Vapor Intrusion Evaluation Report

Wausau Water Supply NPL Site

City of Wausau

December 08, 2021

The Power of Commitment

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1. Introduction

In response to the U.S. Environmental Protection Agency's (EPA) letter of February 23, 2016, this Vapor Intrusion Evaluation Report provides a summary of work and field procedures for a vapor intrusion (VI) evaluation and investigation at the Wausau Water Supply Superfund Site in Wausau, Wisconsin (Site). The VI evaluation was conducted in a phased approach from March 2017 through September 2019. The investigation was conducted in accordance with the *Vapor Intrusion Evaluation Work Plan* (Work Plan) submitted to the EPA on February 22, 2017. The Work Plan was prepared in accordance with the EPA guidance document: "*OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (June, 2015)" and the Wisconsin Department of Natural Resources (WDNR) guidance document "*Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin* (December 2010)".

Preliminary evaluation of the Site included sampling and analysis of shallow aquifer groundwater samples. These results were screened using EPA's Vapor Intrusion Screening Level (VISL) Calculator[1], and WDNR's Vapor Action Levels (VALs), which indicated that additional assessment and delineation in certain areas of the Site were warranted. The objectives of this investigation were to collect additional groundwater data to better delineate the contaminant plume and to collect subsurface vapor data to determine the potential for vapor intrusion to indoor air. Specific tasks included:

- Installation of temporary wells for groundwater sampling
- Laboratory analysis of groundwater samples
- Installation of soil vapor sampling probes
- Building occupancy and construction assessments
- Installation of sub-slab vapor sampling points
- Sampling and analysis of soil vapor, indoor air, and ambient air

Site background information is provided below and the data resulting from these tasks are presented in Sections 2 and 3. Sections 4 and 5 present conclusions and recommendations, respectively.

1.1 Site Background

The Wausau Superfund Site is located on the north side of the City of Wausau, which is located in north-central Wisconsin along the Wisconsin River in Marathon County. Figure 1 shows the location of the Site. The Site consists of two contaminant source areas separated by the Wisconsin River. The East Bank portion of the Site is related to solvent spills that occurred on property operated by Wausau Chemical Corporation (WCC). The West Bank portion of the Site is related to the former City of Wausau landfill. The former landfill property is presently owned by Regal Rexnord Corporation (formerly Marathon Electric Company and Regal Beloit). These two properties are considered source areas for contaminants in the aquifer, which is the source of drinking water for the City of Wausau. The East Bank and West Bank areas are depicted on the Site Plan, Figure 2.

Groundwater and soil remediation has been ongoing at the two source areas since approximately 1985. Remedial actions by the Group were initiated in the early 1990s in accordance with the September 29, 1990, Record of Decision (ROD) and the Consent Decree (CD) entered with the court on January 24, 1991. Remedies implemented at the Site consisted of two soil vapor extraction (SVE) systems to address the source areas and groundwater extraction and treatment, utilizing existing municipal production wells (CW3 and CW6) and a remediation well (EW1).

Source area remediation was accomplished by the installation of SVE systems at Marathon Electric (West Bank) and Wausau Chemical (East Bank) in January 1994. The SVE system at Marathon Electric operated until April 1996, when

[1] Vapor Intrusion Screening Level (VISL) Calculator Version 3.4, June 2015 RSLs

the West Bank source remediation was approved as complete. The East Bank SVE system was modified in 1996 and continued to operate until January 2001. The East Bank source remediation was approved as complete in 2007.

Groundwater remediation was provided through two existing municipal production wells (CW3 and CW6) and one extraction well installed at Marathon Electric (EW1). Air strippers, located at the Wausau water treatment plant, treated water from the municipal supply wells. Water from EW1 was treated by air stripping (over riprap on the riverbank) before being discharged to the Wisconsin River.

EW1 stopped operating in July 2012 due to pump failure. Since EW1 has essentially completed its performance goal, the Group proposed a pilot study to confirm that City wells CW6 and CW3 will effectively contain the contaminant plume without the need for pumping at EW1. The EW1 Shutdown Pilot Study Report was submitted to EPA in March 2015. The WDNR and EPA approved the permanent shutdown of EW1 on November 19, 2021. The shutdown approval letter also conditionally approved the abandonment and decommissioning of the EW1 infrastructure, pending an abandonment Work Plan. The EW1 abandonment Work Plan submittal is anticipated to be completed in December 2021.

Additional groundwater remediation was provided by a groundwater extraction system operated by WCC between 1985 and 1996 as an interim remediation measure. The extraction system at WCC consisted of a series of shallow wells at the south end of the WCC property. Groundwater from this system was treated by air stripping. This system was in addition to the requirements of the ROD or the CD and operation ceased in 1996.

1.2 Site Contaminants of Potential Concern

Site contaminants of potential concern (COPC) are limited to the following chlorinated VOCs:

East Bank

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis-1,2-Dichloroethene (c12DCE)
- Vinyl chloride

West Bank

- Trichloroethene
- cis-1,2-Dichloroethene
- Vinyl chloride
- Carbon tetrachloride (CT)
- Chloroform

Significant concentrations of CT and chloroform were detected in only one well, C3S, which is a shallow well in the former City landfill. These compounds were not detected off of Marathon Electric property and are apparently limited to the landfill.

The East Bank COPCs are related to a release of PCE, which has degraded over time to TCE, c12DCE, and low concentrations of vinyl chloride. c12DCE has no indoor air standard due to the absence of inhalation toxicity information. However, it was included in the list of analytes as an indicator of the presence of potential VOC impacts.

2. Preliminary Vapor Intrusion Evaluations

Two investigation programs were implemented previously at the Site to assess potential risk due to vapor intrusion. The first was a soil and soil vapor investigation at WCC property in February 2015, summarized below.

The second preliminary VI assessment was groundwater sampling of most shallow monitoring wells on the East Bank and West Bank in October and November 2015. The shallow groundwater data were screened for potential vapor risks using EPA's VISL Calculator. A summary of these results is provided in Section 2.2.

2.1 Summary of WCC Soil and Vapor Investigation

The WCC field investigation was conducted on February 25 and 26, 2015, in accordance with the "*Work Plan for a Focused Site Investigation*" letter dated September 18, 2014, which was conditionally approved by WDNR on November 14, 2014. The majority of the WCC building is slab-above-grade construction and the main floor is approximately 3 to 4 feet above the ground surface. The sample depths described in this Section are relative to ground surface. A report of the investigation results was submitted to WDNR on April 7, 2015. WCC has since moved its operations and, currently, the former WCC facility is unoccupied. The former WCC property is now in the possession of the City of Wausau.

2.1.1 WCC Investigation Conclusions

1. Soil concentrations of VOCs beneath the building and outside the building were low and did not indicate a potential hazard with respect to direct contact exposures.
2. Soil concentrations of VOCs below the building have not impacted groundwater quality because the building prevents infiltration. However, if the building is removed, future potential infiltration could impact groundwater because the soil concentrations exceed the leaching to groundwater standards.
3. Based on the former use of the building, the indoor air quality was estimated to be below the applicable OSHA PELs.
4. Under potential future residential use of the property, soil vapor concentrations indicate that the soils beneath the building could create conditions that could exceed residential indoor air standards unless additional remediation occurs or an engineered barrier/mitigation system is installed.

2.2 Summary of Shallow Groundwater Data Evaluation Related to Potential Vapor Intrusion

VOC data from monitoring wells screened in the shallow aquifer are one line of evidence for the evaluation of potential vapor intrusion in the area of the groundwater contaminant plumes. Groundwater samples were collected from 17 shallow aquifer monitoring wells on the East and West Banks in 2015 and 2016.

2.2.1 Preliminary Shallow Groundwater Screening Conclusions

5. West Bank potential VI risk is confined to Marathon Electric property. Building construction and occupancy information, additional shallow groundwater data, and soil vapor data were recommended to augment the conceptual site model for Marathon Electric.
6. Additional shallow groundwater VOC data was recommended to confirm that the shallow aquifer between Marathon Electric property and CW6 was not a potential source of VOC vapor intrusion.
7. East Bank groundwater data indicated the need for vapor data and additional groundwater data to evaluate potential VI risk to commercial/industrial and residential properties off of WCC property.
8. The limits of Site-related groundwater impacts east of E24AR needed to be delineated between E24AR and E28A.

These recommendations for additional groundwater and vapor data collection were incorporated into the VI Evaluation Work Plan, which was implemented beginning in March 2017. The results are presented in the following sections.

3. VI Investigation Results

3.1 Overview

From March 2017 to September 2019 GHD performed additional field work to supplement existing Site data in an effort to better understand the potential for VI risk in areas adjacent to the known groundwater plume footprints at the Site. These activities are listed below and summarized in greater detail in the sections to follow. All laboratory data is included in Appendix A.

9. Installed temporary monitoring wells and collected groundwater samples for VOC analysis to further delineate groundwater impacts in residential and commercial/industrial areas on the West Bank and East Bank. This was conducted in March 2017 and is summarized in Section 3.2.
10. Installed vapor probes and collected vapor samples to delineate the horizontal and vertical extent of potential VOCs in the vadose zone on the West Bank and East Bank. Two sampling rounds were conducted in March 2017 and August 2017 as summarized in Section 3.3.
11. Collected sub-slab and indoor air samples at select residential and commercial/industrial buildings on the West Bank and East Bank. West Bank samples were collected on two occasions in March 2017 and August 2017. The West Bank results are summarized in Section 3.5.2. East Bank sub-slab and indoor air sampling has occurred on six occasions from April 2017 through September 2019. These results are summarized in Section 3.5.1.
12. Assessed commercial/industrial buildings for occupancy, construction, basements, ventilation, and presence of radon mitigation systems as discussed in Section 3.4.
13. Resampled select locations for sub-slab and indoor air sampling to confirm previous results.

3.2 Additional Groundwater Sampling Results

Additional groundwater delineation was conducted to the east of monitoring well E24AR on the East Bank and north of Marathon Electric property on the West Bank in March 2017. These groundwater samples were collected from temporary wells that were removed after sample collection. VOC data from these locations were used to confirm and establish the extent of potential groundwater vapor sources. Stratigraphic logs for the temporary wells are included in Appendix B.

3.2.1 East Bank Groundwater Sampling

On March 6 and 7, 2017, groundwater samples were collected on the East Bank to further delineate the eastern extent of the groundwater plume. Temporary wells were installed at nine locations (E1 through E9) as shown on Figure 3. Samples from these wells were analyzed for PCE, TCE, c12DCE, and vinyl chloride.

While groundwater samples from temporary wells E1 through E7 all had VOC detections, only temporary wells E2 (15 µg/L TCE) and E4 (5.4 µg/L vinyl chloride) had VOC concentrations that slightly exceeded the VI screening level for groundwater[2]. Temporary wells E8 and E9 had no detections. All East Bank groundwater sampling results are shown in Table 1.

The East Bank groundwater delineation sampling results indicated that the eastern limit of the VOC plume was between N 2nd Street and N. 3rd Street, and the southern limit was north of Lincoln Avenue (see Figure 3). Figures 4, 5, and 6 illustrate the approximate limits of PCE, TCE, and vinyl chloride in the shallow portion of the aquifer on the East Bank in the spring of 2017. Note that the concentrations shown for the permanent monitoring wells are the highest concentrations reported for each well over three annual sampling events from fall 2016 through the fall of 2018.

[2] USEPA VISL Calculator with 10-5 additional cancer risk.

3.2.2 West Bank Groundwater Sampling

Potential VI sources on the West Bank are related to shallow groundwater and soils in the former City landfill. On March 8 and 9, 2017, groundwater samples were collected adjacent to Marathon Electric building “A” to further delineate the groundwater plume adjacent to and immediately downgradient from the fill area. Additionally, shallow groundwater samples were collected at select locations north of Marathon Electric property to confirm that the shallow aquifer is not impacted in that area. A total of seven temporary wells (W1 through W7), as shown on Figure 3, were installed on the West Bank. Samples from these wells were analyzed for TCE, c12DCE, CT, chloroform, and vinyl chloride.

Of the groundwater samples collected from the seven temporary wells on the West Bank, only two samples contained VOCs at detectable concentrations. Temporary well W2 had a TCE detection of 1.0 µg/L. Temporary well W4, directly downgradient from W2 had a chloroform concentration of 2.1 µg/L. None of the groundwater samples collected from the West Bank temporary wells had VI screening level exceedances. All West Bank groundwater sampling results are shown in Table 1.

The West Bank groundwater delineation sampling results indicated that the VOC plume is primarily within the deeper portion of the aquifer and VOCs in the shallow portion of the aquifer do not extend far from the landfill. Figure 7 illustrates the approximate limits of TCE in the shallow portion of the aquifer on the West Bank in the spring of 2017. Note that the concentrations shown for the permanent monitoring wells are the highest concentrations reported for each well over three annual sampling events from fall 2016 through the fall of 2018.

3.3 Soil Vapor Sampling Results

Vapor samples were collected at each of the East Bank and West Bank groundwater delineation temporary well locations. Vapor probes were constructed with 6-inch stainless steel screen implants attached to ¼” polyethylene tubing. Two vapor probe sampling events were conducted in the spring and late summer of 2017. All vapor probes were sampled using stainless steel vacuum canisters and samples were analyzed for VOCs by the TO-15 method. Vapor probe locations are depicted on Figure 3. Field sampling notes are included in Appendix C.

3.3.1 East Bank Vapor Probes

In March 2017, vapor probes were installed at each of the nine East Bank groundwater sampling locations described in Section 3.2.1. For locations where the depth to groundwater was greater than 20 feet (E2 and E4 through E9), vapor sample collection was attempted at two depths - one just above the water table and the other at 8.5 to 9 ft bgs (assumed basement depth). At the two locations where the water table was 20 ft bgs or shallower (E1 and E3), one probe was installed from 8.5 to 9 ft bgs. There were nine total shallow probes and seven total deep probes (16 probes total) on the East Bank. Samples were collected using vacuum canisters and were analyzed for VOCs by the TO-15 method. East Bank vapor analytes included PCE, TCE, c12DCE, and vinyl chloride.

March 2017 East Bank vapor probe sampling results are presented in Table 2. The shallow probe at location E7 had water in the screened interval and was not sampled. All 15 of the remaining probes were successfully sampled. All 15 probes had detectable VOC concentrations, although none exceeded their respective residential or small industrial screening levels.

On August 1, 2017, GHD collected a second round of soil vapor samples from the East Bank probes.
August 2017 East Bank vapor probe sampling results are also provided in Table 2. The single probe installed at E3 and both shallow and deep probes installed at E6 were not sampled because they were removed due to road construction. The shallow probe installed at E7 was not sampled due to the presence of water in the probe. Of the remaining 12 probes, all had detectable VOC concentrations, but none of the results exceeded their respective residential or small industrial screening levels.

3.3.2 West Bank Vapor Probes

In March 2017, vapor probes were installed at each of the seven West Bank groundwater sampling locations described in Section 3.2.2. For locations where the depth to groundwater was greater than 20 feet (W1 through W4 and W7), vapor probes installed at two depths - one just above the water table and the other at 8.5 to 9 ft. bgs (assumed basement depth). At the two locations where the water table was 20 ft. bgs or shallower (W5 and W6), only one probe was installed at a depth of 5.5 to 6 ft. bgs. There were seven total shallow probes and five total deep probes (12 probes total). Samples were collected using vacuum canisters and were analyzed for VOCs by the TO-15 method. West Bank vapor analytes included TCE, c12DCE, vinyl chloride, CT, and chloroform.

On March 13 and 14, 2017, GHD collected soil vapor samples from the 12 West Bank probes and these sampling results are presented in Table 2. All probes had detectable VOC concentrations, although none exceeded their respective USEPA residential or large industrial screening levels.

On August 1, 2017, GHD collected a second round of soil vapor samples from the 12 West Bank probes. August 2017 West Bank vapor probe sampling results are included in Table 2. W6 was not sampled due to water in the probe. All of the 11 probes sampled had detectable VOC concentrations, although none exceeded their respective residential or large industrial screening levels.

3.4 Building Assessments for Sub-slab Vapor Sampling

Upon implementation of the Work Plan, letters were sent to the businesses and residents potentially affected by field sampling activities. The letters were an introduction to explain the purpose of the proposed field work and gain agreements to access the properties.

For those locations where sub-slab sampling was proposed as part of the first phase of investigation, a combination introduction/access agreement letter was sent to the affected owners. If the results of the first phase of investigation indicated that sub-slab sampling should be conducted in additional buildings, a second letter was sent to request access to those locations.

All buildings proposed for sub-slab sampling where access was granted were assessed to obtain information that was used to help interpret results and better assess potential VI risk. Information obtained by these assessments included the following:

14. Basement depth or crawlspace; presence of sump
15. Basement floor type; concrete, soil, other?
16. Locations of normally occupied areas
17. Type of ventilation; air exchange rates
18. Radon mitigation, vapor barrier
19. Chemical usage

Given that Site soils are coarse grained sand and gravel, specific investigation activities related to potential vapor migration along utility lines were not proposed in the Work Plan. Considering that utility backfill is typically compacted fill, the native soils are likely more permeable than backfilled utility trenches and preferential pathways are not likely to occur associated with these structures.

As outlined in the Work Plan, the City of Wausau provided utility maps showing the locations of sewer and water mains in the investigation areas. Copies of these maps were provided in the Work Plan. Inspection of these maps did not indicate the need for additional investigation during the field activities. Potential preferential migration along utility corridors was further assessed as the investigation progressed and did not warrant additional investigation.

When selecting potential sub-slab sampling locations within residences or office buildings, the locations of sewer and water lines entering the building were considered in the selection process.

3.5 Sub-slab and Indoor Air Sampling Results

Sub-slab vapor and indoor air sampling was conducted at residential and commercial buildings that were identified as potential vapor intrusion risks based on their proximity to source areas or elevated groundwater concentrations. The scope of this evaluation included assessments of residential and commercial/industrial buildings for occupancy, construction, basements, ventilation, and presence of radon mitigation system. Where access was granted, sub-slab/indoor air samples were collected on at least two separate occasions.

3.5.1 East Bank Sub-slab and Indoor Air Sampling

The initial vapor sampling on the East Bank occurred at five residential properties along North 2nd Street and one commercial property (Bridge Community Clinic). East Bank sample locations are shown on Figure 8. Sampling rounds were conducted in April, May, and July 2017, and in March 2018. Two to four samples were collected from the six locations and each sample was analyzed using the TO-15 method for PCE, TCE, c12DCE, and vinyl chloride. Sub-slab and indoor air laboratory results are presented in Table 3.

Based on relatively high PCE vapor probe results from probe location E1, additional residential property (2108 N. 3rd St.) was added to the March 2018 sampling round. Subsequent monitoring events included the commercial property at 200 E. Wausau Avenue (D&J Rentals) and a residential property at 2103 N. 3rd Street. Two adjacent residential properties on N. 3rd St. and one commercial property (Thrive Foodery) were contacted on multiple occasion and by multiple means to request access for sampling, but access was not obtained. Sub-slab and indoor air results for all sampling events are included in Table 3. A summary of the sequence of sampling events and the locations sampled, as well as a list of the properties that were contacted but either did not respond or denied access is provided in Table 4.

3.5.1.1 East Bank Residential Sub-slab and Indoor Air Results

USEPA/WDNR sub-slab screening levels are included on Table 3. The residential sub-slab screening level for TCE (70 µg/m3) was exceeded in three of the 18 samples collected and each of the three exceedances were from a different location. The highest sub-slab TCE concentration was 160 µg/m3 (1917 N. 2nd St.). However, three other samples from the same location did not exceed 12 µg/m3. The screening levels for PCE and vinyl chloride were not exceeded in any of the sub-slab samples.

A total of 23 residential indoor air samples were collected from eight homes. The indoor air action levels were not exceeded in any of the samples except for one basement sample that slightly exceeded the TCE action level of 2.1 µg/m3. Two subsequent TCE results for that location (1917 N. 2nd St.) were 0.28 µg/m3 and 1.6 µg/m3. The basement at 1917 N. 2nd St. is unfinished and is used solely for laundry and storage.

3.5.1.2 East Bank Small Commercial Sub-slab and Indoor Air Results

Two small commercial properties were evaluated as part of the sub-slab/indoor air investigation. Samples were collected in April and July 2017 at the Bridge Community Clinic, and samples were collected in April and September 2019 at D & J Rentals. The lab results are included in Table 3. The basements of both of these locations are near the water table and PCE and TCE were detected in all sub-slab samples. Concentrations were assessed relative to the USEPA/WDNR small commercial screening levels and none of the results exceeded an action level.

PCE and TCE were also detected in all of the indoor air samples collected in the basement level of the two buildings, but all concentrations were far below their respective action levels, as shown on Table 3.

3.5.2 West Bank Sub-slab and Indoor Air Sampling

Sub-slab and indoor air sampling on the West Bank was limited to the Marathon Electric (Regal) property. Groundwater results from residential areas hydraulically downgradient from Marathon Electric revealed that the

shallow groundwater is not impacted. Thus, additional vapor intrusion evaluation of the West Bank residential area is not needed.

Based on the close proximity of Marathon Electric buildings to the former City landfill, sub-slab sampling was performed at six total locations in the two buildings closest to the former landfill. West Bank sub-slab and indoor air sample locations are shown on Figure 9. Two sampling events were performed in March and August 2017. All samples were collected using vacuum canisters and laboratory analysis for VOCs was performed using the TO-15 method. West Bank vapor analytes included TCE, c12DCE, CT, chloroform, and vinyl chloride.

3.5.2.1 West Bank Sub-slab and Indoor Air Results

West Bank sub-slab results are presented Table 5. The vapor data were compared to sub-slab screening levels and indoor air action levels for large industrial buildings. The sub-slab TCE concentrations from both sampling events at SS-2 beneath Building B and at SS-5 beneath Building A exceeded the screening level of 880 µg/m3. Chloroform and CT were also detected in some of the sub-slab samples, but all concentrations were below their respective screening levels.

Indoor air samples were collected from one location inside each building, as shown on Figure 9. TCE, CT, and chloroform were detected in both sampling events, but all concentrations were far below the indoor air action levels for large industrial buildings.

Since the indoor air concentrations did not suggest a health risk to Marathon Electric employees, no additional vapor intrusion evaluation is recommended on the West Bank.

4. Conclusions

Analytical data collected during groundwater, soil vapor probe, sub-slab, and indoor air sampling conducted between March 2017 and September 2019 supplemented decades of existing Site-wide data and was analyzed for the purpose of investigating the potential for VI risk within and adjacent to the two known VOC plumes on the East Bank and West Bank. The conclusions drawn from this effort are as follows.

The East Bank groundwater sampling results indicated that the eastern limit of the VOC plume was between N 2nd Street and N. 3rd Street, and the southern limit was north of Lincoln Avenue.

The West Bank groundwater delineation sampling results indicated that the VOC plume is primarily within the deeper portion of the aquifer and VOCs in the shallow portion of the aquifer do not extend far from the former City landfill on Marathon Electric property.

Results from the soil vapor probe investigations on the East and West Banks did not exceed their respective residential, small commercial, or large industrial screening levels.

The residential sub-slab screening level for TCE (70 µg/m3) was exceeded in three of the 18 samples collected from East Bank residences and each of the three exceedances were from a different location.

East Bank residential indoor air samples indicated that indoor air action levels were not exceeded in any of the samples except for one sample from a basement that slightly exceeded the TCE action level. Subsequent results from that basement indicated levels of TCE below the action level.

Based on the East Bank residential and commercial indoor air results, there does not appear to be a health risk at the tested properties related to potential vapor intrusion of Site chemicals.

Marathon Electric sub-slab results from both sampling events indicated that TCE exceeded the screening level of 880 µg/m3 at SS-2 beneath Building B and at SS-5 beneath Building A.

Marathon Electric indoor air concentrations did not exceed action levels and there is no indication of a health risk to workers.

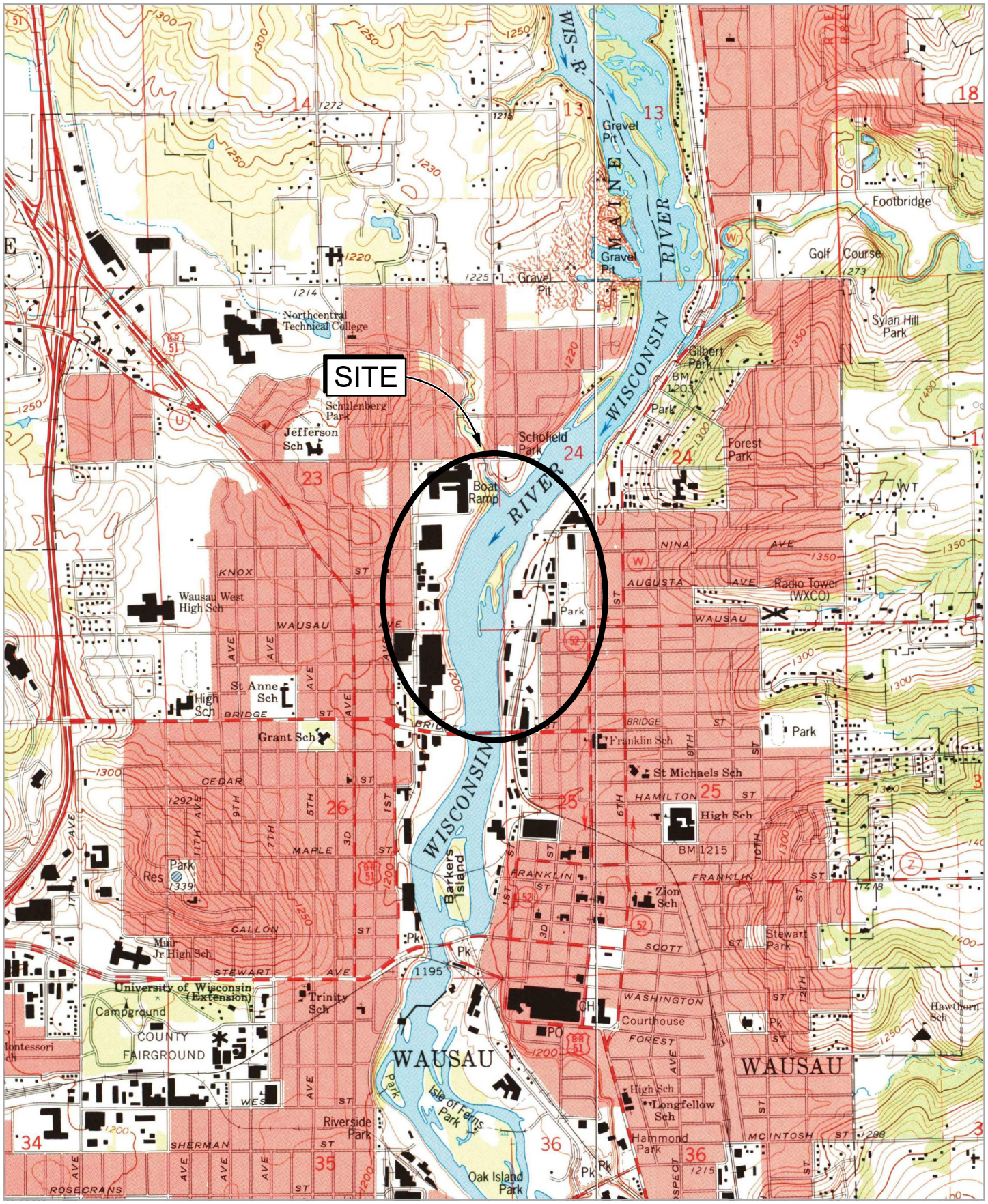
5. Recommendations

Indoor air samples collected during the investigation period indicate that there is no direct health risk to residents or workers in or adjacent to the footprint of the VOC plumes on the East and West Banks. Where sub-slab samples slightly exceeded conservative action levels, indoor air samples indicated a lack of a sufficient vapor source or pathway into the interior of residential or commercial buildings, and there doesn't appear to be an existing risk to occupants.

GHD recommends no additional directed VI investigation or sampling at this time. Additionally, GHD recommends the plugging and abandonment of soil vapor pin locations where access is granted to do so.

GHD recommends the continued sampling and monitoring of groundwater as outlined in the ROD and CD.

Figures



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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

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GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

SITE LOCATION

FIGURE 1

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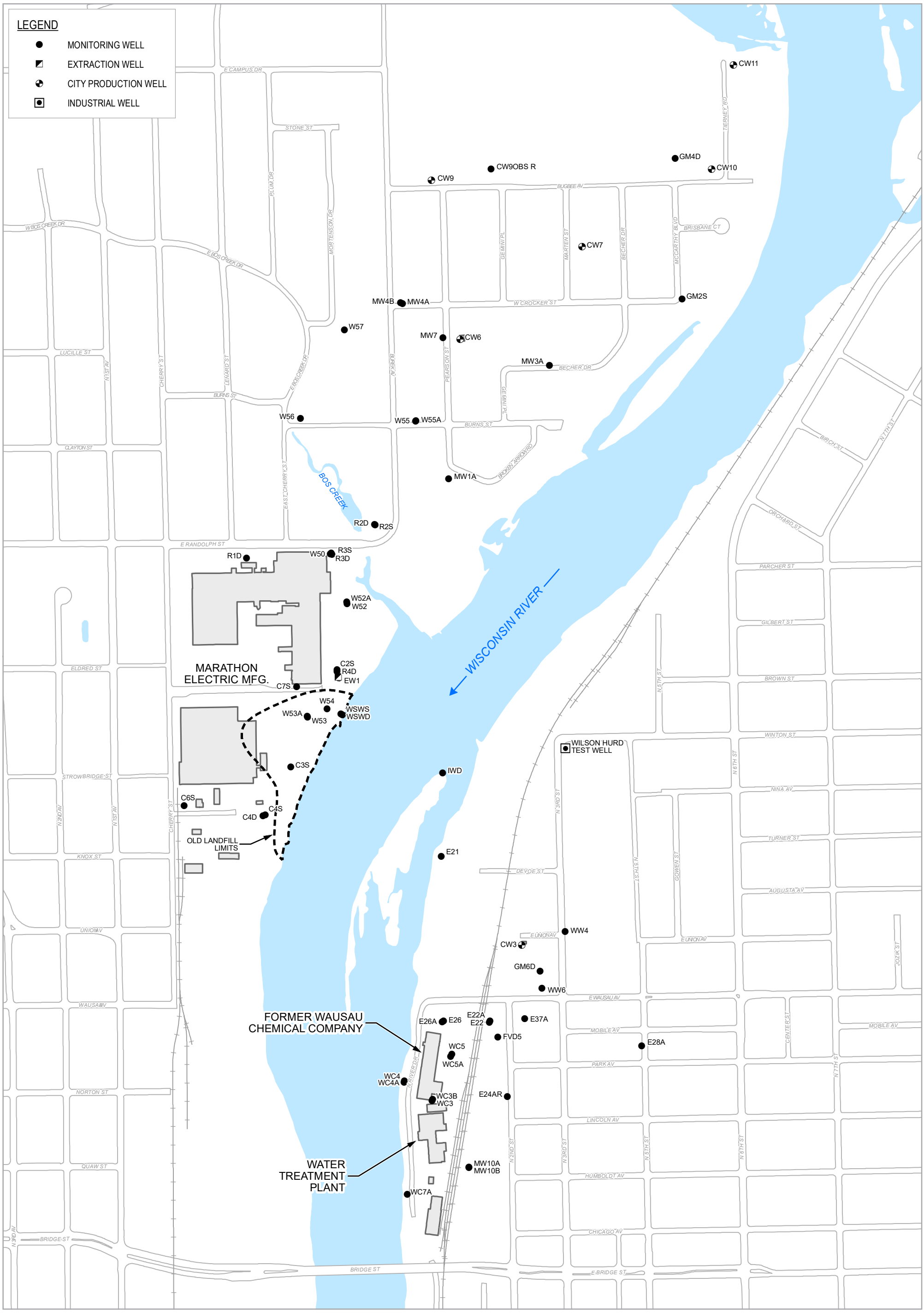

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

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GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

SITE PLAN

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 2

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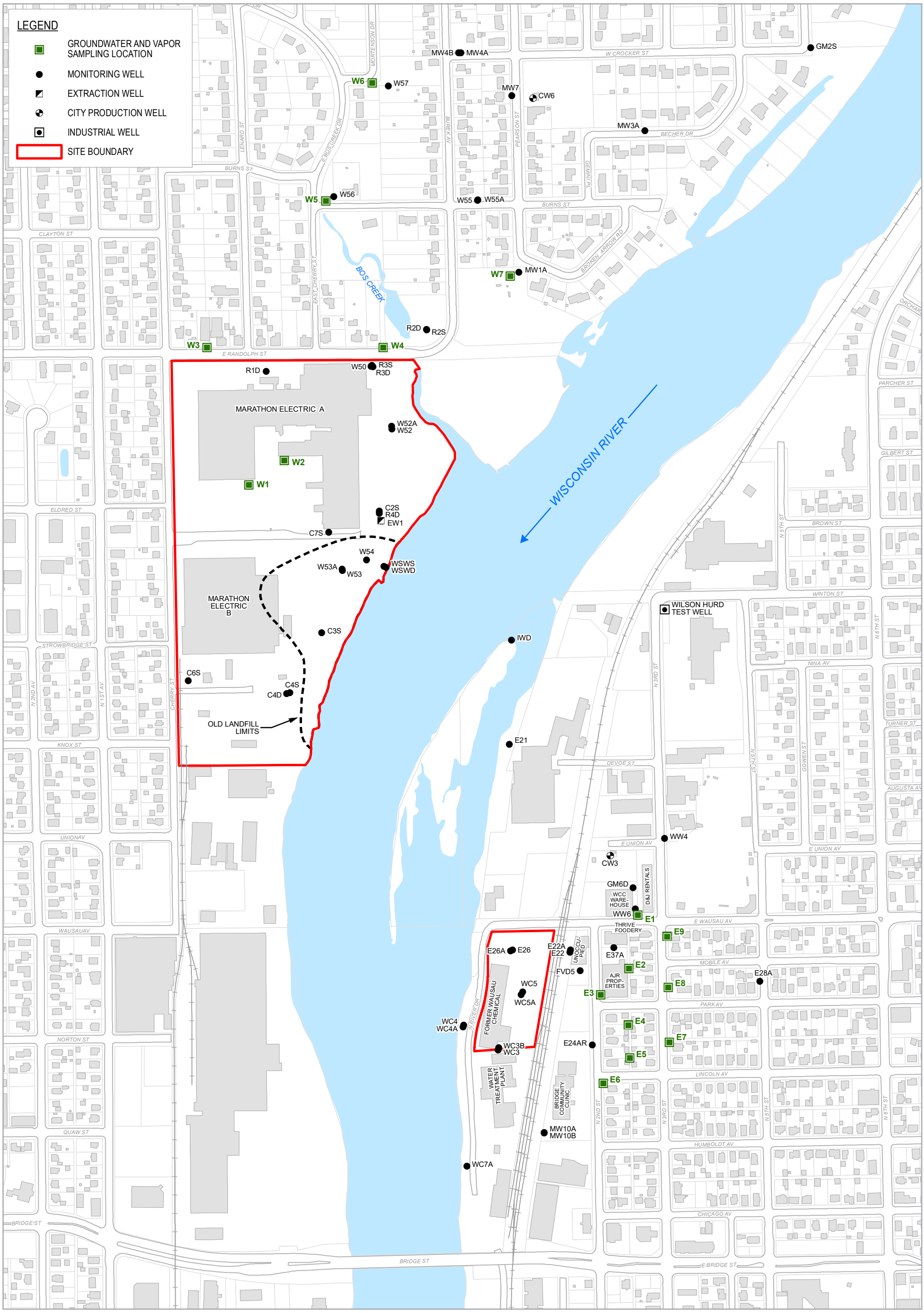

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

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GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

SHALLOW AQUIFER DELINEATION LOCATIONS AND SOIL VAPOR PROBE LOCATIONS

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 3

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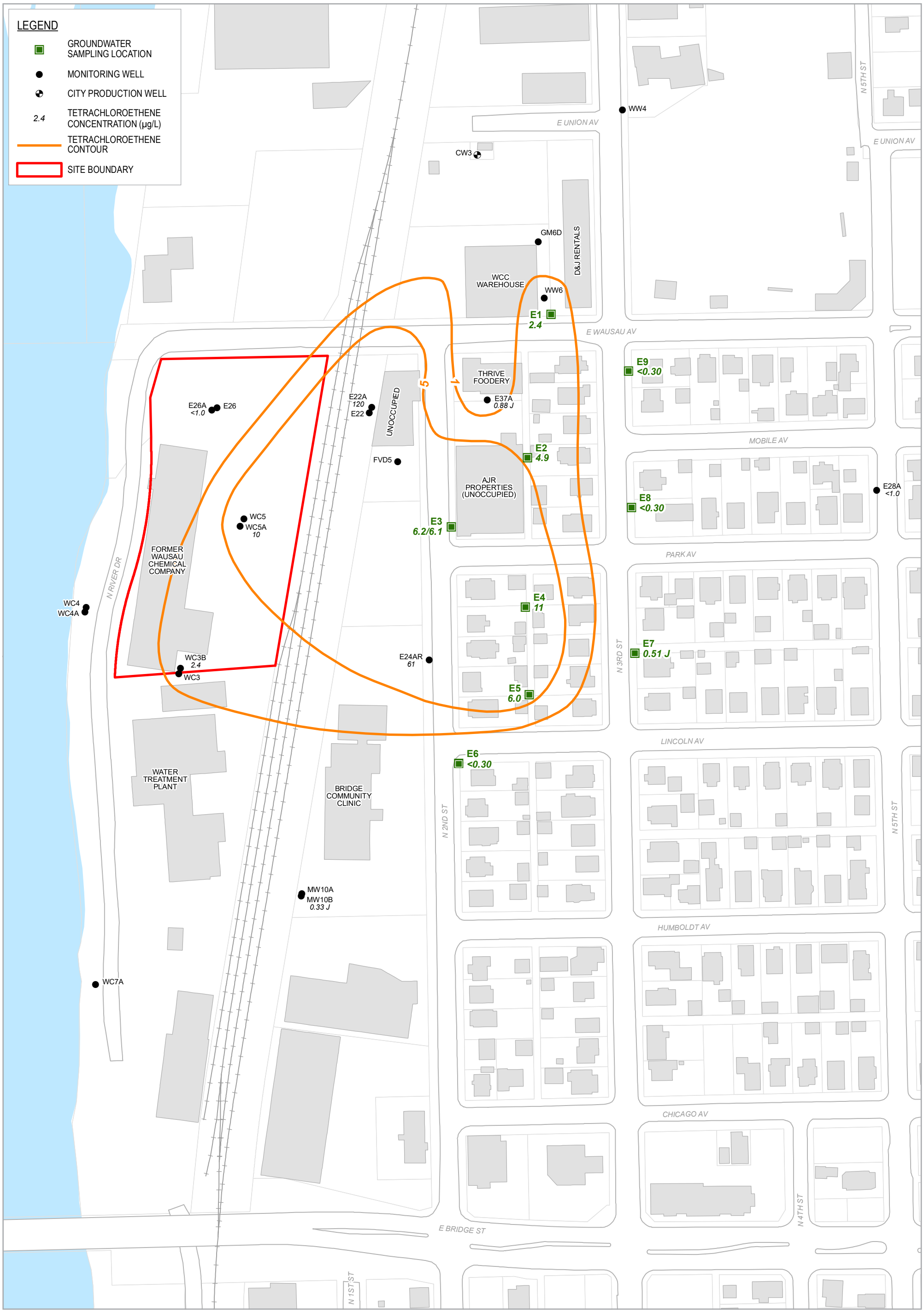

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

N

GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

EAST BANK SHALLOW AQUIFER DELINEATION TETRACHLOROETHENE

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 4

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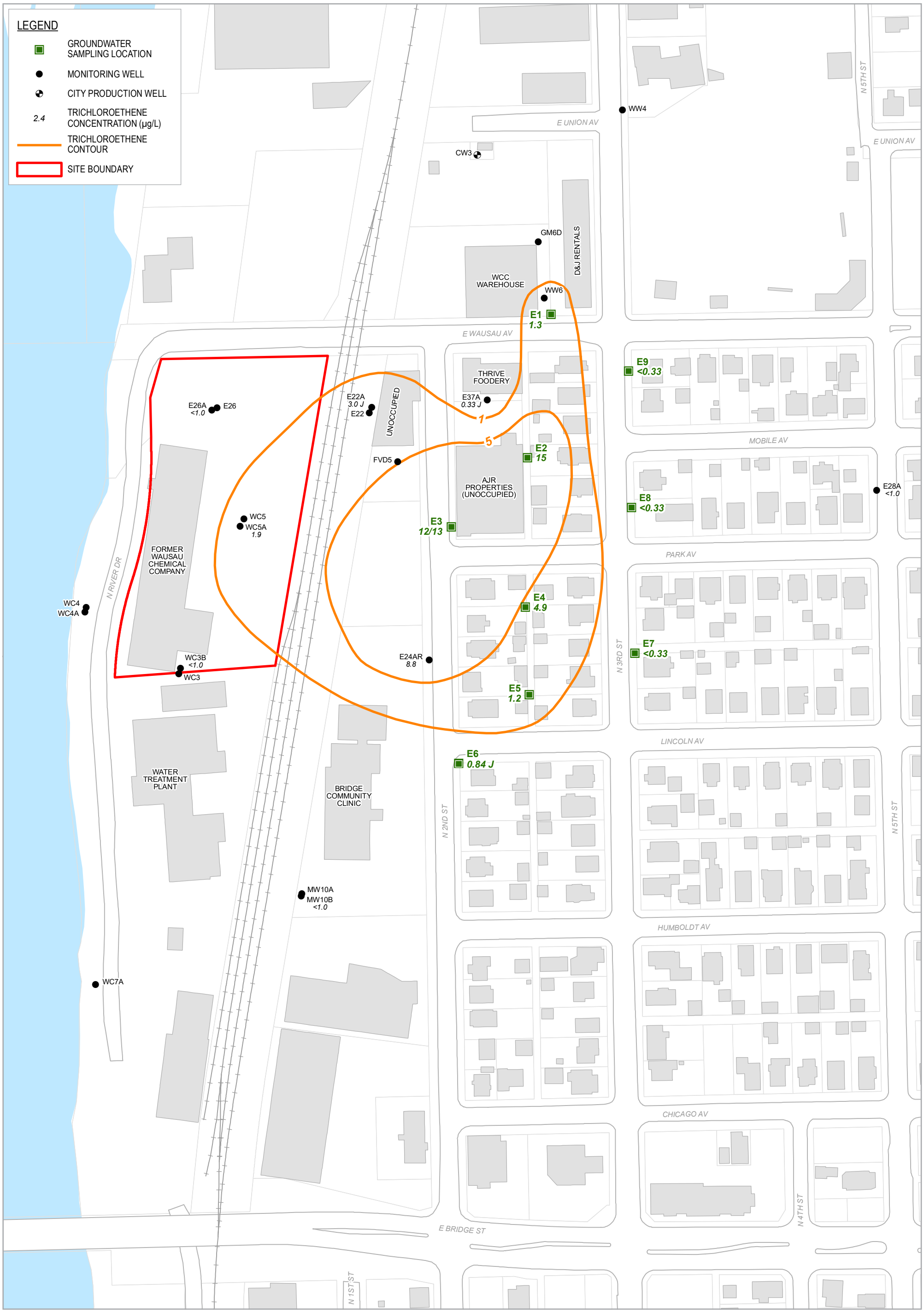

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

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GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

EAST BANK SHALLOW AQUIFER DELINEATION TRICHLOROETHENE

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 5

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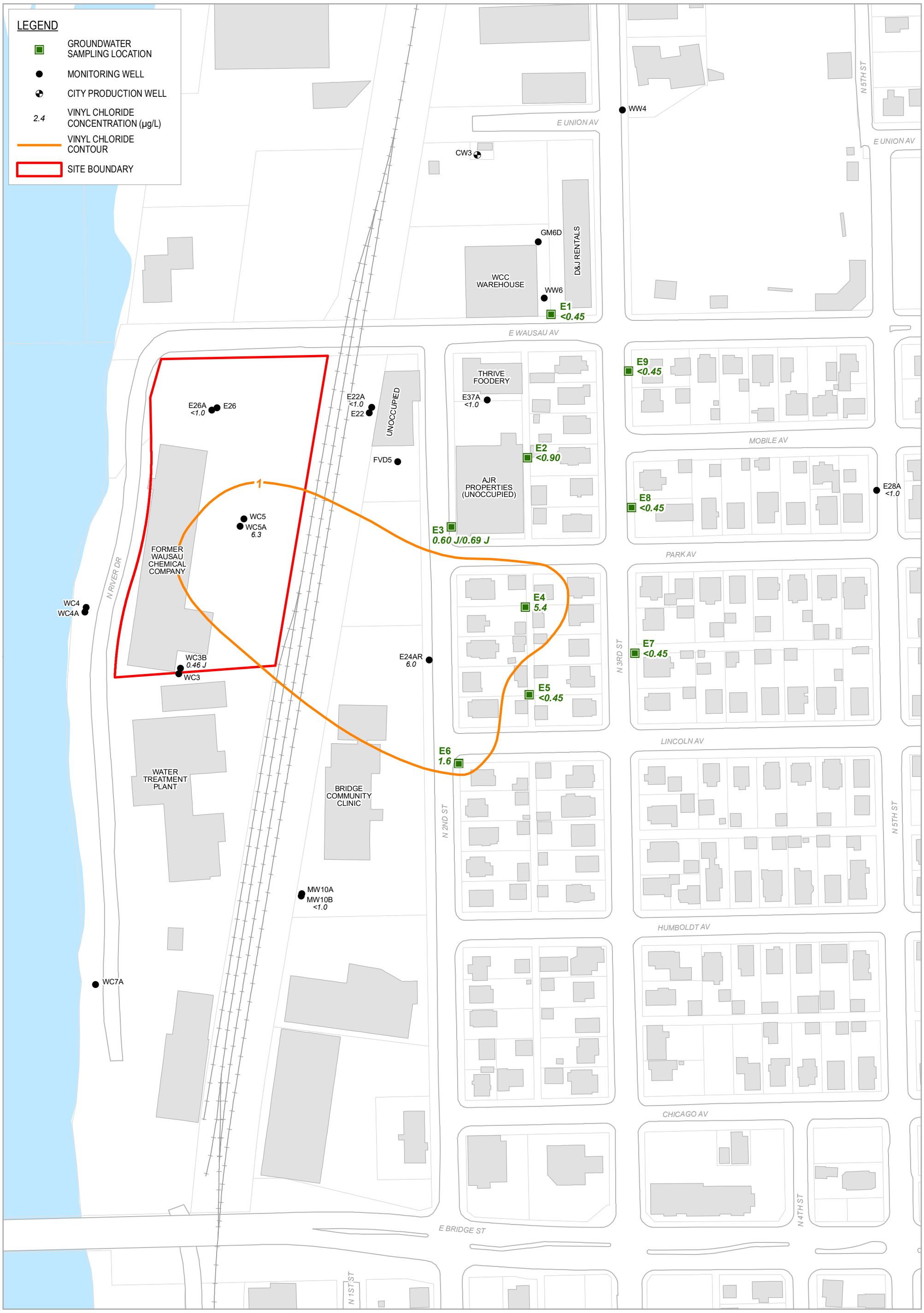

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

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WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

EAST BANK SHALLOW AQUIFER DELINEATION VINYL CHLORIDE

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 6

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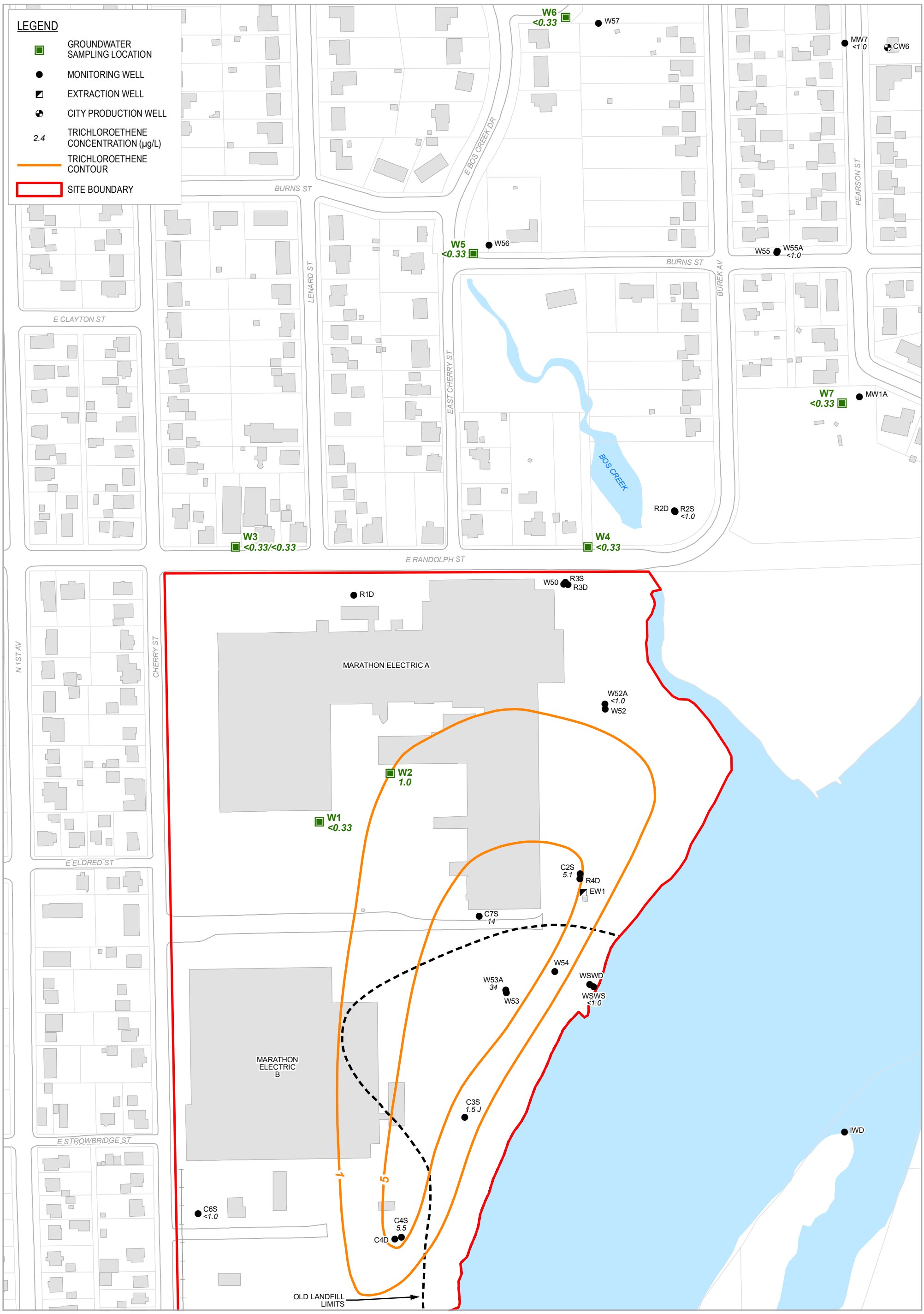

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Feet

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Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

N

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WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

WEST BANK SHALLOW AQUIFER DELINEATION TRICHLOROETHENE

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 7

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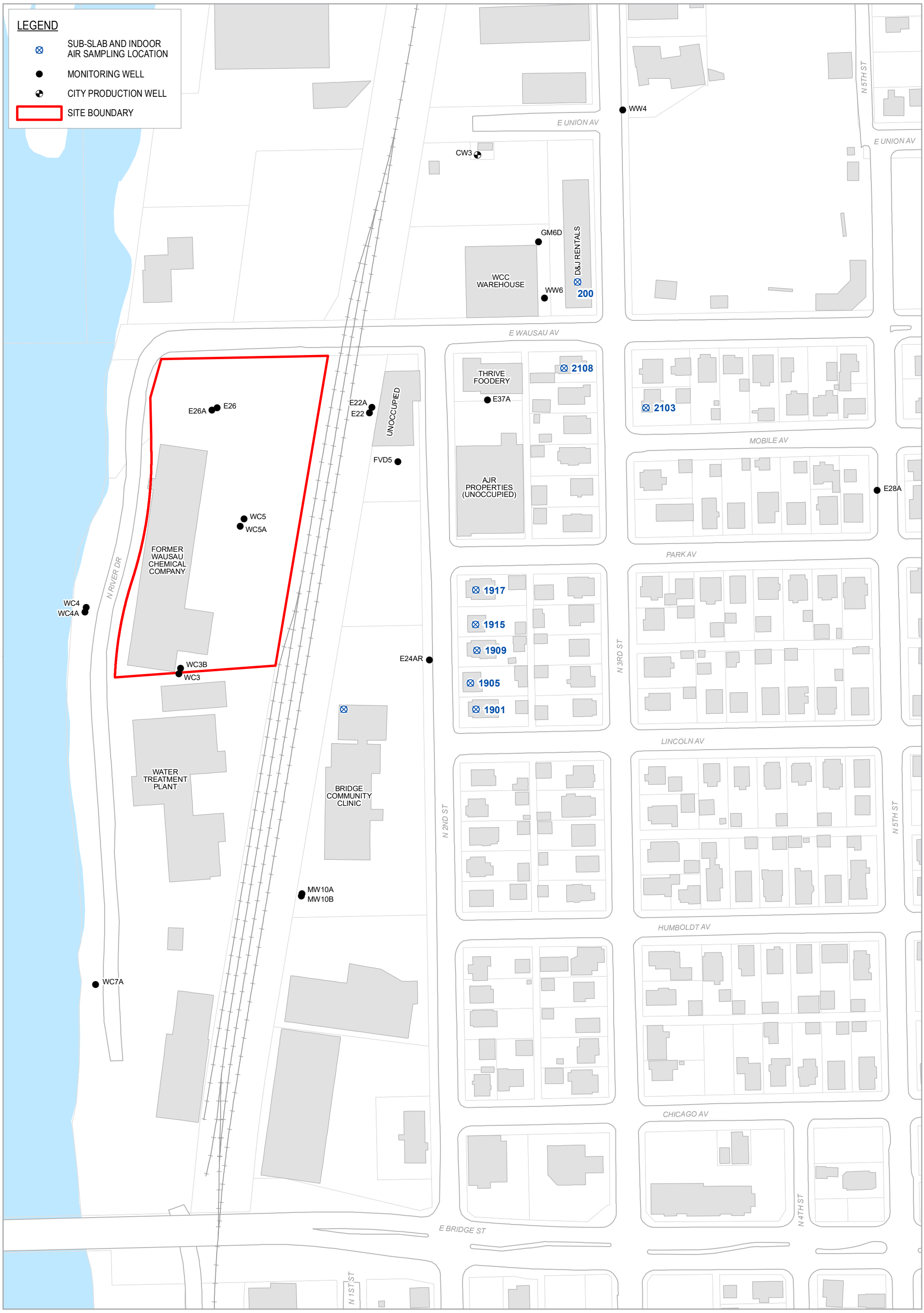

Paper Size ANSI B

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

N

GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

EAST BANK SUB-SLAB VAPOR AND INDOOR AIR SAMPLE LOCATIONS

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 8

I:\GIS\Projects\6-chars\00----\0039--\003978\003978-REPORTS\003978-00(043)\003978-00(043)GIS-SP008.mxd
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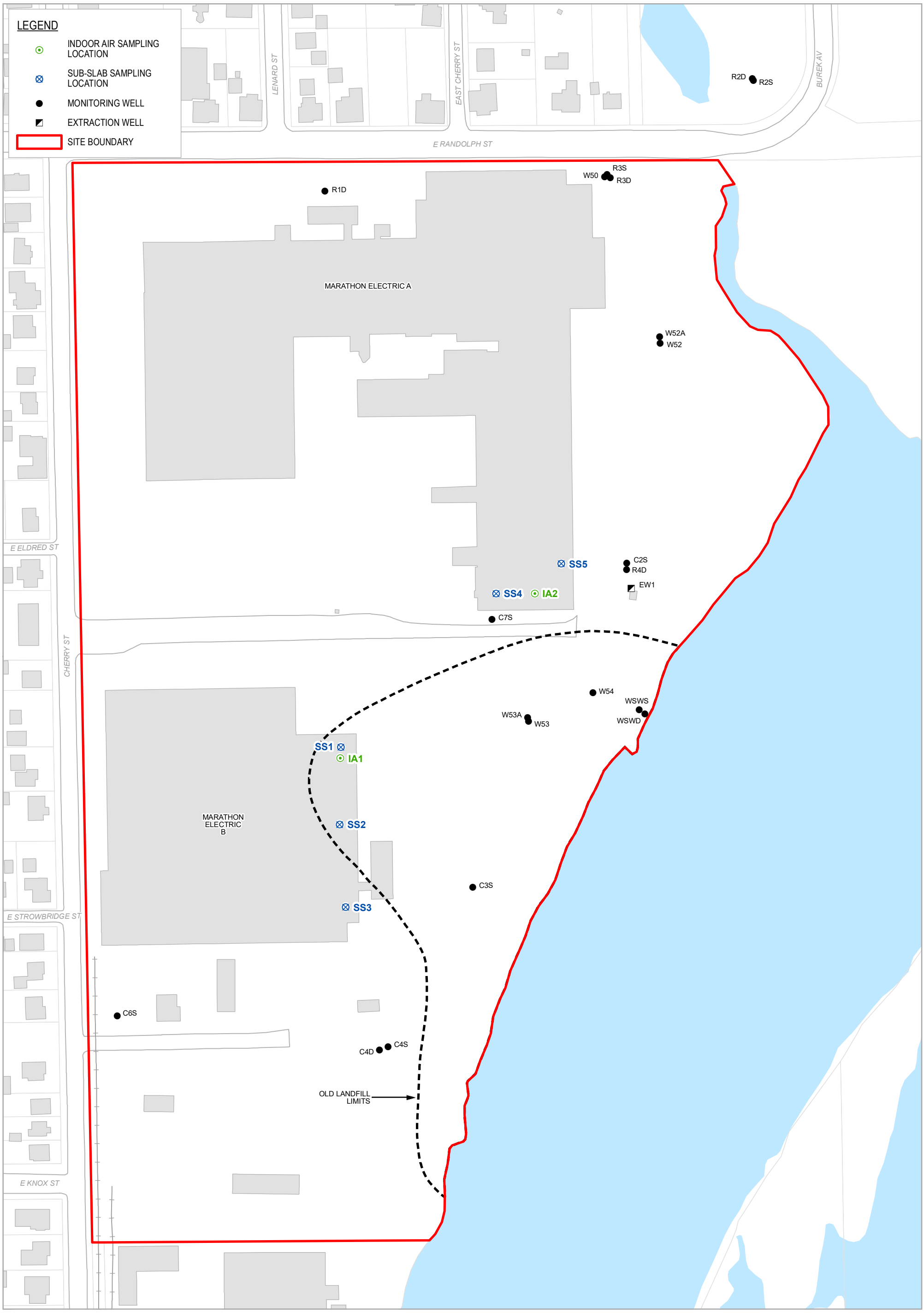

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

N

GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

WEST BANK SUB-SLAB VAPOR AND INDOOR AIR SAMPLE LOCATIONS

Project No. **003978-00**
Revision No. **-**
Date **02/05/2020**

FIGURE 9

I:\GIS\Projects\6-chars\00----\0039--\003978\003978-REPORTS\003978-00(043)\003978-00(043)GIS-SP009.mxd
Print date: 05 Feb 2020 - 13:34

Data source: Marathon County. Created by: rjcoy

Tables

Table 1

Groundwater Delineation Sample Results
Vapor Intrusion Evaluation
Wausau Water Supply NPL Site
Wausau, Wisconsin

East Bank	Date	Water Table Depth (ft bgs)	Sample Depth (ft bgs)	Units	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
E1 (Non-res)	3/6/2017	15	15 -19	µg/L	2.4	1.3	3.2	0.45 U	--	--
E2	3/7/2017	25	25-29	µg/L	4.9	**15**	43	0.90 U	--	--
E3 (Non-res)	3/6/2017	20	20-24	µg/L	6.2/6.1	12/13	14/15	0.60 J/0.69 J	--	--
E4	3/7/2017	28	28-32	µg/L	11	4.9	30	**5.4**	--	--
E5	3/7/2017	25	25-29	µg/L	6.0	1.2	5.3	0.45 U	--	--
E6	3/7/2017	25	25-29	µg/L	0.30 U	0.84 J	7.8	1.6	--	--
E7	3/6/2017	26	26-30	µg/L	0.51 J	0.33 U	0.30 U	0.45 U	--	--
E8	3/6/2017	26	26-30	µg/L	0.30 U	0.33 U	0.30 U	0.45 U	--	--
E9	3/6/2017	24	24-28	µg/L	0.30 U	0.33 U	0.30 U	0.45 U	--	--
West Bank										
W1 (Non-res)	3/8/2017	33	33-35	µg/L	--	0.33 U	0.30 U	0.45 U	0.35 U	0.31 U
W2 (Non-res)	3/9/2017	30	31-35	µg/L	--	1.0	0.30 U	0.45 U	0.35 U	0.31 U
W3	3/9/2017	34	34-38	µg/L	--	0.33 U/0.33 U	0.30 U/0.30 U	0.45 U/0.45 U	0.35 U/0.35 U	0.31 U/0.31 U
W4	3/9/2017	23	23-25	µg/L	--	0.33 U	0.30 U	0.45 U	0.35 U	2.1
W5	3/9/2017	9	10-12	µg/L	--	0.33 U	0.30 U	0.45 U	0.35 U	0.31 U
W6	3/9/2017	9.5	10-12	µg/L	--	0.33 U	0.30 U	0.45 U	0.35 U	0.31 U
W7	3/9/2017	28	29-32	µg/L	--	0.33 U	0.30 U	0.45 U	0.35 U	0.31 U
Residential Vapor Intrusion Screening Level for Shallow Groundwater (10E-05 target risk for carcinogens)				µg/L	**120**	**10**	**--**	**3.0**	**7.6**	**15**
Non-Residential Vapor Intrusion Screening Level for Shallow Groundwater (10E-05 target risk for carcinogens)				µg/L	**510**	**42**	**--**	**37**	**34**	**64**

Notes:

15 - indicates VI screening level exceeded

Screening levels are based on USEPA's VISL Calculator with 1.0E-05 additional cancer risk and a 1.0 Hazard Quotient for non-carcinogens

Table 2

Vapor Probe Results - East Bank and West Bank Locations
Vapor Intrusion Evaluation
Wausau Water Supply NPL Site
Wausau, Wisconsin

East Bank - March 2017	Date	Water Table Depth (ft bgs)	Vapor Probe Screen Depth (ft bgs)	Units	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride
E1 S (Non-res)	3/9/2017	15	8.5 - 9	ug/m3	1,300	9.6	6.3 U	2.0 U
E2 S	3/9/2017	25	8.5 - 9	ug/m3	77	1.6	0.79 U	0.26 U
E2 D	3/9/2017	25	19.5 - 20	ug/m3	120	33	28	0.51 U
E3 S (Non-res)	3/9/2017	20	8.5 - 9	ug/m3	130	76	6.1	0.10 U
E4 S	3/9/2017	28	8.5 - 9	ug/m3	38	0.21 U	0.32 U	0.10 U
E4 D	3/9/2017	28	21.5 - 22	ug/m3	190	21	13	0.26 U
E5 S	3/10/2017	25	8.5 - 9	ug/m3	100	0.99	0.32 U	0.10 U
E5 D	3/10/2017	25	21.5 - 22	ug/m3	160	8.6	0.51	0.10 U
E6 S	3/10/2017	25	8.5 - 9	ug/m3	69	1.8	0.32 U	0.10 U
E6 D	3/10/2017	25	21.5 - 22	ug/m3	750/680	27/26	7.4/7.0	0.68 U
E7 S	3/10/2017	26	8.5 - 9	ug/m3	W	W	W	W
E7 D	3/10/2017	26	21.5 - 22	ug/m3	96	7.2	0.35	0.10 U
E8 S	3/10/2017	26	8.5 - 9	ug/m3	25	0.43 U	0.63 U	0.20 U
E8 D	3/10/2017	26	21.5 - 22	ug/m3	160	17	0.63 U	0.20 U
E9 S	3/10/2017	24	8.5 - 9	ug/m3	160	0.43 U	0.63 U	0.20 U
E9 D	3/10/2017	24	21.5 - 22	ug/m3	170	25	1.2	0.10 U
Residential Screening Level (10-5 Additional Risk) (0.03 attenuation factor)				ug/m3	**1,400**	**70**	**--**	**56**
Small Industrial Screening Level (10-5 Additional Risk) (0.03 attenuation factor)				ug/m3	**5,840**	**290**	**--**	**930**

Table 2

Vapor Probe Results - East Bank and West Bank Locations
Vapor Intrusion Evaluation
Wausau Water Supply NPL Site
Wausau, Wisconsin

East Bank - August 2017	Date	Water Table Depth (ft bgs)	Vapor Probe Screen Depth (ft bgs)	Units	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride
E1 S (Non-res)	8/1/2017	15	8.5 - 9	ug/m3	1,700/1,900	24/23	3.4 U/1.2 J	2.7 U/0.74 U
E2 S	8/1/2017	25	8.5 - 9	ug/m3	43	0.75 U	0.95 U	0.74 U
E2 D	8/1/2017	25	19.5 - 20	ug/m3	51	46	39	0.74 U
E3S (Non-res)	8/1/2017	20	8.5 - 9	ug/m3	NA	NA	NA	NA
E4 S	8/1/2017	28	8.5 - 9	ug/m3	25	0.75 U	0.95 U	0.74 U
E4 D	8/1/2017	28	21.5 - 22	ug/m3	2.3 J	1.2 J	0.95 U	0.74 U
E5 S	8/1/2017	25	8.5 - 9	ug/m3	66/64	0.75 U/0.75 U	0.95 U/0.95 U	0.74 U/0.74 U
E5 D	8/1/2017	25	21.5 - 22	ug/m3	170	5.4	0.95 U	0.74 U
E6 S	8/1/2017	25	8.5 - 9	ug/m3	NA	NA	NA	NA
E6 D	8/1/2017	25	21.5 - 22	ug/m3	NA	NA	NA	NA
E7 S	8/1/2017	26	8.5 - 9	ug/m3	W	W	W	W
E7 D	8/1/2017	26	21.5 - 22	ug/m3	410	4.8	0.95 U	0.74 U
E8 S	8/1/2017	26	8.5 - 9	ug/m3	30	1.2 J	0.95 U	0.74 U
E8 D	8/1/2017	26	21.5 - 22	ug/m3	92	10	0.95 U	0.74 U
E9 S	8/1/2017	24	8.5 - 9	ug/m3	230	1.6 J	0.95 U	0.74 U
E9 D	8/1/2017	24	21.5 - 22	ug/m3	220	7.8	0.96 J	0.74 U
Non-industrial Screening Level (10-5 Additional Risk) (0.03 attenuation factor)				ug/m3	**1,400**	**70**	**--**	**56**
Small Industrial Screening Level (10-5 Additional Risk) (0.03 attenuation factor)				ug/m3	**5,840**	**290**	**--**	**930**

Notes:

NA - Probes E3, E6S, and E6D were removed by road construction prior to the August 2017 sampling event

W - Probe E7S could not be sampled during either sampling event due to water in the probe

Table 2

Vapor Probe Results - East Bank and West Bank Locations
Vapor Intrusion Evaluation
Wausau Water Supply NPL Site
Wausau, Wisconsin

West Bank - March 2017	Date	Water Table Depth (ft bgs)	Vapor Probe Screen Depth (ft bgs)	Units	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
W-1S (Indust)	3/13/2017	33	8.5 - 9	ug/m3	6.1	0.095 U	0.074 U	0.38 J	0.56
W-1D (Indust)	3/13/2017	33	29.5 - 30	ug/m3	6.4	0.095 U	0.074 U	0.49 J	0.12 J
W-2S (Indust)	3/13/2017	30	8.5 - 9	ug/m3	94	0.16 J	0.12 U	0.74 J	0.0778 J
W-2D (Indust)	3/13/2017	30	26.5 - 27	ug/m3	86	0.18 J	0.093 U	0.21 J	0.46 J
W-3S	3/14/2017	34	8.5 - 9	ug/m3	10	0.095 U	0.074 U	0.25 J	0.19 J
W-3D	3/14/2017	34	30.5 - 31	ug/m3	32	0.13 J	0.074 U	0.34 J	0.13 J
W-4S	3/14/2017	21	8.5 - 9	ug/m3	0.099 J	0.095 U	0.074 U	0.094 U	3.3
W-4D	3/14/2017	21	18.5 - 19	ug/m3	0.13 J	0.095 U	0.074 U	0.094 U	14
W-5S	3/14/2017	9	5.5 - 6	ug/m3	9.0	0.095 U	0.074 U	0.28 J	0.13 J
W-6S	3/14/2017	9.5	5.5 - 6	ug/m3	2.2	0.095 U	0.074 U	0.74	0.35 J
W-7S	3/14/2017	28	8.5 - 9	ug/m3	7.3	0.095 U	0.074 U	0.12 J	<0.073
W-7D	3/14/2017	28	24.5 - 25	ug/m3	1.8	0.095 U	0.074 U	0.10 J	0.10 J
Residential Screening Level (10-5 Additional Risk) (0.03 attenuation factor)				ug/m3	**70**	**--**	**57**	**127**	**43**
Large Industrial Screening Level (10-5 Additional Risk) (0.01 attenuation factor)				ug/m3	**880**	**--**	**2,800**	**2,050**	**540**

Table 2

Vapor Probe Results - East Bank and West Bank Locations
Vapor Intrusion Evaluation
Wausau Water Supply NPL Site
Wausau, Wisconsin

West Bank - August 2017	Date	Water Table Depth (ft bgs)	Vapor Probe Screen Depth (ft bgs)	Units	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
W-1S (Indust)	8/1/2017	33	8.5 - 9	ug/m3	0.77 J/0.75 U	0.95 U/0.95 U	0.74 U/0.74 U	0.94 U/0.94 U	0.73 U/0.73 U
W-1D (Indust)	8/1/2017	33	29.5 - 30	ug/m3	170	0.95 U	0.74 U	4.5 J	1.3 J
W-2S (Indust)	8/1/2017	30	8.5 - 9	ug/m3	160	0.95 U	0.74 U	0.94 U	0.73 U
W-2D (Indust)	8/1/2017	30	26.5 - 27	ug/m3	100	0.95 U	0.74 U	0.94 U	0.73 U
W-3S	8/1/2017	34	8.5 - 9	ug/m3	4.5	0.95 U	0.74 U	0.94 U	0.75 J
W-3D	8/1/2017	34	30.5 - 31	ug/m3	13	0.95 U	0.74 U	0.94 U	0.73 U
W-4S	8/1/2017	21	8.5 - 9	ug/m3	0.75 U/0.75 U	0.95 U/0.95 U	0.74 U/0.74 U	0.94 U/0.94 U	20/14
W-4D	8/1/2017	21	18.5 - 19	ug/m3	65	0.95 U	0.74 U	1.3 J	21
W-5S	8/1/2017	9	5.5 - 6	ug/m3	4.5	0.95 U	0.74 U	0.94 U	0.73 U
W-6S	8/1/2017	9.5	5.5 - 6	ug/m3	W	W	W	W	W
W-7S	8/1/2017	28	8.5 - 9	ug/m3	7.8	0.95 U	0.74 U	0.94 U	0.73 U
W-7D	8/1/2017	28	24.5 - 25	ug/m3	1.8 J	0.95 U	0.74 U	0.94 U	0.73 U
Non-industrial Screening Level (10-5 Additional Risk) (0.03 attenuation factor)				ug/m3	**70**	**--**	**57**	**127**	**43**
Large Industrial Screening Level (10-5 Additional Risk) (0.01 attenuation factor)				ug/m3	**880**	**--**	**2,800**	**2,050**	**540**

Notes:

W - Probe W6S could not be sampled during the August 2017 sampling event due to water in the probe

Screening levels are based on USEPA's VISL Calculator with a 10-05 target risk for carcinogens; and a 1.0 Hazard Quotient

Table 3

East Bank Subslab and Indoor Air Lab Results
Wausau Water Supply NPL Site
Wausau. Wisconsin

SUB-SLAB

(Bodenheimer)	Date	Sample Location	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
1901 N. 2nd St.	4/4/2017	Subslab	130	11	9.6	0.074 U
1901 N. 2nd St.	7/31/2017	Subslab	7.8	1.4 J	1.0 J	0.074 U
1901 N. 2nd St.	3/27/2018	Subslab	140	56	68	0.074 U
(Hang)						
1905 N. 2nd St.	5/15/2017	Subslab	160	0.18	0.095 U	0.074 U
1905 N. 2nd St.	3/28/2018	Subslab	220	**84**	3.2	0.074 U
(Westberg)						
1909 N. 2nd St.	5/15/2017	Subslab	47	0.40	0.095 U	0.074 U
1909 N. 2nd St.	7/31/2017	Subslab	57	0.86 J	0.095 U	0.074 U
1909 N. 2nd St.	3/27/2018	Subslab	100	8.6	0.095 U	0.074 U
(Viergutz)						
1915 N. 2nd St.	4/4/2017	Subslab	63	3.5	0.095 U	0.074 U
1915 N. 2nd St.	7/31/2017	Subslab	42	1.0 J	0.095 U	0.074 U
1915 N. 2nd St.	3/27/2018	Subslab	65	42	0.095 U	0.074 U
(Krause)						
1917 N. 2nd St.	4/4/2017	Subslab	110	12	0.52	0.086 J
1917 N. 2nd St.	5/15/2017	Subslab	68	12	0.095 U	0.074 U
1917 N. 2nd St.	7/31/2017	Subslab	49	3.3	0.095 U	0.074 U
1917 N. 2nd St.	3/27/2018	Subslab	76	**160**	2.8 J	0.074 U
Sub-slab Residential Screening Level (0.03 attenuation factor)			**1,400**	**70**	**--**	**57**

INDOOR AIR

(Bodenheimer)	Date	Sample Location	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
1901 N. 2nd St.	4/4/2017	Basement	0.15 J	0.075 U	0.095 U	0.074 U
1901 N. 2nd St.	7/31/2017	Basement	0.44 J	0.075 U	0.095 U	0.074 U
1901 N. 2nd St.	3/27/2018	Basement	0.38 J	0.15 J	0.095 U	0.074 U
(Hang)						
1905 N. 2nd St.	5/15/2017	1st Floor	0.14 J	0.075 U	0.095 U	<0.074
1905 N. 2nd St.	3/28/2018	1st Floor	0.11 J	0.075 U	0.095 U	0.074 U
(Westberg)						
1909 N. 2nd St.	5/15/2017	1st Floor	0.31 J	0.075 U	0.095 U	0.074 U
1909 N. 2nd St.	7/31/2017	1st Floor	0.28 J	0.075 U	0.095 U	0.074 U
1909 N. 2nd St.	3/27/2018	1st Floor	0.31 J	0.20 J	0.095 U	0.074 U
(Viergutz)						
1915 N. 2nd St.	4/4/2017	1st Floor	1.1	0.33	0.095 U	0.074 U
1915 N. 2nd St.	7/31/2017	1st Floor	0.24 J	0.075 U	0.095 U	0.074 U
1915 N. 2nd St.	3/27/2018	1st Floor	0.65	0.52	0.099 J	0.074 U
(Krause)						
1917 N. 2nd St.	4/4/2017	1st Floor	0.70	1.8	0.42	0.074 U
1917 N. 2nd St.	5/15/2017	1st Floor	0.28 J	0.14 J	0.095 U	0.074 U
1917 N. 2nd St.	7/31/2017	1st Floor	0.56	0.075 U	0.095 U	0.074 U
1917 N. 2nd St.	3/27/2018	1st Floor	0.65	0.86	0.40	0.074 U
(Krause)						
1917 N. 2nd St.	5/15/2017	Basement	1.2	**2.9**	0.68	0.074 U
1917 N. 2nd St.	7/31/2017	Basement	0.38 J	0.28	0.095 U	0.074 U
1917 N. 2nd St.	3/27/2018	Basement	0.99	1.6	0.75	0.074 U
Residential Indoor Air Action Level			**42**	**2.1**	**--**	**1.7**

Note: All units µg/m3

Table 3

East Bank Subslab and Indoor Air Lab Results
Wausau Water Supply NPL Site
Wausau. Wisconsin

SUB-SLAB

(Steffen)	Date	Sample Location	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
2108 N 3rd St.	3/27/2018	Subslab	370	**120**	42	0.074 U
(Helke)						
2103 N. 3rd St	4/25/2019	Subslab	1.1U	0.75U	0.95U	0.74U
2103 N. 3rd St	9/24/2019	Subslab	1.1	0.32U	0.40U	0.66U
Sub-slab Residential Screening Level (0.03 attenuation factor)			**1,400**	**70**	**--**	**57**

INDOOR AIR

(Steffen)	Date	Sample Location	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
2108 N 3rd St.	3/27/2018	1st Floor	2.1	0.83	0.16 J	0.074 U
2108 N. 3rd St.	4/25/2019	1st Floor	2.4	0.65	0.095U	0.074U
2108 N. 3rd St.	4/25/2019	Basement	3.4	0.71	0.095U	0.074U
(Helke)						
2103 N. 3rd St.	4/25/2019	1st Floor	1.7	0.38	0.095U	0.074U
2103 N. 3rd St.	9/24/2019	1st Floor	0.69	0.039 J	0.095U	0.074U
Residential Indoor Air Action Level			**42**	**2.1**	**--**	**1.7**

Commercial Properties

(Bridge Clinic)						
Bridge Comm. Clinic	4/4/2017	Subslab	3,000	58	7.6 U	5.9 U
Bridge Comm. Clinic	7/31/2017	Subslab	2,700	65	6.7 U	5.2 U
(D&J Rentals 200 E. Wausau Ave.)						
D&J Showroom	4/25/2019	Subslab	740	25	0.095U	0.074U
D&J South Storage	4/25/2019	Subslab	97	15	0.40 J	0.074U
D&J South Storage Dup.	4/25/2019	Subslab	100	16	1.6 J	0.074U
D&J Showroom	9/24/2019	Subslab	1,100	37	0.40U	0.66U
D&J South Storage	9/24/2019	Subslab	240	11	1.1 J	0.074U
D&J South Storage Dup	9/24/2019	Subslab	220	10	1.1 J	0.074U
Small Commercial Sub-slab Screening Level (0.03 attenuation factor)			**6,000**	**290**	**--**	**930**

(Bridge Clinic)						
Bridge Comm. Clinic	4/4/2017	Basement	16	0.44	0.095 U	0.074 U
Bridge Comm. Clinic	7/31/2017	Basement	2.1	0.34	0.095 U	0.074 U
(D&J Rentals 200 E. Wausau Ave.)						
D&J - Showroom	4/25/2019	Basement	0.68	0.098	0.95U	0.74U
D&J - Showroom	9/24/2019	Basement	2.2	0.088	0.04U	0.066U
Small Commercial Indoor Air Action Level			**180**	**8.8**	**--**	**28**

Note: All units µg/m3

Screening Levels and Action Levels are from Wisconsin DNR "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. Based on November 2017 U.S.EPA Regional Screening Levels.

Table 4

Summary of Property Owner Contacts and Sequence of Sub-slab and Indoor Air Sampling
Wausau Water Supply NPL Site
Wausau, Wisconsin

Sampling Event	Date	Properties Contacted to Request Access	Properties Sampled	Properties Not Responding or Declined Access
Round 1	4/4/2017	1901, 1905, 1909, 1915, and 1917 N. 2nd Street, Bridge Comm. Clinic	1901, 1915, and 1917 N. 2nd Street, Bridge Comm. Clinic	1905 and 1909 N. 2nd Street
Round 2	5/15/2017	1905, 1909, and 1917 N. 2nd Street	First sample from 1905 and 1909 N. 2nd St.. Second sample from 1917 N. 2nd St..	None
Round 3	7/31/2017	1901, 1905, 1909, 1915, and 1917 N. 2nd Street, Bridge Comm. Clinic	Second sample from 1901, 1909, 1915 N. 2nd St. and Bridge Comm. Clinic. Third sample from 1917 N. 2nd St.	1905 N. 2nd St.
Round 4	3/27/2018	1901, 1905, 1909, 1915, and 1917 N. 2nd, Bridge Comm. Clinic and 2108 N. 3rd St.	Second sample from 1905 N. 2nd, Third samples from 1901, 1909, 1915 N. 2nd St.. Fourth sample from 1917 N. 2nd. Plus first sample from 2108 N. 3rd St.	None
Round 5	4/25/2019	2103, 2105, 2106, 2108 N. 3rd St, Thrive Foodery, D&J Rentals	2108 N. 3rd (second sample), 2103 N. 3rd, D&J Rentals	No responses from 2105 N. 3rd and Thrive Foodery. 2106 N. 3rd refused access
Round 6	9/24/2019	2103, 2105, 2106, 2108 N. 3rd St, Thrive Foodery, D&J Rentals	Second samples from 2103 N. 3rd and D&J Rentals	No responses from 2105 N. 3rd and Thrive Foodery. 2106 N. 3rd refused access

Table 5

West Bank Sub-slab Vapor and Indoor Air Results
Wausau Water Supply NPL Site
Wausau, Wisconsin

Sub-slab Regal - March 2017	Date	Units	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
SS-1 (north side Building B)	3/13/2017	ug/m3	270	1.3 J	0.37 U	0.47 U	0.40 J
SS-2 (middle Building B)	3/13/2017	ug/m3	**9,400**	150	21 U	1,200	220
SS-3 (south side Building B)	3/13/2017	ug/m3	0.78	0.95 U	0.74 U	0.62	0.17 J
SS-4 (southeast side Building A)	3/13/2017	ug/m3	220	0.99 J	0.25 U	5.3	1.5
SS-5 (southeast side Building A)	3/13/2017	ug/m3	**4,800**	17 U	13 U	17 U	41 J
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			**880**	**--**	**2,800**	**2,000**	**530**

Indoor Air Regal - March 2017							
Indoor Air - Building B	3/13/2017	ug/m3	1.6	0.095 U	0.074 U	0.44 J	0.15 J
Indoor Air - Building A	3/13/2017	ug/m3	0.82	0.095 U	0.074 U	0.42 J	0.14 J
Industrial Indoor Air Action Level			**8.8**	**--**	**28**	**20**	**5.3**

Outdoor Air near Building B	3/13/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.41 J	0.093 J

Table 5

West Bank Sub-slab Vapor and Indoor Air Results
Wausau Water Supply NPL Site
Wausau, Wisconsin

Sub-slab Regal - August 2017	Date	Units	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
SS-1 (north side Building B)	8/1/2017	ug/m3	280	1.3 J	0.74 U	0.94 U	0.73 U
SS-2 (middle Building B)	8/1/2017	ug/m3	**15,000**	260	43 U	1,800	470
SS-3 (south side Building B)	8/1/2017	ug/m3	0.75 U	0.95 U	0.74 U	5.5	0.73 U
SS-4 (southeast Building A)	8/2/2017	ug/m3	9.4	0.95 U	0.74 U	0.94 U	0.73 U
SS-5 (southeast Building A)	8/1/2017	ug/m3	**4,900**	15 U	12 U	15 U	50 J
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			**880**	**--**	**2,800**	**2,000**	**530**

Indoor Air Regal - August 2017							
Indoor Air - Building B	8/1/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.41 J	0.15 J
Indoor Air - Building A	8/1/2017	ug/m3	0.17 J	0.095 U	0.074 U	0.45 J	0.14 J
Industrial Indoor Air Action Level			**8.8**	**--**	**28**	**20**	**5.3**
Outdoor Air near Building B	8/1/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.44 J	0.14 J

Notes:

4,800 - Result exceeded applicable screening level

J - Estimated value

Screening Levels and Action Levels are from Wisconsin DNR "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. Based on November 2017 U.S.EPA Regional Screening Levels.

Appendices

Appendix A

Laboratory Analytical Results Building Assessments

Memorandum

April 28, 2017

To:	Chuck Ahrens, GHD	Ref. No.:	003978
From:	Grant Anderson/sb/13	Tel:	(651) 639-0913

Subject: **Analytical Results and Reduced Data Validation**
Groundwater Sampling Event
Wausau Superfund – Wausau, Wisconsin
March and April 2017

1. Introduction

The following document details a reduced validation of analytical results for groundwater and air samples collected in support of the air and groundwater monitoring program at the Wausau Superfund Site in Wausau, Wisconsin in March and April, 2017. Groundwater samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica), located in North Canton, Ohio. Air samples were submitted to TestAmerica located in Knoxville, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services, Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spike samples, and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) Quality Assurance Project Plan (QAPP), Report 2, March 2011

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October 1999, United States Environmental Protection Agency (USEPA) 540/R 99/008

Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding times.

All groundwater samples were properly preserved and delivered on ice, and stored by the laboratory at the required temperature (0-6°C). Air samples were collected in summa canisters and delivered at room temperature.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. The LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern

and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with all compounds of interest. The percent recoveries and RPD values were within the laboratory control limits demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample, two field blank samples and three field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, a trip blank sample was submitted to the laboratory for volatile organic compound (VOC) analysis. All results were non-detect for the compounds of interest.

Field Blank Sample Analysis

To assess ambient conditions at the site and cleanliness of sample containers, two field blank samples were submitted for analysis, as identified in Table 1. All results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value.

The field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Tables 2A and 2B unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Tables 2A and 2B.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Tables 2A and 2B are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters Select VOCs	Comments
G-170309-RA-01	E-3S	air	03/09/17	12:35	X	
G-170309-RA-02	E-2S	air	03/09/17	13:18	X	
G-170309-RA-03	E-2D	air	03/09/17	13:18	X	
G-170309-RA-04	E-4S	air	03/09/17	14:35	X	
G-170309-RA-05	E-4D	air	03/09/17	14:38	X	
G-170309-RA-06	E-1S	air	03/09/17	15:17	X	
G-170310-RA-07	E-5S	air	03/10/17	8:37	X	
G-170310-RA-08	E-5D	air	03/10/17	8:37	X	
G-170310-RA-09	E-6S	air	03/10/17	9:30	X	
G-170310-RA-10	E-6D	air	03/10/17	9:29	X	
G-170310-RA-11	E-6D	air	03/10/17	9:29	X	duplicate (RA-10)
G-170310-RA-12	E-7D	air	03/10/17	10:23	X	
G-170310-RA-13	E-8S	air	03/10/17	11:10	X	
G-170310-RA-14	E-8D	air	03/10/17	11:10	X	
G-170310-RA-15	E-9S	air	03/10/17	12:00	X	
G-170310-RA-16	E-9D	air	03/10/17	12:05	X	
G-170313-RA-17	W-2S	air	03/13/17	16:59	X	
G-170313-RA-18	W-2D	air	03/13/17	16:59	X	
G-170313-RA-19	W-1S	air	03/13/17	17:50	X	
G-170313-RA-20	W-1D	air	03/13/17	17:42	X	
G-170314-RA-21	W-5S	air	03/14/17	9:34	X	
G-170314-RA-22	W-5D	air	03/14/17	9:45	X	
G-170314-RA-23	W-7S	air	03/14/17	10:27	X	field blank
G-170314-RA-24	W-7D	air	03/14/17	10:27	X	
G-170314-RA-25	W-4S	air	03/14/17	10:45	X	
G-170314-RA-26	W-4D	air	03/14/17	10:45	X	
G-170314-RA-27	W-3S	air	03/14/17	11:30	X	
G-170314-RA-28	W-3D	air	03/14/17	11:30	X	

Table 1

Sample Collection and Analysis Summary
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters Select VOCs	Comments
SS-170313-RA-01	SS-1 (North side of South Building) - Regal	air	03/13/17	14:36	X	
SS-170313-RA-02	SS-2 (Middle of South Building) - Regal	air	03/13/17	14:45	X	
SS-170313-RA-03	SS-3 (South Side of South Building) - Regal	air	03/13/17	14:50	X	
SS-170313-RA-04	SS-4 (Southwest of North Building) - Regal	air	03/13/17	15:52	X	
SS-170313-RA-05	SS-5 (East side of North Building) - Regal	air	03/13/17	16:04	X	
OA-170313-RA-01	Outdoor Air near South Building - Regal	air	03/13/17	11:45	X	
IA-170313-RA-01	Indoor Air - North Building - Regal	air	03/13/17	11:45	X	
IA-170313-RA-02	Indoor Air - South Building - Regal	air	03/13/17	11:50	X	
W-170306-RA-01	E-1	water	03/06/17	12:45	X	
W-170306-RA-02	E-9	water	03/06/17	14:30	X	
W-170306-RA-03	E-8	water	03/06/17	15:45	X	
W-170306-RA-04	E-7	water	03/06/17	17:30	X	
W-170307-RA-05	E-3	water	03/07/17	8:30	X	
W-170307-RA-06	E-3	water	03/07/17	8:30	X	duplicate (RA-05)
W-170307-RA-07	E-2	water	03/07/17	9:50	X	
W-170307-RA-08	E-4	water	03/07/17	12:45	X	
W-170307-RA-09	E-5	water	03/07/17	14:00	X	field blank
W-170307-RA-10	E-5	water	03/07/17	14:00	X	
W-170307-RA-11	E-6	water	03/07/17	15:20	X	
W-170308-RA-15	W-1	water	03/08/17	18:45	X	
W-170309-RA-16	W-4	water	03/09/17	9:00	X	
W-170309-RA-17	W-5	water	03/09/17	10:00	X	
W-170309-RA-18	W-6	water	03/09/17	10:35	X	
W-170309-RA-19	W-7	water	03/09/17	12:10	X	MS/MSD
W-170309-RA-20	W-3	water	03/09/17	13:30	X	
W-170309-RA-21	W-3	water	03/09/17	13:35	X	duplicate (RA-21)
W-170309-RA-22	W-2	water	03/09/17	13:45	X	field blank
W-170309-RA-23	W-2	water	03/09/17	15:35	X	
TRIP BLANK	lab	water	03/09/17	00:00	X	Trip Blank

Table 1

Sample Collection and Analysis Summary
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters Select VOCs	Comments
OA-170404-RA-02	Outdoor Air near Bridge Comm. clinic	air	04/04/17	11:10	X	
IA-170404-RA-03	Indoor Air Bridge Comm. Clinic	air	04/04/17	11:15	X	
IA-170404-RA-04	IA Basement- 1901 N 2nd St	air	04/04/17	16:40	X	
IA-170404-RA-05	IA Main Level-1917 N 2nd St	air	04/04/17	11:30	X	
IA-170404-RA-06	IA Main Level -1915 N 2nd St	air	04/04/17	15:50	X	
SS-170404-RA-06	SS-6 Bridge Comm. Clinic	air	04/04/17	14:25	X	
SS-170404-RA-07	SS-7 1901 N 2nd St	air	04/04/17	15:20	X	
SS-170404-RA-08	SS-8 1917 N 2nd St	air	04/04/17	16:48	X	
SS-170404-RA-09	SS-9 1915 N 2nd St	air	04/04/17	17:52	X	

Notes:

VOC - Volatile Organic Compounds
Select VOCs East = tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, vinyl chloride
Select VOCs West = trichloroethene, cis-1,2-dichlorothene, vinyl chloride, carbon tetrachloride, chloroform
MS/MSD - Matrix Spike/Matrix Spike Duplicate

Table 2A

Validated Analytical Results Summary - Water
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		**E-1**	**E-2**	**E-3**	**E-3**	**E-4**	**E-5**	**E-5**
Sample Name:		**W-170306-RA-01**	**W-170307-RA-07**	**W-170307-RA-05**	**W-170307-RA-06**	**W-170307-RA-08**	**W-170307-RA-10**	**W-170307-RA-09**
Sample Date:		**03/06/2017**	**03/07/2017**	**03/07/2017**	**03/07/2017**	**03/07/2017**	**03/07/2017**	**03/07/2017**
					Duplicate			**Field Blank**
Parameters	**Unit**							
Volatile Organic Compounds								
Carbon tetrachloride	µg/L	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	3.2	43	14	15	30	5.3	1.0 U
Tetrachloroethene	µg/L	2.4	4.9	6.2	6.1	11	6.0	1.0 U
Trichloroethene	µg/L	1.3	15	12	13	4.9	1.2	1.0 U
Vinyl chloride	µg/L	1.0 U	2.0 U	0.60 J	0.69 J	5.4	1.0 U	1.0 U

Table 2A

Validated Analytical Results Summary - Water
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		**E-6**	**E-7**	**E-8**	**E-9**	**W-1**	**W-2**	**W-2**
Sample Name:		**W-170307-RA-11**	**W-170306-RA-04**	**W-170306-RA-03**	**W-170306-RA-02**	**W-170308-RA-15**	**W-170309-RA-23**	**W-170309-RA-22**
Sample Date:		**03/07/2017**	**03/06/2017**	**03/06/2017**	**03/06/2017**	**03/08/2017**	**03/09/2017**	**03/09/2017**
								Field Blank
Parameters	**Unit**							
Volatile Organic Compounds								
Carbon tetrachloride	µg/L	--	--	--	--	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	--	--	--	--	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	7.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.51 J	1.0 U	1.0 U	--	--	--
Trichloroethene	µg/L	0.84 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0	1.0 U
Vinyl chloride	µg/L	1.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2A

Validated Analytical Results Summary - Water
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		**W-3**	**W-3**	**W-4**	**W-5**	**W-6**	**W-7**
Sample Name:		**W-170309-RA-20**	**W-170309-RA-21**	**W-170309-RA-16**	**W-170309-RA-17**	**W-170309-RA-18**	**W-170309-RA-19**
Sample Date:		**03/09/2017**	**03/09/2017**	**03/09/2017**	**03/09/2017**	**03/09/2017**	**03/09/2017**
			Duplicate				
Parameters	**Unit**						
Volatile Organic Compounds							
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	2.1	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	--	--	--	--	--	--
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Note:

U - Not detected at the associated reporting limit
J - Estimated concentration

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		E-1S	E-2D	E-2S	E-3S	E-4D	E-4S	E-5D	E-5S
Sample Name:		G-170309-RA-06	G-170309-RA-03	G-170309-RA-02	G-170309-RA-01	G-170309-RA-05	G-170309-RA-04	G-170310-RA-08	G-170310-RA-07
Sample Date:		03/09/2017	03/09/2017	03/09/2017	03/09/2017	03/09/2017	03/09/2017	03/10/2017	03/10/2017
Parameters	**Unit**								
Volatile Organic Compounds									
Carbon tetrachloride	ppbv	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	1.6 U	7.1	0.20 U	1.5	3.2	0.080 U	0.13	0.080 U
Tetrachloroethene	ppbv	190	18	11	19	29	5.6	23	15
Trichloroethene	ppbv	1.8	6.2	0.30	14	4.0	0.040 U	1.6	0.19
Vinyl chloride	ppbv	0.80 U	0.20 U	0.10 U	0.040 U	0.10 U	0.040 U	0.040 U	0.040 U
Carbon tetrachloride	µg/m3	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	6.3 U	28	0.79 U	6.1	13	0.32 U	0.51	0.32 U
Tetrachloroethene	µg/m3	1300	120	77	130	190	38	160	100
Trichloroethene	µg/m3	9.6	33	1.6	76	21	0.21 U	8.6	0.99
Vinyl chloride	µg/m3	2.0 U	0.51 U	0.26 U	0.10 U	0.26 U	0.10 U	0.10 U	0.10 U

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		E-6D	E-6D	E-6S	E-7D	E-8D	E-8S	E-9D	E-9S
Sample Name:		G-170310-RA-10	G-170310-RA-11	G-170310-RA-09	G-170310-RA-12	G-170310-RA-14	G-170310-RA-13	G-170310-RA-16	G-170310-RA-15
Sample Date:		03/10/2017	03/10/2017	03/10/2017	03/10/2017	03/10/2017	03/10/2017	03/10/2017	03/10/2017
			Duplicate						
Parameters	**Unit**								
Volatile Organic Compounds									
Carbon tetrachloride	ppbv	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	1.9	1.8	0.080 U	0.089	0.16 U	0.16 U	0.30	0.16 U
Tetrachloroethene	ppbv	110	100	10	14	23	3.7	25	24
Trichloroethene	ppbv	5.1	4.8	0.34	1.3	3.1	0.080 U	2.5	0.080 U
Vinyl chloride	ppbv	0.27 U	0.27 U	0.040 U	0.040 U	0.080 U	0.080 U	0.040 U	0.080 U
Carbon tetrachloride	µg/m3	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	7.4	7.0	0.32 U	0.35	0.63 U	0.63 U	1.2	0.63 U
Tetrachloroethene	µg/m3	750	680	69	96	160	25	170	160
Trichloroethene	µg/m3	27	26	1.8	7.2	17	0.43 U	13	0.43 U
Vinyl chloride	µg/m3	0.68 U	0.68 U	0.10 U	0.10 U	0.20 U	0.20 U	0.10 U	0.20 U

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		**Basement - 1901 N 2nd St**	**Indoor Air Bridge Comm. Clinic**	**Main level - 1915 N 2nd St**	**Main level - 1917 N 2nd St**	**Outdoor Air near East Bank**
Sample Name:		**IA-170404-RA-04**	**IA-170404-RA-03**	**IA-170404-RA-06**	**IA-170404-RA-05**	**OA-170404-RA-02**
Sample Date:		**04/04/2017**	**04/04/2017**	**04/04/2017**	**04/04/2017**	**04/04/2017**
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	0.080 U	0.080 U	0.080 U	0.10	0.080 U
Tetrachloroethene	ppbv	0.023 J	2.3	0.16	0.10	0.030 J
Trichloroethene	ppbv	0.040 U	0.081	0.061	0.33	0.040 U
Vinyl chloride	ppbv	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
Carbon tetrachloride	µg/m3	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	0.32 U	0.32 U	0.32 U	0.42	0.32 U
Tetrachloroethene	µg/m3	0.15 J	16	1.1	0.70	0.20 J
Trichloroethene	µg/m3	0.21 U	0.44	0.33	1.8	0.21 U
Vinyl chloride	µg/m3	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		Outdoor Air near South Building - Regal	Indoor Air - North Building	Indoor Air - South Building - Regal	SS-1 - Regal	SS-2 - Regal
Sample Name:		OA-170313-RA-01	IA-170313-RA-01	IA-170313-RA-02	SS-170313-RA-01	SS-170313-RA-02
Sample Date:		03/14/2017	03/14/2017	03/14/2017	03/13/2017	03/13/2017
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	0.066 J	0.067 J	0.071 J	0.40 U	190
Chloroform (Trichloromethane)	ppbv	0.019 J	0.029 J	0.030 J	0.083 J	45
cis-1,2-Dichloroethene	ppbv	0.080 U	0.080 U	0.080 U	0.32 J	37
Tetrachloroethene	ppbv	--	--	--	--	--
Trichloroethene	ppbv	0.040 U	0.15	0.30	51	1800
Vinyl chloride	ppbv	0.040 U	0.040 U	0.040 U	0.20 U	12 U
Carbon tetrachloride	µg/m3	0.41 J	0.42 J	0.44 J	2.5 U	1200
Chloroform (Trichloromethane)	µg/m3	0.093 J	0.14 J	0.15 J	0.40 J	220
cis-1,2-Dichloroethene	µg/m3	0.32 U	0.32 U	0.32 U	1.3 J	150
Tetrachloroethene	µg/m3	--	--	--	--	--
Trichloroethene	µg/m3	0.21 U	0.82	1.6	270	9400
Vinyl chloride	µg/m3	0.10 U	0.10 U	0.10 U	0.51 U	30 U

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		SS-3 - Regal	SS-4 - Regal	SS-5 - Regal	SS-6 - Bridge Comm. Clinic	SS-7 - 1901 N. 2nd St.	SS-8 - 1917 N. 2nd St.
Sample Name:		SS-170313-RA-03	SS-170313-RA-04	SS-170313-RA-05	SS-170404-RA-06	SS-170404-RA-07	SS-170404-RA-08
Sample Date:		03/13/2017	03/13/2017	03/13/2017	04/04/2017	04/04/2017	04/04/2017
Parameters	**Unit**						
Volatile Organic Compounds							
Carbon tetrachloride	ppbv	0.098	0.84	14 U	--	--	--
Chloroform (Trichloromethane)	ppbv	0.034 J	0.30	8.5 J	--	--	--
cis-1,2-Dichloroethene	ppbv	0.080 U	0.25 J	14 U	6.4 U	2.4	0.13
Tetrachloroethene	ppbv	--	--	--	440	19	16
Trichloroethene	ppbv	0.14	40	900	11	2.0	2.2
Vinyl chloride	ppbv	0.040 U	0.13 U	7.1 U	3.2 U	0.040 U	0.034 J
Carbon tetrachloride	µg/m3	0.62	5.3	89 U	--	--	--
Chloroform (Trichloromethane)	µg/m3	0.17 J	1.5	41 J	--	--	--
cis-1,2-Dichloroethene	µg/m3	0.32 U	0.99 J	56 U	25 U	9.6	0.52
Tetrachloroethene	µg/m3	--	--	--	3000	130	110
Trichloroethene	µg/m3	0.78	220	4800	58	11	12
Vinyl chloride	µg/m3	0.10 U	0.34 U	18 U	8.1 U	0.10 U	0.086 J

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		**SS-9 - 1915 N. 2nd St.**	**W-1D**	**W-1S**	**W-2D**	**W-2S**	**W-3D**
Sample Name:		**SS-170404-RA-09**	**G-170313-RA-20**	**G-170313-RA-19**	**G-170313-RA-18**	**G-170313-RA-17**	**G-170314-RA-28**
Sample Date:		**04/04/2017**	**03/13/2017**	**03/13/2017**	**03/13/2017**	**03/13/2017**	**03/14/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
Carbon tetrachloride	ppbv	--	0.078 J	0.060 J	0.034 J	0.12 J	0.054 J
Chloroform (Trichloromethane)	ppbv	--	0.025 J	0.12	0.095 J	0.078 J	0.027 J
cis-1,2-Dichloroethene	ppbv	0.080 U	0.080 U	0.080 U	0.045 J	0.040 J	0.032 J
Tetrachloroethene	ppbv	9.3	--	--	--	--	--
Trichloroethene	ppbv	0.64	1.2	1.1	16	17	5.9
Vinyl chloride	ppbv	0.040 U	0.040 U	0.040 U	0.050 U	0.067 U	0.040 U
Carbon tetrachloride	µg/m3	--	0.49 J	0.38 J	0.21 J	0.74 J	0.034 J
Chloroform (Trichloromethane)	µg/m3	--	0.12 J	0.56	0.46 J	0.38 J	0.13 J
cis-1,2-Dichloroethene	µg/m3	0.32 U	0.32 U	0.32 U	0.18 J	0.16 J	0.13 J
Tetrachloroethene	µg/m3	63	--	--	--	--	--
Trichloroethene	µg/m3	3.5	6.4	6.1	86	94	32
Vinyl chloride	µg/m3	0.10 U	0.10 U	0.10 U	0.13 U	0.17 U	0.10 U

Table 2B

Validated Analytical Results Summary - Air
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

Location ID:		W-3S	W-4D	W-4S	W-5D	W-5S	W-7D	W-7S
Sample Name:		G-170314-RA-27	G-170314-RA-26	G-170314-RA-25	G-170314-RA-22	G-170314-RA-21	G-170314-RA-24	G-170314-RA-23
Sample Date:		03/14/2017	03/14/2017	03/14/2017	03/14/2017	03/14/2017	03/14/2017	03/14/2017
Parameters	**Unit**							
Volatile Organic Compounds								
Carbon tetrachloride	ppbv	0.040 J	0.080 U	0.080 U	0.12	0.045 J	0.017 J	0.020 J
Chloroform (Trichloromethane)	ppbv	0.038 J	2.9	0.68	0.073 J	0.026 J	0.020 J	0.080 U
cis-1,2-Dichloroethene	ppbv	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U
Tetrachloroethene	ppbv	--	--	--	--	--	--	--
Trichloroethene	ppbv	1.9	0.025 J	0.018 J	0.41	1.7	0.33	1.4
Vinyl chloride	ppbv	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
Carbon tetrachloride	µg/m3	0.25 J	0.50 U	0.50 U	0.74	0.28 J	0.10 J	0.12 J
Chloroform (Trichloromethane)	µg/m3	0.19 J	14	3.3	0.35 J	0.13 J	0.10 J	0.39 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Tetrachloroethene	µg/m3	--	--	--	--	--	--	--
Trichloroethene	µg/m3	10	0.13 J	0.099 J	2.2	9.0	1.8	7.3
Vinyl chloride	µg/m3	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U

Note:

U - Not detected at the associated reporting limit
J - Estimated concentration

Table 3

Analytical Methods and Holding Time Criteria
Groundwater Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March and April 2017

			Holding Time	
Parameter	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Volatile Organic Compounds (VOC)	SW-846 8260B	Water	-	14
Volatile Organic Compounds (VOC)	TO-15	Air	-	30

Notes:

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TO-15 - "Compendium of Methods for the Determination of Toxic Organic Compounds in Air", EPA-625/R-96/010b, January 1999.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-7423-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Diane Lange

Authorized for release by:
3/27/2017 10:01:38 AM
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-7423-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-7423-1

Comments
No additional comments.

Receipt
The samples were received on 3/13/2017 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page. Additionally, the canisters were checked down to the method detection limit (MDL) for the targeted analytes.

Method(s) TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: Although the BFB is flagged as outside control limits for TO-14A on batch 140-9474, the results are within limits for TO-15, which is required for this project.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Client Sample ID: G-170309-RA-01 — Lab Sample ID: 140-7423-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.5		0.080		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	17	E	0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	14		0.040		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	19		0.20		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	6.1		0.32		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	120	E	0.54		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	76		0.21		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	130		1.4		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170309-RA-02 — Lab Sample ID: 140-7423-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	11		0.20		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.30		0.10		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	77		1.4		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.6		0.54		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170309-RA-03 — Lab Sample ID: 140-7423-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	7.1		0.40		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	18		0.40		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	6.2		0.20		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	28		1.6		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	120		2.7		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	33		1.1		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170309-RA-04 — Lab Sample ID: 140-7423-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.6		0.080		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	38		0.54		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170309-RA-05 — Lab Sample ID: 140-7423-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.2		0.20		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	29		0.20		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.0		0.10		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	13		0.79		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	190		1.4		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	21		0.54		ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Client Sample ID: G-170309-RA-06 — Lab Sample ID: 140-7423-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	190		1.6		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.80		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1300		11		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.6		4.3		ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Client Sample ID: G-170309-RA-01

Lab Sample ID: 140-7423-1

Date Collected: 03/09/17 12:35
Matrix: Air
Date Received: 03/13/17 11:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.5		0.080		ppb v/v			03/16/17 15:22	1
Tetrachloroethene	17	E	0.080		ppb v/v			03/16/17 15:22	1
Trichloroethene	14		0.040		ppb v/v			03/16/17 15:22	1
Vinyl chloride	ND		0.040		ppb v/v			03/16/17 15:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	6.1		0.32		ug/m3			03/16/17 15:22	1
Tetrachloroethene	120	E	0.54		ug/m3			03/16/17 15:22	1
Trichloroethene	76		0.21		ug/m3			03/16/17 15:22	1
Vinyl chloride	ND		0.10		ug/m3			03/16/17 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*03/16/17 15:22*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	19		0.20		ppb v/v			03/17/17 05:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	130		1.4		ug/m3			03/17/17 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*03/17/17 05:42*	*1*

Client Sample ID: G-170309-RA-02

Lab Sample ID: 140-7423-2

Date Collected: 03/09/17 13:18
Matrix: Air
Date Received: 03/13/17 11:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.20		ppb v/v			03/17/17 06:31	1
Tetrachloroethene	11		0.20		ppb v/v			03/17/17 06:31	1
Trichloroethene	0.30		0.10		ppb v/v			03/17/17 06:31	1
Vinyl chloride	ND		0.10		ppb v/v			03/17/17 06:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.79		ug/m3			03/17/17 06:31	1
Tetrachloroethene	77		1.4		ug/m3			03/17/17 06:31	1
Trichloroethene	1.6		0.54		ug/m3			03/17/17 06:31	1
Vinyl chloride	ND		0.26		ug/m3			03/17/17 06:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*03/17/17 06:31*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Client Sample ID: G-170309-RA-03

Lab Sample ID: 140-7423-3
Matrix: Air

Date Collected: 03/09/17 13:18
Date Received: 03/13/17 11:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**7.1**		0.40		ppb v/v			03/18/17 06:27	1
Tetrachloroethene	**18**		0.40		ppb v/v			03/18/17 06:27	1
Trichloroethene	**6.2**		0.20		ppb v/v			03/18/17 06:27	1
Vinyl chloride	ND		0.20		ppb v/v			03/18/17 06:27	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**28**		1.6		ug/m3			03/18/17 06:27	1
Tetrachloroethene	**120**		2.7		ug/m3			03/18/17 06:27	1
Trichloroethene	**33**		1.1		ug/m3			03/18/17 06:27	1
Vinyl chloride	ND		0.51		ug/m3			03/18/17 06:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*60 - 140*		*03/18/17 06:27*	*1*

Client Sample ID: G-170309-RA-04

Lab Sample ID: 140-7423-4
Matrix: Air

Date Collected: 03/09/17 14:38
Date Received: 03/13/17 11:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/18/17 07:23	1
Tetrachloroethene	**5.6**		0.080		ppb v/v			03/18/17 07:23	1
Trichloroethene	ND		0.040		ppb v/v			03/18/17 07:23	1
Vinyl chloride	ND		0.040		ppb v/v			03/18/17 07:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/18/17 07:23	1
Tetrachloroethene	**38**		0.54		ug/m3			03/18/17 07:23	1
Trichloroethene	ND		0.21		ug/m3			03/18/17 07:23	1
Vinyl chloride	ND		0.10		ug/m3			03/18/17 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*60 - 140*		*03/18/17 07:23*	*1*

Client Sample ID: G-170309-RA-05

Lab Sample ID: 140-7423-5
Matrix: Air

Date Collected: 03/09/17 14:38
Date Received: 03/13/17 11:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3.2**		0.20		ppb v/v			03/16/17 18:43	1
Tetrachloroethene	**29**		0.20		ppb v/v			03/16/17 18:43	1
Trichloroethene	**4.0**		0.10		ppb v/v			03/16/17 18:43	1
Vinyl chloride	ND		0.10		ppb v/v			03/16/17 18:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**13**		0.79		ug/m3			03/16/17 18:43	1
Tetrachloroethene	**190**		1.4		ug/m3			03/16/17 18:43	1
Trichloroethene	**21**		0.54		ug/m3			03/16/17 18:43	1
Vinyl chloride	ND		0.26		ug/m3			03/16/17 18:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140		03/16/17 18:43	1

Client Sample ID: G-170309-RA-06

Lab Sample ID: 140-7423-6

Date Collected: 03/09/17 15:17
Matrix: Air
Date Received: 03/13/17 11:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.6		ppb v/v			03/16/17 19:31	1
Tetrachloroethene	**190**		1.6		ppb v/v			03/16/17 19:31	1
Trichloroethene	**1.8**		0.80		ppb v/v			03/16/17 19:31	1
Vinyl chloride	ND		0.80		ppb v/v			03/16/17 19:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		6.3		ug/m3			03/16/17 19:31	1
Tetrachloroethene	**1300**		11		ug/m3			03/16/17 19:31	1
Trichloroethene	**9.6**		4.3		ug/m3			03/16/17 19:31	1
Vinyl chloride	ND		2.0		ug/m3			03/16/17 19:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		60 - 140		03/16/17 19:31	1

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**							
140-7423-1 - DL	G-170309-RA-01	102							
140-7423-1	G-170309-RA-01	93							
140-7423-2	G-170309-RA-02	99							
140-7423-3	G-170309-RA-03	112							
140-7423-4	G-170309-RA-04	89							
140-7423-5	G-170309-RA-05	95							
140-7423-6	G-170309-RA-06	105							
LCS 140-9474/1006	Lab Control Sample	103							
LCS 140-9475/1002	Lab Control Sample	105							
MB 140-9474/8	Method Blank	101							
MB 140-9475/18	Method Blank	100							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-9474/8
Matrix: Air
Analysis Batch: 9474

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/16/17 14:27	1
Tetrachloroethene	ND		0.080		ppb v/v			03/16/17 14:27	1
Trichloroethene	ND		0.040		ppb v/v			03/16/17 14:27	1
Vinyl chloride	ND		0.040		ppb v/v			03/16/17 14:27	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/16/17 14:27	1
Tetrachloroethene	ND		0.54		ug/m3			03/16/17 14:27	1
Trichloroethene	ND		0.21		ug/m3			03/16/17 14:27	1
Vinyl chloride	ND		0.10		ug/m3			03/16/17 14:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*03/16/17 14:27*	*1*

Lab Sample ID: LCS 140-9474/1006
Matrix: Air
Analysis Batch: 9474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.59		ppb v/v		129	70 - 130
Tetrachloroethene	2.00	1.98		ppb v/v		99	70 - 130
Trichloroethene	2.00	2.15		ppb v/v		107	70 - 130
Vinyl chloride	2.00	2.56		ppb v/v		128	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	10.3		ug/m3		129	70 - 130
Tetrachloroethene	14	13.4		ug/m3		99	70 - 130
Trichloroethene	11	11.6		ug/m3		107	70 - 130
Vinyl chloride	5.1	6.54		ug/m3		128	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*

Lab Sample ID: MB 140-9475/18
Matrix: Air
Analysis Batch: 9475

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/18/17 02:23	1
Tetrachloroethene	ND		0.080		ppb v/v			03/18/17 02:23	1
Trichloroethene	ND		0.040		ppb v/v			03/18/17 02:23	1
Vinyl chloride	ND		0.040		ppb v/v			03/18/17 02:23	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/18/17 02:23	1
Tetrachloroethene	ND		0.54		ug/m3			03/18/17 02:23	1
Trichloroethene	ND		0.21		ug/m3			03/18/17 02:23	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-9475/18
Matrix: Air
Analysis Batch: 9475

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10		ug/m3			03/18/17 02:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*03/18/17 02:23*	*1*

Lab Sample ID: LCS 140-9475/1002
Matrix: Air
Analysis Batch: 9475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.48		ppb v/v		124	70 - 130
Tetrachloroethene	2.00	1.90		ppb v/v		95	70 - 130
Trichloroethene	2.00	2.13		ppb v/v		106	70 - 130
Vinyl chloride	2.00	2.38		ppb v/v		119	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	9.85		ug/m3		124	70 - 130
Tetrachloroethene	14	12.9		ug/m3		95	70 - 130
Trichloroethene	11	11.4		ug/m3		106	70 - 130
Vinyl chloride	5.1	6.08		ug/m3		119	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Air - GC/MS VOA

Analysis Batch: 9474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7423-1	G-170309-RA-01	Total/NA	Air	TO 15 LL	
140-7423-1 - DL	G-170309-RA-01	Total/NA	Air	TO 15 LL	
140-7423-2	G-170309-RA-02	Total/NA	Air	TO 15 LL	
140-7423-5	G-170309-RA-05	Total/NA	Air	TO 15 LL	
140-7423-6	G-170309-RA-06	Total/NA	Air	TO 15 LL	
MB 140-9474/8	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9474/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 9475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7423-3	G-170309-RA-03	Total/NA	Air	TO 15 LL	
140-7423-4	G-170309-RA-04	Total/NA	Air	TO 15 LL	
MB 140-9475/18	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9475/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Client Sample ID: G-170309-RA-01 — Lab Sample ID: 140-7423-1

Date Collected: 03/09/17 12:35 — **Matrix: Air**
Date Received: 03/13/17 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 15:22	AFB	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL	DL	1	200 mL	500 mL	9474	03/17/17 05:42	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170309-RA-02 — Lab Sample ID: 140-7423-2

Date Collected: 03/09/17 13:18 — **Matrix: Air**
Date Received: 03/13/17 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	200 mL	500 mL	9474	03/17/17 06:31	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170309-RA-03 — Lab Sample ID: 140-7423-3

Date Collected: 03/09/17 13:18 — **Matrix: Air**
Date Received: 03/13/17 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9475	03/18/17 06:27	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170309-RA-04 — Lab Sample ID: 140-7423-4

Date Collected: 03/09/17 14:38 — **Matrix: Air**
Date Received: 03/13/17 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9475	03/18/17 07:23	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170309-RA-05 — Lab Sample ID: 140-7423-5

Date Collected: 03/09/17 14:38 — **Matrix: Air**
Date Received: 03/13/17 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	200 mL	500 mL	9474	03/16/17 18:43	AFB	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Client Sample ID: G-170309-RA-06 — Lab Sample ID: 140-7423-6

Date Collected: 03/09/17 15:17 — **Matrix: Air**
Date Received: 03/13/17 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	25 mL	500 mL	9474	03/16/17 19:31	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-9474/8

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 14:27	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-9475/18

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9475	03/18/17 02:23	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-9474/1006

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 11:52	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-9475/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9475	03/17/17 12:53	AFB	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7423-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7423-1	G-170309-RA-01	Air	03/09/17 12:35	03/13/17 11:30
140-7423-2	G-170309-RA-02	Air	03/09/17 13:18	03/13/17 11:30
140-7423-3	G-170309-RA-03	Air	03/09/17 13:18	03/13/17 11:30
140-7423-4	G-170309-RA-04	Air	03/09/17 14:38	03/13/17 11:30
140-7423-5	G-170309-RA-05	Air	03/09/17 14:38	03/13/17 11:30
140-7423-6	G-170309-RA-06	Air	03/09/17 15:17	03/13/17 11:30

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW #114
City/State/Zip St. Paul MN 55112
Phone: 651 639 0913
FAX:
Project Name: Wausau
Site/location: 3978
PO #

Project Manager:
Phone:
Site Contact:
TAL Contact: G Anderson

Sampled By: R Garnot

1 of 1 COCs

140-7423 Chain of Custody

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
G-170308-RA-01	3/8/17	1209	1235	-28.5	-5	10933	09673	X											
G-170308-RA-02		1248	1318	-29	-5	10110	11148	X											
G-170308-RA-03		1248	1318	-27	-5	11129	10770	X											
G-170308-RA-04		1357	1438	-29	-5	10927	10850	X											
G-170308-RA-05		1357	1438	-5	-5	10892	10223	X											
G-170308-RA-06		1447	1517	-30	-6	09956	10248	X											

Sampled by : R Garnot

Temperature (Fahrenheit)	Interior	Ambient	
Start		25°	
Stop		25°	

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
Fedex 2 day, trk# 8092 2836 8603
No custody seal, KW 3/13/17

Special Instructions/QC Requirements & Comments:
Analyze PCE, TCE, c12DCE, vinyl chloride only

Canisters Shipped by:	Date/Time: 3/8/17 1600	Canisters Received by: 3/13/17 1130
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

6 cans
6 KR

Loc: 140
7423

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400377 9 PM Instructions:

Sample Receiving Associate: KU Date: 3/17/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 3/14/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-7423-a-1	09673	7248	B	6	-5.2	1345	
AFB	140-7423-a-2	11148	7248	B	6	-4.3	1346	
AFB	140-7423-a-3	10770	7267	B	6	-5.7	1347	
AFB	140-7423-a-4	10806	7267	B	6	-4.5	1348	
AFB	140-7423-a-5	10223	7267	B	6	-5.5	1349	
AFB	140-7423-a-6	10248	7267	B	6	-4.8	1350	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7248-1

SDG No.:

Client Sample ID: 10026 | Lab Sample ID: 140-7248-7

Matrix: Air | Lab File ID: JB26lot7248.D

Analysis Method: TO 15 LL | Date Collected: 02/25/2017 12:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2017 15:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8842 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND	*	0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND	*	0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7248-1

SDG No.:

Client Sample ID: 10026 | Lab Sample ID: 140-7248-7

Matrix: Air | Lab File ID: JB26lot7248.D

Analysis Method: TO 15 LL | Date Collected: 02/25/2017 12:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2017 15:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8842 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7248-1
SDG No.:
Client Sample ID: 10026 | Lab Sample ID: 140-7248-7
Matrix: Air | Lab File ID: JB26lot7248.D
Analysis Method: TO 15 LL | Date Collected: 02/25/2017 12:15
Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2017 15:42
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 8842 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND	*	0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7248-1

SDG No.:

Client Sample ID: 10026 Lab Sample ID: 140-7248-7

Matrix: Air Lab File ID: JB26lot7248.D

Analysis Method: TO 15 LL Date Collected: 02/25/2017 12:15

Sample wt/vol: 500(mL) Date Analyzed: 02/26/2017 15:42

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8842 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170222-4121.b\JB26lot7248.D				
Lims ID:	140-7248-A-7				
Client ID:	10026				
Sample Type:	Client				
Inject. Date:	26-Feb-2017 15:42:30	ALS Bottle#:	15	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004121-006				
Misc. Info.:	10026				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170222-4121.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	27-Feb-2017 08:56:44	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				
First Level Reviewer: barlozhetskayaa		Date:	26-Feb-2017 16:23:28		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.568	8.569	-0.001	99	343755	4.00	
* 2 1,4-Difluorobenzene	114	10.768	10.769	-0.001	94	1447087	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.545	15.546	-0.001	87	1171530	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.192	17.192	0.000	96	624271	3.37	
31 Methylene Chloride	84	6.051	6.057	-0.006	94	7487	0.0739	

Reagents:

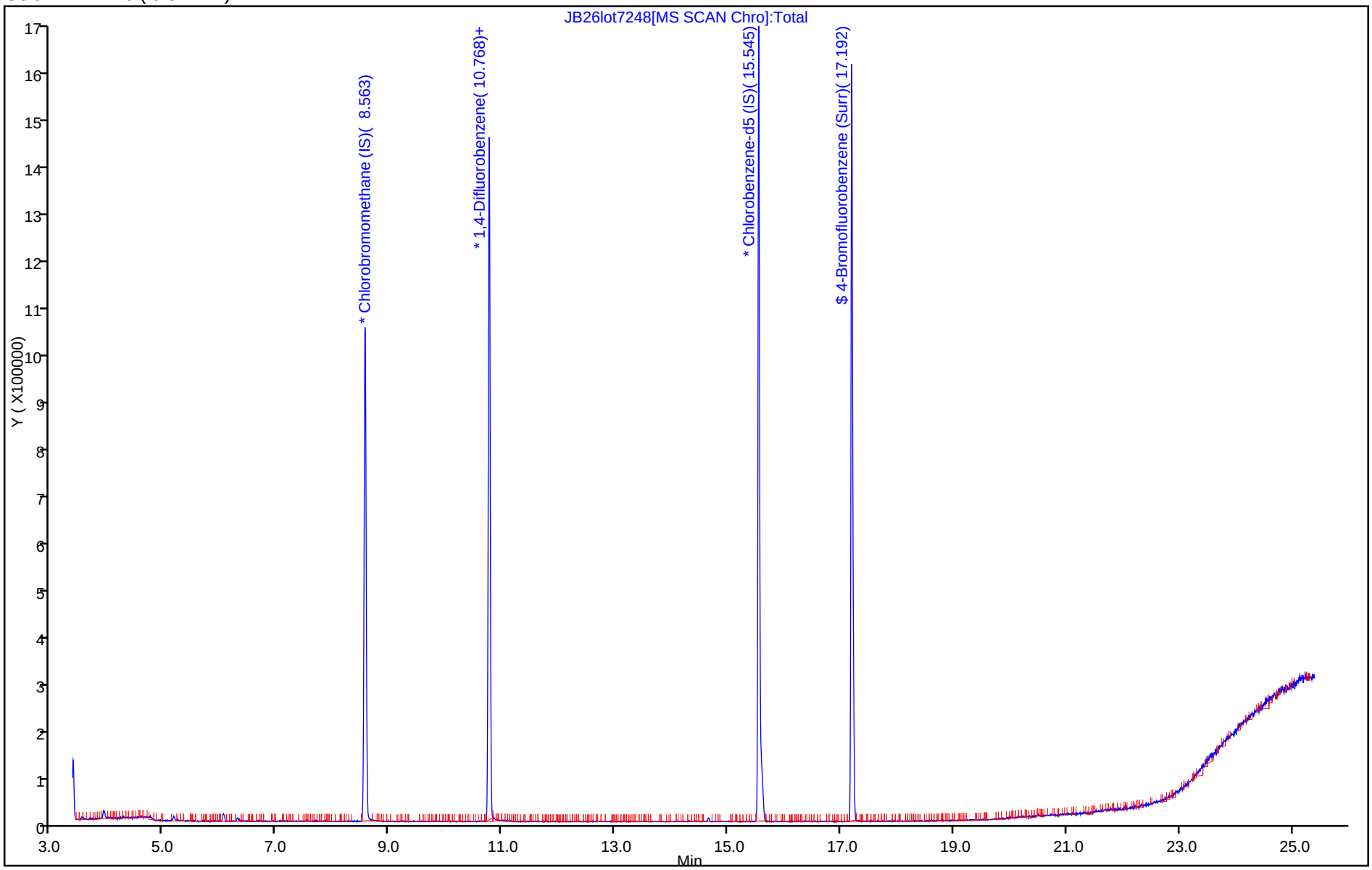
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 27-Feb-2017 08:56:51 Chrom Revision: 2.2 22-Feb-2017 11:38:16

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170222-4121.b\JB26lot7248.D				
Injection Date:	26-Feb-2017 15:42:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-7248-A-7	Lab Sample ID:	140-7248-7	Worklist Smp#:	6
Client ID:	10026				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 | Lab Sample ID: 140-7267-12

Matrix: Air | Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8957 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7267-1
SDG No.:
Client Sample ID: 10798
Lab Sample ID: 140-7267-12
Matrix: Air
Lab File ID: JC01LOT7267.D
Analysis Method: TO 15 LL
Date Collected: 02/28/2017 15:55
Sample wt/vol: 500(mL)
Date Analyzed: 03/02/2017 09:50
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 8957
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 | Lab Sample ID: 140-7267-12

Matrix: Air | Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8957 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 Lab Sample ID: 140-7267-12

Matrix: Air Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\JC01LOT7267.D
Lims ID: 140-7267-A-12
Client ID: 10798
Sample Type: Client
Inject. Date: 02-Mar-2017 09:50:30 ALS Bottle#: 1 Worklist Smp#: 29
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004160-029
Misc. Info.: 10798
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 02-Mar-2017 10:48:58 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: tajh Date: 02-Mar-2017 10:48:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.557	8.575	-0.018	99	318413	4.00	
* 2 1,4-Difluorobenzene	114	10.758	10.770	-0.012	95	1432888	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.540	15.547	-0.007	86	1142564	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.186	17.193	-0.007	95	578609	3.20	
13 Butane	43	4.039	4.040	-0.001	94	6239	0.0325	
24 Isopropyl alcohol	45	5.238	5.229	0.009	89	12792	0.0833	
31 Methylene Chloride	84	6.045	6.063	-0.018	95	8751	0.0933	

Reagents:

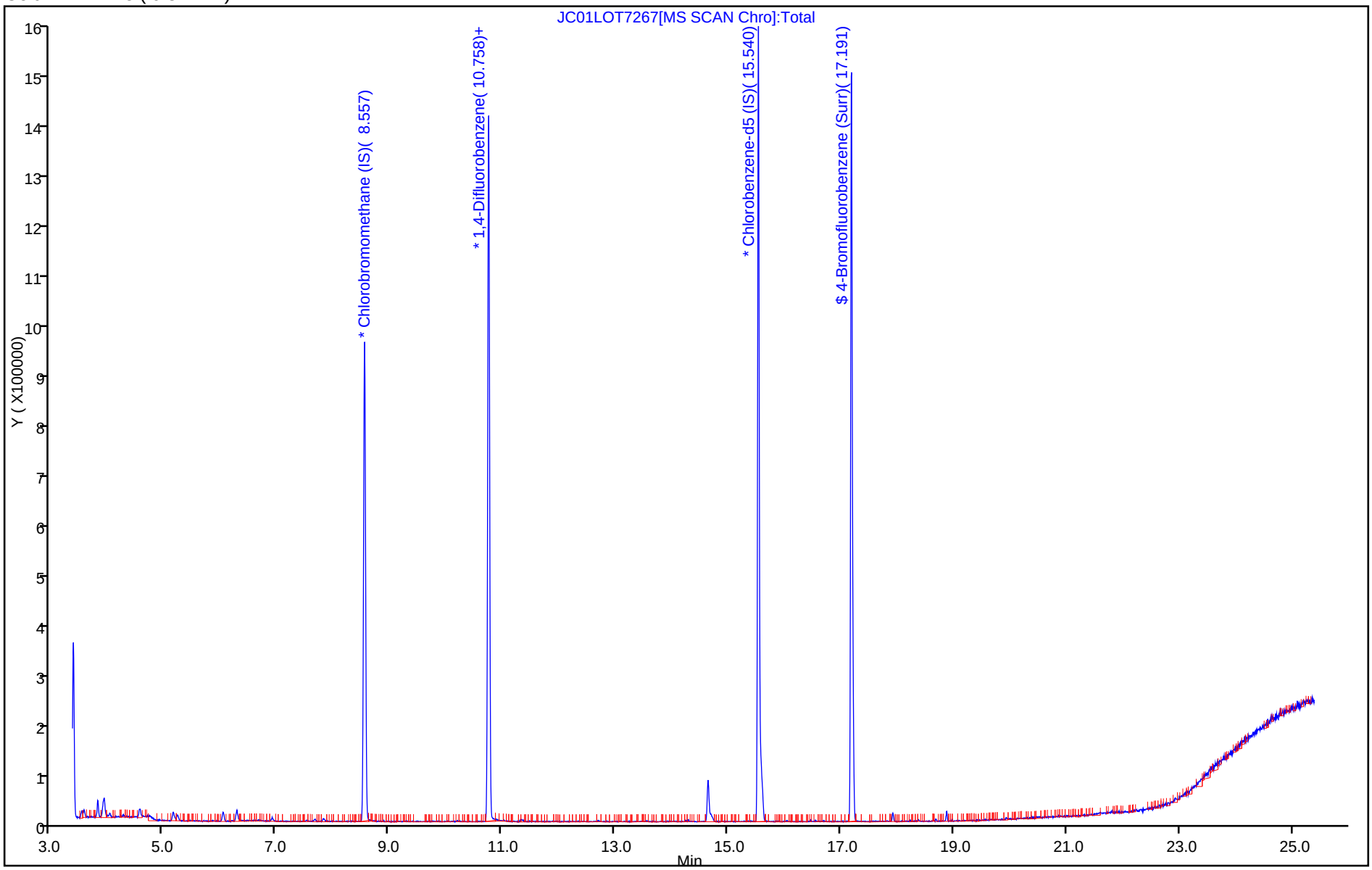
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 02-Mar-2017 10:49:50 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\JC01LOT7267.D				
Injection Date:	02-Mar-2017 09:50:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-7267-A-12	Lab Sample ID:	140-7267-12	Worklist Smp#:	29
Client ID:	10798				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-7429-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Diane Lange

Authorized for release by:
3/27/2017 11:16:49 AM
Diana Lange, Project Management Assistant II
diane.lange@testamericainc.com

Designee for

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-7429-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-7429-1

Comments
No additional comments.

Receipt
The samples were received on 3/14/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Receipt Exceptions

The Canister ID for the following sample did not match the information listed on the Chain-of-Custody (COC): G-170310-RA-11 (140-7429-5). The container label accurately lists the Canister ID as 09722, while the COC lists the canister ID incorrectly as 10704. The Canister ID was updated per the container label.

Air - GC/MS VOA
This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page. Additionally, the canisters were checked down to the method detection limit (MDL) for the targeted analytes.

Method(s) TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: Although the BFB is flagged as outside control limits for TO-14A on batch 140-9474, the results are within limits for TO-15, which is required for this project.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-07 — Lab Sample ID: 140-7429-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	15		0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.19		0.040		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	100		0.54		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.99		0.21		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-08 — Lab Sample ID: 140-7429-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.13		0.080		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	19	E	0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.6		0.040		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	23		0.20		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.51		0.32		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	130	E	0.54		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	8.6		0.21		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	160		1.4		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-09 — Lab Sample ID: 140-7429-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	10		0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.34		0.040		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	69		0.54		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.21		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-10 — Lab Sample ID: 140-7429-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.9		0.53		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	110		0.53		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	5.1		0.27		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	7.4		2.1		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	750		3.6		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	27		1.4		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-11 — Lab Sample ID: 140-7429-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.8		0.53		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	100		0.53		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.8		0.27		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	7.0		2.1		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	680		3.6		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	26		1.4		ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-12 — Lab Sample ID: 140-7429-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.089		0.080		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	14		0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.3		0.040		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.35		0.32		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	96		0.54		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	7.2		0.21		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-13 — Lab Sample ID: 140-7429-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	3.7		0.16		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	25		1.1		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-14 — Lab Sample ID: 140-7429-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	23		0.16		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	3.1		0.080		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	160		1.1		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	17		0.43		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-15 — Lab Sample ID: 140-7429-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	24		0.16		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	160		1.1		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170310-RA-16 — Lab Sample ID: 140-7429-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.30		0.080		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	20	E	0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.5		0.040		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	25		0.20		ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.2		0.32		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	130	E	0.54		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	13		0.21		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	170		1.4		ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-07

Lab Sample ID: 140-7429-1

Date Collected: 03/10/17 08:37
Matrix: Air
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/16/17 20:24	1
Tetrachloroethene	**15**		0.080		ppb v/v			03/16/17 20:24	1
Trichloroethene	**0.19**		0.040		ppb v/v			03/16/17 20:24	1
Vinyl chloride	ND		0.040		ppb v/v			03/16/17 20:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/16/17 20:24	1
Tetrachloroethene	**100**		0.54		ug/m3			03/16/17 20:24	1
Trichloroethene	**0.99**		0.21		ug/m3			03/16/17 20:24	1
Vinyl chloride	ND		0.10		ug/m3			03/16/17 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*60 - 140*		*03/16/17 20:24*	*1*

Client Sample ID: G-170310-RA-08

Lab Sample ID: 140-7429-2

Date Collected: 03/10/17 08:37
Matrix: Air
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.13**		0.080		ppb v/v			03/16/17 21:17	1
Tetrachloroethene	**19**	**E**	0.080		ppb v/v			03/16/17 21:17	1
Trichloroethene	**1.6**		0.040		ppb v/v			03/16/17 21:17	1
Vinyl chloride	ND		0.040		ppb v/v			03/16/17 21:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.51**		0.32		ug/m3			03/16/17 21:17	1
Tetrachloroethene	**130**	**E**	0.54		ug/m3			03/16/17 21:17	1
Trichloroethene	**8.6**		0.21		ug/m3			03/16/17 21:17	1
Vinyl chloride	ND		0.10		ug/m3			03/16/17 21:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*03/16/17 21:17*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**23**		0.20		ppb v/v			03/18/17 03:12	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**160**		1.4		ug/m3			03/18/17 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*03/18/17 03:12*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-09

Lab Sample ID: 140-7429-3
Matrix: Air

Date Collected: 03/10/17 09:30
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/16/17 22:10	1
Tetrachloroethene	**10**		0.080		ppb v/v			03/16/17 22:10	1
Trichloroethene	**0.34**		0.040		ppb v/v			03/16/17 22:10	1
Vinyl chloride	ND		0.040		ppb v/v			03/16/17 22:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/16/17 22:10	1
Tetrachloroethene	**69**		0.54		ug/m3			03/16/17 22:10	1
Trichloroethene	**1.8**		0.21		ug/m3			03/16/17 22:10	1
Vinyl chloride	ND		0.10		ug/m3			03/16/17 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*60 - 140*		*03/16/17 22:10*	*1*

Client Sample ID: G-170310-RA-10

Lab Sample ID: 140-7429-4
Matrix: Air

Date Collected: 03/10/17 09:29
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.9**		0.53		ppb v/v			03/16/17 22:57	1
Tetrachloroethene	**110**		0.53		ppb v/v			03/16/17 22:57	1
Trichloroethene	**5.1**		0.27		ppb v/v			03/16/17 22:57	1
Vinyl chloride	ND		0.27		ppb v/v			03/16/17 22:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**7.4**		2.1		ug/m3			03/16/17 22:57	1
Tetrachloroethene	**750**		3.6		ug/m3			03/16/17 22:57	1
Trichloroethene	**27**		1.4		ug/m3			03/16/17 22:57	1
Vinyl chloride	ND		0.68		ug/m3			03/16/17 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*03/16/17 22:57*	*1*

Client Sample ID: G-170310-RA-11

Lab Sample ID: 140-7429-5
Matrix: Air

Date Collected: 03/10/17 09:27
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.8**		0.53		ppb v/v			03/16/17 23:45	1
Tetrachloroethene	**100**		0.53		ppb v/v			03/16/17 23:45	1
Trichloroethene	**4.8**		0.27		ppb v/v			03/16/17 23:45	1
Vinyl chloride	ND		0.27		ppb v/v			03/16/17 23:45	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**7.0**		2.1		ug/m3			03/16/17 23:45	1
Tetrachloroethene	**680**		3.6		ug/m3			03/16/17 23:45	1
Trichloroethene	**26**		1.4		ug/m3			03/16/17 23:45	1
Vinyl chloride	ND		0.68		ug/m3			03/16/17 23:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		60 - 140		03/16/17 23:45	1

Client Sample ID: G-170310-RA-12 — Lab Sample ID: 140-7429-6

Date Collected: 03/10/17 10:23 — **Matrix: Air**
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.089		0.080		ppb v/v			03/17/17 00:38	1
Tetrachloroethene	14		0.080		ppb v/v			03/17/17 00:38	1
Trichloroethene	1.3		0.040		ppb v/v			03/17/17 00:38	1
Vinyl chloride	ND		0.040		ppb v/v			03/17/17 00:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.35		0.32		ug/m3			03/17/17 00:38	1
Tetrachloroethene	96		0.54		ug/m3			03/17/17 00:38	1
Trichloroethene	7.2		0.21		ug/m3			03/17/17 00:38	1
Vinyl chloride	ND		0.10		ug/m3			03/17/17 00:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		60 - 140		03/17/17 00:38	1

Client Sample ID: G-170310-RA-13 — Lab Sample ID: 140-7429-7

Date Collected: 03/10/17 11:10 — **Matrix: Air**
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.16		ppb v/v			03/18/17 04:51	1
Tetrachloroethene	3.7		0.16		ppb v/v			03/18/17 04:51	1
Trichloroethene	ND		0.080		ppb v/v			03/18/17 04:51	1
Vinyl chloride	ND		0.080		ppb v/v			03/18/17 04:51	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.63		ug/m3			03/18/17 04:51	1
Tetrachloroethene	25		1.1		ug/m3			03/18/17 04:51	1
Trichloroethene	ND		0.43		ug/m3			03/18/17 04:51	1
Vinyl chloride	ND		0.20		ug/m3			03/18/17 04:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140		03/18/17 04:51	1

Client Sample ID: G-170310-RA-14 — Lab Sample ID: 140-7429-8

Date Collected: 03/10/17 11:10 — **Matrix: Air**
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.16		ppb v/v			03/17/17 02:20	1
Tetrachloroethene	23		0.16		ppb v/v			03/17/17 02:20	1
Trichloroethene	3.1		0.080		ppb v/v			03/17/17 02:20	1
Vinyl chloride	ND		0.080		ppb v/v			03/17/17 02:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.63		ug/m3			03/17/17 02:20	1

Client Sample ID: G-170310-RA-14

Lab Sample ID: 140-7429-8
Matrix: Air

Date Collected: 03/10/17 11:10
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**160**		1.1		ug/m3			03/17/17 02:20	1
Trichloroethene	**17**		0.43		ug/m3			03/17/17 02:20	1
Vinyl chloride	ND		0.20		ug/m3			03/17/17 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*03/17/17 02:20*	*1*

Client Sample ID: G-170310-RA-15

Lab Sample ID: 140-7429-9
Matrix: Air

Date Collected: 03/10/17 12:00
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.16		ppb v/v			03/17/17 03:10	1
Tetrachloroethene	**24**		0.16		ppb v/v			03/17/17 03:10	1
Trichloroethene	ND		0.080		ppb v/v			03/17/17 03:10	1
Vinyl chloride	ND		0.080		ppb v/v			03/17/17 03:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.63		ug/m3			03/17/17 03:10	1
Tetrachloroethene	**160**		1.1		ug/m3			03/17/17 03:10	1
Trichloroethene	ND		0.43		ug/m3			03/17/17 03:10	1
Vinyl chloride	ND		0.20		ug/m3			03/17/17 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*03/17/17 03:10*	*1*

Client Sample ID: G-170310-RA-16

Lab Sample ID: 140-7429-10
Matrix: Air

Date Collected: 03/10/17 12:05
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.30**		0.080		ppb v/v			03/17/17 04:52	1
Tetrachloroethene	**20**	**E**	0.080		ppb v/v			03/17/17 04:52	1
Trichloroethene	**2.5**		0.040		ppb v/v			03/17/17 04:52	1
Vinyl chloride	ND		0.040		ppb v/v			03/17/17 04:52	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.2**		0.32		ug/m3			03/17/17 04:52	1
Tetrachloroethene	**130**	**E**	0.54		ug/m3			03/17/17 04:52	1
Trichloroethene	**13**		0.21		ug/m3			03/17/17 04:52	1
Vinyl chloride	ND		0.10		ug/m3			03/17/17 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*03/17/17 04:52*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-16

Lab Sample ID: 140-7429-10

Date Collected: 03/10/17 12:05
Matrix: Air
Date Received: 03/14/17 09:45
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	25		0.20		ppb v/v			03/18/17 05:40	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	170		1.4		ug/m3			03/18/17 05:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*03/18/17 05:40*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-7429-1	G-170310-RA-07	90						
140-7429-2	G-170310-RA-08	91						
140-7429-2 - DL	G-170310-RA-08	97						
140-7429-3	G-170310-RA-09	89						
140-7429-4	G-170310-RA-10	107						
140-7429-5	G-170310-RA-11	107						
140-7429-6	G-170310-RA-12	93						
140-7429-7	G-170310-RA-13	100						
140-7429-8	G-170310-RA-14	96						
140-7429-9	G-170310-RA-15	96						
140-7429-10	G-170310-RA-16	94						
140-7429-10 - DL	G-170310-RA-16	99						
LCS 140-9474/1006	Lab Control Sample	103						
LCS 140-9475/1002	Lab Control Sample	105						
MB 140-9474/8	Method Blank	101						
MB 140-9475/18	Method Blank	100						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-9474/8
Matrix: Air
Analysis Batch: 9474

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/16/17 14:27	1
Tetrachloroethene	ND		0.080		ppb v/v			03/16/17 14:27	1
Trichloroethene	ND		0.040		ppb v/v			03/16/17 14:27	1
Vinyl chloride	ND		0.040		ppb v/v			03/16/17 14:27	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/16/17 14:27	1
Tetrachloroethene	ND		0.54		ug/m3			03/16/17 14:27	1
Trichloroethene	ND		0.21		ug/m3			03/16/17 14:27	1
Vinyl chloride	ND		0.10		ug/m3			03/16/17 14:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*03/16/17 14:27*	*1*

Lab Sample ID: LCS 140-9474/1006
Matrix: Air
Analysis Batch: 9474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.59		ppb v/v		129	70 - 130
Tetrachloroethene	2.00	1.98		ppb v/v		99	70 - 130
Trichloroethene	2.00	2.15		ppb v/v		107	70 - 130
Vinyl chloride	2.00	2.56		ppb v/v		128	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	10.3		ug/m3		129	70 - 130
Tetrachloroethene	14	13.4		ug/m3		99	70 - 130
Trichloroethene	11	11.6		ug/m3		107	70 - 130
Vinyl chloride	5.1	6.54		ug/m3		128	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*

Lab Sample ID: MB 140-9475/18
Matrix: Air
Analysis Batch: 9475

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080		ppb v/v			03/18/17 02:23	1
Tetrachloroethene	ND		0.080		ppb v/v			03/18/17 02:23	1
Trichloroethene	ND		0.040		ppb v/v			03/18/17 02:23	1
Vinyl chloride	ND		0.040		ppb v/v			03/18/17 02:23	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32		ug/m3			03/18/17 02:23	1
Tetrachloroethene	ND		0.54		ug/m3			03/18/17 02:23	1
Trichloroethene	ND		0.21		ug/m3			03/18/17 02:23	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-9475/18
Matrix: Air
Analysis Batch: 9475

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10		ug/m3			03/18/17 02:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*03/18/17 02:23*	*1*

Lab Sample ID: LCS 140-9475/1002
Matrix: Air
Analysis Batch: 9475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.48		ppb v/v		124	70 - 130
Tetrachloroethene	2.00	1.90		ppb v/v		95	70 - 130
Trichloroethene	2.00	2.13		ppb v/v		106	70 - 130
Vinyl chloride	2.00	2.38		ppb v/v		119	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	9.85		ug/m3		124	70 - 130
Tetrachloroethene	14	12.9		ug/m3		95	70 - 130
Trichloroethene	11	11.4		ug/m3		106	70 - 130
Vinyl chloride	5.1	6.08		ug/m3		119	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Air - GC/MS VOA

Analysis Batch: 9474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7429-1	G-170310-RA-07	Total/NA	Air	TO 15 LL	
140-7429-2	G-170310-RA-08	Total/NA	Air	TO 15 LL	
140-7429-3	G-170310-RA-09	Total/NA	Air	TO 15 LL	
140-7429-4	G-170310-RA-10	Total/NA	Air	TO 15 LL	
140-7429-5	G-170310-RA-11	Total/NA	Air	TO 15 LL	
140-7429-6	G-170310-RA-12	Total/NA	Air	TO 15 LL	
140-7429-8	G-170310-RA-14	Total/NA	Air	TO 15 LL	
140-7429-9	G-170310-RA-15	Total/NA	Air	TO 15 LL	
140-7429-10	G-170310-RA-16	Total/NA	Air	TO 15 LL	
MB 140-9474/8	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9474/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 9475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7429-2 - DL	G-170310-RA-08	Total/NA	Air	TO 15 LL	
140-7429-7	G-170310-RA-13	Total/NA	Air	TO 15 LL	
140-7429-10 - DL	G-170310-RA-16	Total/NA	Air	TO 15 LL	
MB 140-9475/18	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9475/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-07 — Lab Sample ID: 140-7429-1

Date Collected: 03/10/17 08:37 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 20:24	AFB	TAL KNX
	Instrument ID:	MR								

Client Sample ID: G-170310-RA-08 — Lab Sample ID: 140-7429-2

Date Collected: 03/10/17 08:37 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 21:17	AFB	TAL KNX
	Instrument ID:	MR								
Total/NA	Analysis	TO 15 LL	DL	1	200 mL	500 mL	9475	03/18/17 03:12	AFB	TAL KNX
	Instrument ID:	MR								

Client Sample ID: G-170310-RA-09 — Lab Sample ID: 140-7429-3

Date Collected: 03/10/17 09:30 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 22:10	AFB	TAL KNX
	Instrument ID:	MR								

Client Sample ID: G-170310-RA-10 — Lab Sample ID: 140-7429-4

Date Collected: 03/10/17 09:29 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	75 mL	500 mL	9474	03/16/17 22:57	AFB	TAL KNX
	Instrument ID:	MR								

Client Sample ID: G-170310-RA-11 — Lab Sample ID: 140-7429-5

Date Collected: 03/10/17 09:27 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	75 mL	500 mL	9474	03/16/17 23:45	AFB	TAL KNX
	Instrument ID:	MR								

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: G-170310-RA-12 — Lab Sample ID: 140-7429-6

Date Collected: 03/10/17 10:23 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/17/17 00:38	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170310-RA-13 — Lab Sample ID: 140-7429-7

Date Collected: 03/10/17 11:10 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	250 mL	500 mL	9475	03/18/17 04:51	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170310-RA-14 — Lab Sample ID: 140-7429-8

Date Collected: 03/10/17 11:10 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	250 mL	500 mL	9474	03/17/17 02:20	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170310-RA-15 — Lab Sample ID: 140-7429-9

Date Collected: 03/10/17 12:00 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	250 mL	500 mL	9474	03/17/17 03:10	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170310-RA-16 — Lab Sample ID: 140-7429-10

Date Collected: 03/10/17 12:05 — **Matrix: Air**
Date Received: 03/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/17/17 04:52	AFB	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL	DL	1	200 mL	500 mL	9475	03/18/17 05:40	AFB	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Client Sample ID: Method Blank — Lab Sample ID: MB 140-9474/8

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 14:27	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-9475/18

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9475	03/18/17 02:23	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-9474/1006

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9474	03/16/17 11:52	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-9475/1002

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9475	03/17/17 12:53	AFB	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7429-1	G-170310-RA-07	Air	03/10/17 08:37	03/14/17 09:45
140-7429-2	G-170310-RA-08	Air	03/10/17 08:37	03/14/17 09:45
140-7429-3	G-170310-RA-09	Air	03/10/17 09:30	03/14/17 09:45
140-7429-4	G-170310-RA-10	Air	03/10/17 09:29	03/14/17 09:45
140-7429-5	G-170310-RA-11	Air	03/10/17 09:27	03/14/17 09:45
140-7429-6	G-170310-RA-12	Air	03/10/17 10:23	03/14/17 09:45
140-7429-7	G-170310-RA-13	Air	03/10/17 11:10	03/14/17 09:45
140-7429-8	G-170310-RA-14	Air	03/10/17 11:10	03/14/17 09:45
140-7429-9	G-170310-RA-15	Air	03/10/17 12:00	03/14/17 09:45
140-7429-10	G-170310-RA-16	Air	03/10/17 12:05	03/14/17 09:45

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: G4D
Address: 1801 Old Highway 8 NW
City/State/Zip St. Paul MN 55112
Phone: 651-639-0913
FAX:
Project Name: Vaugan
Site/location: 3978
PO #

Project Manager:
Phone:
Site Contact:
TAL Contact: G Anderson

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: RAamot

1 of 2 COCs

140-7429 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
G-170310-RA-07	3/10/17	810	837	-29	-5	10613	10514	X											
G-170310-RA-08	↓	810	837	-29	-5	11114	10554	X											
G-170310-RA-09	↓	857	930	-30	-5	10673	10482	X											
G-170310-RA-10	↓	857	929	-30	-5	11091	10704	X											
G-170310-RA-11	↓	857	927	-29	-5	11516	10704	X											

Sampled by : RAamot

Temperature (Fahrenheit)

	Interior	Ambient	
Start		10°	
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Received @ ambient, 2 boxes
Fedex 2 day, trk ~~#~~ 8092 2830 8588 8007 1574 0511

No custody seal
KW 3/14/17

Special Instructions/QC Requirements & Comments:
~~PCA~~ PCE, TCE, c12DCE, vinyl chloride only

Canisters Shipped by: [signature]	Date/Time: 3/10/17 1300	Canisters Received by: [signature] 3/14/17 0945
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

12 cans
12 KR

3/27/2017

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW
City/State/Zip St Paul
Phone: 651-639-0913
FAX:
Project Name: Wausau
Site/location: 3968
PO #

Project Manager:
Phone:
Site Contact:
TAL Contact: G. Anderson

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: RAamot

2 of 2 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
G-170310-RA-12	3/10/17	956	1023	-30	-5	10893	10042	X											
G-170310-RA-13		1091	1110	-30	-5	09889	10764	X											
G-170310-RA-14		1091	1110	-30	-5	10883	09979	X											
G-170310-RA-15		1135	1200	-29	-5	10619	11167	X											
G-170310-RA-16		1135	1205	-29	-5	10677	10179	X											

Sampled by : Ryan Aamot

Temperature (Fahrenheit)	Interior	Ambient
Start		10°
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Special Instructions/QC Requirements & Comments: PCE, TCE, c12DCE, vinyl chloride only

Canisters Shipped by:	Date/Time: 3/10/17 1300	Canisters Received by: 3/14/17 0945
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

Loc: 140
7429

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ Containers, Broken
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?	✓			☐ Containers, Broken
6. Were samples received in appropriate containers?	✓			☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)		✓		☑ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?	✓			☐ Sampler Not Listed on COC
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ Residual Chlorine
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

7. Sample G-170310-RA-11 is in can 09722.

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14003779 PM Instructions:

Sample Receiving Associate: [signature] Date: 3/14/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 3/15/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
seg	140-7429-A-1	10514	7268	B	6	-2.7	1243	
seg	140-7429-A-2	10554	7268	B	6	-3.3	1243	
seg	140-7429-A-3	10482	7268	B	6	-1.6	1244	
seg	140-7429-A-4	10704	7268	B	6	-3.0	1244	
seg	140-7429-A-5	09722	7268	B	6	-4.1	1244	
seg	140-7429-A-6	10042	7268	B	6	-3.6	1300	
seg	140-7429-A-7	10764	7268	B	6	-3.4	1300	
seg	140-7429-A-8	09979	7267	B	6	-3.2	1302	
seg	140-7429-A-9	11167	7268	B	6	-3.0	1303	
seg	140-7429-A-10	10179	7267	B	6	0.0	1303	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 | Lab Sample ID: 140-7267-12

Matrix: Air | Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8957 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7267-1
SDG No.:
Client Sample ID: 10798
Lab Sample ID: 140-7267-12
Matrix: Air
Lab File ID: JC01LOT7267.D
Analysis Method: TO 15 LL
Date Collected: 02/28/2017 15:55
Sample wt/vol: 500(mL)
Date Analyzed: 03/02/2017 09:50
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 8957
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 | Lab Sample ID: 140-7267-12

Matrix: Air | Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8957 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 Lab Sample ID: 140-7267-12

Matrix: Air Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\JC01LOT7267.D
Lims ID: 140-7267-A-12
Client ID: 10798
Sample Type: Client
Inject. Date: 02-Mar-2017 09:50:30 ALS Bottle#: 1 Worklist Smp#: 29
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004160-029
Misc. Info.: 10798
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 02-Mar-2017 10:48:58 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: tajh Date: 02-Mar-2017 10:48:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.557	8.575	-0.018	99	318413	4.00	
* 2 1,4-Difluorobenzene	114	10.758	10.770	-0.012	95	1432888	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.540	15.547	-0.007	86	1142564	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.186	17.193	-0.007	95	578609	3.20	
13 Butane	43	4.039	4.040	-0.001	94	6239	0.0325	
24 Isopropyl alcohol	45	5.238	5.229	0.009	89	12792	0.0833	
31 Methylene Chloride	84	6.045	6.063	-0.018	95	8751	0.0933	

Reagents:

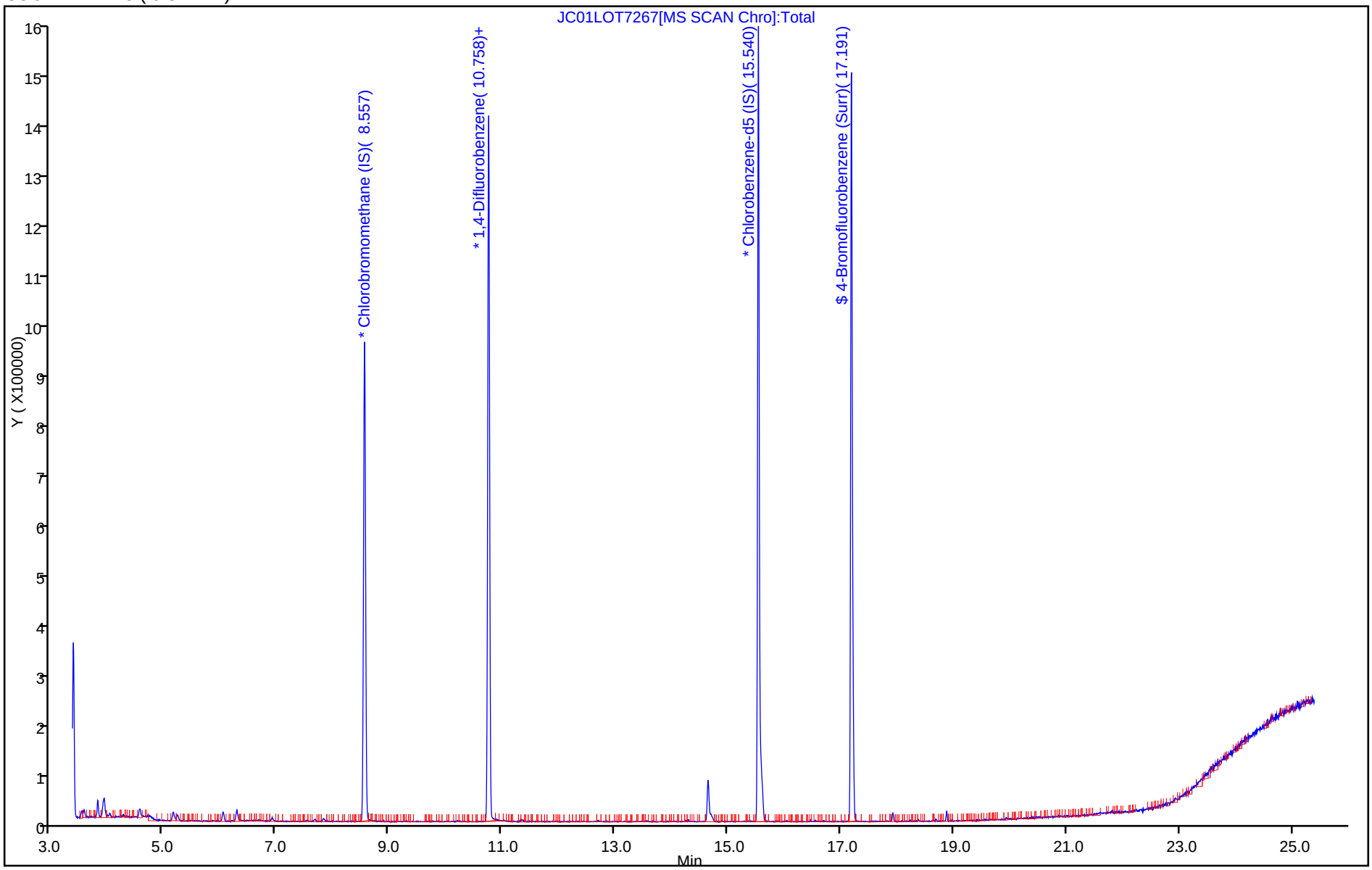
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 02-Mar-2017 10:49:50 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\JC01LOT7267.D				
Injection Date:	02-Mar-2017 09:50:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-7267-A-12	Lab Sample ID:	140-7267-12	Worklist Smp#:	29
Client ID:	10798				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7268-1

SDG No.:

Client Sample ID: 09767 | Lab Sample ID: 140-7268-10

Matrix: Air | Lab File ID: LOT7268.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 12:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND	*	0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7268-1

SDG No.:

Client Sample ID: 09767 | Lab Sample ID: 140-7268-10

Matrix: Air | Lab File ID: LOT7268.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 12:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND	*	0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7268-1

SDG No.:

Client Sample ID: 09767 | Lab Sample ID: 140-7268-10

Matrix: Air | Lab File ID: LOT7268.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 12:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7268-1

SDG No.:

Client Sample ID: 09767 Lab Sample ID: 140-7268-10

Matrix: Air Lab File ID: LOT7268.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:35

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2017 12:22

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8987 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170228-4171.b\LOT7268.D
Lims ID: 140-7268-A-10
Client ID: 09767
Sample Type: Client
Inject. Date: 02-Mar-2017 12:22:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004171-004
Misc. Info.: 09767
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170228-4171.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 10:50:08 Calib Date: 24-Feb-2017 05:21:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170220-4095.b\RB23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: tajh Date: 02-Mar-2017 13:24:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.204	8.226	-0.022	98	442495	4.00	
* 2 1,4-Difluorobenzene	114	10.372	10.383	-0.011	96	2174130	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.274	15.274	0.000	89	1681148	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.967	16.967	0.000	96	1213089	4.13	
31 Methylene Chloride	84	5.907	5.918	-0.011	98	10971	0.0795	
47 1,1,1-Trichloroethane	97	9.229	9.234	-0.005	95	5477	0.0194	

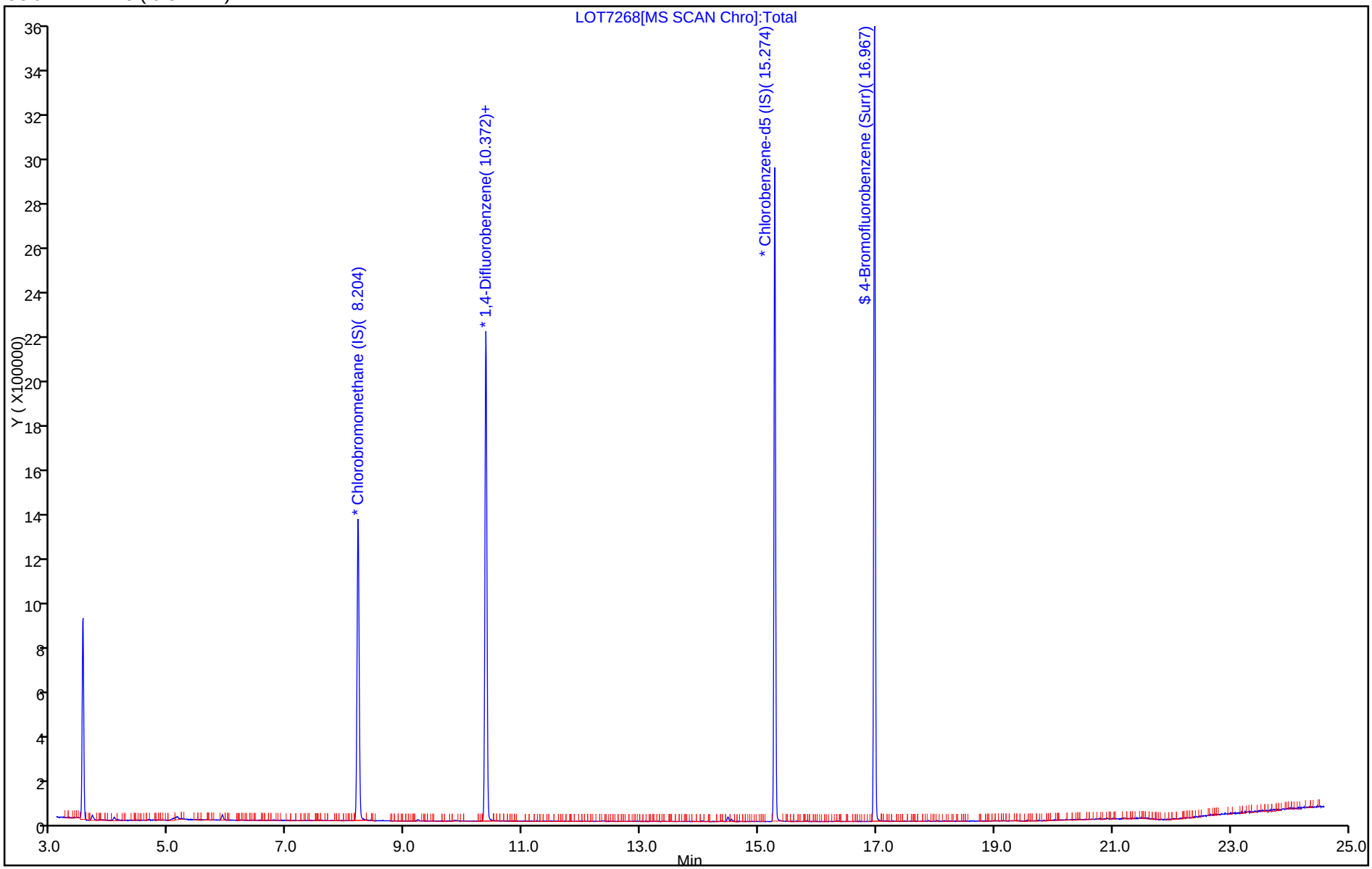
Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Mar-2017 10:50:23 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170228-4171.b\LOT7268.D				
Injection Date:	02-Mar-2017 12:22:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7268-A-10	Lab Sample ID:	140-7268-10	Worklist Smp#:	4
Client ID:	09767				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-76368-1
Client Project/Site: 3978, Wausau

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Authorized for release by:
3/9/2017 4:46:44 PM
Leslie Howell, Project Manager I
leslie.howell@testamericainc.com

Designee for

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Job ID: 240-76368-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-76368-1

Comments
No additional comments.

Receipt
The samples were received on 3/8/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9º C.

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

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

Method Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-76368-1	W-170306-RA-01	Water	03/06/17 12:45	03/08/17 09:30
240-76368-2	W-170306-RA-02	Water	03/06/17 14:30	03/08/17 09:30
240-76368-3	W-170306-RA-03	Water	03/06/17 15:45	03/08/17 09:30
240-76368-4	W-170306-RA-04	Water	03/06/17 17:30	03/08/17 09:30
240-76368-5	W-170307-RA-05	Water	03/07/17 08:30	03/08/17 09:30
240-76368-6	W-170307-RA-06	Water	03/07/17 08:30	03/08/17 09:30
240-76368-7	W-170307-RA-07	Water	03/07/17 09:50	03/08/17 09:30
240-76368-8	W-170307-RA-08	Water	03/07/17 12:45	03/08/17 09:30
240-76368-9	W-170307-RA-09	Water	03/07/17 14:00	03/08/17 09:30
240-76368-10	W-170307-RA-10	Water	03/07/17 14:00	03/08/17 09:30
240-76368-11	W-170307-RA-11	Water	03/07/17 15:20	03/08/17 09:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170306-RA-01 — Lab Sample ID: 240-76368-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.2		1.0	0.30	ug/L	1		8260C	Total/NA
Tetrachloroethene	2.4		1.0	0.30	ug/L	1		8260C	Total/NA
Trichloroethene	1.3		1.0	0.33	ug/L	1		8260C	Total/NA

Client Sample ID: W-170306-RA-02 — Lab Sample ID: 240-76368-2

No Detections.

Client Sample ID: W-170306-RA-03 — Lab Sample ID: 240-76368-3

No Detections.

Client Sample ID: W-170306-RA-04 — Lab Sample ID: 240-76368-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.51	J	1.0	0.30	ug/L	1		8260C	Total/NA

Client Sample ID: W-170307-RA-05 — Lab Sample ID: 240-76368-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	14		1.0	0.30	ug/L	1		8260C	Total/NA
Tetrachloroethene	6.2		1.0	0.30	ug/L	1		8260C	Total/NA
Trichloroethene	12		1.0	0.33	ug/L	1		8260C	Total/NA
Vinyl chloride	0.60	J	1.0	0.45	ug/L	1		8260C	Total/NA

Client Sample ID: W-170307-RA-06 — Lab Sample ID: 240-76368-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	15		1.0	0.30	ug/L	1		8260C	Total/NA
Tetrachloroethene	6.1		1.0	0.30	ug/L	1		8260C	Total/NA
Trichloroethene	13		1.0	0.33	ug/L	1		8260C	Total/NA
Vinyl chloride	0.69	J	1.0	0.45	ug/L	1		8260C	Total/NA

Client Sample ID: W-170307-RA-07 — Lab Sample ID: 240-76368-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	43		2.0	0.60	ug/L	2		8260C	Total/NA
Tetrachloroethene	4.9		2.0	0.60	ug/L	2		8260C	Total/NA
Trichloroethene	15		2.0	0.66	ug/L	2		8260C	Total/NA

Client Sample ID: W-170307-RA-08 — Lab Sample ID: 240-76368-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	30		1.0	0.30	ug/L	1		8260C	Total/NA
Tetrachloroethene	11		1.0	0.30	ug/L	1		8260C	Total/NA
Trichloroethene	4.9		1.0	0.33	ug/L	1		8260C	Total/NA
Vinyl chloride	5.4		1.0	0.45	ug/L	1		8260C	Total/NA

Client Sample ID: W-170307-RA-09 — Lab Sample ID: 240-76368-9

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-10 — Lab Sample ID: 240-76368-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.3		1.0	0.30	ug/L	1		8260C	Total/NA
Tetrachloroethene	6.0		1.0	0.30	ug/L	1		8260C	Total/NA
Trichloroethene	1.2		1.0	0.33	ug/L	1		8260C	Total/NA

Client Sample ID: W-170307-RA-11 — Lab Sample ID: 240-76368-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	7.8		1.0	0.30	ug/L	1		8260C	Total/NA
Trichloroethene	0.84	J	1.0	0.33	ug/L	1		8260C	Total/NA
Vinyl chloride	1.6		1.0	0.45	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170306-RA-01

Lab Sample ID: 240-76368-1

Date Collected: 03/06/17 12:45

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3.2**		1.0	0.30	ug/L			03/09/17 13:01	1
Tetrachloroethene	**2.4**		1.0	0.30	ug/L			03/09/17 13:01	1
Trichloroethene	**1.3**		1.0	0.33	ug/L			03/09/17 13:01	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*73 - 124*		*03/09/17 13:01*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 120*		*03/09/17 13:01*	*1*
4-Bromofluorobenzene (Surr)	*82*		*73 - 120*		*03/09/17 13:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 132*		*03/09/17 13:01*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170306-RA-02

Lab Sample ID: 240-76368-2

Date Collected: 03/06/17 14:30

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 13:24	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 13:24	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/09/17 13:24	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*73 - 124*		*03/09/17 13:24*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 120*		*03/09/17 13:24*	*1*
4-Bromofluorobenzene (Surr)	*84*		*73 - 120*		*03/09/17 13:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 132*		*03/09/17 13:24*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170306-RA-03

Lab Sample ID: 240-76368-3

Date Collected: 03/06/17 15:45

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 13:47	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 13:47	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/09/17 13:47	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*73 - 124*		*03/09/17 13:47*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*		*03/09/17 13:47*	*1*
4-Bromofluorobenzene (Surr)	*81*		*73 - 120*		*03/09/17 13:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*63 - 132*		*03/09/17 13:47*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170306-RA-04

Lab Sample ID: 240-76368-4

Date Collected: 03/06/17 17:30

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 14:09	1
Tetrachloroethene	**0.51**	**J**	1.0	0.30	ug/L			03/09/17 14:09	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/09/17 14:09	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*73 - 124*		*03/09/17 14:09*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*		*03/09/17 14:09*	*1*
4-Bromofluorobenzene (Surr)	*81*		*73 - 120*		*03/09/17 14:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*63 - 132*		*03/09/17 14:09*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-05

Lab Sample ID: 240-76368-5

Date Collected: 03/07/17 08:30

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	14		1.0	0.30	ug/L			03/09/17 14:32	1
Tetrachloroethene	6.2		1.0	0.30	ug/L			03/09/17 14:32	1
Trichloroethene	12		1.0	0.33	ug/L			03/09/17 14:32	1
Vinyl chloride	0.60	J	1.0	0.45	ug/L			03/09/17 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*85*		*73 - 124*		*03/09/17 14:32*	*1*
Dibromofluoromethane (Surr)	*82*		*80 - 120*		*03/09/17 14:32*	*1*
4-Bromofluorobenzene (Surr)	*81*		*73 - 120*		*03/09/17 14:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*63 - 132*		*03/09/17 14:32*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-06

Lab Sample ID: 240-76368-6

Date Collected: 03/07/17 08:30

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	15		1.0	0.30	ug/L			03/09/17 14:55	1
Tetrachloroethene	6.1		1.0	0.30	ug/L			03/09/17 14:55	1
Trichloroethene	13		1.0	0.33	ug/L			03/09/17 14:55	1
Vinyl chloride	0.69	J	1.0	0.45	ug/L			03/09/17 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*87*		*73 - 124*		*03/09/17 14:55*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*		*03/09/17 14:55*	*1*
4-Bromofluorobenzene (Surr)	*83*		*73 - 120*		*03/09/17 14:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 132*		*03/09/17 14:55*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-07

Lab Sample ID: 240-76368-7

Date Collected: 03/07/17 09:50

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**43**		2.0	0.60	ug/L			03/09/17 16:02	2
Tetrachloroethene	**4.9**		2.0	0.60	ug/L			03/09/17 16:02	2
Trichloroethene	**15**		2.0	0.66	ug/L			03/09/17 16:02	2
Vinyl chloride	2.0	U	2.0	0.90	ug/L			03/09/17 16:02	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*73 - 124*		*03/09/17 16:02*	*2*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/09/17 16:02*	*2*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*03/09/17 16:02*	*2*
1,2-Dichloroethane-d4 (Surr)	*97*		*63 - 132*		*03/09/17 16:02*	*2*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-08

Lab Sample ID: 240-76368-8

Date Collected: 03/07/17 12:45

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	30		1.0	0.30	ug/L			03/09/17 14:32	1
Tetrachloroethene	11		1.0	0.30	ug/L			03/09/17 14:32	1
Trichloroethene	4.9		1.0	0.33	ug/L			03/09/17 14:32	1
Vinyl chloride	5.4		1.0	0.45	ug/L			03/09/17 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*73 - 124*		*03/09/17 14:32*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*03/09/17 14:32*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*03/09/17 14:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*63 - 132*		*03/09/17 14:32*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-09

Lab Sample ID: 240-76368-9

Date Collected: 03/07/17 14:00

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 14:55	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 14:55	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/09/17 14:55	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*73 - 124*		*03/09/17 14:55*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/09/17 14:55*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/09/17 14:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*63 - 132*		*03/09/17 14:55*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-10

Lab Sample ID: 240-76368-10

Date Collected: 03/07/17 14:00

Matrix: Water

Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**5.3**		1.0	0.30	ug/L			03/09/17 15:18	1
Tetrachloroethene	**6.0**		1.0	0.30	ug/L			03/09/17 15:18	1
Trichloroethene	**1.2**		1.0	0.33	ug/L			03/09/17 15:18	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*73 - 124*		*03/09/17 15:18*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*03/09/17 15:18*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/09/17 15:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*63 - 132*		*03/09/17 15:18*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-11

Lab Sample ID: 240-76368-11

Date Collected: 03/07/17 15:20
Matrix: Water
Date Received: 03/08/17 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**7.8**		1.0	0.30	ug/L			03/09/17 15:40	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 15:40	1
Trichloroethene	**0.84**	**J**	1.0	0.33	ug/L			03/09/17 15:40	1
Vinyl chloride	**1.6**		1.0	0.45	ug/L			03/09/17 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*73 - 124*		*03/09/17 15:40*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*03/09/17 15:40*	*1*
4-Bromofluorobenzene (Surr)	*91*		*73 - 120*		*03/09/17 15:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*63 - 132*		*03/09/17 15:40*	*1*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	12DCE
Lab Sample ID	Client Sample ID	(73-124)	(80-120)	(73-120)	(63-132)
240-76368-1	W-170306-RA-01	84	85	82	83
240-76368-2	W-170306-RA-02	88	85	84	83
240-76368-3	W-170306-RA-03	84	87	81	82
240-76368-4	W-170306-RA-04	86	86	81	81
240-76368-5	W-170307-RA-05	85	82	81	80
240-76368-6	W-170307-RA-06	87	86	83	83
240-76368-7	W-170307-RA-07	99	104	99	97
240-76368-8	W-170307-RA-08	100	106	99	98
240-76368-9	W-170307-RA-09	100	104	97	95
240-76368-10	W-170307-RA-10	100	106	98	97
240-76368-11	W-170307-RA-11	104	103	91	96
LCS 240-269880/4	Lab Control Sample	89	88	86	87
LCS 240-269882/4	Lab Control Sample	106	104	108	91
MB 240-269880/6	Method Blank	88	89	85	84
MB 240-269882/6	Method Blank	99	106	99	95

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	12DCE
Lab Sample ID	Client Sample ID	(10-150)	(10-150)	(10-150)	(10-150)
MRL 240-269880/5	Lab Control Sample	90	91	87	90

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-269880/6
Matrix: Water
Analysis Batch: 269880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 12:39	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 12:39	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/09/17 12:39	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*73 - 124*		*03/09/17 12:39*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*		*03/09/17 12:39*	*1*
4-Bromofluorobenzene (Surr)	*85*		*73 - 120*		*03/09/17 12:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*63 - 132*		*03/09/17 12:39*	*1*

Lab Sample ID: LCS 240-269880/4
Matrix: Water
Analysis Batch: 269880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	10.0	9.92		ug/L		99	80 - 120
Tetrachloroethene	10.0	9.79		ug/L		98	80 - 123
Trichloroethene	10.0	9.98		ug/L		100	80 - 122
Vinyl chloride	10.0	8.24		ug/L		82	60 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*89*		*73 - 124*
Dibromofluoromethane (Surr)	*88*		*80 - 120*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*
1,2-Dichloroethane-d4 (Surr)	*87*		*63 - 132*

Lab Sample ID: MRL 240-269880/5
Matrix: Water
Analysis Batch: 269880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.00100	0.000984	J	ng/uL		98	10 - 150
Tetrachloroethene	0.00100	0.000893	J	ng/uL		89	10 - 150
Trichloroethene	0.00100	0.000917	J	ng/uL		92	10 - 150
Vinyl chloride	0.00100	0.00102		ng/uL		102	10 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
Toluene-d8 (Surr)	*90*		*10 - 150*
Dibromofluoromethane (Surr)	*91*		*10 - 150*
4-Bromofluorobenzene (Surr)	*87*		*10 - 150*
1,2-Dichloroethane-d4 (Surr)	*90*		*10 - 150*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-269882/6
Matrix: Water
Analysis Batch: 269882

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 12:40	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			03/09/17 12:40	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/09/17 12:40	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/09/17 12:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*73 - 124*		*03/09/17 12:40*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*03/09/17 12:40*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*03/09/17 12:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*63 - 132*		*03/09/17 12:40*	*1*

Lab Sample ID: LCS 240-269882/4
Matrix: Water
Analysis Batch: 269882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	80 - 120
Tetrachloroethene	10.0	10.4		ug/L		104	80 - 123
Trichloroethene	10.0	10.6		ug/L		106	80 - 122
Vinyl chloride	10.0	10.2		ug/L		102	60 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*73 - 124*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*
1,2-Dichloroethane-d4 (Surr)	*91*		*63 - 132*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

GC/MS VOA

Analysis Batch: 269880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-76368-1	W-170306-RA-01	Total/NA	Water	8260C	
240-76368-2	W-170306-RA-02	Total/NA	Water	8260C	
240-76368-3	W-170306-RA-03	Total/NA	Water	8260C	
240-76368-4	W-170306-RA-04	Total/NA	Water	8260C	
240-76368-5	W-170307-RA-05	Total/NA	Water	8260C	
240-76368-6	W-170307-RA-06	Total/NA	Water	8260C	
MB 240-269880/6	Method Blank	Total/NA	Water	8260C	
LCS 240-269880/4	Lab Control Sample	Total/NA	Water	8260C	
MRL 240-269880/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 269882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-76368-7	W-170307-RA-07	Total/NA	Water	8260C	
240-76368-8	W-170307-RA-08	Total/NA	Water	8260C	
240-76368-9	W-170307-RA-09	Total/NA	Water	8260C	
240-76368-10	W-170307-RA-10	Total/NA	Water	8260C	
240-76368-11	W-170307-RA-11	Total/NA	Water	8260C	
MB 240-269882/6	Method Blank	Total/NA	Water	8260C	
LCS 240-269882/4	Lab Control Sample	Total/NA	Water	8260C	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170306-RA-01 — Lab Sample ID: 240-76368-1

Date Collected: 03/06/17 12:45 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269880	03/09/17 13:01	LEE	TAL CAN

Client Sample ID: W-170306-RA-02 — Lab Sample ID: 240-76368-2

Date Collected: 03/06/17 14:30 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269880	03/09/17 13:24	LEE	TAL CAN

Client Sample ID: W-170306-RA-03 — Lab Sample ID: 240-76368-3

Date Collected: 03/06/17 15:45 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269880	03/09/17 13:47	LEE	TAL CAN

Client Sample ID: W-170306-RA-04 — Lab Sample ID: 240-76368-4

Date Collected: 03/06/17 17:30 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269880	03/09/17 14:09	LEE	TAL CAN

Client Sample ID: W-170307-RA-05 — Lab Sample ID: 240-76368-5

Date Collected: 03/07/17 08:30 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269880	03/09/17 14:32	LEE	TAL CAN

Client Sample ID: W-170307-RA-06 — Lab Sample ID: 240-76368-6

Date Collected: 03/07/17 08:30 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269880	03/09/17 14:55	LEE	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Client Sample ID: W-170307-RA-07 — Lab Sample ID: 240-76368-7

Date Collected: 03/07/17 09:50 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	269882	03/09/17 16:02	LEE	TAL CAN

Client Sample ID: W-170307-RA-08 — Lab Sample ID: 240-76368-8

Date Collected: 03/07/17 12:45 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269882	03/09/17 14:32	LEE	TAL CAN

Client Sample ID: W-170307-RA-09 — Lab Sample ID: 240-76368-9

Date Collected: 03/07/17 14:00 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269882	03/09/17 14:55	LEE	TAL CAN

Client Sample ID: W-170307-RA-10 — Lab Sample ID: 240-76368-10

Date Collected: 03/07/17 14:00 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269882	03/09/17 15:18	LEE	TAL CAN

Client Sample ID: W-170307-RA-11 — Lab Sample ID: 240-76368-11

Date Collected: 03/07/17 15:20 — **Matrix: Water**
Date Received: 03/08/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	269882	03/09/17 15:40	LEE	TAL CAN

Laboratory References:

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

Certification Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76368-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2927	04-30-17 *
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17 *
Illinois	NELAP	5	200004	07-31-17 *
Kansas	NELAP	7	E-10336	02-28-17 *
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17
Minnesota	NELAP	5	039-999-348	12-31-17
Minnesota (Petrofund)	State Program	1	3506	07-31-17 *
Nevada	State Program	9	OH-000482008A	07-31-17 *
New Jersey	NELAP	2	OH001	06-30-17 *
New York	NELAP	2	10975	03-31-17 *
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-17
Washington	State Program	10	C971	01-12-18
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

* Certification renewal pending - certification considered valid.

4.2/3.9

CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP-02051
PAGE 1 OF 1
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 3978	Laboratory Name: Test America	Lab Location:	SSOW ID:
Project Name: Warsaw-East	Lab Contact:	Lab Quote No:	Cooler No:
Project Location: Warsaw			Carrier:
Chemistry Contact: G. Anderson			Airbill No:
Sampler(s): RAurmy			Date Shipped:

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	PCE	TCE	cis DCE	Vinyl Chloride							MS/MSD Request	Comments/ Special Instructions:
1	W-170306-RA-01	3/6/17	1245	WG	G		3							3												1 day TAT
2	W-170306-RA-02		1430				3							3												
3	W-170306-RA-03		1545				3							3												
	W-170306-RA-04		1730				3							3												
	W-170307-RA-05	3/7/17	830				3							3												
	W-170307-RA-06		830				3							3												
	W-170307-RA-07		950				3							3												
8	W-170307-RA-08		1245				3							3												
9	W-170307-RA-09		1400				3							3												
10	W-170307-RA-10		1400				3							3												
11	W-170307-RA-11		1530				3							3												
12																										
13																										
14																										
15																										

240-76368 Chain of Custody

TAT Required in business days (use separate COCs for different TATs):
☒ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Total Number of Containers: 33

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. [signature]	GHD	3/7/17		1. POP	TAL	3-8-17	9:30
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 710368
Canton Facility

Client CRA Site Name —
Cooler Received on 3-8-17 Opened on 3-8-17
Cooler unpacked by: POP
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

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

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.3** °C) Observed Cooler Temp. 4.2 °C Corrected Cooler Temp. 3.9 °C
   IR GUN #36 (CF **+0.3**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC682547**
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes No

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

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-76551-1
Client Project/Site: 3978, Wausau

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Denise D Heckler

Authorized for release by:
3/13/2017 2:51:38 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Job ID: 240-76551-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-76551-1

Comments
No additional comments.

Receipt
The samples were received on 3/10/2017 11:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 270257 recovered above the upper control limit for Carbon Tetrachloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: W-170309-RA-18 (240-76551-4), W-170309-RA-19 (240-76551-5), W-170309-RA-20 (240-76551-6) and W-170309-RA-21 (240-76551-7).

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

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

Method Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-76551-1	W-170308-RA-15	Water	03/08/17 18:45	03/10/17 11:10
240-76551-2	W-170309-RA-16	Water	03/09/17 09:00	03/10/17 11:10
240-76551-3	W-170309-RA-17	Water	03/09/17 10:00	03/10/17 11:10
240-76551-4	W-170309-RA-18	Water	03/09/17 10:35	03/10/17 11:10
240-76551-5	W-170309-RA-19	Water	03/09/17 12:10	03/10/17 11:10
240-76551-6	W-170309-RA-20	Water	03/09/17 13:30	03/10/17 11:10
240-76551-7	W-170309-RA-21	Water	03/09/17 13:35	03/10/17 11:10
240-76551-8	W-170309-RA-22	Water	03/09/17 13:45	03/10/17 11:10
240-76551-9	W-170309-RA-23	Water	03/09/17 15:35	03/10/17 11:10
240-76551-10	TRIP BLANK	Water	03/09/17 00:00	03/10/17 11:10

Detection Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170308-RA-15 — Lab Sample ID: 240-76551-1

No Detections.

Client Sample ID: W-170309-RA-16 — Lab Sample ID: 240-76551-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.1		1.0	0.31	ug/L	1		8260C	Total/NA

Client Sample ID: W-170309-RA-17 — Lab Sample ID: 240-76551-3

No Detections.

Client Sample ID: W-170309-RA-18 — Lab Sample ID: 240-76551-4

No Detections.

Client Sample ID: W-170309-RA-19 — Lab Sample ID: 240-76551-5

No Detections.

Client Sample ID: W-170309-RA-20 — Lab Sample ID: 240-76551-6

No Detections.

Client Sample ID: W-170309-RA-21 — Lab Sample ID: 240-76551-7

No Detections.

Client Sample ID: W-170309-RA-22 — Lab Sample ID: 240-76551-8

No Detections.

Client Sample ID: W-170309-RA-23 — Lab Sample ID: 240-76551-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.0		1.0	0.33	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-76551-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170308-RA-15

Lab Sample ID: 240-76551-1

Date Collected: 03/08/17 18:45

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 10:31	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 10:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 10:31	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 10:31	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 10:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*87*		*73 - 124*		*03/13/17 10:31*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*		*03/13/17 10:31*	*1*
4-Bromofluorobenzene (Surr)	*82*		*73 - 120*		*03/13/17 10:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 132*		*03/13/17 10:31*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-16

Lab Sample ID: 240-76551-2

Date Collected: 03/09/17 09:00

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 10:54	1
Chloroform	**2.1**		1.0	0.31	ug/L			03/13/17 10:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 10:54	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 10:54	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 10:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*73 - 124*		*03/13/17 10:54*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 120*		*03/13/17 10:54*	*1*
4-Bromofluorobenzene (Surr)	*81*		*73 - 120*		*03/13/17 10:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*63 - 132*		*03/13/17 10:54*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-17

Lab Sample ID: 240-76551-3

Date Collected: 03/09/17 10:00

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 11:17	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 11:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 11:17	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 11:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 11:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*87*		*73 - 124*		*03/13/17 11:17*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 120*		*03/13/17 11:17*	*1*
4-Bromofluorobenzene (Surr)	*82*		*73 - 120*		*03/13/17 11:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*63 - 132*		*03/13/17 11:17*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-18

Lab Sample ID: 240-76551-4

Date Collected: 03/09/17 10:35

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 10:10	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 10:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 10:10	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 10:10	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 10:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*73 - 124*		*03/13/17 10:10*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*03/13/17 10:10*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*03/13/17 10:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*63 - 132*		*03/13/17 10:10*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-19

Lab Sample ID: 240-76551-5

Date Collected: 03/09/17 12:10
Matrix: Water
Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 10:32	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 10:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 10:32	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 10:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 10:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*73 - 124*		*03/13/17 10:32*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*03/13/17 10:32*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*03/13/17 10:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*63 - 132*		*03/13/17 10:32*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-20

Lab Sample ID: 240-76551-6

Date Collected: 03/09/17 13:30

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 10:55	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 10:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 10:55	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 10:55	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 10:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*73 - 124*		*03/13/17 10:55*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*03/13/17 10:55*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*03/13/17 10:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*63 - 132*		*03/13/17 10:55*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-21

Lab Sample ID: 240-76551-7

Date Collected: 03/09/17 13:35

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 11:17	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 11:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 11:17	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 11:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 11:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*73 - 124*		*03/13/17 11:17*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/13/17 11:17*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*03/13/17 11:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*63 - 132*		*03/13/17 11:17*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-22

Lab Sample ID: 240-76551-8

Date Collected: 03/09/17 13:45

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 11:39	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 11:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 11:39	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 11:39	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 11:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*73 - 124*		*03/13/17 11:39*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*		*03/13/17 11:39*	*1*
4-Bromofluorobenzene (Surr)	*79*		*73 - 120*		*03/13/17 11:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*63 - 132*		*03/13/17 11:39*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-23

Lab Sample ID: 240-76551-9

Date Collected: 03/09/17 15:35

Matrix: Water

Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 12:02	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 12:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 12:02	1
Trichloroethene	**1.0**		1.0	0.33	ug/L			03/13/17 12:02	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*73 - 124*		*03/13/17 12:02*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 120*		*03/13/17 12:02*	*1*
4-Bromofluorobenzene (Surr)	*79*		*73 - 120*		*03/13/17 12:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 132*		*03/13/17 12:02*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-76551-10

Date Collected: 03/09/17 00:00
Matrix: Water
Date Received: 03/10/17 11:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 10:08	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 10:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 10:08	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 10:08	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*85*		*73 - 124*		*03/13/17 10:08*	*1*
Dibromofluoromethane (Surr)	*84*		*80 - 120*		*03/13/17 10:08*	*1*
4-Bromofluorobenzene (Surr)	*79*		*73 - 120*		*03/13/17 10:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*63 - 132*		*03/13/17 10:08*	*1*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	12DCE
Lab Sample ID	Client Sample ID	(73-124)	(80-120)	(73-120)	(63-132)
240-76551-1	W-170308-RA-15	87	86	82	83
240-76551-2	W-170309-RA-16	88	86	81	85
240-76551-3	W-170309-RA-17	87	88	82	84
240-76551-4	W-170309-RA-18	102	101	93	100
240-76551-5	W-170309-RA-19	99	105	96	99
240-76551-5 MS	W-170309-RA-19	108	104	104	93
240-76551-5 MSD	W-170309-RA-19	107	104	101	94
240-76551-6	W-170309-RA-20	99	106	99	101
240-76551-7	W-170309-RA-21	102	104	94	100
240-76551-8	W-170309-RA-22	86	87	79	80
240-76551-9	W-170309-RA-23	86	85	79	83
240-76551-10	TRIP BLANK	85	84	79	80
LCS 240-270254/4	Lab Control Sample	89	90	86	90
LCS 240-270257/4	Lab Control Sample	108	105	103	93
MB 240-270254/6	Method Blank	88	89	84	83
MB 240-270257/6	Method Blank	102	104	95	100

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-270254/6
Matrix: Water
Analysis Batch: 270254

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 09:46	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 09:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 09:46	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 09:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 09:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*73 - 124*		*03/13/17 09:46*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*		*03/13/17 09:46*	*1*
4-Bromofluorobenzene (Surr)	*84*		*73 - 120*		*03/13/17 09:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 132*		*03/13/17 09:46*	*1*

Lab Sample ID: LCS 240-270254/4
Matrix: Water
Analysis Batch: 270254

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	10.0	11.8		ug/L		118	69 - 149
Chloroform	10.0	9.53		ug/L		95	80 - 120
cis-1,2-Dichloroethene	10.0	9.76		ug/L		98	80 - 120
Trichloroethene	10.0	9.99		ug/L		100	80 - 122
Vinyl chloride	10.0	9.02		ug/L		90	60 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*89*		*73 - 124*
Dibromofluoromethane (Surr)	*90*		*80 - 120*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*63 - 132*

Lab Sample ID: MB 240-270257/6
Matrix: Water
Analysis Batch: 270257

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			03/13/17 09:48	1
Chloroform	1.0	U	1.0	0.31	ug/L			03/13/17 09:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/13/17 09:48	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			03/13/17 09:48	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/13/17 09:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*73 - 124*		*03/13/17 09:48*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/13/17 09:48*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*03/13/17 09:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*63 - 132*		*03/13/17 09:48*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-270257/4
Matrix: Water
Analysis Batch: 270257

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	10.0	14.7		ug/L		147	69 - 149
Chloroform	10.0	10.3		ug/L		103	80 - 120
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	80 - 120
Trichloroethene	10.0	10.5		ug/L		105	80 - 122
Vinyl chloride	10.0	10.4		ug/L		104	60 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*73 - 124*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*63 - 132*

Lab Sample ID: 240-76551-5 MS
Matrix: Water
Analysis Batch: 270257

Client Sample ID: W-170309-RA-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.0	U	10.0	12.7		ug/L		127	51 - 154
Chloroform	1.0	U	10.0	10.7		ug/L		107	67 - 133
cis-1,2-Dichloroethene	1.0	U	10.0	10.8		ug/L		108	64 - 134
Trichloroethene	1.0	U	10.0	10.6		ug/L		106	58 - 139
Vinyl chloride	1.0	U	10.0	9.62		ug/L		96	38 - 147

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*73 - 124*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*63 - 132*

Lab Sample ID: 240-76551-5 MSD
Matrix: Water
Analysis Batch: 270257

Client Sample ID: W-170309-RA-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon tetrachloride	1.0	U	10.0	14.8		ug/L		148	51 - 154	15	35
Chloroform	1.0	U	10.0	10.9		ug/L		109	67 - 133	2	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	64 - 134	1	35
Trichloroethene	1.0	U	10.0	11.2		ug/L		112	58 - 139	5	35
Vinyl chloride	1.0	U	10.0	9.97		ug/L		100	38 - 147	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*73 - 124*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
1,2-Dichloroethane-d4 (Surr)	*94*		*63 - 132*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

GC/MS VOA

Analysis Batch: 270254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-76551-1	W-170308-RA-15	Total/NA	Water	8260C	
240-76551-2	W-170309-RA-16	Total/NA	Water	8260C	
240-76551-3	W-170309-RA-17	Total/NA	Water	8260C	
240-76551-8	W-170309-RA-22	Total/NA	Water	8260C	
240-76551-9	W-170309-RA-23	Total/NA	Water	8260C	
240-76551-10	TRIP BLANK	Total/NA	Water	8260C	
MB 240-270254/6	Method Blank	Total/NA	Water	8260C	
LCS 240-270254/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 270257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-76551-4	W-170309-RA-18	Total/NA	Water	8260C	
240-76551-5	W-170309-RA-19	Total/NA	Water	8260C	
240-76551-6	W-170309-RA-20	Total/NA	Water	8260C	
240-76551-7	W-170309-RA-21	Total/NA	Water	8260C	
MB 240-270257/6	Method Blank	Total/NA	Water	8260C	
LCS 240-270257/4	Lab Control Sample	Total/NA	Water	8260C	
240-76551-5 MS	W-170309-RA-19	Total/NA	Water	8260C	
240-76551-5 MSD	W-170309-RA-19	Total/NA	Water	8260C	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170308-RA-15 — Lab Sample ID: 240-76551-1

Date Collected: 03/08/17 18:45 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270254	03/13/17 10:31	LEE	TAL CAN

Client Sample ID: W-170309-RA-16 — Lab Sample ID: 240-76551-2

Date Collected: 03/09/17 09:00 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270254	03/13/17 10:54	LEE	TAL CAN

Client Sample ID: W-170309-RA-17 — Lab Sample ID: 240-76551-3

Date Collected: 03/09/17 10:00 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270254	03/13/17 11:17	LEE	TAL CAN

Client Sample ID: W-170309-RA-18 — Lab Sample ID: 240-76551-4

Date Collected: 03/09/17 10:35 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270257	03/13/17 10:10	LEE	TAL CAN

Client Sample ID: W-170309-RA-19 — Lab Sample ID: 240-76551-5

Date Collected: 03/09/17 12:10 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270257	03/13/17 10:32	LEE	TAL CAN

Client Sample ID: W-170309-RA-20 — Lab Sample ID: 240-76551-6

Date Collected: 03/09/17 13:30 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270257	03/13/17 10:55	LEE	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Client Sample ID: W-170309-RA-21 — Lab Sample ID: 240-76551-7

Date Collected: 03/09/17 13:35 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270257	03/13/17 11:17	LEE	TAL CAN

Client Sample ID: W-170309-RA-22 — Lab Sample ID: 240-76551-8

Date Collected: 03/09/17 13:45 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270254	03/13/17 11:39	LEE	TAL CAN

Client Sample ID: W-170309-RA-23 — Lab Sample ID: 240-76551-9

Date Collected: 03/09/17 15:35 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270254	03/13/17 12:02	LEE	TAL CAN

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-76551-10

Date Collected: 03/09/17 00:00 — **Matrix: Water**
Date Received: 03/10/17 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	270254	03/13/17 10:08	LEE	TAL CAN

Laboratory References:

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

Certification Summary

Client: GHD Services Inc.
Project/Site: 3978, Wausau

TestAmerica Job ID: 240-76551-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2927	04-30-17 *
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17 *
Illinois	NELAP	5	200004	07-31-17 *
Kansas	NELAP	7	E-10336	02-28-17 *
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17
Minnesota	NELAP	5	039-999-348	12-31-17
Minnesota (Petrofund)	State Program	1	3506	07-31-17 *
Nevada	State Program	9	OH-000482008A	07-31-17 *
New Jersey	NELAP	2	OH001	06-30-17 *
New York	NELAP	2	10975	03-31-17 *
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-17
Washington	State Program	10	C971	01-12-18
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

* Certification renewal pending - certification considered valid.

3.3/3.0

CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP- 02047
PAGE 1 OF 1
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 003978	Laboratory Name: Test America	Lab Location:	SSOW ID:
Project Name: Wausau	Lab Contact:	Lab Quote No:	Cooler No:
Project Location: Wausau			Carrier:
Chemistry Contact: Grant Anderson			Airbill No:
Sampler(s): Ryan Aamot			Date Shipped:

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested (See Back of COC for Definitions): VOCs	TCE	cis-1,2-DCE	CT	Chloroform	Vinyl Chloride					MS/MSD Request	Comments/ Special Instructions:
1	W-170308-RA-15	3-9-17	1945	W	G		3							3	X	/	/	/	/	/						1 Day TAT
2	W-170309-RA-16	3/9/17	0900				3							3		/	/	/	/	/						
3	W-170309-RA-17		1000				3							3		/	/	/	/	/						
	W-170309-RA-18		1035				3							3		/	/	/	/	/						
	W-170309-RA-19		1210				9							9		/	/	/	/	/						MS/MSD
	W-170309-RA-20		1330				3							3		/	/	/	/	/						
	W-170309-RA-21		1335				3							3		/	/	/	/	/						
8	W-170309-RA-22		1345				3							3		/	/	/	/	/						
9	W-170309-RA-23		1535				3							3		/	/	/	/	/						
10																										
11	trip blank													1												
12																										
13																										
14																										
15																										

240-76551 Chain of Custody

TAT Required in business days (use separate COCs for different TATs):
☒ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Total Number of Containers: 34
All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	GHD	3/10/17	1600	1.	TA	3.10.17	1110
				2.			
				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 710557
Canton Facility

Client GHD Site Name _____ Cooler unpacked by:

Cooler Received on 3-10-17 Opened on 3-10-17

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

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

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

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

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.3** °C) Observed Cooler Temp. 3.3 °C Corrected Cooler Temp. 3.0 °C
   IR GUN #36 (CF **+0.3**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC682547**
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes No

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

Concerning _____

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

COC = 1x40 TB, rec'd 6x40, will log.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Ref: SOP NC-SC-0005, Sample Receiving
\\tacorp\corp\QA\QA_Facilities\Canton-QA\Document-Management\Work-Instruction\In Revision\WI-NC-099-022817 Cooler Receipt Form.doc djl

Memorandum

October 13, 2017

To:	Chuck Ahrens, GHD	Ref. No.:	003978
From:	Grant Anderson/sb/14	Tel:	(651) 639-0913

Subject: **Analytical Results and Reduced Data Validation**
Air Sampling Event
Wausau Superfund – Wausau, Wisconsin
May, July and August 2017

1. Introduction

The following document details a reduced validation of analytical results for air samples collected in support of the air monitoring program at the Wausau Superfund Site in Wausau, Wisconsin in May, July and August, 2017. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) located in Knoxville, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services, Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS) samples, and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "National Functional Guidelines for Organic Superfund Methods Data Review," EPA-540-R-2017-002, January 2017

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding times.

All air samples were collected in summa canisters and delivered at room temperature.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. The LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Field QA/QC Samples

The field QA/QC consisted of four field duplicate sample sets.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, four field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value.

The field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Tables 2A and 2B unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Tables 2A and 2B.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Tables 2A and 2B are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
OA-170515-RA-01	N. 2nd St. Outdoor Air	air	05/15/2017	10:00	Select VOCs	
IA-170515-RA-01	1905 N 2nd St. - Main Level	air	05/15/2017	08:05	Select VOCs	
IA-170515-RA-02	1917 N 2nd St. - Basement	air	05/15/2017	10:18	Select VOCs	
IA-170515-RA-03	1917 N 2nd St. - Main Level	air	05/15/2017	10:30	Select VOCs	
IA-170515-RA-04	1909 N 2nd St. - Main Level	air	05/15/2017	15:40	Select VOCs	
SS-170515-RA-01	1905 N 2nd St.	air	05/15/2017	11:10	Select VOCs	
SS-170516-RA-02	1917 N 2nd St.	air	05/16/2017	10:52	Select VOCs	
SS-170516-RA-03	1909 N 2nd St.	air	05/16/2017	16:10	Select VOCs	
SS-170801-RA-06	RB Building B SS-1	air	08/01/2017	14:56	Select VOCs	
G-170801-RA-15	E7D	air	08/01/2017	14:03	Select VOCs	
G-170801-RA-16	W1S	air	08/01/2017	17:42	Select VOCs	
G-170801-RA-17	W1S	air	08/01/2017	17:44	Select VOCs	duplicate (RA-15)
G-170801-RA-18	W1D	air	08/01/2017	17:44	Select VOCs	
G-170801-RA-19	W4S	air	08/01/2017	18:25	Select VOCs	
G-170801-RA-20	W4S	air	08/01/2017	18:21	Select VOCs	duplicate (RA-19)
G-170801-RA-21	W4D	air	08/01/2017	18:23	Select VOCs	
G-170802-RA-22	W7S	air	08/02/2017	07:54	Select VOCs	
G-170802-RA-23	W7D	air	08/02/2017	07:49	Select VOCs	
G-170802-RA-24	W5S	air	08/02/2017	08:19	Select VOCs	
SS-170801-RA-07	RB Building B SS-2	air	08/01/2017	16:20	Select VOCs	
G-170802-RA-25	W3S	air	08/02/2017	08:43	Select VOCs	
G-170802-RA-26	W3D	air	08/02/2017	08:43	Select VOCs	
G-170802-RA-27	W2S	air	08/02/2017	09:15	Select VOCs	
G-170802-RA-28	W2D	air	08/02/2017	09:13	Select VOCs	
SS-170801-RA-08	RB Building B SS-3	air	08/01/2017	16:22	Select VOCs	
SS-170801-RA-09	RB Building A SS5	air	08/01/2017	17:12	Select VOCs	
SS-170802-RA-10	RB Building A SS-4	air	08/02/2017	09:54	Select VOCs	
IA-170731-RA-07	RB IA-Building A	air	07/31/2017	16:56	Select VOCs	
IA-170731-RA-08	RB IA-Building B	air	07/31/2017	15:00	Select VOCs	
OA-170731-RA-02	RB Outdoor Air	air	07/31/2017	14:25	Select VOCs	
G-170801-RA-01	E2S	air	08/01/2017	09:42	Select VOCs	

Table 1

Sample Collection and Analysis Summary
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
G-170801-RA-10	E9S	air	08/01/2017	13:02	Select VOCs	
G-170801-RA-11	E9D	air	08/01/2017	12:57	Select VOCs	
G-170801-RA-12	E8S	air	08/01/2017	13:29	Select VOCs	
G-170801-RA-13	E8D	air	08/01/2017	13:34	Select VOCs	
IA-170731-RA-01	IA-Bridge Clinic-Basement	air	07/31/2017	12:24	Select VOCs	
IA-170731-RA-02	IA-1917 2nd St. - Main Level	air	07/31/2017	12:31	Select VOCs	
IA-170731-RA-03	IA-1917 2nd St. - Basement	air	07/31/2017	12:31	Select VOCs	
IA-170731-RA-04	IA-1915 2nd St. - Main Level	air	07/31/2017	15:14	Select VOCs	
IA-170731-RA-05	IA-1909 2nd St. - Main Level	air	07/31/2017	15:20	Select VOCs	
IA-170731-RA-06	IA-1901 2nd St. - Basement	air	07/31/2017	16:40	Select VOCs	
G-170801-RA-02	E2D	air	08/01/2017	09:42	Select VOCs	
OA-170731-RA-01	N. 2nd St. Outdoor Air	air	07/31/2017	15:15	Select VOCs	
SS-170731-RA-01	Bridge Clinic Subslab	air	07/31/2017	14:58	Select VOCs	
SS-170731-RA-02	1917 2nd St.	air	07/31/2017	15:43	Select VOCs	
SS-170731-RA-03	1915 2nd St.	air	07/31/2017	16:13	Select VOCs	
SS-170731-RA-04	1909 2nd St.	air	07/31/2017	16:39	Select VOCs	
SS-170731-RA-05	1901 2nd St.	air	07/31/2017	17:12	Select VOCs	
G-170801-RA-03	E4S	air	08/01/2017	10:14	Select VOCs	
G-170801-RA-04	E4D	air	08/01/2017	10:10	Select VOCs	
G-170801-RA-05	E5S	air	08/01/2017	10:53	Select VOCs	
G-170801-RA-06	E5S	air	08/01/2017	10:51	Select VOCs	duplicate (RA-05)
G-170801-RA-07	E5D	air	08/01/2017	10:54	Select VOCs	
G-170801-RA-08	E1S	air	08/01/2017	11:30	Select VOCs	
G-170801-RA-09	E1S	air	08/01/2017	11:30	Select VOCs	duplicate (RA-08)

Notes:

VOC - Volatile Organic Compounds
Select VOCs East - tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, vinyl chloride
Select VOCs West - trichloroethene, cis-1,2-dichlorothene, vinyl chloride, carbon tetrachloride, chloroform

Table 2A

Validated Analytical Results Summary - May
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**1905 N 2nd St.**	**1905 N 2nd St. - ML**	**1909 N 2nd St. - ML**	**1909 N 2nd St.**	**1917 N 2nd St.**	**1917 N 2nd St. - Basement**	**1917 N 2nd St. - OA**	**1917 N 2nd St. - ML**
Sample Name:		**SS-170515-RA-01**	**IA-170515-RA-01**	**IA-170515-RA-04**	**SS-170516-RA-03**	**SS-170516-RA-02**	**IA-170515-RA-02**	**OA-170515-RA-01**	**IA-170515-RA-03**
Sample Date:		**05/15/2017**	**05/15/2017**	**05/15/2017**	**05/16/2017**	**05/16/2017**	**05/15/2017**	**05/15/2017**	**05/15/2017**
Parameters	**Unit**								
Volatile Organic Compounds									
cis-1,2-Dichloroethene	ppbv	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.17	0.080 U	0.080 U
Tetrachloroethene	ppbv	23	0.020 J	0.045 J	7.0	10	0.18	0.080 U	0.042 J
Trichloroethene	ppbv	0.18	0.040 U	0.040 U	0.075	2.3	0.54	0.040 U	0.025 J
Vinyl chloride	ppbv	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.68	0.32 U	0.32 U
Tetrachloroethene	µg/m3	160	0.14 J	0.31 J	47	68	1.2	0.54 U	0.28 J
Trichloroethene	µg/m3	0.97	0.21 U	0.21 U	0.40	12	2.9	0.21 U	0.14 J
Vinyl chloride	µg/m3	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U

Notes

U - Not detected at the associated reporting limit
J - Estimated concentration
ML - Main Level
OA - Outdoor Air

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**1901 N 2nd St.**	**1901 N 2nd St. - Basement**	**1909 N 2nd St.**	**1909 N 2nd St. - ML**	**1915 N 2nd St.**
Sample Name:		**SS-170731-RA-05**	**IA-170731-RA-06**	**SS-170731-RA-04**	**IA-170731-RA-05**	**SS-170731-RA-03**
Sample Date:		**07/31/2017**	**07/31/2017**	**07/31/2017**	**07/31/2017**	**07/31/2017**
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	0.26 J	0.080 U	0.80 U	0.080 U	0.80 U
Tetrachloroethene	ppbv	1.2	0.064 J	8.4	0.042 J	6.1
Trichloroethene	ppbv	0.26 J	0.040 U	0.16 J	0.040 U	0.19 J
Vinyl chloride	ppbv	0.40 U	0.040 U	0.40 U	0.040 U	0.40 U
Carbon tetrachloride	µg/m3	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	1.0 J	0.32 U	3.2 U	0.32 U	3.2 U
Tetrachloroethene	µg/m3	7.8	0.44 J	57	0.28 J	42
Trichloroethene	µg/m3	1.4 J	0.21 U	0.86 J	0.21 U	1.0 J
Vinyl chloride	µg/m3	1.0 U	0.10 U	1.0 U	0.10 U	1.0 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**1915 N 2nd St. - ML**	**1917 N 2nd St.**	**1917 N 2nd St. - Basement**	**1917 N 2nd St. - OA**	**Bridge Clinic**
Sample Name:		**IA-170731-RA-04**	**SS-170731-RA-02**	**IA-170731-RA-03**	**OA-170731-RA-01**	**SS-170731-RA-01**
Sample Date:		**07/31/2017**	**07/31/2017**	**07/31/2017**	**07/31/2017**	**07/31/2017**
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	0.080 U	0.80 U	0.080 U	0.080 U	5.7 U
Tetrachloroethene	ppbv	0.036 J	7.3	0.056 J	0.080 U	390
Trichloroethene	ppbv	0.040 U	0.62	0.052	0.040 U	12
Vinyl chloride	ppbv	0.040 U	0.40 U	0.040 U	0.040 U	2.8 U
Carbon tetrachloride	µg/m3	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	0.32 U	3.2 U	0.32 U	0.32 U	22 U
Tetrachloroethene	µg/m3	0.24 J	49	0.38 J	0.54 U	2700
Trichloroethene	µg/m3	0.21 U	3.3	0.28	0.21 U	65
Vinyl chloride	µg/m3	0.10 U	1.0 U	0.10 U	0.10 U	7.2 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**Bridge Clinic - Basement**	**E-1S**	**E-1S**	**E-2D**	**E-2S**
Sample Name:		**IA-170731-RA-01**	**G-170801-RA-08**	**G-170801-RA-09**	**G-170801-RA-02**	**G-170801-RA-01**
Sample Date:		**07/31/2017**	**08/01/2017**	**08/01/2017**	**08/01/2017**	**08/01/2017**
				Duplicate		
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	0.080 U	2.9 U	0.31 J	9.9	0.80 U
Tetrachloroethene	ppbv	0.30	250	280	7.5	6.4
Trichloroethene	ppbv	0.064	4.5	4.2	8.5	0.40 U
Vinyl chloride	ppbv	0.040 U	1.4 U	0.40 U	0.40 U	0.40 U
Carbon tetrachloride	µg/m3	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	0.32 U	11 U	1.2 J	39	3.2 U
Tetrachloroethene	µg/m3	2.1	1700	1900	51	43
Trichloroethene	µg/m3	0.34	24	23	46	2.1 U
Vinyl chloride	µg/m3	0.10 U	3.7 U	1.0 U	1.0 U	1.0 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**E-4D**	**E-4S**	**E-5D**	**E-5S**	**E-5S**	**E-7D**
Sample Name:		**G-170801-RA-04**	**G-170801-RA-03**	**G-170801-RA-07**	**G-170801-RA-05**	**G-170801-RA-06**	**G-170801-RA-15**
Sample Date:		**08/01/2017**	**08/01/2017**	**08/01/2017**	**08/01/2017**	**08/01/2017**	**08/01/2017**
						Duplicate	
Parameters	**Unit**						
Volatile Organic Compounds							
Carbon tetrachloride	ppbv	--	--	--	--	--	--
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--	--
cis-1,2-Dichloroethene	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Tetrachloroethene	ppbv	0.35 J	3.7	25	9.7	9.5	60
Trichloroethene	ppbv	0.23 J	0.40 U	1.0	0.40 U	0.40 U	0.89
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Carbon tetrachloride	µg/m3	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/m3	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U
Tetrachloroethene	µg/m3	2.3 J	25	170	66	64	410
Trichloroethene	µg/m3	1.2 J	2.1 U	5.4	2.1 U	2.1 U	4.8
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		E-8D	E-8S	E-9D	E-9S	1917 N 2nd St. - ML	RB Building A
Sample Name:		G-170801-RA-13	G-170801-RA-12	G-170801-RA-11	G-170801-RA-10	IA-170731-RA-02	IA-170731-RA-07
Sample Date:		08/01/2017	08/01/2017	08/01/2017	08/01/2017	07/31/2017	07/31/2017
Parameters	**Unit**						
Volatile Organic Compounds							
Carbon tetrachloride	ppbv	--	--	--	--	--	0.072 J
Chloroform (Trichloromethane)	ppbv	--	--	--	--	--	0.029 J
cis-1,2-Dichloroethene	ppbv	0.80 U	0.80 U	0.24 J	0.80 U	0.080 U	0.080 U
Tetrachloroethene	ppbv	14	4.5	33	34	0.082	--
Trichloroethene	ppbv	1.9	0.22 J	1.5	0.31 J	0.040 U	0.031 J
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.040 U	0.040 U
Carbon tetrachloride	µg/m3	--	--	--	--	--	0.45 J
Chloroform (Trichloromethane)	µg/m3	--	--	--	--	--	0.14 J
cis-1,2-Dichloroethene	µg/m3	3.2 U	3.2 U	0.96 J	3.2 U	0.32 U	0.32 U
Tetrachloroethene	µg/m3	92	30	220	230	0.56	--
Trichloroethene	µg/m3	10	1.2 J	7.8	1.6 J	0.21 U	0.17 J
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.0 U	0.10 U	0.10 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		RB Building A SS-5	RB Building A SS-5	RB Building B	RB Building B SS-1	RB Building B SS-2
Sample Name:		SS-170802-RA-10	SS-170801-RA-09	IA-170731-RA-08	SS-170801-RA-06	SS-170801-RA-07
Sample Date:		08/02/2017	08/01/2017	07/31/2017	08/01/2017	08/01/2017
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	0.80 U	13 U	0.065 J	0.80 U	290
Chloroform (Trichloromethane)	ppbv	0.80 U	10 J	0.030 J	0.80 U	97
cis-1,2-Dichloroethene	ppbv	0.80 U	13 U	0.080 U	0.34 J	65
Tetrachloroethene	ppbv	--	--	--	--	--
Trichloroethene	ppbv	1.8	910	0.040 U	52	2900
Vinyl chloride	ppbv	0.40 U	6.5 U	0.040 U	0.40 U	23 U
Carbon tetrachloride	µg/m3	5.0 U	82 U	0.41 J	5.0 U	1800
Chloroform (Trichloromethane)	µg/m3	3.9 U	50 J	0.15 J	3.9 U	470
cis-1,2-Dichloroethene	µg/m3	3.2 U	51 U	0.32 U	1.3 J	260
Tetrachloroethene	µg/m3	--	--	--	--	--
Trichloroethene	µg/m3	9.4	4900	0.21 U	280	15000
Vinyl chloride	µg/m3	1.0 U	17 U	0.10 U	1.0 U	60 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**RB Building B SS-3**	**Regal - OA**	**W-1D**	**W-1S**	**W-1S**
Sample Name:		**SS-170801-RA-08**	**OA-170731-RA-02**	**G-170801-RA-18**	**G-170801-RA-16**	**G-170801-RA-17**
Sample Date:		**08/01/2017**	**07/31/2017**	**08/01/2017**	**08/01/2017**	**08/01/2017**
						Duplicate
Parameters	**Unit**					
Volatile Organic Compounds						
Carbon tetrachloride	ppbv	0.87	0.070 J	0.72 J	0.80 U	0.80 U
Chloroform (Trichloromethane)	ppbv	0.80 U	0.028 J	0.26 J	0.80 U	0.80 U
cis-1,2-Dichloroethene	ppbv	0.80 U	0.080 U	0.80 U	0.80 U	0.80 U
Tetrachloroethene	ppbv	--	--	--	--	--
Trichloroethene	ppbv	0.40 U	0.040 U	31	0.14 J	0.40 U
Vinyl chloride	ppbv	0.40 U	0.040 U	0.40 U	0.40 U	0.40 U
Carbon tetrachloride	µg/m3	5.5	0.44 J	4.5 J	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/m3	3.9 U	0.14 J	1.3 J	3.9 U	3.9 U
cis-1,2-Dichloroethene	µg/m3	3.2 U	0.32 U	3.2 U	3.2 U	3.2 U
Tetrachloroethene	µg/m3	--	--	--	--	--
Trichloroethene	µg/m3	2.1 U	0.21 U	170	0.77 J	2.1 U
Vinyl chloride	µg/m3	1.0 U	0.10 U	1.0 U	1.0 U	1.0 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**W-2D**	**W-2S**	**W-3D**	**W-3S**	**W-4D**	**W-4S**
Sample Name:		**G-170802-RA-28**	**G-170802-RA-27**	**G-170802-RA-26**	**G-170802-RA-25**	**G-170801-RA-21**	**G-170801-RA-19**
Sample Date:		**08/02/2017**	**08/02/2017**	**08/02/2017**	**08/02/2017**	**08/01/2017**	**08/01/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
Carbon tetrachloride	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.20 J	0.80 U
Chloroform (Trichloromethane)	ppbv	0.80 U	0.80 U	0.80 U	0.15 J	4.2	4.0
cis-1,2-Dichloroethene	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Tetrachloroethene	ppbv	--	--	--	--	--	--
Trichloroethene	ppbv	19	31	2.4	0.84	12	0.40 U
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	5.0 U	5.0 U	1.3 J	5.0 U
Chloroform (Trichloromethane)	µg/m3	3.9 U	3.9 U	3.9 U	0.75 J	21	20
cis-1,2-Dichloroethene	µg/m3	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U
Tetrachloroethene	µg/m3	--	--	--	--	--	--
Trichloroethene	µg/m3	100	160	13	4.5	65	2.1 U
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2B

Validated Analytical Results Summary - July and August
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

Location ID:		**W-4S**	**W-5S**	**W-7D**	**W-7S**
Sample Name:		**G-170801-RA-20**	**G-170802-RA-24**	**G-170802-RA-23**	**G-170802-RA-22**
Sample Date:		**08/01/2017**	**08/02/2017**	**08/02/2017**	**08/02/2017**
		Duplicate			
Parameters	**Unit**				
Volatile Organic Compounds					
Carbon tetrachloride	ppbv	0.80 U	0.80 U	0.80 U	0.80 U
Chloroform (Trichloromethane)	ppbv	2.8	0.80 U	0.80 U	0.80 U
cis-1,2-Dichloroethene	ppbv	0.80 U	0.80 U	0.80 U	0.80 U
Tetrachloroethene	ppbv	--	--	--	--
Trichloroethene	ppbv	0.40 U	0.83	0.34 J	1.5
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.40 U
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/m3	14	3.9 U	3.9 U	3.9 U
cis-1,2-Dichloroethene	µg/m3	3.2 U	3.2 U	3.2 U	3.2 U
Tetrachloroethene	µg/m3	--	--	--	--
Trichloroethene	µg/m3	2.1 U	4.5	1.8 J	7.8
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.0 U

Notes

U - Not detected at the associated reporting limit
J - Estimated concentration
ML - Main Level
OA - Outdoor Air
RB - Regal Beloit

Table 3

Analytical Methods and Holding Time Criteria
Air Sampling Events
Wausau Superfund Site
Wausau, Wisconsin
May, July and August 2017

			Holding Time	
Parameter	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Volatile Organic Compounds (VOC)	TO-15	Air	-	30

Notes:

Method References:

TO-15 - "Compendium of Methods for the Determination of Toxic Organic Compounds in Air", EPA-625/R-96/010b, January 1999.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-7537-1
Client Project/Site: Wausau Vapor Sampling
Revision: 1

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Authorized for release by:
4/7/2017 12:23:30 PM

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-7537-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-7537-1
REVISED

Comments
This report has been revised. Carbon tetrachloride was reported for several samples.

Receipt
The samples were received on 3/18/2017 10:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page. Additionally, the canisters were checked down to the method detection limit (MDL) for chloroform.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: OA-170313-RA-01 — Lab Sample ID: 140-7537-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.066	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.019	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.41	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.093	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-170313-RA-01 — Lab Sample ID: 140-7537-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.067	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.029	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.15		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.42	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.14	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.82		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-170313-RA-02 — Lab Sample ID: 140-7537-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.071	J	0.080	0.015	ppb v/v	1.49		TO 15 LL	Total/NA
Chloroform	0.030	J	0.080	0.015	ppb v/v	1.49		TO 15 LL	Total/NA
Trichloroethene	0.30		0.040	0.014	ppb v/v	1.49		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.44	J	0.50	0.094	ug/m3	1.49		TO 15 LL	Total/NA
Chloroform	0.15	J	0.39	0.073	ug/m3	1.49		TO 15 LL	Total/NA
Trichloroethene	1.6		0.21	0.075	ug/m3	1.49		TO 15 LL	Total/NA

Client Sample ID: SS-170313-RA-01 — Lab Sample ID: 140-7537-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.083	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.32	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	51		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.40	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.3	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	270		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170313-RA-02 — Lab Sample ID: 140-7537-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	190		23	4.3	ppb v/v	11.58		TO 15 LL	Total/NA
Chloroform	45		23	4.3	ppb v/v	11.58		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	37		23	6.9	ppb v/v	11.58		TO 15 LL	Total/NA
Trichloroethene	1800		12	4.1	ppb v/v	11.58		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	1200		150	27	ug/m3	11.58		TO 15 LL	Total/NA
Chloroform	220		110	21	ug/m3	11.58		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: SS-170313-RA-02 (Continued) — Lab Sample ID: 140-7537-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	150		92	28	ug/m3	11.58		TO 15 LL	Total/NA
Trichloroethene	9400		62	22	ug/m3	11.58		TO 15 LL	Total/NA

Client Sample ID: SS-170313-RA-03 — Lab Sample ID: 140-7537-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.098		0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.034	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.14		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.62		0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.17	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.78		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170313-RA-04 — Lab Sample ID: 140-7537-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.84		0.27	0.050	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.30		0.27	0.050	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.25	J	0.27	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	40		0.13	0.047	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	5.3		1.7	0.31	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.5		1.3	0.24	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.99	J	1.1	0.32	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	220		0.72	0.25	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170313-RA-05 — Lab Sample ID: 140-7537-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	8.5	J	14	2.7	ppb v/v	12.39		TO 15 LL	Total/NA
Trichloroethene	900		7.1	2.5	ppb v/v	12.39		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	41	J	69	13	ug/m3	12.39		TO 15 LL	Total/NA
Trichloroethene	4800		38	13	ug/m3	12.39		TO 15 LL	Total/NA

Client Sample ID: G-170313-RA-17 — Lab Sample ID: 140-7537-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.12	J	0.13	0.025	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.078	J	0.13	0.025	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.040	J	0.13	0.040	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	17		0.067	0.023	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.74	J	0.84	0.16	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.38	J	0.65	0.12	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.16	J	0.53	0.16	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	94		0.36	0.13	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170313-RA-18 — Lab Sample ID: 140-7537-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.034	J	0.10	0.019	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.095	J	0.10	0.019	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.045	J	0.10	0.030	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	16		0.050	0.018	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.21	J	0.63	0.12	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.46	J	0.49	0.092	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	86		0.27	0.094	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170313-RA-19 — Lab Sample ID: 140-7537-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.060	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.12		0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.1		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.38	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.56		0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.1		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170313-RA-20 — Lab Sample ID: 140-7537-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.078	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.025	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.49	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.12	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.4		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-21 — Lab Sample ID: 140-7537-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.045	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.026	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.7		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.28	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.0		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-22 — Lab Sample ID: 140-7537-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.12		0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.073	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.41		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: G-170314-RA-22 (Continued) — Lab Sample ID: 140-7537-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.74		0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.35	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.2		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-23 — Lab Sample ID: 140-7537-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.020	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.4		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.12	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	7.3		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-24 — Lab Sample ID: 140-7537-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.017	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.020	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.33		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.10	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.10	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-25 — Lab Sample ID: 140-7537-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.68		0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.018	J	0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.3		0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.099	J	0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-26 — Lab Sample ID: 140-7537-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.9		0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.025	J	0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	14		0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.13	J	0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-27 — Lab Sample ID: 140-7537-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.040	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.038	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.9		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-27 (Continued) — Lab Sample ID: 140-7537-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.25	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.19	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	10		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170314-RA-28 — Lab Sample ID: 140-7537-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.054	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.027	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.032	J	0.080	0.024	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	5.9		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.34	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.13	J	0.32	0.095	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	32		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: OA-170313-RA-01

Lab Sample ID: 140-7537-1
Matrix: Air

Date Collected: 03/14/17 11:45
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.066	J	0.080	0.015	ppb v/v			03/22/17 14:07	1
Chloroform	0.019	J	0.080	0.015	ppb v/v			03/22/17 14:07	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/22/17 14:07	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/22/17 14:07	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/22/17 14:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.41	J	0.50	0.094	ug/m3			03/22/17 14:07	1
Chloroform	0.093	J	0.39	0.073	ug/m3			03/22/17 14:07	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/22/17 14:07	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/22/17 14:07	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/22/17 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*60 - 140*		*03/22/17 14:07*	*1*

Client Sample ID: IA-170313-RA-01

Lab Sample ID: 140-7537-2
Matrix: Air

Date Collected: 03/14/17 11:45
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.067	J	0.080	0.015	ppb v/v			03/22/17 15:02	1
Chloroform	0.029	J	0.080	0.015	ppb v/v			03/22/17 15:02	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/22/17 15:02	1
Trichloroethene	0.15		0.040	0.014	ppb v/v			03/22/17 15:02	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/22/17 15:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.42	J	0.50	0.094	ug/m3			03/22/17 15:02	1
Chloroform	0.14	J	0.39	0.073	ug/m3			03/22/17 15:02	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/22/17 15:02	1
Trichloroethene	0.82		0.21	0.075	ug/m3			03/22/17 15:02	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/22/17 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*60 - 140*		*03/22/17 15:02*	*1*

Client Sample ID: IA-170313-RA-02

Lab Sample ID: 140-7537-3
Matrix: Air

Date Collected: 03/14/17 11:50
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.071	J	0.080	0.015	ppb v/v			03/22/17 15:58	1.49
Chloroform	0.030	J	0.080	0.015	ppb v/v			03/22/17 15:58	1.49
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/22/17 15:58	1.49
Trichloroethene	0.30		0.040	0.014	ppb v/v			03/22/17 15:58	1.49
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/22/17 15:58	1.49

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.44**	**J**	0.50	0.094	ug/m3			03/22/17 15:58	1.49
Chloroform	**0.15**	**J**	0.39	0.073	ug/m3			03/22/17 15:58	1.49
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/22/17 15:58	1.49
Trichloroethene	**1.6**		0.21	0.075	ug/m3			03/22/17 15:58	1.49
Vinyl chloride	ND		0.10	0.074	ug/m3			03/22/17 15:58	1.49

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*60 - 140*		*03/22/17 15:58*	*1.49*

Client Sample ID: SS-170313-RA-01

Lab Sample ID: 140-7537-4

Date Collected: 03/13/17 14:36
Matrix: Air
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/23/17 17:17	1
Chloroform	**0.083**	**J**	0.40	0.075	ppb v/v			03/23/17 17:17	1
cis-1,2-Dichloroethene	**0.32**	**J**	0.40	0.12	ppb v/v			03/23/17 17:17	1
Trichloroethene	**51**		0.20	0.070	ppb v/v			03/23/17 17:17	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/23/17 17:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/23/17 17:17	1
Chloroform	**0.40**	**J**	2.0	0.37	ug/m3			03/23/17 17:17	1
cis-1,2-Dichloroethene	**1.3**	**J**	1.6	0.48	ug/m3			03/23/17 17:17	1
Trichloroethene	**270**		1.1	0.38	ug/m3			03/23/17 17:17	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/23/17 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*03/23/17 17:17*	*1*

Client Sample ID: SS-170313-RA-02

Lab Sample ID: 140-7537-5

Date Collected: 03/13/17 14:45
Matrix: Air
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**190**		23	4.3	ppb v/v			03/23/17 16:30	11.58
Chloroform	**45**		23	4.3	ppb v/v			03/23/17 16:30	11.58
cis-1,2-Dichloroethene	**37**		23	6.9	ppb v/v			03/23/17 16:30	11.58
Trichloroethene	**1800**		12	4.1	ppb v/v			03/23/17 16:30	11.58
Vinyl chloride	ND		12	8.4	ppb v/v			03/23/17 16:30	11.58

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**1200**		150	27	ug/m3			03/23/17 16:30	11.58
Chloroform	**220**		110	21	ug/m3			03/23/17 16:30	11.58
cis-1,2-Dichloroethene	**150**		92	28	ug/m3			03/23/17 16:30	11.58
Trichloroethene	**9400**		62	22	ug/m3			03/23/17 16:30	11.58
Vinyl chloride	ND		30	21	ug/m3			03/23/17 16:30	11.58

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*03/23/17 16:30*	*11.58*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: SS-170313-RA-03

Lab Sample ID: 140-7537-6
Matrix: Air
Date Collected: 03/13/17 14:50
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.098		0.080	0.015	ppb v/v			03/22/17 18:28	1
Chloroform	0.034	J	0.080	0.015	ppb v/v			03/22/17 18:28	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/22/17 18:28	1
Trichloroethene	0.14		0.040	0.014	ppb v/v			03/22/17 18:28	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/22/17 18:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.62		0.50	0.094	ug/m3			03/22/17 18:28	1
Chloroform	0.17	J	0.39	0.073	ug/m3			03/22/17 18:28	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/22/17 18:28	1
Trichloroethene	0.78		0.21	0.075	ug/m3			03/22/17 18:28	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/22/17 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*60 - 140*		*03/22/17 18:28*	*1*

Client Sample ID: SS-170313-RA-04

Lab Sample ID: 140-7537-7
Matrix: Air
Date Collected: 03/13/17 15:52
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.84		0.27	0.050	ppb v/v			03/23/17 18:06	1
Chloroform	0.30		0.27	0.050	ppb v/v			03/23/17 18:06	1
cis-1,2-Dichloroethene	0.25	J	0.27	0.080	ppb v/v			03/23/17 18:06	1
Trichloroethene	40		0.13	0.047	ppb v/v			03/23/17 18:06	1
Vinyl chloride	ND		0.13	0.097	ppb v/v			03/23/17 18:06	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	5.3		1.7	0.31	ug/m3			03/23/17 18:06	1
Chloroform	1.5		1.3	0.24	ug/m3			03/23/17 18:06	1
cis-1,2-Dichloroethene	0.99	J	1.1	0.32	ug/m3			03/23/17 18:06	1
Trichloroethene	220		0.72	0.25	ug/m3			03/23/17 18:06	1
Vinyl chloride	ND		0.34	0.25	ug/m3			03/23/17 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*03/23/17 18:06*	*1*

Client Sample ID: SS-170313-RA-05

Lab Sample ID: 140-7537-8
Matrix: Air
Date Collected: 03/13/17 16:04
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		14	2.7	ppb v/v			03/23/17 18:54	12.39
Chloroform	8.5	J	14	2.7	ppb v/v			03/23/17 18:54	12.39
cis-1,2-Dichloroethene	ND		14	4.2	ppb v/v			03/23/17 18:54	12.39
Trichloroethene	900		7.1	2.5	ppb v/v			03/23/17 18:54	12.39
Vinyl chloride	ND		7.1	5.1	ppb v/v			03/23/17 18:54	12.39

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: SS-170313-RA-05

Lab Sample ID: 140-7537-8
Matrix: Air

Date Collected: 03/13/17 16:04
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		89	17	ug/m3			03/23/17 18:54	12.39
Chloroform	**41**	**J**	69	13	ug/m3			03/23/17 18:54	12.39
cis-1,2-Dichloroethene	ND		56	17	ug/m3			03/23/17 18:54	12.39
Trichloroethene	**4800**		38	13	ug/m3			03/23/17 18:54	12.39
Vinyl chloride	ND		18	13	ug/m3			03/23/17 18:54	12.39

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*03/23/17 18:54*	*12.39*

Client Sample ID: G-170313-RA-17

Lab Sample ID: 140-7537-9
Matrix: Air

Date Collected: 03/13/17 16:59
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.12**	**J**	0.13	0.025	ppb v/v			03/23/17 19:45	1
Chloroform	**0.078**	**J**	0.13	0.025	ppb v/v			03/23/17 19:45	1
cis-1,2-Dichloroethene	**0.040**	**J**	0.13	0.040	ppb v/v			03/23/17 19:45	1
Trichloroethene	**17**		0.067	0.023	ppb v/v			03/23/17 19:45	1
Vinyl chloride	ND		0.067	0.048	ppb v/v			03/23/17 19:45	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.74**	**J**	0.84	0.16	ug/m3			03/23/17 19:45	1
Chloroform	**0.38**	**J**	0.65	0.12	ug/m3			03/23/17 19:45	1
cis-1,2-Dichloroethene	**0.16**	**J**	0.53	0.16	ug/m3			03/23/17 19:45	1
Trichloroethene	**94**		0.36	0.13	ug/m3			03/23/17 19:45	1
Vinyl chloride	ND		0.17	0.12	ug/m3			03/23/17 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*60 - 140*		*03/23/17 19:45*	*1*

Client Sample ID: G-170313-RA-18

Lab Sample ID: 140-7537-10
Matrix: Air

Date Collected: 03/13/17 16:59
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.034**	**J**	0.10	0.019	ppb v/v			03/23/17 20:37	1
Chloroform	**0.095**	**J**	0.10	0.019	ppb v/v			03/23/17 20:37	1
cis-1,2-Dichloroethene	**0.045**	**J**	0.10	0.030	ppb v/v			03/23/17 20:37	1
Trichloroethene	**16**		0.050	0.018	ppb v/v			03/23/17 20:37	1
Vinyl chloride	ND		0.050	0.036	ppb v/v			03/23/17 20:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.21**	**J**	0.63	0.12	ug/m3			03/23/17 20:37	1
Chloroform	**0.46**	**J**	0.49	0.092	ug/m3			03/23/17 20:37	1
cis-1,2-Dichloroethene	**0.18**	**J**	0.40	0.12	ug/m3			03/23/17 20:37	1
Trichloroethene	**86**		0.27	0.094	ug/m3			03/23/17 20:37	1
Vinyl chloride	ND		0.13	0.093	ug/m3			03/23/17 20:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170313-RA-18

Lab Sample ID: 140-7537-10
Matrix: Air

Date Collected: 03/13/17 16:59
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		60 - 140		03/23/17 20:37	1

Client Sample ID: G-170313-RA-19

Lab Sample ID: 140-7537-11
Matrix: Air

Date Collected: 03/13/17 17:50
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.060	J	0.080	0.015	ppb v/v			03/23/17 21:31	1
Chloroform	0.12		0.080	0.015	ppb v/v			03/23/17 21:31	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 21:31	1
Trichloroethene	1.1		0.040	0.014	ppb v/v			03/23/17 21:31	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 21:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.38	J	0.50	0.094	ug/m3			03/23/17 21:31	1
Chloroform	0.56		0.39	0.073	ug/m3			03/23/17 21:31	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 21:31	1
Trichloroethene	6.1		0.21	0.075	ug/m3			03/23/17 21:31	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 21:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		60 - 140		03/23/17 21:31	1

Client Sample ID: G-170313-RA-20

Lab Sample ID: 140-7537-12
Matrix: Air

Date Collected: 03/13/17 17:42
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.078	J	0.080	0.015	ppb v/v			03/23/17 22:25	1
Chloroform	0.025	J	0.080	0.015	ppb v/v			03/23/17 22:25	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 22:25	1
Trichloroethene	1.2		0.040	0.014	ppb v/v			03/23/17 22:25	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 22:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.49	J	0.50	0.094	ug/m3			03/23/17 22:25	1
Chloroform	0.12	J	0.39	0.073	ug/m3			03/23/17 22:25	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 22:25	1
Trichloroethene	6.4		0.21	0.075	ug/m3			03/23/17 22:25	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		60 - 140		03/23/17 22:25	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-21

Lab Sample ID: 140-7537-13
Matrix: Air

Date Collected: 03/14/17 09:34
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.045	J	0.080	0.015	ppb v/v			03/23/17 23:19	1
Chloroform	0.026	J	0.080	0.015	ppb v/v			03/23/17 23:19	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 23:19	1
Trichloroethene	1.7		0.040	0.014	ppb v/v			03/23/17 23:19	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 23:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.28	J	0.50	0.094	ug/m3			03/23/17 23:19	1
Chloroform	0.13	J	0.39	0.073	ug/m3			03/23/17 23:19	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 23:19	1
Trichloroethene	9.0		0.21	0.075	ug/m3			03/23/17 23:19	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*60 - 140*		*03/23/17 23:19*	*1*

Client Sample ID: G-170314-RA-22

Lab Sample ID: 140-7537-14
Matrix: Air

Date Collected: 03/14/17 09:45
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.12		0.080	0.015	ppb v/v			03/24/17 00:15	1
Chloroform	0.073	J	0.080	0.015	ppb v/v			03/24/17 00:15	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/24/17 00:15	1
Trichloroethene	0.41		0.040	0.014	ppb v/v			03/24/17 00:15	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/24/17 00:15	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.74		0.50	0.094	ug/m3			03/24/17 00:15	1
Chloroform	0.35	J	0.39	0.073	ug/m3			03/24/17 00:15	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/24/17 00:15	1
Trichloroethene	2.2		0.21	0.075	ug/m3			03/24/17 00:15	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/24/17 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*60 - 140*		*03/24/17 00:15*	*1*

Client Sample ID: G-170314-RA-23

Lab Sample ID: 140-7537-15
Matrix: Air

Date Collected: 03/14/17 10:27
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.020	J	0.080	0.015	ppb v/v			03/24/17 02:12	1
Chloroform	ND		0.080	0.015	ppb v/v			03/24/17 02:12	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/24/17 02:12	1
Trichloroethene	1.4		0.040	0.014	ppb v/v			03/24/17 02:12	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/24/17 02:12	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-23

Lab Sample ID: 140-7537-15
Matrix: Air

Date Collected: 03/14/17 10:27
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.12**	**J**	0.50	0.094	ug/m3			03/24/17 02:12	1
Chloroform	ND		0.39	0.073	ug/m3			03/24/17 02:12	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/24/17 02:12	1
Trichloroethene	**7.3**		0.21	0.075	ug/m3			03/24/17 02:12	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/24/17 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*60 - 140*		*03/24/17 02:12*	*1*

Client Sample ID: G-170314-RA-24

Lab Sample ID: 140-7537-16
Matrix: Air

Date Collected: 03/14/17 10:27
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.017**	**J**	0.080	0.015	ppb v/v			03/24/17 03:07	1
Chloroform	**0.020**	**J**	0.080	0.015	ppb v/v			03/24/17 03:07	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/24/17 03:07	1
Trichloroethene	**0.33**		0.040	0.014	ppb v/v			03/24/17 03:07	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/24/17 03:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.10**	**J**	0.50	0.094	ug/m3			03/24/17 03:07	1
Chloroform	**0.10**	**J**	0.39	0.073	ug/m3			03/24/17 03:07	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/24/17 03:07	1
Trichloroethene	**1.8**		0.21	0.075	ug/m3			03/24/17 03:07	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/24/17 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*60 - 140*		*03/24/17 03:07*	*1*

Client Sample ID: G-170314-RA-25

Lab Sample ID: 140-7537-17
Matrix: Air

Date Collected: 03/14/17 10:45
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/23/17 11:55	1
Chloroform	**0.68**		0.080	0.015	ppb v/v			03/23/17 11:55	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 11:55	1
Trichloroethene	**0.018**	**J**	0.040	0.014	ppb v/v			03/23/17 11:55	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 11:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/23/17 11:55	1
Chloroform	**3.3**		0.39	0.073	ug/m3			03/23/17 11:55	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 11:55	1
Trichloroethene	**0.099**	**J**	0.21	0.075	ug/m3			03/23/17 11:55	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 11:55	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-25

Lab Sample ID: 140-7537-17
Matrix: Air

Date Collected: 03/14/17 10:45
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		60 - 140		03/23/17 11:55	1

Client Sample ID: G-170314-RA-26

Lab Sample ID: 140-7537-18
Matrix: Air

Date Collected: 03/14/17 10:45
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/23/17 12:49	1
Chloroform	**2.9**		0.080	0.015	ppb v/v			03/23/17 12:49	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 12:49	1
Trichloroethene	**0.025**	**J**	0.040	0.014	ppb v/v			03/23/17 12:49	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 12:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/23/17 12:49	1
Chloroform	**14**		0.39	0.073	ug/m3			03/23/17 12:49	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 12:49	1
Trichloroethene	**0.13**	**J**	0.21	0.075	ug/m3			03/23/17 12:49	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		60 - 140		03/23/17 12:49	1

Client Sample ID: G-170314-RA-27

Lab Sample ID: 140-7537-19
Matrix: Air

Date Collected: 03/14/17 11:30
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.040**	**J**	0.080	0.015	ppb v/v			03/23/17 14:45	1
Chloroform	**0.038**	**J**	0.080	0.015	ppb v/v			03/23/17 14:45	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 14:45	1
Trichloroethene	**1.9**		0.040	0.014	ppb v/v			03/23/17 14:45	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 14:45	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.25**	**J**	0.50	0.094	ug/m3			03/23/17 14:45	1
Chloroform	**0.19**	**J**	0.39	0.073	ug/m3			03/23/17 14:45	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 14:45	1
Trichloroethene	**10**		0.21	0.075	ug/m3			03/23/17 14:45	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 14:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		60 - 140		03/23/17 14:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-28

Lab Sample ID: 140-7537-20

Date Collected: 03/14/17 11:30
Date Received: 03/18/17 10:35
Sample Container: Summa Canister 6L

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.054	J	0.080	0.015	ppb v/v			03/23/17 15:41	1
Chloroform	0.027	J	0.080	0.015	ppb v/v			03/23/17 15:41	1
cis-1,2-Dichloroethene	0.032	J	0.080	0.024	ppb v/v			03/23/17 15:41	1
Trichloroethene	5.9		0.040	0.014	ppb v/v			03/23/17 15:41	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 15:41	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.34	J	0.50	0.094	ug/m3			03/23/17 15:41	1
Chloroform	0.13	J	0.39	0.073	ug/m3			03/23/17 15:41	1
cis-1,2-Dichloroethene	0.13	J	0.32	0.095	ug/m3			03/23/17 15:41	1
Trichloroethene	32		0.21	0.075	ug/m3			03/23/17 15:41	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*60 - 140*		*03/23/17 15:41*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-7537-1	OA-170313-RA-01	86						
140-7537-2	IA-170313-RA-01	82						
140-7537-3	IA-170313-RA-02	81						
140-7537-4	SS-170313-RA-01	100						
140-7537-5	SS-170313-RA-02	91						
140-7537-6	SS-170313-RA-03	80						
140-7537-7	SS-170313-RA-04	97						
140-7537-8	SS-170313-RA-05	94						
140-7537-9	G-170313-RA-17	86						
140-7537-10	G-170313-RA-18	84						
140-7537-11	G-170313-RA-19	89						
140-7537-12	G-170313-RA-20	91						
140-7537-13	G-170314-RA-21	87						
140-7537-14	G-170314-RA-22	84						
140-7537-15	G-170314-RA-23	88						
140-7537-16	G-170314-RA-24	82						
140-7537-17	G-170314-RA-25	81						
140-7537-18	G-170314-RA-26	81						
140-7537-19	G-170314-RA-27	85						
140-7537-20	G-170314-RA-28	85						
LCS 140-9675/1002	Lab Control Sample	94						
LCS 140-9720/1002	Lab Control Sample	96						
MB 140-9675/20	Method Blank	96						
MB 140-9720/4	Method Blank	93						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-9675/20
Matrix: Air
Analysis Batch: 9675

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/22/17 13:14	1
Chloroform	ND		0.080	0.015	ppb v/v			03/22/17 13:14	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/22/17 13:14	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/22/17 13:14	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/22/17 13:14	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/22/17 13:14	1
Chloroform	ND		0.39	0.073	ug/m3			03/22/17 13:14	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/22/17 13:14	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/22/17 13:14	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/22/17 13:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*03/22/17 13:14*	*1*

Lab Sample ID: LCS 140-9675/1002
Matrix: Air
Analysis Batch: 9675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.08		ppb v/v		104	70 - 130
Chloroform	2.00	2.07		ppb v/v		103	70 - 130
cis-1,2-Dichloroethene	2.00	2.13		ppb v/v		106	70 - 130
Trichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Vinyl chloride	2.00	2.55		ppb v/v		127	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.1		ug/m3		104	70 - 130
Chloroform	9.8	10.1		ug/m3		103	70 - 130
cis-1,2-Dichloroethene	7.9	8.43		ug/m3		106	70 - 130
Trichloroethene	11	11.5		ug/m3		107	70 - 130
Vinyl chloride	5.1	6.51		ug/m3		127	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*

Lab Sample ID: MB 140-9720/4
Matrix: Air
Analysis Batch: 9720

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/23/17 11:00	1
Chloroform	ND		0.080	0.015	ppb v/v			03/23/17 11:00	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/23/17 11:00	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/23/17 11:00	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/23/17 11:00	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/23/17 11:00	1
Chloroform	ND		0.39	0.073	ug/m3			03/23/17 11:00	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/23/17 11:00	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/23/17 11:00	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/23/17 11:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*03/23/17 11:00*	*1*

Lab Sample ID: LCS 140-9720/1002
Matrix: Air
Analysis Batch: 9720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.33		ppb v/v		116	70 - 130
Chloroform	2.00	2.07		ppb v/v		103	70 - 130
cis-1,2-Dichloroethene	2.00	2.12		ppb v/v		106	70 - 130
Trichloroethene	2.00	2.18		ppb v/v		109	70 - 130
Vinyl chloride	2.00	1.95		ppb v/v		97	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	14.6		ug/m3		116	70 - 130
Chloroform	9.8	10.1		ug/m3		103	70 - 130
cis-1,2-Dichloroethene	7.9	8.41		ug/m3		106	70 - 130
Trichloroethene	11	11.7		ug/m3		109	70 - 130
Vinyl chloride	5.1	4.98		ug/m3		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Air - GC/MS VOA

Analysis Batch: 9675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7537-1	OA-170313-RA-01	Total/NA	Air	TO 15 LL	
140-7537-2	IA-170313-RA-01	Total/NA	Air	TO 15 LL	
140-7537-3	IA-170313-RA-02	Total/NA	Air	TO 15 LL	
140-7537-6	SS-170313-RA-03	Total/NA	Air	TO 15 LL	
MB 140-9675/20	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9675/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 9720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7537-4	SS-170313-RA-01	Total/NA	Air	TO 15 LL	
140-7537-5	SS-170313-RA-02	Total/NA	Air	TO 15 LL	
140-7537-7	SS-170313-RA-04	Total/NA	Air	TO 15 LL	
140-7537-8	SS-170313-RA-05	Total/NA	Air	TO 15 LL	
140-7537-9	G-170313-RA-17	Total/NA	Air	TO 15 LL	
140-7537-10	G-170313-RA-18	Total/NA	Air	TO 15 LL	
140-7537-11	G-170313-RA-19	Total/NA	Air	TO 15 LL	
140-7537-12	G-170313-RA-20	Total/NA	Air	TO 15 LL	
140-7537-13	G-170314-RA-21	Total/NA	Air	TO 15 LL	
140-7537-14	G-170314-RA-22	Total/NA	Air	TO 15 LL	
140-7537-15	G-170314-RA-23	Total/NA	Air	TO 15 LL	
140-7537-16	G-170314-RA-24	Total/NA	Air	TO 15 LL	
140-7537-17	G-170314-RA-25	Total/NA	Air	TO 15 LL	
140-7537-18	G-170314-RA-26	Total/NA	Air	TO 15 LL	
140-7537-19	G-170314-RA-27	Total/NA	Air	TO 15 LL	
140-7537-20	G-170314-RA-28	Total/NA	Air	TO 15 LL	
MB 140-9720/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9720/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: OA-170313-RA-01 — Lab Sample ID: 140-7537-1

Date Collected: 03/14/17 11:45 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9675	03/22/17 14:07	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170313-RA-01 — Lab Sample ID: 140-7537-2

Date Collected: 03/14/17 11:45 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9675	03/22/17 15:02	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170313-RA-02 — Lab Sample ID: 140-7537-3

Date Collected: 03/14/17 11:50 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.49	745 mL	500 mL	9675	03/22/17 15:58	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170313-RA-01 — Lab Sample ID: 140-7537-4

Date Collected: 03/13/17 14:36 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9720	03/23/17 17:17	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170313-RA-02 — Lab Sample ID: 140-7537-5

Date Collected: 03/13/17 14:45 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		11.58	20 mL	500 mL	9720	03/23/17 16:30	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170313-RA-03 — Lab Sample ID: 140-7537-6

Date Collected: 03/13/17 14:50 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9675	03/22/17 18:28	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: SS-170313-RA-04 — Lab Sample ID: 140-7537-7

Date Collected: 03/13/17 15:52 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	150 mL	500 mL	9720	03/23/17 18:06	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170313-RA-05 — Lab Sample ID: 140-7537-8

Date Collected: 03/13/17 16:04 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		12.39	35 mL	500 mL	9720	03/23/17 18:54	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170313-RA-17 — Lab Sample ID: 140-7537-9

Date Collected: 03/13/17 16:59 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	300 mL	500 mL	9720	03/23/17 19:45	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170313-RA-18 — Lab Sample ID: 140-7537-10

Date Collected: 03/13/17 16:59 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	400 mL	500 mL	9720	03/23/17 20:37	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170313-RA-19 — Lab Sample ID: 140-7537-11

Date Collected: 03/13/17 17:50 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 21:31	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170313-RA-20 — Lab Sample ID: 140-7537-12

Date Collected: 03/13/17 17:42 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 22:25	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-21 — Lab Sample ID: 140-7537-13

Date Collected: 03/14/17 09:34 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 23:19	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170314-RA-22 — Lab Sample ID: 140-7537-14

Date Collected: 03/14/17 09:45 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/24/17 00:15	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170314-RA-23 — Lab Sample ID: 140-7537-15

Date Collected: 03/14/17 10:27 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/24/17 02:12	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170314-RA-24 — Lab Sample ID: 140-7537-16

Date Collected: 03/14/17 10:27 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/24/17 03:07	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170314-RA-25 — Lab Sample ID: 140-7537-17

Date Collected: 03/14/17 10:45 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 11:55	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170314-RA-26 — Lab Sample ID: 140-7537-18

Date Collected: 03/14/17 10:45 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 12:49	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Client Sample ID: G-170314-RA-27 — Lab Sample ID: 140-7537-19

Date Collected: 03/14/17 11:30 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 14:45	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170314-RA-28 — Lab Sample ID: 140-7537-20

Date Collected: 03/14/17 11:30 — **Matrix: Air**
Date Received: 03/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 15:41	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-9675/20

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9675	03/22/17 13:14	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-9720/4

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 11:00	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-9675/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9675	03/22/17 11:03	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-9720/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9720	03/23/17 09:13	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	Carbon tetrachloride
TO 15 LL		Air	Chloroform
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7537-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7537-1	OA-170313-RA-01	Air	03/14/17 11:45	03/18/17 10:35
140-7537-2	IA-170313-RA-01	Air	03/14/17 11:45	03/18/17 10:35
140-7537-3	IA-170313-RA-02	Air	03/14/17 11:50	03/18/17 10:35
140-7537-4	SS-170313-RA-01	Air	03/13/17 14:36	03/18/17 10:35
140-7537-5	SS-170313-RA-02	Air	03/13/17 14:45	03/18/17 10:35
140-7537-6	SS-170313-RA-03	Air	03/13/17 14:50	03/18/17 10:35
140-7537-7	SS-170313-RA-04	Air	03/13/17 15:52	03/18/17 10:35
140-7537-8	SS-170313-RA-05	Air	03/13/17 16:04	03/18/17 10:35
140-7537-9	G-170313-RA-17	Air	03/13/17 16:59	03/18/17 10:35
140-7537-10	G-170313-RA-18	Air	03/13/17 16:59	03/18/17 10:35
140-7537-11	G-170313-RA-19	Air	03/13/17 17:50	03/18/17 10:35
140-7537-12	G-170313-RA-20	Air	03/13/17 17:42	03/18/17 10:35
140-7537-13	G-170314-RA-21	Air	03/14/17 09:34	03/18/17 10:35
140-7537-14	G-170314-RA-22	Air	03/14/17 09:45	03/18/17 10:35
140-7537-15	G-170314-RA-23	Air	03/14/17 10:27	03/18/17 10:35
140-7537-16	G-170314-RA-24	Air	03/14/17 10:27	03/18/17 10:35
140-7537-17	G-170314-RA-25	Air	03/14/17 10:45	03/18/17 10:35
140-7537-18	G-170314-RA-26	Air	03/14/17 10:45	03/18/17 10:35
140-7537-19	G-170314-RA-27	Air	03/14/17 11:30	03/18/17 10:35
140-7537-20	G-170314-RA-28	Air	03/14/17 11:30	03/18/17 10:35

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GAD
Address: 184 Old Highway 8 NW 114
City/State/Zip St. Paul MN
Phone: 651-639-0913
FAX:
Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact:
TAL Contact: Grant Anderson

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By:

1 of 4 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
OA-170313-RA-01	3/13/17	12:40 3/13/17	1145 3/14/17	-30	-6	7617	10967	X								X			
IA-170313-RA-01	3/13/17	12:10 3/13/17	1145 3/14/17	-28	-6	9866	10165	X							X				
IA-170313-RA-02	3/13/17	1245 3/13/17	1150 3/14/17	-30	-5	10620	10848	X							X				

Sampled by: RAamot

140-7537 Chain of Custody

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Rec'd temp Ambient
NO custody seals
D. Flo
4 BOXES FEDX# 727212007823 SD

21 CANS / 21 FLOWS

Special Instructions/QC Requirements & Comments:
Only TCE, c12DCE, CT, chloroform, vinyl Chloride

Canisters Shipped by:	Date/Time: 3/15/17 1500	Canisters Received by: David D Flo 3-18-17 1035
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

4/7/2017

1400 3779

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GAD
Address: 1801 Old Highway 8 NW 114
City/State/Zip St. Paul MN 55112
Phone: 651 639 0913
FAX:

Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact:
TAL Contact: Grant Anderson

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: RTamot

2 of 4 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SS-170313-RA-01	3/13/17	1406	1436	-30	-5	11104	11303	X									X		
SS-170313-RA-02	↓	1415	1445	-29	-5	10910	10377	X									X		
SS-170313-RA-03	↓	1420	1450	-30	-5	10888	10551	X									X		
SS-170313-RA-04	↓	1523	1552	-30	-5	~~09778~~ 10678	~~10978~~ 10978	X									X		
SS-170313-RA-05	↓	1528	1604	-29	-5	09574	10640	X									X		

Sampled by : RTamot

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Rec'd temp Ambient
No custody seals
D. Flo

Special Instructions/QC Requirements & Comments:
Only TCE, c12DCE, CT, chloroform, vinyl chloride

Canisters Shipped by:	Date/Time: 3/15/17 1500	Canisters Received by: David D Flo 3-16-17 1035
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW 114
City/State/Zip: St. Paul MN 55112
Phone: 651 639 0913
FAX:
Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact:
TAL Contact: Grant Anderson

Sampled By: RAamot

3 of 4 COCs

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
G-170313-RA-17	3/13/17	1634	1659	-29	-5	10611	10187	X									X		
G-170313-RA-18	3/13/17	1634	1659	-29	-5	11010	10261	X									X		
G-170313-RA-19	3/13/17	1715	1750	-30	-6	11112	10118	X									X		
G-170313-RA-20	3/13/17	1715	1742	-30	-5	10671	10405	X									X		
G-170314-RA-21	3/14/17	904	934	-30	-6	10547	11473	X									X		
G-170314-RA-22	3/14/17	916	945	-28	-5	10087	10389	X									X		

Sampled by : RAamot

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Rec'd temp Ambient
NO custody seals
D. Flea

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:
only TCE, c12DCE, CT, chloroform, vinyl chloride

Canisters Shipped by:	Date/Time: 3/15/17 1500	Canisters Received by: David D Flea 3-18-17 1035
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GAD
Address: 1801 Old Highway 8 Nw 114
City/State/Zip St Paul MN 55112
Phone: 651 639 0913
FAX:

Project Name: Warsaw
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact:
TAL Contact: Grant Anderson

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: RAmot

4 of 4 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
G-170314-RA-23	3/14/17	1000	1027	-30	-5	10958	11557	X									X		
G-170314-RA-24	3/14/17	1000	1027	-29	-5	10844	11235	X									X		
G-170314-RA-25	3/14/17	1013	1045	-30	-5	11441	10397	X									X		
G-170314-RA-26	3/14/17	1013	1045	-30	-5	11113	11502	X									X		
G-170314-RA-27	3/14/17	1102	1130	-30	-5	10958	11047	X									X		
G-170314-RA-28	3/14/17	1102	1130	-29	-5	10844	10230	X									X		

Sampled by : RAmot

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Rec'd temp Ambient
No custody seals
D. Flores

Returned 5 flows/5 CANS

Special Instructions/QC Requirements & Comments:
Only TCE, c12DCE, chloroform, vinyl chloride

Canisters Shipped by:	Date/Time: 3/15/17 1500	Canisters Received by: David D. Flores 3-18-17 1035
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

Loc: 140
7537

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 14003779 PM Instructions:

Sample Receiving Associate: [signature] Date: 3-20-17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 3/20/17

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
SEG	140-7537-a-1	10967	7316	B	6	-3.7	1443	
SEG	140-7537-a-2	10848	7322	B	6	-6.9	1444	
SEG	140-7537-a-3	10165	7322	B	6	-7.9	1444	1.4
SEG	140-7537-a-4	11303	7267	B	6	-5.8	1454	
SEG	140-7537-a-5	10377	7267	B	6	-4.1	1454	
SEG	140-7537-a-6	10551	7267	B	6	-4.6	1455	
SEG	140-7537-a-7	09978	7268	B	6	-4.7	1455	
SEG	140-7537-a-8	10640	7268	B	6	-4.9	1456	
SEG	140-7537-a-9	10187	7316	B	6	-3.7	1456	
SEG	140-7537-a-10	10261	7248	B	6	-3.9	1504	
SEG	140-7537-a-11	10118	7315	B	6	-3.2	1504	
SEG	140-7537-a-12	10405	7316	B	6	-2.8	1505	
SEG	140-7537-a-13	11473	7268	B	6	-2.8	1505	
SEG	140-7537-a-14	10389	7267	B	6	-4.9	1506	
SEG	140-7537-a-15	11559	7248	B	6	-3.3	1506	
SEG	140-7537-a-16	11235	7267	B	6	-3.8	1512	
SEG	140-7537-a-17	10397	7267	B	6	-4.4	1512	
SEG	140-7537-a-18	11562	7248	B	6	-2.7	1513	
SEG	140-7537-a-19	11047	7315	B	6	-3.8	1513	
SEG	140-7537-a-20	10230	7322	B	6	-5.0	1513	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7248-1

SDG No.:

Client Sample ID: 10026 | Lab Sample ID: 140-7248-7

Matrix: Air | Lab File ID: JB26lot7248.D

Analysis Method: TO 15 LL | Date Collected: 02/25/2017 12:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2017 15:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8842 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND	*	0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND	*	0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7248-1
SDG No.:
Client Sample ID: 10026
Lab Sample ID: 140-7248-7
Matrix: Air
Lab File ID: JB26lot7248.D
Analysis Method: TO 15 LL
Date Collected: 02/25/2017 12:15
Sample wt/vol: 500(mL)
Date Analyzed: 02/26/2017 15:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 8842
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7248-1

SDG No.:

Client Sample ID: 10026 | Lab Sample ID: 140-7248-7

Matrix: Air | Lab File ID: JB26lot7248.D

Analysis Method: TO 15 LL | Date Collected: 02/25/2017 12:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2017 15:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8842 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND	*	0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7248-1

SDG No.:

Client Sample ID: 10026 Lab Sample ID: 140-7248-7

Matrix: Air Lab File ID: JB26lot7248.D

Analysis Method: TO 15 LL Date Collected: 02/25/2017 12:15

Sample wt/vol: 500(mL) Date Analyzed: 02/26/2017 15:42

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8842 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170222-4121.b\JB26lot7248.D
Lims ID: 140-7248-A-7
Client ID: 10026
Sample Type: Client
Inject. Date: 26-Feb-2017 15:42:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004121-006
Misc. Info.: 10026
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170222-4121.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Feb-2017 08:56:44 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: barlozhetskayaa Date: 26-Feb-2017 16:23:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.568	8.569	-0.001	99	343755	4.00	
* 2 1,4-Difluorobenzene	114	10.768	10.769	-0.001	94	1447087	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.545	15.546	-0.001	87	1171530	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.192	17.192	0.000	96	624271	3.37	
31 Methylene Chloride	84	6.051	6.057	-0.006	94	7487	0.0739	

Reagents:

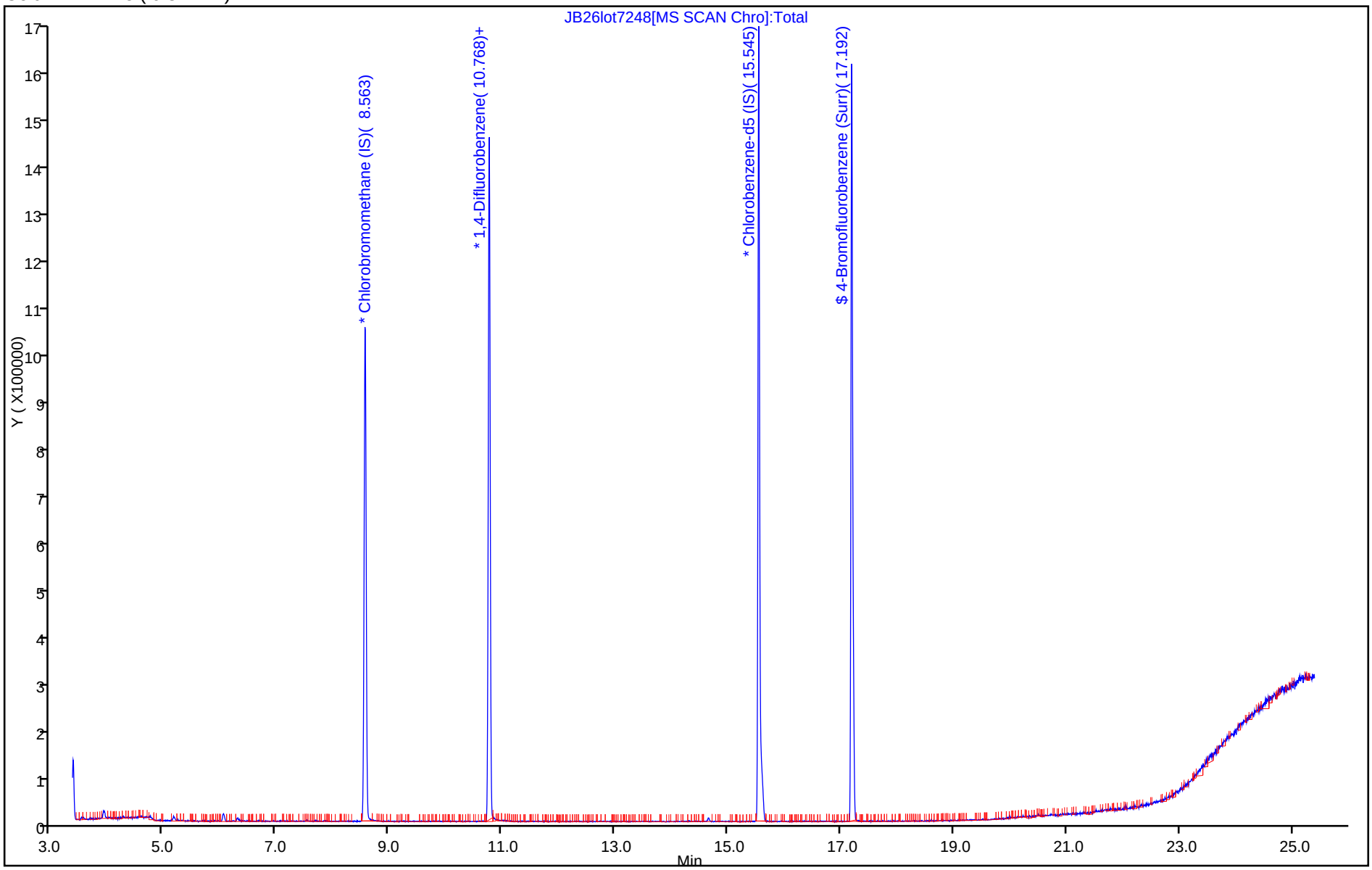
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 27-Feb-2017 08:56:51 Chrom Revision: 2.2 22-Feb-2017 11:38:16

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170222-4121.b\JB26lot7248.D				
Injection Date:	26-Feb-2017 15:42:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-7248-A-7	Lab Sample ID:	140-7248-7	Worklist Smp#:	6
Client ID:	10026				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville
Job No.: 140-7267-1
SDG No.:
Client Sample ID: 10798
Lab Sample ID: 140-7267-12
Matrix: Air
Lab File ID: JC01LOT7267.D
Analysis Method: TO 15 LL
Date Collected: 02/28/2017 15:55
Sample wt/vol: 500(mL)
Date Analyzed: 03/02/2017 09:50
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 8957
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7267-1
SDG No.:
Client Sample ID: 10798
Lab Sample ID: 140-7267-12
Matrix: Air
Lab File ID: JC01LOT7267.D
Analysis Method: TO 15 LL
Date Collected: 02/28/2017 15:55
Sample wt/vol: 500(mL)
Date Analyzed: 03/02/2017 09:50
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 8957
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 | Lab Sample ID: 140-7267-12

Matrix: Air | Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8957 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7267-1

SDG No.:

Client Sample ID: 10798 Lab Sample ID: 140-7267-12

Matrix: Air Lab File ID: JC01LOT7267.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:55

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2017 09:50

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\JC01LOT7267.D
Lims ID: 140-7267-A-12
Client ID: 10798
Sample Type: Client
Inject. Date: 02-Mar-2017 09:50:30 ALS Bottle#: 1 Worklist Smp#: 29
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004160-029
Misc. Info.: 10798
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 02-Mar-2017 10:48:58 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: tajh Date: 02-Mar-2017 10:48:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.557	8.575	-0.018	99	318413	4.00	
* 2 1,4-Difluorobenzene	114	10.758	10.770	-0.012	95	1432888	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.540	15.547	-0.007	86	1142564	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.186	17.193	-0.007	95	578609	3.20	
13 Butane	43	4.039	4.040	-0.001	94	6239	0.0325	
24 Isopropyl alcohol	45	5.238	5.229	0.009	89	12792	0.0833	
31 Methylene Chloride	84	6.045	6.063	-0.018	95	8751	0.0933	

Reagents:

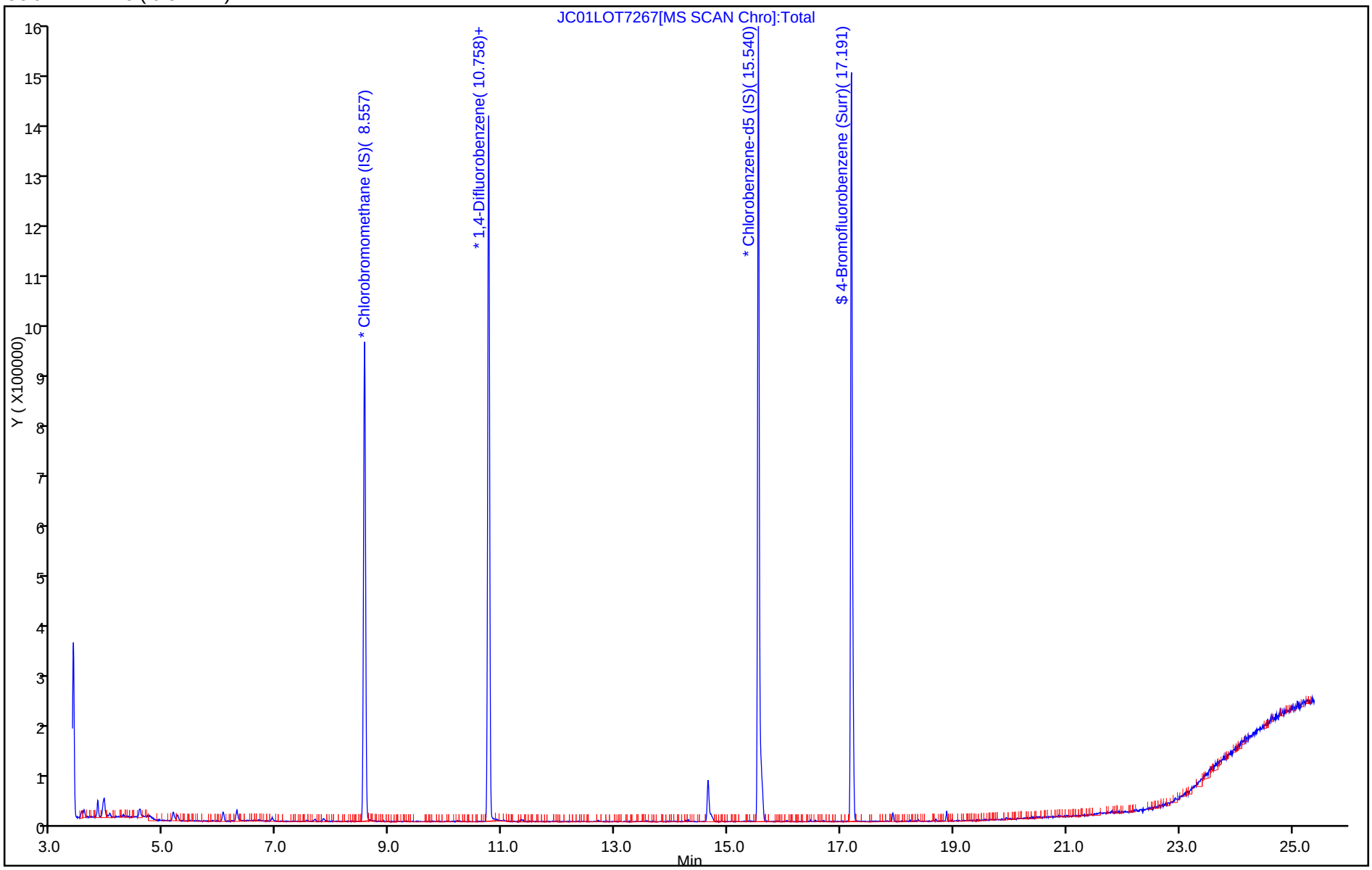
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 02-Mar-2017 10:49:50 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170227-4160.b\JC01LOT7267.D				
Injection Date:	02-Mar-2017 09:50:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-7267-A-12	Lab Sample ID:	140-7267-12	Worklist Smp#:	29
Client ID:	10798				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7268-1

SDG No.:

Client Sample ID: 09767 | Lab Sample ID: 140-7268-10

Matrix: Air | Lab File ID: LOT7268.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 12:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND	*	0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7268-1
SDG No.:
Client Sample ID: 09767 | Lab Sample ID: 140-7268-10
Matrix: Air | Lab File ID: LOT7268.D
Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35
Sample wt/vol: 500(mL) | Date Analyzed: 03/02/2017 12:22
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 8987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND	*	0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7268-1
SDG No.:
Client Sample ID: 09767
Lab Sample ID: 140-7268-10
Matrix: Air
Lab File ID: LOT7268.D
Analysis Method: TO 15 LL
Date Collected: 02/28/2017 16:35
Sample wt/vol: 500(mL)
Date Analyzed: 03/02/2017 12:22
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 8987
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7268-1

SDG No.:

Client Sample ID: 09767 Lab Sample ID: 140-7268-10

Matrix: Air Lab File ID: LOT7268.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:35

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2017 12:22

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8987 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170228-4171.b\LOT7268.D
Lims ID: 140-7268-A-10
Client ID: 09767
Sample Type: Client
Inject. Date: 02-Mar-2017 12:22:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004171-004
Misc. Info.: 09767
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170228-4171.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 10:50:08 Calib Date: 24-Feb-2017 05:21:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170220-4095.b\RB23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: tajh Date: 02-Mar-2017 13:24:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.204	8.226	-0.022	98	442495	4.00	
* 2 1,4-Difluorobenzene	114	10.372	10.383	-0.011	96	2174130	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.274	15.274	0.000	89	1681148	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.967	16.967	0.000	96	1213089	4.13	
31 Methylene Chloride	84	5.907	5.918	-0.011	98	10971	0.0795	
47 1,1,1-Trichloroethane	97	9.229	9.234	-0.005	95	5477	0.0194	

Reagents:

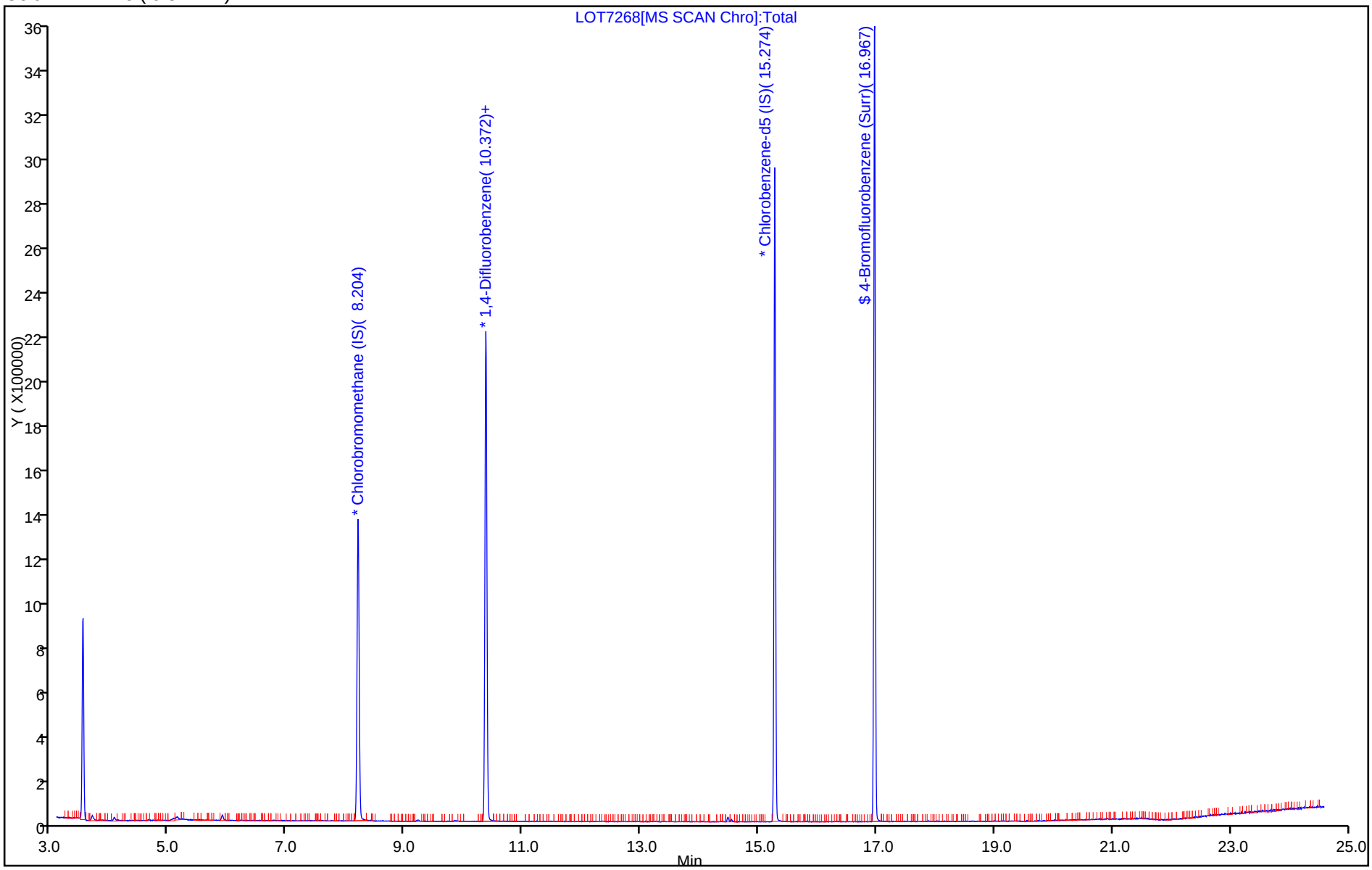
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Mar-2017 10:50:23 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170228-4171.b\LOT7268.D				
Injection Date:	02-Mar-2017 12:22:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7268-A-10	Lab Sample ID:	140-7268-10	Worklist Smp#:	4
Client ID:	09767				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville
Job No.: 140-7315-1
SDG No.:
Client Sample ID: 09770
Lab Sample ID: 140-7315-10
Matrix: Air
Lab File ID: GC04LOT7315.D
Analysis Method: TO 15 LL
Date Collected: 03/03/2017 16:40
Sample wt/vol: 500(mL)
Date Analyzed: 03/04/2017 13:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 9099
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7315-1

SDG No.:

Client Sample ID: 09770 | Lab Sample ID: 140-7315-10

Matrix: Air | Lab File ID: GC04LOT7315.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 16:40

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 13:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9099 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7315-1
SDG No.:
Client Sample ID: 09770
Lab Sample ID: 140-7315-10
Matrix: Air
Lab File ID: GC04LOT7315.D
Analysis Method: TO 15 LL
Date Collected: 03/03/2017 16:40
Sample wt/vol: 500(mL)
Date Analyzed: 03/04/2017 13:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 9099
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7315-1

SDG No.:

Client Sample ID: 09770 Lab Sample ID: 140-7315-10

Matrix: Air Lab File ID: GC04LOT7315.D

Analysis Method: TO 15 LL Date Collected: 03/03/2017 16:40

Sample wt/vol: 500(mL) Date Analyzed: 03/04/2017 13:27

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9099 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\GC04LOT7315.D
Lims ID: 140-7315-A-10
Client ID: 09770
Sample Type: Client
Inject. Date: 04-Mar-2017 13:27:30 ALS Bottle#: 1 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004204-005
Misc. Info.: 09770
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 06-Mar-2017 11:55:46 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 04-Mar-2017 14:14:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.996	8.001	-0.005	85	357575	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1827479	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	87	1712962	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	92	1189396	3.73	
31 Methylene Chloride	84	5.656	5.661	-0.005	92	10257	0.1191	
47 1,1,1-Trichloroethane	97	8.999	9.004	-0.005	96	5279	0.0203	

Reagents:

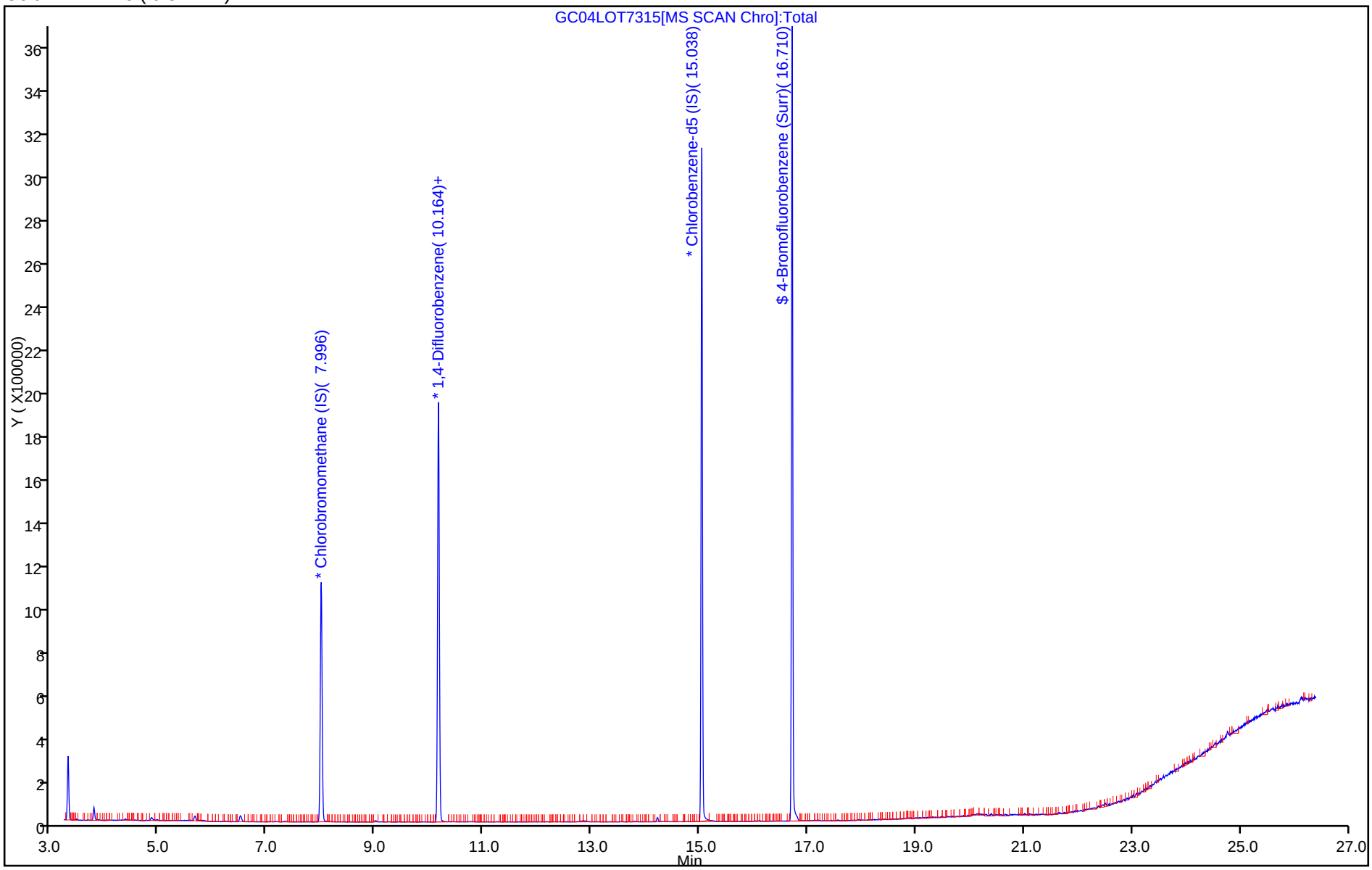
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 06-Mar-2017 11:55:52 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\GC04LOT7315.D				
Injection Date:	04-Mar-2017 13:27:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-7315-A-10	Lab Sample ID:	140-7315-10	Worklist Smp#:	5
Client ID:	09770				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7316-1

SDG No.:

Client Sample ID: 10126 | Lab Sample ID: 140-7316-10

Matrix: Air | Lab File ID: GC04LOT7316.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 17:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 14:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9099 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7316-1

SDG No.:

Client Sample ID: 10126 | Lab Sample ID: 140-7316-10

Matrix: Air | Lab File ID: GC04LOT7316.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 17:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 14:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9099 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7316-1
SDG No.:
Client Sample ID: 10126
Lab Sample ID: 140-7316-10
Matrix: Air
Lab File ID: GC04LOT7316.D
Analysis Method: TO 15 LL
Date Collected: 03/03/2017 17:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/04/2017 14:12
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 9099
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7316-1

SDG No.:

Client Sample ID: 10126 Lab Sample ID: 140-7316-10

Matrix: Air Lab File ID: GC04LOT7316.D

Analysis Method: TO 15 LL Date Collected: 03/03/2017 17:00

Sample wt/vol: 500(mL) Date Analyzed: 03/04/2017 14:12

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9099 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\GC04LOT7316.D
Lims ID: 140-7316-A-10
Client ID: 10126
Sample Type: Client
Inject. Date: 04-Mar-2017 14:12:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004204-006
Misc. Info.: 10126
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 06-Mar-2017 11:55:46 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 04-Mar-2017 15:36:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.001	8.001	0.000	85	364465	4.00	
* 2 1,4-Difluorobenzene	114	10.169	10.169	0.000	95	1819727	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	87	1776591	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	91	1246442	3.77	
31 Methylene Chloride	84	5.666	5.661	0.005	92	8424	0.0959	

Reagents:

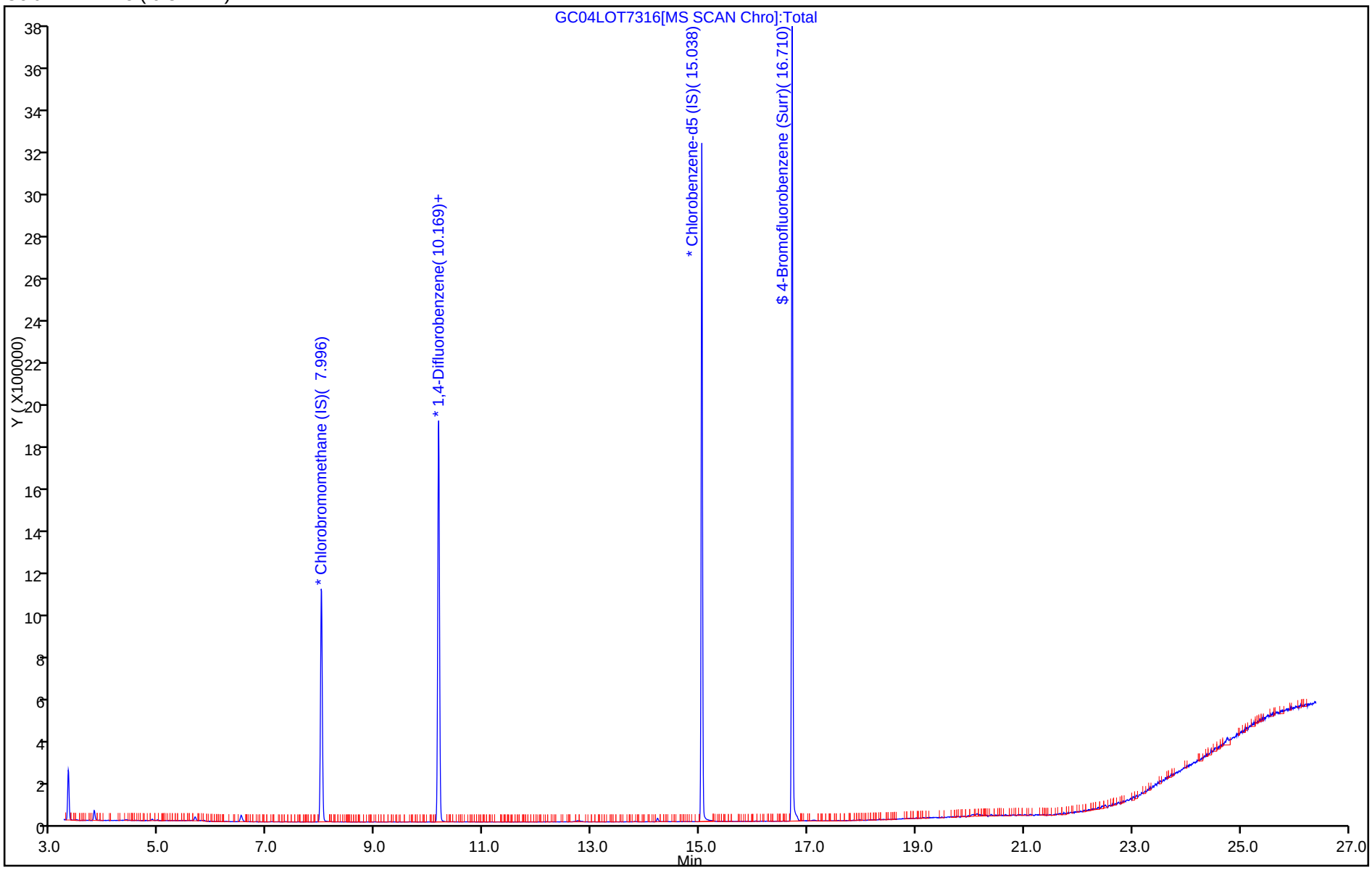
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 06-Mar-2017 11:55:54 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\GC04LOT7316.D				
Injection Date:	04-Mar-2017 14:12:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-7316-A-10	Lab Sample ID:	140-7316-10	Worklist Smp#:	6
Client ID:	10126				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7322-1
SDG No.:
Client Sample ID: 10045 | Lab Sample ID: 140-7322-2
Matrix: Air | Lab File ID: LOT7322.D
Analysis Method: TO 15 LL | Date Collected: 03/04/2017 14:30
Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 13:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 9122 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7322-1

SDG No.:

Client Sample ID: 10045 | Lab Sample ID: 140-7322-2

Matrix: Air | Lab File ID: LOT7322.D

Analysis Method: TO 15 LL | Date Collected: 03/04/2017 14:30

Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 13:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9122 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7322-1
SDG No.:
Client Sample ID: 10045 | Lab Sample ID: 140-7322-2
Matrix: Air | Lab File ID: LOT7322.D
Analysis Method: TO 15 LL | Date Collected: 03/04/2017 14:30
Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 13:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 9122 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7322-1

SDG No.:

Client Sample ID: 10045 Lab Sample ID: 140-7322-2

Matrix: Air Lab File ID: LOT7322.D

Analysis Method: TO 15 LL Date Collected: 03/04/2017 14:30

Sample wt/vol: 500(mL) Date Analyzed: 03/06/2017 13:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9122 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170304-4208.b\LOT7322.D				
Lims ID:	140-7322-A-2				
Client ID:	10045				
Sample Type:	Client				
Inject. Date:	06-Mar-2017 13:25:30	ALS Bottle#:	16	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004208-008				
Misc. Info.:	10045				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170304-4208.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Mar-2017 10:28:29	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK023				

First Level Reviewer: tajh Date: 06-Mar-2017 15:04:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	7.996	-0.005	89	354328	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1764261	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	89	1698275	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	94	1258852	3.98	
31 Methylene Chloride	84	5.656	5.656	0.000	91	7181	0.0841	

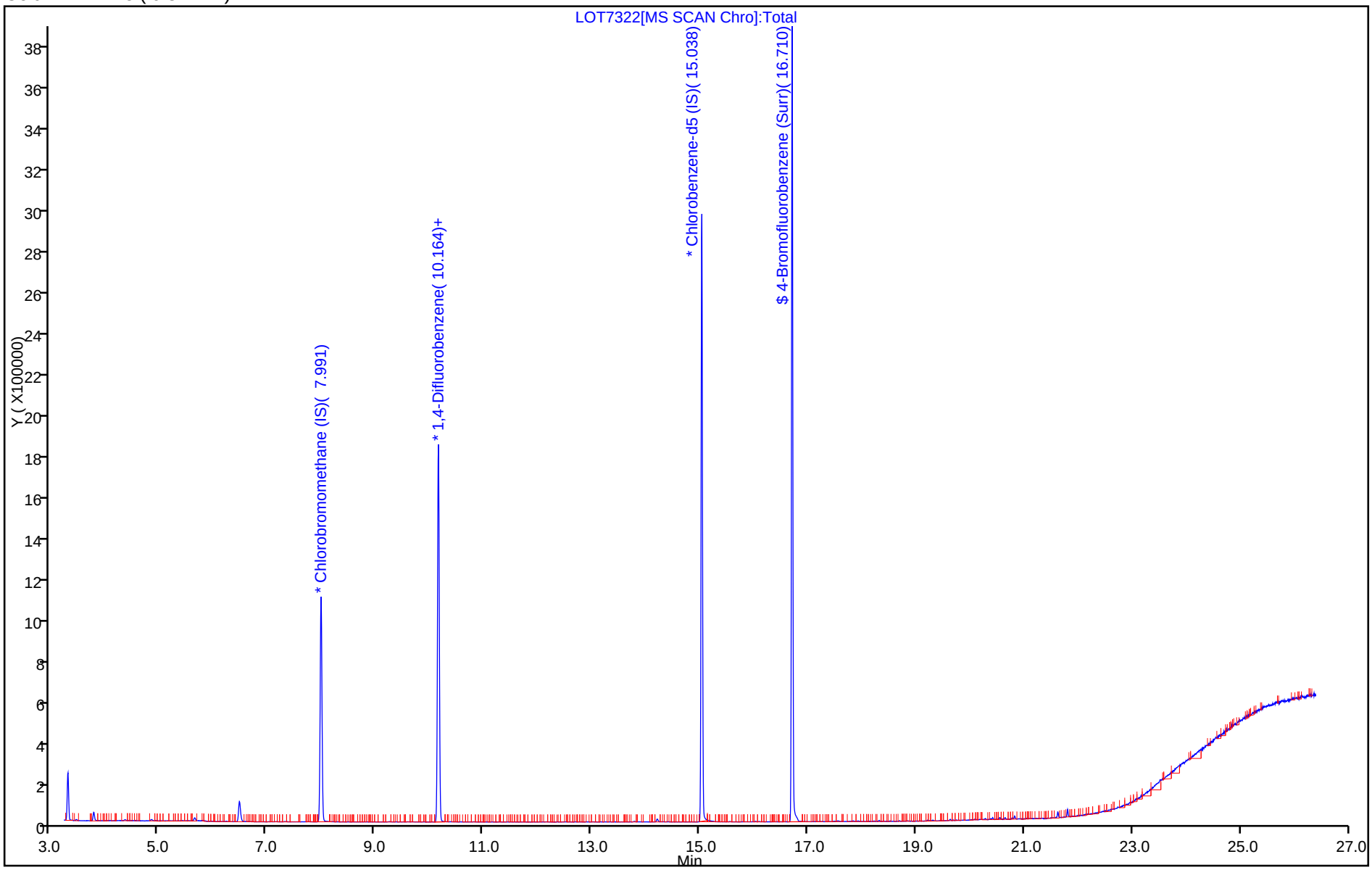
Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2017 10:28:40 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170304-4208.b\LOT7322.D				
Injection Date:	06-Mar-2017 13:25:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7322-A-2	Lab Sample ID:	140-7322-2	Worklist Smp#:	8
Client ID:	10045				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-7756-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Authorized for release by:
4/20/2017 3:13:31 PM

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-7756-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-7756-1

Comments
No additional comments.

Receipt
The samples were received on 4/10/2017 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page. Additionally, the canisters were checked down to the method detection limit (MDL) for chloroform.

Method(s) TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: OA-170404-RA-02 — Lab Sample ID: 140-7756-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.030	J	0.080	0.016	ppb v/v	1.71		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.20	J	0.54	0.11	ug/m3	1.71		TO 15 LL	Total/NA

Client Sample ID: IA-170404-RA-03 — Lab Sample ID: 140-7756-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.3		0.080	0.016	ppb v/v	1.64		TO 15 LL	Total/NA
Trichloroethene	0.081		0.040	0.014	ppb v/v	1.64		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	16		0.54	0.11	ug/m3	1.64		TO 15 LL	Total/NA
Trichloroethene	0.44		0.21	0.075	ug/m3	1.64		TO 15 LL	Total/NA

Client Sample ID: IA-170404-RA-04 — Lab Sample ID: 140-7756-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.023	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.15	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-170404-RA-05 — Lab Sample ID: 140-7756-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.10		0.080	0.024	ppb v/v	2		TO 15 LL	Total/NA
Tetrachloroethene	0.10		0.080	0.016	ppb v/v	2		TO 15 LL	Total/NA
Trichloroethene	0.33		0.040	0.014	ppb v/v	2		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.42		0.32	0.095	ug/m3	2		TO 15 LL	Total/NA
Tetrachloroethene	0.70		0.54	0.11	ug/m3	2		TO 15 LL	Total/NA
Trichloroethene	1.8		0.21	0.075	ug/m3	2		TO 15 LL	Total/NA

Client Sample ID: IA-170404-RA-06 — Lab Sample ID: 140-7756-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.16		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.061		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.1		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.33		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170404-RA-06 — Lab Sample ID: 140-7756-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	440		6.4	1.3	ppb v/v	1.59		TO 15 LL	Total/NA
Trichloroethene	11		3.2	1.1	ppb v/v	1.59		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	3000		43	8.6	ug/m3	1.59		TO 15 LL	Total/NA
Trichloroethene	58		17	6.0	ug/m3	1.59		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: SS-170404-RA-07 — Lab Sample ID: 140-7756-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.4		0.080	0.024	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	17	E	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.0		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	19		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	9.6		0.32	0.095	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	120	E	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	11		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene - DL	130		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170404-RA-08 — Lab Sample ID: 140-7756-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.13		0.080	0.024	ppb v/v	1.56		TO 15 LL	Total/NA
Tetrachloroethene	16		0.080	0.016	ppb v/v	1.56		TO 15 LL	Total/NA
Trichloroethene	2.2		0.040	0.014	ppb v/v	1.56		TO 15 LL	Total/NA
Vinyl chloride	0.034	J	0.040	0.029	ppb v/v	1.56		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.52		0.32	0.095	ug/m3	1.56		TO 15 LL	Total/NA
Tetrachloroethene	110		0.54	0.11	ug/m3	1.56		TO 15 LL	Total/NA
Trichloroethene	12		0.21	0.075	ug/m3	1.56		TO 15 LL	Total/NA
Vinyl chloride	0.086	J	0.10	0.074	ug/m3	1.56		TO 15 LL	Total/NA

Client Sample ID: SS-170404-RA-09 — Lab Sample ID: 140-7756-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	9.3		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.64		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	63		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.5		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: OA-170404-RA-02

Lab Sample ID: 140-7756-1
Matrix: Air

Date Collected: 04/04/17 11:10
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/17/17 16:58	1.71
Tetrachloroethene	**0.030**	**J**	0.080	0.016	ppb v/v			04/17/17 16:58	1.71
Trichloroethene	ND		0.040	0.014	ppb v/v			04/17/17 16:58	1.71
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 16:58	1.71

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/17/17 16:58	1.71
Tetrachloroethene	**0.20**	**J**	0.54	0.11	ug/m3			04/17/17 16:58	1.71
Trichloroethene	ND		0.21	0.075	ug/m3			04/17/17 16:58	1.71
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 16:58	1.71

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*04/17/17 16:58*	*1.71*

Client Sample ID: IA-170404-RA-03

Lab Sample ID: 140-7756-2
Matrix: Air

Date Collected: 04/04/17 11:15
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/17/17 17:54	1.64
Tetrachloroethene	**2.3**		0.080	0.016	ppb v/v			04/17/17 17:54	1.64
Trichloroethene	**0.081**		0.040	0.014	ppb v/v			04/17/17 17:54	1.64
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 17:54	1.64

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/17/17 17:54	1.64
Tetrachloroethene	**16**		0.54	0.11	ug/m3			04/17/17 17:54	1.64
Trichloroethene	**0.44**		0.21	0.075	ug/m3			04/17/17 17:54	1.64
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 17:54	1.64

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*60 - 140*		*04/17/17 17:54*	*1.64*

Client Sample ID: IA-170404-RA-04

Lab Sample ID: 140-7756-3
Matrix: Air

Date Collected: 04/04/17 16:40
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/17/17 18:47	1
Tetrachloroethene	**0.023**	**J**	0.080	0.016	ppb v/v			04/17/17 18:47	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/17/17 18:47	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 18:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/17/17 18:47	1
Tetrachloroethene	**0.15**	**J**	0.54	0.11	ug/m3			04/17/17 18:47	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/17/17 18:47	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: IA-170404-RA-04

Lab Sample ID: 140-7756-3
Matrix: Air

Date Collected: 04/04/17 16:40
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*04/17/17 18:47*	*1*

Client Sample ID: IA-170404-RA-05

Lab Sample ID: 140-7756-4
Matrix: Air

Date Collected: 04/04/17 11:30
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.10**		0.080	0.024	ppb v/v			04/17/17 19:44	2
Tetrachloroethene	**0.10**		0.080	0.016	ppb v/v			04/17/17 19:44	2
Trichloroethene	**0.33**		0.040	0.014	ppb v/v			04/17/17 19:44	2
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 19:44	2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.42**		0.32	0.095	ug/m3			04/17/17 19:44	2
Tetrachloroethene	**0.70**		0.54	0.11	ug/m3			04/17/17 19:44	2
Trichloroethene	**1.8**		0.21	0.075	ug/m3			04/17/17 19:44	2
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 19:44	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*60 - 140*		*04/17/17 19:44*	*2*

Client Sample ID: IA-170404-RA-06

Lab Sample ID: 140-7756-5
Matrix: Air

Date Collected: 04/04/17 15:50
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/17/17 20:37	1
Tetrachloroethene	**0.16**		0.080	0.016	ppb v/v			04/17/17 20:37	1
Trichloroethene	**0.061**		0.040	0.014	ppb v/v			04/17/17 20:37	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 20:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/17/17 20:37	1
Tetrachloroethene	**1.1**		0.54	0.11	ug/m3			04/17/17 20:37	1
Trichloroethene	**0.33**		0.21	0.075	ug/m3			04/17/17 20:37	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*04/17/17 20:37*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: SS-170404-RA-06

Lab Sample ID: 140-7756-6
Matrix: Air

Date Collected: 04/04/17 14:25
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		6.4	1.9	ppb v/v			04/17/17 16:02	1.59
Tetrachloroethene	**440**		6.4	1.3	ppb v/v			04/17/17 16:02	1.59
Trichloroethene	**11**		3.2	1.1	ppb v/v			04/17/17 16:02	1.59
Vinyl chloride	ND		3.2	2.3	ppb v/v			04/17/17 16:02	1.59

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		25	7.6	ug/m3			04/17/17 16:02	1.59
Tetrachloroethene	**3000**		43	8.6	ug/m3			04/17/17 16:02	1.59
Trichloroethene	**58**		17	6.0	ug/m3			04/17/17 16:02	1.59
Vinyl chloride	ND		8.1	5.9	ug/m3			04/17/17 16:02	1.59

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/17/17 16:02*	*1.59*

Client Sample ID: SS-170404-RA-07

Lab Sample ID: 140-7756-7
Matrix: Air

Date Collected: 04/04/17 15:20
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**2.4**		0.080	0.024	ppb v/v			04/17/17 21:31	1
Tetrachloroethene	**17**	**E**	0.080	0.016	ppb v/v			04/17/17 21:31	1
Trichloroethene	**2.0**		0.040	0.014	ppb v/v			04/17/17 21:31	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 21:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**9.6**		0.32	0.095	ug/m3			04/17/17 21:31	1
Tetrachloroethene	**120**	**E**	0.54	0.11	ug/m3			04/17/17 21:31	1
Trichloroethene	**11**		0.21	0.075	ug/m3			04/17/17 21:31	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*04/17/17 21:31*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**19**		0.40	0.080	ppb v/v			04/18/17 09:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**130**		2.7	0.54	ug/m3			04/18/17 09:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*60 - 140*		*04/18/17 09:43*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: SS-170404-RA-08

Lab Sample ID: 140-7756-8
Matrix: Air

Date Collected: 04/04/17 16:48
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.13		0.080	0.024	ppb v/v			04/17/17 22:26	1.56
Tetrachloroethene	16		0.080	0.016	ppb v/v			04/17/17 22:26	1.56
Trichloroethene	2.2		0.040	0.014	ppb v/v			04/17/17 22:26	1.56
Vinyl chloride	0.034	J	0.040	0.029	ppb v/v			04/17/17 22:26	1.56

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.52		0.32	0.095	ug/m3			04/17/17 22:26	1.56
Tetrachloroethene	110		0.54	0.11	ug/m3			04/17/17 22:26	1.56
Trichloroethene	12		0.21	0.075	ug/m3			04/17/17 22:26	1.56
Vinyl chloride	0.086	J	0.10	0.074	ug/m3			04/17/17 22:26	1.56

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*04/17/17 22:26*	*1.56*

Client Sample ID: SS-170404-RA-09

Lab Sample ID: 140-7756-9
Matrix: Air

Date Collected: 04/04/17 17:52
Date Received: 04/10/17 10:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/17/17 23:19	1
Tetrachloroethene	9.3		0.080	0.016	ppb v/v			04/17/17 23:19	1
Trichloroethene	0.64		0.040	0.014	ppb v/v			04/17/17 23:19	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 23:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/17/17 23:19	1
Tetrachloroethene	63		0.54	0.11	ug/m3			04/17/17 23:19	1
Trichloroethene	3.5		0.21	0.075	ug/m3			04/17/17 23:19	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*04/17/17 23:19*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-7756-1	OA-170404-RA-02	96						
140-7756-2	IA-170404-RA-03	89						
140-7756-3	IA-170404-RA-04	96						
140-7756-4	IA-170404-RA-05	92						
140-7756-5	IA-170404-RA-06	94						
140-7756-6	SS-170404-RA-06	104						
140-7756-7	SS-170404-RA-07	91						
140-7756-7 - DL	SS-170404-RA-07	111						
140-7756-8	SS-170404-RA-08	91						
140-7756-9	SS-170404-RA-09	97						
LCS 140-10506/1006	Lab Control Sample	94						
MB 140-10506/9	Method Blank	106						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-10506/9
Matrix: Air
Analysis Batch: 10506

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/17/17 15:16	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			04/17/17 15:16	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/17/17 15:16	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/17/17 15:16	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/17/17 15:16	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			04/17/17 15:16	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/17/17 15:16	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/17/17 15:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*04/17/17 15:16*	*1*

Lab Sample ID: LCS 140-10506/1006
Matrix: Air
Analysis Batch: 10506

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.24		ppb v/v		112	70 - 130
Tetrachloroethene	2.00	2.54		ppb v/v		127	70 - 130
Trichloroethene	2.00	2.24		ppb v/v		112	70 - 130
Vinyl chloride	2.00	2.28		ppb v/v		114	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	8.89		ug/m3		112	70 - 130
Tetrachloroethene	14	17.2		ug/m3		127	70 - 130
Trichloroethene	11	12.0		ug/m3		112	70 - 130
Vinyl chloride	5.1	5.82		ug/m3		114	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Air - GC/MS VOA

Analysis Batch: 10506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7756-1	OA-170404-RA-02	Total/NA	Air	TO 15 LL	
140-7756-2	IA-170404-RA-03	Total/NA	Air	TO 15 LL	
140-7756-3	IA-170404-RA-04	Total/NA	Air	TO 15 LL	
140-7756-4	IA-170404-RA-05	Total/NA	Air	TO 15 LL	
140-7756-5	IA-170404-RA-06	Total/NA	Air	TO 15 LL	
140-7756-6	SS-170404-RA-06	Total/NA	Air	TO 15 LL	
140-7756-7	SS-170404-RA-07	Total/NA	Air	TO 15 LL	
140-7756-7 - DL	SS-170404-RA-07	Total/NA	Air	TO 15 LL	
140-7756-8	SS-170404-RA-08	Total/NA	Air	TO 15 LL	
140-7756-9	SS-170404-RA-09	Total/NA	Air	TO 15 LL	
MB 140-10506/9	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-10506/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: OA-170404-RA-02 — Lab Sample ID: 140-7756-1

Date Collected: 04/04/17 11:10 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.71	855 mL	500 mL	10506	04/17/17 16:58	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170404-RA-03 — Lab Sample ID: 140-7756-2

Date Collected: 04/04/17 11:15 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.64	820 mL	500 mL	10506	04/17/17 17:54	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170404-RA-04 — Lab Sample ID: 140-7756-3

Date Collected: 04/04/17 16:40 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	10506	04/17/17 18:47	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170404-RA-05 — Lab Sample ID: 140-7756-4

Date Collected: 04/04/17 11:30 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		2	1000 mL	500 mL	10506	04/17/17 19:44	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170404-RA-06 — Lab Sample ID: 140-7756-5

Date Collected: 04/04/17 15:50 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	10506	04/17/17 20:37	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170404-RA-06 — Lab Sample ID: 140-7756-6

Date Collected: 04/04/17 14:25 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.59	10 mL	500 mL	10506	04/17/17 16:02	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Client Sample ID: SS-170404-RA-07 — Lab Sample ID: 140-7756-7

Date Collected: 04/04/17 15:20 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	10506	04/17/17 21:31	HMT	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL	DL	1	100 mL	500 mL	10506	04/18/17 09:43	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170404-RA-08 — Lab Sample ID: 140-7756-8

Date Collected: 04/04/17 16:48 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.56	780 mL	500 mL	10506	04/17/17 22:26	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170404-RA-09 — Lab Sample ID: 140-7756-9

Date Collected: 04/04/17 17:52 — **Matrix: Air**
Date Received: 04/10/17 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	10506	04/17/17 23:19	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-10506/9

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	10506	04/17/17 15:16	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-10506/1006

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	10506	04/17/17 11:55	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-7756-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7756-1	OA-170404-RA-02	Air	04/04/17 11:10	04/10/17 10:15
140-7756-2	IA-170404-RA-03	Air	04/04/17 11:15	04/10/17 10:15
140-7756-3	IA-170404-RA-04	Air	04/04/17 16:40	04/10/17 10:15
140-7756-4	IA-170404-RA-05	Air	04/04/17 11:30	04/10/17 10:15
140-7756-5	IA-170404-RA-06	Air	04/04/17 15:50	04/10/17 10:15
140-7756-6	SS-170404-RA-06	Air	04/04/17 14:25	04/10/17 10:15
140-7756-7	SS-170404-RA-07	Air	04/04/17 15:20	04/10/17 10:15
140-7756-8	SS-170404-RA-08	Air	04/04/17 16:48	04/10/17 10:15
140-7756-9	SS-170404-RA-09	Air	04/04/17 17:52	04/10/17 10:15

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW
City/State/Zip: St. Paul MN 55112
Phone: 651-639-0963
FAX:
Project Name: Winsor
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact:
TAL Contact: Grant Anderson

Sampled By: R Aamot

1 of 2 COCs

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

140-7756 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
OA-170404-RA-02	4/4/17	1410	1110	-29	-6	11581	09615	X								X			
IA-170404-RA-03	4/4/17	1350	1115	-30	-6	11568	11233	X							X				
IA-170404-RA-04	4/4/17	1510	1640	-30	-1	09954	10682	X							X				
IA-170404-RA-05	4/4/17	1600	1130	-30	-10	11504	11157	X							X				
IA-170404-RA-06	4/4/17	1725	1550	-30	-3	11263	10622	X							X				

Sampled by : RAamot

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

2-Boxes NO Custody Seal
Received @ Ambient Temp
R.H 4/10/17

2-Boxes FedEx MSTR# 778845284491 2-DAY
10-CANS, 5-Flows, 5-Flow(R)

Special Instructions/QC Requirements & Comments:
Only analyze PCE, TCE, c12DCE, VC

Canisters Shipped by: RAamot	Date/Time: 4/6/17 1600	Canisters Received by: Rita Hancock 4/10/17 10:15
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW
City/State/Zip St. Paul
Phone: 651-639-0913
FAX:
Project Name: Waugau
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact: Grant Anderson
TAL Contact:

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Sampled By: RAamot

2 of 2 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SS-170404-RA-06	4/4/17	1356	1425	-29	-6	10115	10237	X									X		
SS-170404-RA-07	4/4/17	1454	1520	-30	-5	09894	09917	X									X		
SS-170404-RA-08	4/4/17	1555	1648	-30	-10	09897	~~09~~ 10680	X									X		
SS-170404-RA-09	4/4/17	1722	1752	-30	-5	11441	10068	X									X		

09766

Sampled by : RAamot

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:
Only analyze for PCE, TCE, Cl2DCE, VC

Canisters Shipped by: [signature]	Date/Time: 4/6/17 1600	Canisters Received by: Rita Hancock 4/10/17 10:15
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

4/20/2017

Loc: 140
7756

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14003779 PM Instructions:

Sample Receiving Associate: Rita Hancock Date: 4/10/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 04/13/17

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
seg	140-7756-A-1	09615	7316	B	6	-7.5	1116	
seg	140-7756-A-2	11233	7316	B	6	-8.0	1117	
seg	140-7756-A-3	10682	7316	B	6	-3.7	1119	
seg	140-7756-A-4	11157	7316	B	6	-10.6	1119	
seg	140-7756-A-5	10822	7316	B	6	-3.9	1121	
seg	140-7756-A-6	10237	7529	B	6	-8.2	1128	
seg	140-7756-A-7	09917	7529	B	6	-5.1	1130	
seg	140-7756-A-8	10680	7529	B	6	-8.3	1130	
seg	140-7756-A-9	10068	7529	B	6	-5.9	1132	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7316-1
SDG No.:
Client Sample ID: 10126
Lab Sample ID: 140-7316-10
Matrix: Air
Lab File ID: GC04LOT7316.D
Analysis Method: TO 15 LL
Date Collected: 03/03/2017 17:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/04/2017 14:12
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 9099
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7316-1

SDG No.:

Client Sample ID: 10126 | Lab Sample ID: 140-7316-10

Matrix: Air | Lab File ID: GC04LOT7316.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 17:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 14:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9099 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7316-1

SDG No.:

Client Sample ID: 10126 | Lab Sample ID: 140-7316-10

Matrix: Air | Lab File ID: GC04LOT7316.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 17:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 14:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9099 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7316-1

SDG No.:

Client Sample ID: 10126 Lab Sample ID: 140-7316-10

Matrix: Air Lab File ID: GC04LOT7316.D

Analysis Method: TO 15 LL Date Collected: 03/03/2017 17:00

Sample wt/vol: 500(mL) Date Analyzed: 03/04/2017 14:12

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9099 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\GC04LOT7316.D
Lims ID: 140-7316-A-10
Client ID: 10126
Sample Type: Client
Inject. Date: 04-Mar-2017 14:12:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004204-006
Misc. Info.: 10126
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 06-Mar-2017 11:55:46 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 04-Mar-2017 15:36:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.001	8.001	0.000	85	364465	4.00	
* 2 1,4-Difluorobenzene	114	10.169	10.169	0.000	95	1819727	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	87	1776591	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	91	1246442	3.77	
31 Methylene Chloride	84	5.666	5.661	0.005	92	8424	0.0959	

Reagents:

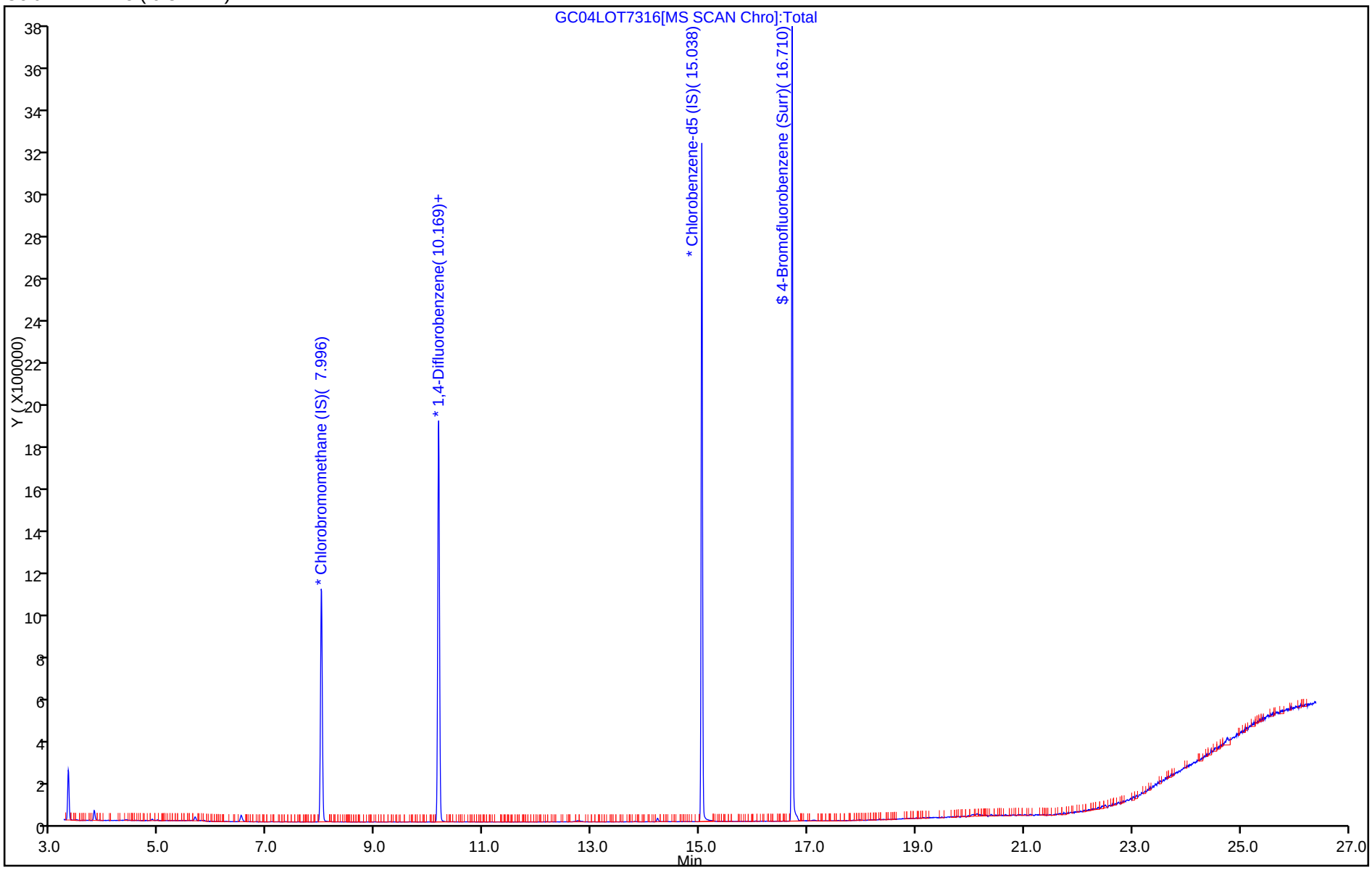
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 06-Mar-2017 11:55:54 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170303-4204.b\GC04LOT7316.D				
Injection Date:	04-Mar-2017 14:12:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-7316-A-10	Lab Sample ID:	140-7316-10	Worklist Smp#:	6
Client ID:	10126				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7322-1
SDG No.:
Client Sample ID: 10045 | Lab Sample ID: 140-7322-2
Matrix: Air | Lab File ID: LOT7322.D
Analysis Method: TO 15 LL | Date Collected: 03/04/2017 14:30
Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 13:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 9122 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7322-1

SDG No.:

Client Sample ID: 10045 | Lab Sample ID: 140-7322-2

Matrix: Air | Lab File ID: LOT7322.D

Analysis Method: TO 15 LL | Date Collected: 03/04/2017 14:30

Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 13:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9122 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7322-1

SDG No.:

Client Sample ID: 10045 | Lab Sample ID: 140-7322-2

Matrix: Air | Lab File ID: LOT7322.D

Analysis Method: TO 15 LL | Date Collected: 03/04/2017 14:30

Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 13:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9122 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-7322-1

SDG No.:

Client Sample ID: 10045 Lab Sample ID: 140-7322-2

Matrix: Air Lab File ID: LOT7322.D

Analysis Method: TO 15 LL Date Collected: 03/04/2017 14:30

Sample wt/vol: 500(mL) Date Analyzed: 03/06/2017 13:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9122 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170304-4208.b\LOT7322.D				
Lims ID:	140-7322-A-2				
Client ID:	10045				
Sample Type:	Client				
Inject. Date:	06-Mar-2017 13:25:30	ALS Bottle#:	16	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004208-008				
Misc. Info.:	10045				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170304-4208.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Mar-2017 10:28:29	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK023				

First Level Reviewer: tajh Date: 06-Mar-2017 15:04:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	7.996	-0.005	89	354328	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1764261	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	89	1698275	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	94	1258852	3.98	
31 Methylene Chloride	84	5.656	5.656	0.000	91	7181	0.0841	

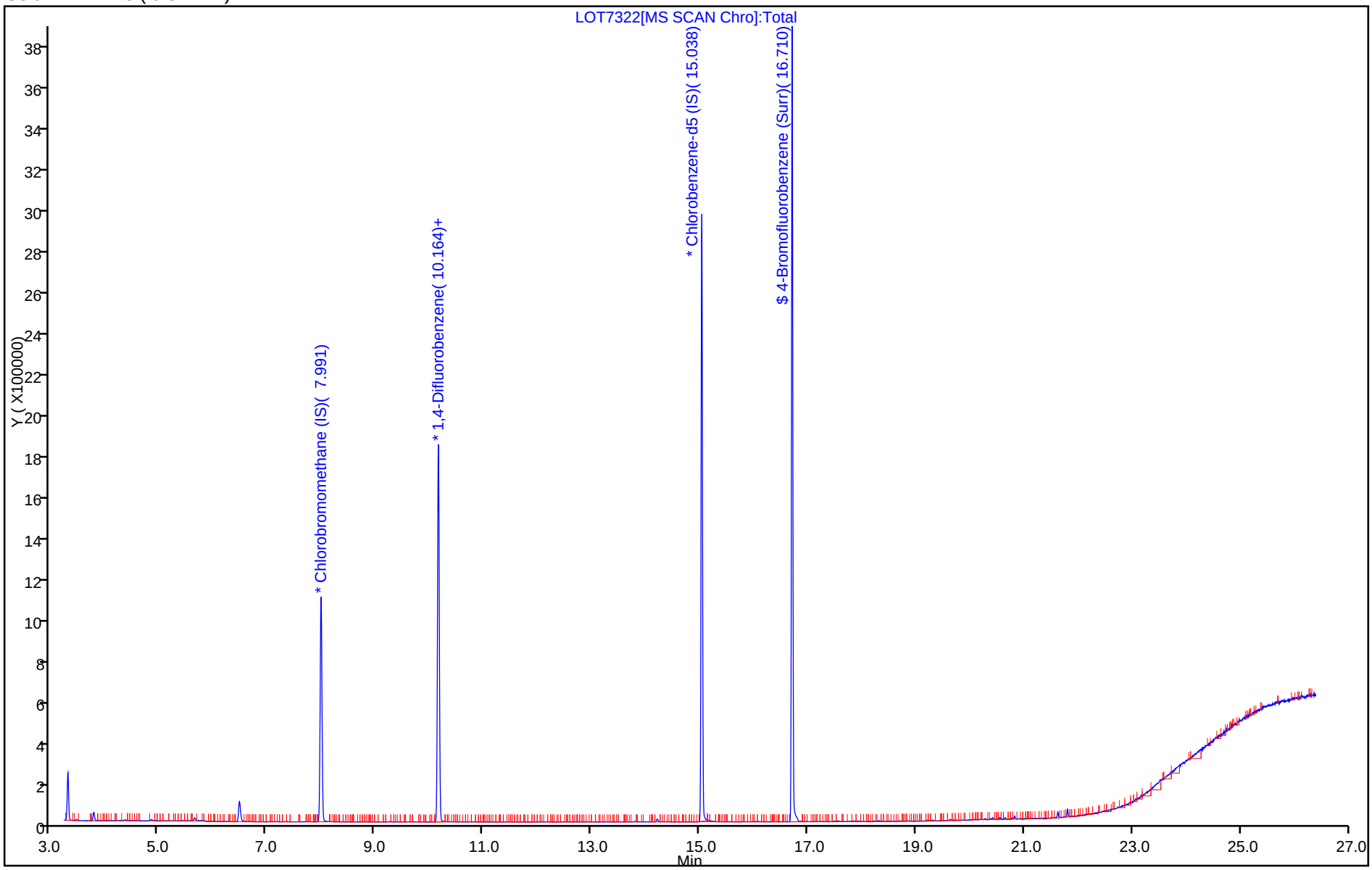
Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2017 10:28:40 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170304-4208.b\LOT7322.D				
Injection Date:	06-Mar-2017 13:25:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7322-A-2	Lab Sample ID:	140-7322-2	Worklist Smp#:	8
Client ID:	10045				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



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

Lab Name: TestAmerica Knoxville | Job No.: 140-7529-1

SDG No.:

Client Sample ID: 11155 | Lab Sample ID: 140-7529-2

Matrix: Air | Lab File ID: LOT7529.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2017 12:20

Sample wt/vol: 500(mL) | Date Analyzed: 03/22/2017 04:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9530 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7529-1
SDG No.:
Client Sample ID: 11155
Lab Sample ID: 140-7529-2
Matrix: Air
Lab File ID: LOT7529.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2017 12:20
Sample wt/vol: 500(mL)
Date Analyzed: 03/22/2017 04:55
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 9530
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7529-1

SDG No.:

Client Sample ID: 11155 | Lab Sample ID: 140-7529-2

Matrix: Air | Lab File ID: LOT7529.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2017 12:20

Sample wt/vol: 500(mL) | Date Analyzed: 03/22/2017 04:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9530 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7529-1

SDG No.:

Client Sample ID: 11155 Lab Sample ID: 140-7529-2

Matrix: Air Lab File ID: LOT7529.D

Analysis Method: TO 15 LL Date Collected: 03/19/2017 12:20

Sample wt/vol: 500(mL) Date Analyzed: 03/22/2017 04:55

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9530 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170316-4340.b\LOT7529.D				
Lims ID:	140-7529-A-2				
Client ID:	11155				
Sample Type:	Client				
Inject. Date:	22-Mar-2017 04:55:30	ALS Bottle#:	2	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004340-029				
Misc. Info.:	11155				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170316-4340.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2017 09:58:01	Calib Date:	15-Mar-2017 20:21:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170315-4323.b\GC15IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 22-Mar-2017 09:41:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	7.991	0.000	78	294410	4.00	
* 2 1,4-Difluorobenzene	114	10.153	10.158	-0.005	95	1487644	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.028	15.033	-0.005	88	1444225	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.699	16.705	-0.006	93	1160297	4.07	
31 Methylene Chloride	84	5.661	5.656	0.005	88	6103	0.0862	
47 1,1,1-Trichloroethane	97	8.999	8.994	0.005	95	11505	0.0482	

Reagents:

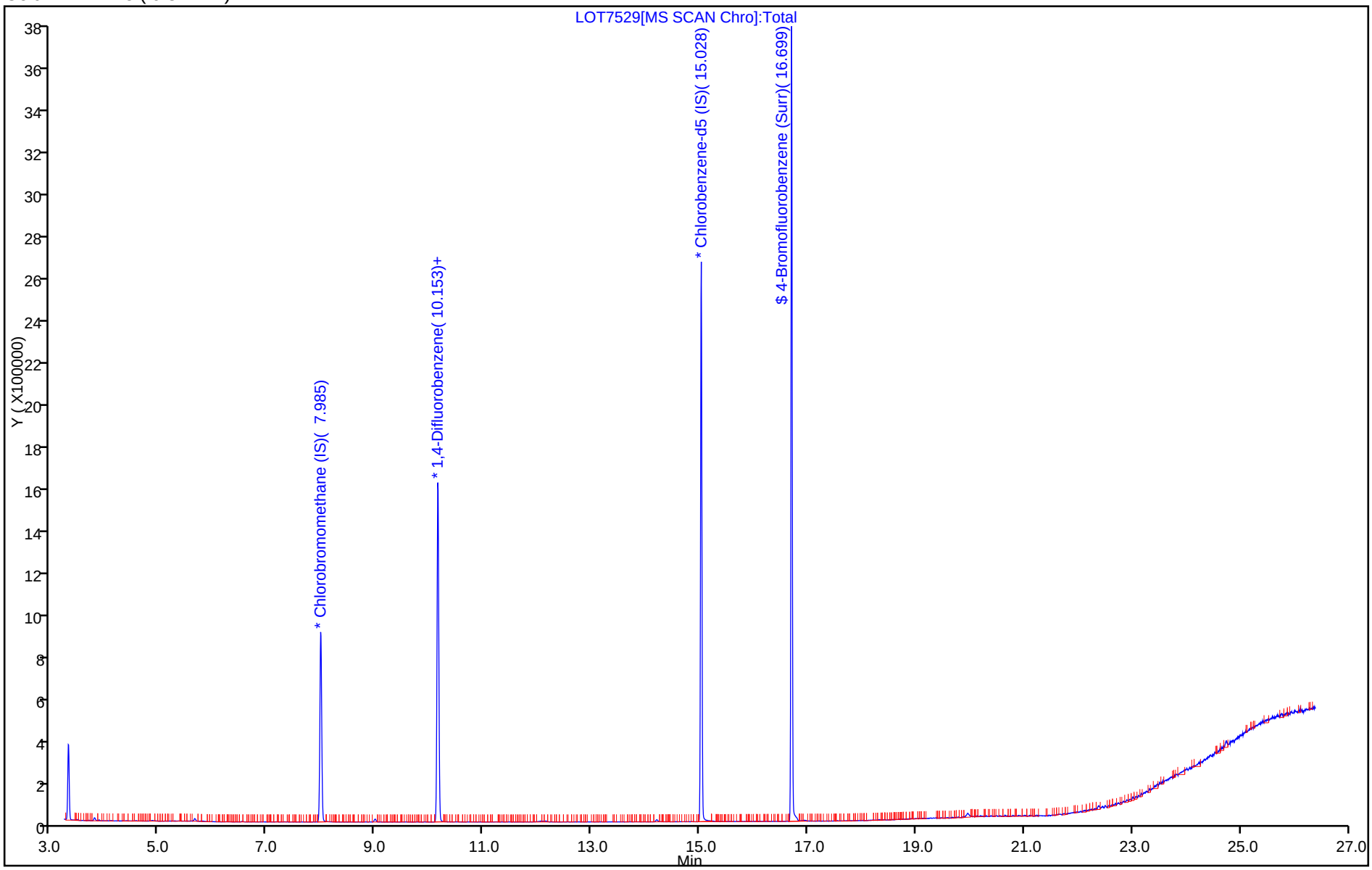
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2017 09:59:18 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170316-4340.b\LOT7529.D				
Injection Date:	22-Mar-2017 04:55:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7529-A-2	Lab Sample ID:	140-7529-2	Worklist Smp#:	29
Client ID:	11155				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-8141-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Authorized for release by:
5/31/2017 10:37:10 AM

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-8141-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-8141-1

Comments
No additional comments.

Receipt
The samples were received on 5/19/2017 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page.

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: OA-170515-RA-01 — Lab Sample ID: 140-8141-1

No Detections.

Client Sample ID: IA-170515-RA-01 — Lab Sample ID: 140-8141-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.020	J	0.080	0.016	ppb v/v	1.53		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.14	J	0.54	0.11	ug/m3	1.53		TO 15 LL	Total/NA

Client Sample ID: IA-170515-RA-02 — Lab Sample ID: 140-8141-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.17		0.080	0.024	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.18		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.54		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.68		0.32	0.095	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.2		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.9		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-170515-RA-03 — Lab Sample ID: 140-8141-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.042	J	0.080	0.016	ppb v/v	1.48		TO 15 LL	Total/NA
Trichloroethene	0.025	J	0.040	0.014	ppb v/v	1.48		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.28	J	0.54	0.11	ug/m3	1.48		TO 15 LL	Total/NA
Trichloroethene	0.14	J	0.21	0.075	ug/m3	1.48		TO 15 LL	Total/NA

Client Sample ID: IA-170515-RA-04 — Lab Sample ID: 140-8141-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.045	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.31	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170515-RA-01 — Lab Sample ID: 140-8141-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	20	E	0.080	0.016	ppb v/v	1.46		TO 15 LL	Total/NA
Trichloroethene	0.18		0.040	0.014	ppb v/v	1.46		TO 15 LL	Total/NA
Tetrachloroethene - DL	23		0.29	0.058	ppb v/v	1.46		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	140	E	0.54	0.11	ug/m3	1.46		TO 15 LL	Total/NA
Trichloroethene	0.97		0.21	0.075	ug/m3	1.46		TO 15 LL	Total/NA
Tetrachloroethene - DL	160		2.0	0.40	ug/m3	1.46		TO 15 LL	Total/NA

Client Sample ID: SS-170516-RA-02 — Lab Sample ID: 140-8141-7

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: SS-170516-RA-02 (Continued) — Lab Sample ID: 140-8141-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	10		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.3		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	68		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	12		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170516-RA-03 — Lab Sample ID: 140-8141-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	7.0		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.075		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	47		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.40		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: OA-170515-RA-01

Lab Sample ID: 140-8141-1
Matrix: Air

Date Collected: 05/15/17 10:00
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/24/17 10:12	1.32
Tetrachloroethene	ND		0.080	0.016	ppb v/v			05/24/17 10:12	1.32
Trichloroethene	ND		0.040	0.014	ppb v/v			05/24/17 10:12	1.32
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/24/17 10:12	1.32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/24/17 10:12	1.32
Tetrachloroethene	ND		0.54	0.11	ug/m3			05/24/17 10:12	1.32
Trichloroethene	ND		0.21	0.075	ug/m3			05/24/17 10:12	1.32
Vinyl chloride	ND		0.10	0.074	ug/m3			05/24/17 10:12	1.32

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*		*05/24/17 10:12*	*1.32*

Client Sample ID: IA-170515-RA-01

Lab Sample ID: 140-8141-2
Matrix: Air

Date Collected: 05/15/17 08:05
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/23/17 19:13	1.53
Tetrachloroethene	**0.020**	**J**	0.080	0.016	ppb v/v			05/23/17 19:13	1.53
Trichloroethene	ND		0.040	0.014	ppb v/v			05/23/17 19:13	1.53
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 19:13	1.53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/23/17 19:13	1.53
Tetrachloroethene	**0.14**	**J**	0.54	0.11	ug/m3			05/23/17 19:13	1.53
Trichloroethene	ND		0.21	0.075	ug/m3			05/23/17 19:13	1.53
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 19:13	1.53

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*60 - 140*		*05/23/17 19:13*	*1.53*

Client Sample ID: IA-170515-RA-02

Lab Sample ID: 140-8141-3
Matrix: Air

Date Collected: 05/15/17 10:18
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.17**		0.080	0.024	ppb v/v			05/23/17 20:10	1
Tetrachloroethene	**0.18**		0.080	0.016	ppb v/v			05/23/17 20:10	1
Trichloroethene	**0.54**		0.040	0.014	ppb v/v			05/23/17 20:10	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 20:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.68**		0.32	0.095	ug/m3			05/23/17 20:10	1
Tetrachloroethene	**1.2**		0.54	0.11	ug/m3			05/23/17 20:10	1
Trichloroethene	**2.9**		0.21	0.075	ug/m3			05/23/17 20:10	1

Client Sample ID: IA-170515-RA-02 — Lab Sample ID: 140-8141-3

Date Collected: 05/15/17 10:18 — **Matrix: Air**
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*60 - 140*		*05/23/17 20:10*	*1*

Client Sample ID: IA-170515-RA-03 — Lab Sample ID: 140-8141-4

Date Collected: 05/15/17 10:30 — **Matrix: Air**
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/23/17 21:06	1.48
Tetrachloroethene	**0.042**	**J**	0.080	0.016	ppb v/v			05/23/17 21:06	1.48
Trichloroethene	**0.025**	**J**	0.040	0.014	ppb v/v			05/23/17 21:06	1.48
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 21:06	1.48

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/23/17 21:06	1.48
Tetrachloroethene	**0.28**	**J**	0.54	0.11	ug/m3			05/23/17 21:06	1.48
Trichloroethene	**0.14**	**J**	0.21	0.075	ug/m3			05/23/17 21:06	1.48
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 21:06	1.48

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*60 - 140*		*05/23/17 21:06*	*1.48*

Client Sample ID: IA-170515-RA-04 — Lab Sample ID: 140-8141-5

Date Collected: 05/15/17 15:40 — **Matrix: Air**
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/23/17 22:03	1
Tetrachloroethene	**0.045**	**J**	0.080	0.016	ppb v/v			05/23/17 22:03	1
Trichloroethene	ND		0.040	0.014	ppb v/v			05/23/17 22:03	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 22:03	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/23/17 22:03	1
Tetrachloroethene	**0.31**	**J**	0.54	0.11	ug/m3			05/23/17 22:03	1
Trichloroethene	ND		0.21	0.075	ug/m3			05/23/17 22:03	1
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 22:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*60 - 140*		*05/23/17 22:03*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: SS-170515-RA-01

Lab Sample ID: 140-8141-6
Matrix: Air

Date Collected: 05/15/17 11:10
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/23/17 22:58	1.46
Tetrachloroethene	**20**	**E**	0.080	0.016	ppb v/v			05/23/17 22:58	1.46
Trichloroethene	**0.18**		0.040	0.014	ppb v/v			05/23/17 22:58	1.46
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 22:58	1.46

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/23/17 22:58	1.46
Tetrachloroethene	**140**	**E**	0.54	0.11	ug/m3			05/23/17 22:58	1.46
Trichloroethene	**0.97**		0.21	0.075	ug/m3			05/23/17 22:58	1.46
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 22:58	1.46

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*60 - 140*		*05/23/17 22:58*	*1.46*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**23**		0.29	0.058	ppb v/v			05/24/17 09:04	1.46

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**160**		2.0	0.40	ug/m3			05/24/17 09:04	1.46

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*05/24/17 09:04*	*1.46*

Client Sample ID: SS-170516-RA-02

Lab Sample ID: 140-8141-7
Matrix: Air

Date Collected: 05/16/17 10:52
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/23/17 23:54	1
Tetrachloroethene	**10**		0.080	0.016	ppb v/v			05/23/17 23:54	1
Trichloroethene	**2.3**		0.040	0.014	ppb v/v			05/23/17 23:54	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 23:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/23/17 23:54	1
Tetrachloroethene	**68**		0.54	0.11	ug/m3			05/23/17 23:54	1
Trichloroethene	**12**		0.21	0.075	ug/m3			05/23/17 23:54	1
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*05/23/17 23:54*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: SS-170516-RA-03

Lab Sample ID: 140-8141-8

Date Collected: 05/16/17 16:10
Matrix: Air
Date Received: 05/19/17 09:40
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/24/17 00:49	1
Tetrachloroethene	**7.0**		0.080	0.016	ppb v/v			05/24/17 00:49	1
Trichloroethene	**0.075**		0.040	0.014	ppb v/v			05/24/17 00:49	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/24/17 00:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/24/17 00:49	1
Tetrachloroethene	**47**		0.54	0.11	ug/m3			05/24/17 00:49	1
Trichloroethene	**0.40**		0.21	0.075	ug/m3			05/24/17 00:49	1
Vinyl chloride	ND		0.10	0.074	ug/m3			05/24/17 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*05/24/17 00:49*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-8141-1	OA-170515-RA-01	91						
140-8141-2	IA-170515-RA-01	85						
140-8141-3	IA-170515-RA-02	89						
140-8141-4	IA-170515-RA-03	88						
140-8141-5	IA-170515-RA-04	90						
140-8141-6	SS-170515-RA-01	86						
140-8141-6 - DL	SS-170515-RA-01	97						
140-8141-7	SS-170516-RA-02	94						
140-8141-8	SS-170516-RA-03	93						
LCS 140-11395/1008	Lab Control Sample	96						
MB 140-11395/13	Method Blank	105						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-11395/13
Matrix: Air
Analysis Batch: 11395

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/23/17 14:52	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			05/23/17 14:52	1
Trichloroethene	ND		0.040	0.014	ppb v/v			05/23/17 14:52	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/23/17 14:52	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/23/17 14:52	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			05/23/17 14:52	1
Trichloroethene	ND		0.21	0.075	ug/m3			05/23/17 14:52	1
Vinyl chloride	ND		0.10	0.074	ug/m3			05/23/17 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*05/23/17 14:52*	*1*

Lab Sample ID: LCS 140-11395/1008
Matrix: Air
Analysis Batch: 11395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.33		ppb v/v		116	70 - 130
Tetrachloroethene	2.00	2.31		ppb v/v		116	70 - 130
Trichloroethene	2.00	2.08		ppb v/v		104	70 - 130
Vinyl chloride	2.00	1.93		ppb v/v		96	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	9.22		ug/m3		116	70 - 130
Tetrachloroethene	14	15.7		ug/m3		116	70 - 130
Trichloroethene	11	11.2		ug/m3		104	70 - 130
Vinyl chloride	5.1	4.93		ug/m3		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Air - GC/MS VOA

Analysis Batch: 11395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8141-1	OA-170515-RA-01	Total/NA	Air	TO 15 LL	
140-8141-2	IA-170515-RA-01	Total/NA	Air	TO 15 LL	
140-8141-3	IA-170515-RA-02	Total/NA	Air	TO 15 LL	
140-8141-4	IA-170515-RA-03	Total/NA	Air	TO 15 LL	
140-8141-5	IA-170515-RA-04	Total/NA	Air	TO 15 LL	
140-8141-6	SS-170515-RA-01	Total/NA	Air	TO 15 LL	
140-8141-6 - DL	SS-170515-RA-01	Total/NA	Air	TO 15 LL	
140-8141-7	SS-170516-RA-02	Total/NA	Air	TO 15 LL	
140-8141-8	SS-170516-RA-03	Total/NA	Air	TO 15 LL	
MB 140-11395/13	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-11395/1008	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: OA-170515-RA-01 — Lab Sample ID: 140-8141-1

Date Collected: 05/15/17 10:00
Date Received: 05/19/17 09:40
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.32	660 mL	500 mL	11395	05/24/17 10:12	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170515-RA-01 — Lab Sample ID: 140-8141-2

Date Collected: 05/15/17 08:05
Date Received: 05/19/17 09:40
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.53	765 mL	500 mL	11395	05/23/17 19:13	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170515-RA-02 — Lab Sample ID: 140-8141-3

Date Collected: 05/15/17 10:18
Date Received: 05/19/17 09:40
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	11395	05/23/17 20:10	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170515-RA-03 — Lab Sample ID: 140-8141-4

Date Collected: 05/15/17 10:30
Date Received: 05/19/17 09:40
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.48	740 mL	500 mL	11395	05/23/17 21:06	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170515-RA-04 — Lab Sample ID: 140-8141-5

Date Collected: 05/15/17 15:40
Date Received: 05/19/17 09:40
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	11395	05/23/17 22:03	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170515-RA-01 — Lab Sample ID: 140-8141-6

Date Collected: 05/15/17 11:10
Date Received: 05/19/17 09:40
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.46	730 mL	500 mL	11395	05/23/17 22:58	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Client Sample ID: SS-170515-RA-01 — Lab Sample ID: 140-8141-6

Date Collected: 05/15/17 11:10 — **Matrix: Air**
Date Received: 05/19/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1.46	200 mL	500 mL	11395	05/24/17 09:04	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170516-RA-02 — Lab Sample ID: 140-8141-7

Date Collected: 05/16/17 10:52 — **Matrix: Air**
Date Received: 05/19/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	11395	05/23/17 23:54	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-170516-RA-03 — Lab Sample ID: 140-8141-8

Date Collected: 05/16/17 16:10 — **Matrix: Air**
Date Received: 05/19/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	11395	05/24/17 00:49	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-11395/13

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	11395	05/23/17 14:52	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-11395/1008

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	11395	05/23/17 12:29	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8141-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-8141-1	OA-170515-RA-01	Air	05/15/17 10:00	05/19/17 09:40
140-8141-2	IA-170515-RA-01	Air	05/15/17 08:05	05/19/17 09:40
140-8141-3	IA-170515-RA-02	Air	05/15/17 10:18	05/19/17 09:40
140-8141-4	IA-170515-RA-03	Air	05/15/17 10:30	05/19/17 09:40
140-8141-5	IA-170515-RA-04	Air	05/15/17 15:40	05/19/17 09:40
140-8141-6	SS-170515-RA-01	Air	05/15/17 11:10	05/19/17 09:40
140-8141-7	SS-170516-RA-02	Air	05/16/17 10:52	05/19/17 09:40
140-8141-8	SS-170516-RA-03	Air	05/16/17 16:10	05/19/17 09:40

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW
City/State/Zip: St. Paul 55112
Phone: 651-639-0913
FAX:
Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact: G. Anderson
TAL Contact:

Sampled By: RAamot

1 of 2 COCs

140-8141 Chain of Custody

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
OA-170515-RA-01	5/15/17	1320	1000	-30	-10	10429	11218	X								X			
IA-170515-RA-01	1100	~~805~~ RA	805	-30	-10	10449	09963	X							X				
IA-170515-RA-02	1315	~~1018~~ RA	1018	-30	0*	11550	10207	X							X				
IA-170515-RA-03	1315	~~1030~~ RA	1030	-30	-5	10435	09601	X							X				
IA-170515-RA-04	1640	~~1540~~ RA	1540	-29	-5	11467	10032	X							X				

Sampled by: Aamot

Temperature (Fahrenheit)

	Interior	Ambient
Start	70	70
Stop	70	70

Received @ ambient, 3 boxes
Fedex 2 day, trk#7791 6823 3628
" " 3797
" " 2877

Pressure (inches of Hg)

	Interior	Ambient
Start		
Stop		

No custody seal, KWS 5/19/17

Special Instructions/QC Requirements & Comments: * I thought the value was a 24hr value - it was only an 8 hour value

Analyze for: PCE, TCE, c12DCE, VC only

Canisters Shipped by: [signature]	Date/Time: 5/17/17 1600	Canisters Received by: [signature] 5/19/17 0940
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

3 KR
6 flows
8 cans

5/31/2017

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GAD
Address: 1301 Old Highway 8 NW
City/State/Zip St Paul MN 55112
Phone: 651 639 [illegible] 0913
FAX:
Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Ahrens
Phone:
Site Contact: G. Anderson
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By:

2 of 2 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SS-170515-PA-01	5/15/17	1045	1110	-30	-10	11098	11032	X									X		
SS-170516-PA-02	5/16/17	1026	1052	-29	-5	09897	10213	X									X		
SS-170516-PA-03	5/16/17	1542	1610	-29	-6	10085	10715	X									X		

Sampled by : Agmar

Temperature (Fahrenheit)	Interior	Ambient
Start	70	70
Stop	70	70

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Special Instructions/QC Requirements & Comments:
Analyze for: PCE, TCE, c12DCE, VC only

Canisters Shipped by:	Date/Time: 5/17/17 1600	Canisters Received by: 5/19/17 0940
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

Loc: 140
8141

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400379 PM Instructions:

Sample Receiving Associate: [signature] Date: 5/19/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 5/19/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-8141-a-1	11218	7529	B	6	-7.3	13:25	0.0
HMT	140-8141-a-2	09963	8042	B	6	-8.7	13:26	+1.3
HMT	140-8141-a-3	10207	7529	B	6	0.0	13:27	
HMT	140-8141-a-4	09601	7529	B	6	-7.3	13:28	1.7
HMT	140-8141-a-5	10032	7529	B	6	-5.5	13:29	
HMT	140-8141-a-6	11032	8042	B	6	-7.7	13:30	1.2
HMT	140-8141-a-7	10213	8054	B	6	-5.4	13:31	
HMT	140-8141-a-8	10715	8055	B	6	-6.6	13:32	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-7529-1
SDG No.:
Client Sample ID: 11155
Lab Sample ID: 140-7529-2
Matrix: Air
Lab File ID: LOT7529.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2017 12:20
Sample wt/vol: 500(mL)
Date Analyzed: 03/22/2017 04:55
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 9530
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7529-1

SDG No.:

Client Sample ID: 11155 | Lab Sample ID: 140-7529-2

Matrix: Air | Lab File ID: LOT7529.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2017 12:20

Sample wt/vol: 500(mL) | Date Analyzed: 03/22/2017 04:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9530 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7529-1

SDG No.:

Client Sample ID: 11155 | Lab Sample ID: 140-7529-2

Matrix: Air | Lab File ID: LOT7529.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2017 12:20

Sample wt/vol: 500(mL) | Date Analyzed: 03/22/2017 04:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9530 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-7529-1

SDG No.:

Client Sample ID: 11155 Lab Sample ID: 140-7529-2

Matrix: Air Lab File ID: LOT7529.D

Analysis Method: TO 15 LL Date Collected: 03/19/2017 12:20

Sample wt/vol: 500(mL) Date Analyzed: 03/22/2017 04:55

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9530 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170316-4340.b\LOT7529.D				
Lims ID:	140-7529-A-2				
Client ID:	11155				
Sample Type:	Client				
Inject. Date:	22-Mar-2017 04:55:30	ALS Bottle#:	2	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004340-029				
Misc. Info.:	11155				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170316-4340.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2017 09:58:01	Calib Date:	15-Mar-2017 20:21:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170315-4323.b\GC15IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 22-Mar-2017 09:41:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	7.991	0.000	78	294410	4.00	
* 2 1,4-Difluorobenzene	114	10.153	10.158	-0.005	95	1487644	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.028	15.033	-0.005	88	1444225	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.699	16.705	-0.006	93	1160297	4.07	
31 Methylene Chloride	84	5.661	5.656	0.005	88	6103	0.0862	
47 1,1,1-Trichloroethane	97	8.999	8.994	0.005	95	11505	0.0482	

Reagents:

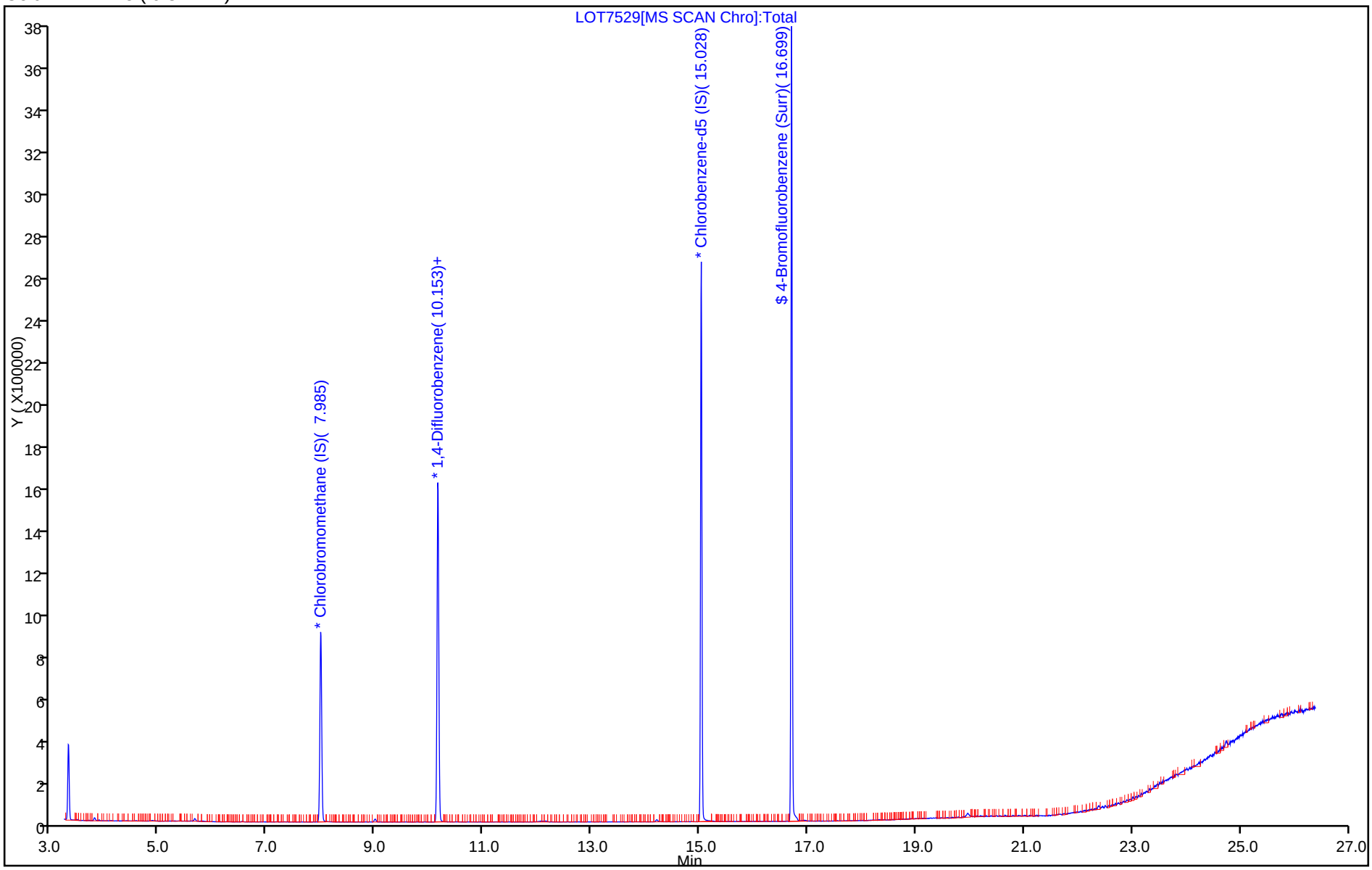
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2017 09:59:18 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170316-4340.b\LOT7529.D				
Injection Date:	22-Mar-2017 04:55:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7529-A-2	Lab Sample ID:	140-7529-2	Worklist Smp#:	29
Client ID:	11155				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8042-1

SDG No.:

Client Sample ID: 10516 | Lab Sample ID: 140-8042-2

Matrix: Air | Lab File ID: LOT8042.D

Analysis Method: TO 15 LL | Date Collected: 05/09/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/10/2017 12:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11131 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND	*	0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8042-1

SDG No.:

Client Sample ID: 10516 | Lab Sample ID: 140-8042-2

Matrix: Air | Lab File ID: LOT8042.D

Analysis Method: TO 15 LL | Date Collected: 05/09/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/10/2017 12:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11131 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8042-1

SDG No.:

Client Sample ID: 10516 | Lab Sample ID: 140-8042-2

Matrix: Air | Lab File ID: LOT8042.D

Analysis Method: TO 15 LL | Date Collected: 05/09/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/10/2017 12:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11131 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND	*	0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8042-1

SDG No.:

Client Sample ID: 10516 Lab Sample ID: 140-8042-2

Matrix: Air Lab File ID: LOT8042.D

Analysis Method: TO 15 LL Date Collected: 05/09/2017 10:00

Sample wt/vol: 500(mL) Date Analyzed: 05/10/2017 12:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 11131 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170509-4887.b\LOT8042.D				
Lims ID:	140-8042-A-2				
Client ID:	10516				
Sample Type:	Client				
Inject. Date:	10-May-2017 12:41:30	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004887-005				
Misc. Info.:	10516				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170509-4887.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-May-2017 14:00:08	Calib Date:	11-Apr-2017 21:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170411-4606.b\RD11IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK013				

First Level Reviewer: tajh Date: 10-May-2017 13:33:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.870	7.886	-0.016	93	678787	4.00	
* 2 1,4-Difluorobenzene	114	10.021	10.032	-0.011	98	3523261	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.982	14.982	0.000	95	2800502	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.681	16.686	-0.005	81	2293230	4.18	
47 1,1,1-Trichloroethane	97	8.878	8.878	0.000	96	26109	0.0461	

Reagents:

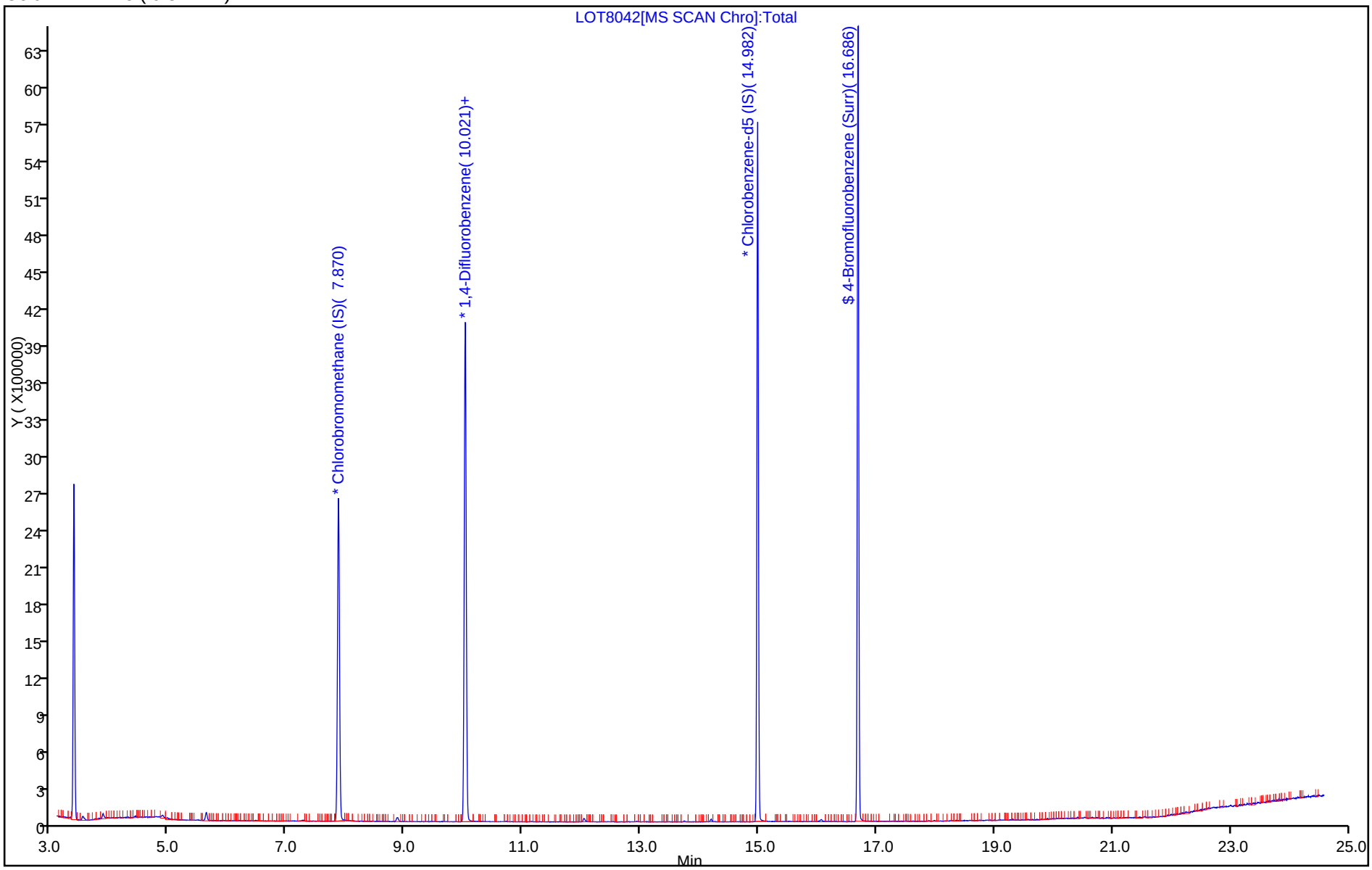
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 10-May-2017 14:00:21 Chrom Revision: 2.2 08-May-2017 08:06:58

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170509-4887.b\LOT8042.D				
Injection Date:	10-May-2017 12:41:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8042-A-2	Lab Sample ID:	140-8042-2	Worklist Smp#:	5
Client ID:	10516				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8054-1

SDG No.:

Client Sample ID: 10568 | Lab Sample ID: 140-8054-1

Matrix: Air | Lab File ID: LOT8054.D

Analysis Method: TO 15 LL | Date Collected: 05/10/2017 16:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/11/2017 12:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11132 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND	*	0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8054-1

SDG No.:

Client Sample ID: 10568 | Lab Sample ID: 140-8054-1

Matrix: Air | Lab File ID: LOT8054.D

Analysis Method: TO 15 LL | Date Collected: 05/10/2017 16:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/11/2017 12:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11132 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND	*	0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8054-1

SDG No.:

Client Sample ID: 10568 | Lab Sample ID: 140-8054-1

Matrix: Air | Lab File ID: LOT8054.D

Analysis Method: TO 15 LL | Date Collected: 05/10/2017 16:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/11/2017 12:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11132 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND	*	0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND	*	0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8054-1

SDG No.:

Client Sample ID: 10568 Lab Sample ID: 140-8054-1

Matrix: Air Lab File ID: LOT8054.D

Analysis Method: TO 15 LL Date Collected: 05/10/2017 16:00

Sample wt/vol: 500(mL) Date Analyzed: 05/11/2017 12:27

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 11132 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170509-4888.b\LOT8054.D				
Lims ID:	140-8054-A-1				
Client ID:	10568				
Sample Type:	Client				
Inject. Date:	11-May-2017 12:27:30	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004888-004				
Misc. Info.:	10568				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170509-4888.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-May-2017 10:37:40	Calib Date:	11-Apr-2017 21:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170411-4606.b\RD11IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.870	7.886	-0.016	94	788959	4.00	
*	2 1,4-Difluorobenzene	114	10.021	10.032	-0.011	97	4008154	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.982	14.988	-0.006	97	3094614	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.681	16.686	-0.005	85	2560188	4.22	

Reagents:

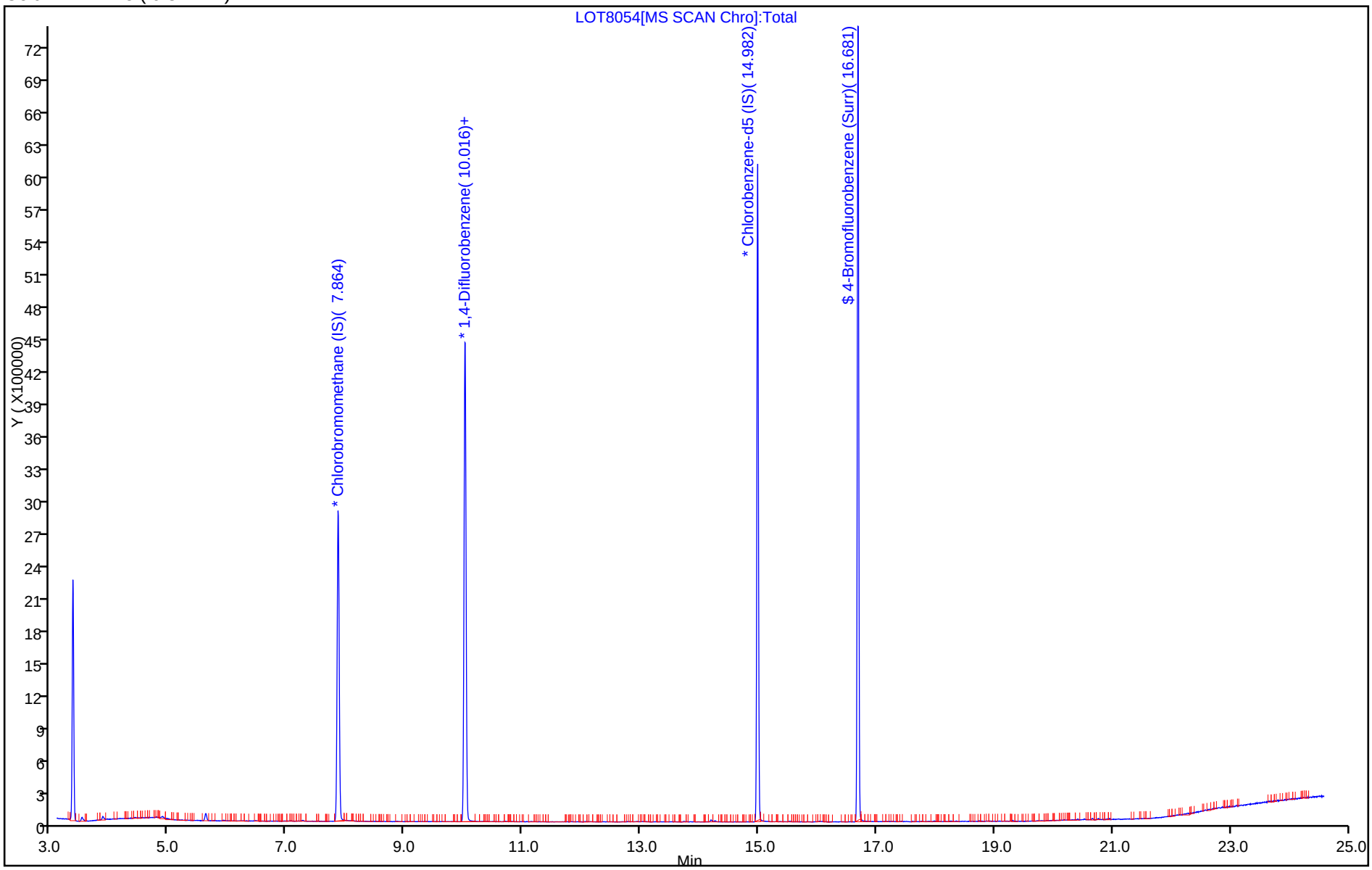
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 12-May-2017 10:37:48 Chrom Revision: 2.2 08-May-2017 08:06:58

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170509-4888.b\LOT8054.D				
Injection Date:	11-May-2017 12:27:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8054-A-1	Lab Sample ID:	140-8054-1	Worklist Smp#:	4
Client ID:	10568				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville
Job No.: 140-8055-1
SDG No.:
Client Sample ID: 09730
Lab Sample ID: 140-8055-1
Matrix: Air
Lab File ID: LOT8055.D
Analysis Method: TO 15 LL
Date Collected: 05/10/2017 16:30
Sample wt/vol: 500(mL)
Date Analyzed: 05/11/2017 13:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 11132
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND	*	0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8055-1
SDG No.:
Client Sample ID: 09730
Lab Sample ID: 140-8055-1
Matrix: Air
Lab File ID: LOT8055.D
Analysis Method: TO 15 LL
Date Collected: 05/10/2017 16:30
Sample wt/vol: 500(mL)
Date Analyzed: 05/11/2017 13:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 11132
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND	*	0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8055-1

SDG No.:

Client Sample ID: 09730 | Lab Sample ID: 140-8055-1

Matrix: Air | Lab File ID: LOT8055.D

Analysis Method: TO 15 LL | Date Collected: 05/10/2017 16:30

Sample wt/vol: 500(mL) | Date Analyzed: 05/11/2017 13:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 11132 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND	*	0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND	*	0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-8055-1

SDG No.:

Client Sample ID: 09730 Lab Sample ID: 140-8055-1

Matrix: Air Lab File ID: LOT8055.D

Analysis Method: TO 15 LL Date Collected: 05/10/2017 16:30

Sample wt/vol: 500(mL) Date Analyzed: 05/11/2017 13:18

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 11132 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170509-4888.b\LOT8055.D
Lims ID: 140-8055-A-1
Client ID: 09730
Sample Type: Client
Inject. Date: 11-May-2017 13:18:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004888-005
Misc. Info.: 09730
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170509-4888.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-May-2017 10:37:40 Calib Date: 11-Apr-2017 21:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170411-4606.b\RD11IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: tajh Date: 11-May-2017 14:06:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.875	7.886	-0.011	93	707594	4.00	
* 2 1,4-Difluorobenzene	114	10.027	10.032	-0.005	98	3656079	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.982	14.988	-0.006	96	2791975	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.681	16.686	-0.005	82	2327533	4.25	
47 1,1,1-Trichloroethane	97	8.878	8.878	0.000	95	40044	0.0678	

Reagents:

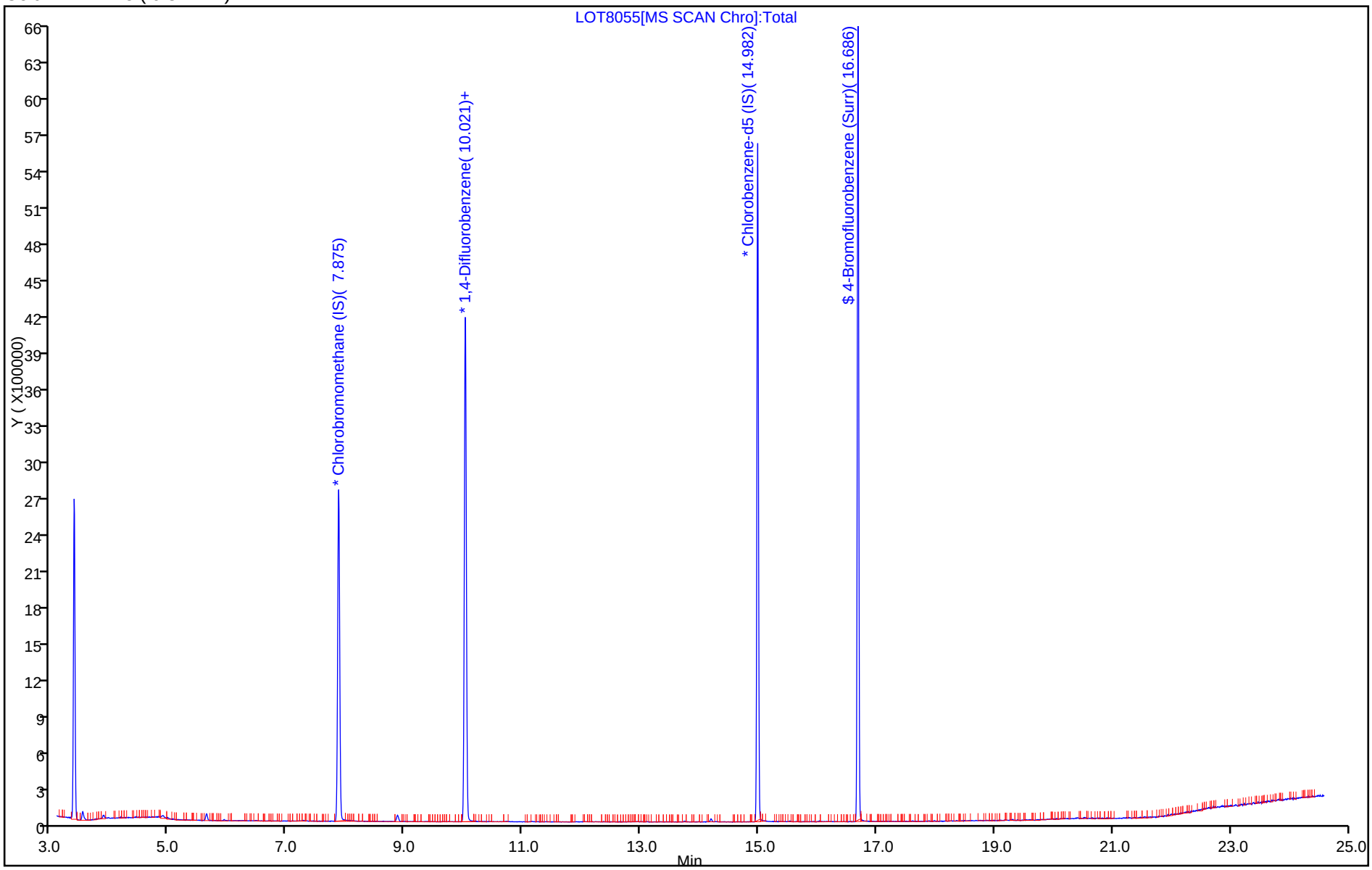
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 12-May-2017 10:37:51 Chrom Revision: 2.2 08-May-2017 08:06:58

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170509-4888.b\LOT8055.D				
Injection Date:	11-May-2017 13:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8055-A-1	Lab Sample ID:	140-8055-1	Worklist Smp#:	5
Client ID:	09730				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-8923-1
Client Project/Site: Wausau Vapor Sampling
Revision: 1

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Diane Lange

Authorized for release by:
8/23/2017 12:31:31 PM
Diana Lange, Project Management Assistant II
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Designee for

Jamie McKinney, Senior Project Manager
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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-8923-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-8923-1
Revised

This report is being revised to add tetracholorethene and remove chloroform and carbon tetrachloride from sample G-170801-RA-15.

Comments
No additional comments.

Receipt
The samples were received on 8/5/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page. Additionally, the canisters were checked down to the method detection limit (MDL) for chloroform.

Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: SS-170801-RA-06 — Lab Sample ID: 140-8923-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.34	J	0.80	0.24	ppb v/v	1.54		TO 15 LL	Total/NA
Trichloroethene	52		0.40	0.14	ppb v/v	1.54		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.3	J	3.2	0.95	ug/m3	1.54		TO 15 LL	Total/NA
Trichloroethene	280		2.1	0.75	ug/m3	1.54		TO 15 LL	Total/NA

Client Sample ID: SS-170801-RA-07 — Lab Sample ID: 140-8923-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	290		47	8.8	ppb v/v	16.34		TO 15 LL	Total/NA
Chloroform	97		47	8.8	ppb v/v	16.34		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	65		47	14	ppb v/v	16.34		TO 15 LL	Total/NA
Trichloroethene	2900		23	8.2	ppb v/v	16.34		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	1800		290	55	ug/m3	16.34		TO 15 LL	Total/NA
Chloroform	470		230	43	ug/m3	16.34		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	260		190	56	ug/m3	16.34		TO 15 LL	Total/NA
Trichloroethene	15000		130	44	ug/m3	16.34		TO 15 LL	Total/NA

Client Sample ID: SS-170801-RA-08 — Lab Sample ID: 140-8923-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.87		0.80	0.15	ppb v/v	1.51		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	5.5		5.0	0.94	ug/m3	1.51		TO 15 LL	Total/NA

Client Sample ID: SS-170801-RA-09 — Lab Sample ID: 140-8923-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	10	J	13	2.4	ppb v/v	5.19		TO 15 LL	Total/NA
Trichloroethene	910		6.5	2.3	ppb v/v	5.19		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	50	J	63	12	ug/m3	5.19		TO 15 LL	Total/NA
Trichloroethene	4900		35	12	ug/m3	5.19		TO 15 LL	Total/NA

Client Sample ID: SS-170802-RA-10 — Lab Sample ID: 140-8923-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.8		0.40	0.14	ppb v/v	1.45		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	9.4		2.1	0.75	ug/m3	1.45		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-07 — Lab Sample ID: 140-8923-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.072	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.029	J	0.080	0.015	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.031	J	0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: IA-170731-RA-07 (Continued) — Lab Sample ID: 140-8923-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.45	J	0.50	0.094	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.14	J	0.39	0.073	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.17	J	0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-08 — Lab Sample ID: 140-8923-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.065	J	0.080	0.015	ppb v/v	1.75		TO 15 LL	Total/NA
Chloroform	0.030	J	0.080	0.015	ppb v/v	1.75		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.41	J	0.50	0.094	ug/m3	1.75		TO 15 LL	Total/NA
Chloroform	0.15	J	0.39	0.073	ug/m3	1.75		TO 15 LL	Total/NA

Client Sample ID: OA-170731-RA-02 — Lab Sample ID: 140-8923-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.070	J	0.080	0.015	ppb v/v	1.67		TO 15 LL	Total/NA
Chloroform	0.028	J	0.080	0.015	ppb v/v	1.67		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.44	J	0.50	0.094	ug/m3	1.67		TO 15 LL	Total/NA
Chloroform	0.14	J	0.39	0.073	ug/m3	1.67		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-15 — Lab Sample ID: 140-8923-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.89		0.40	0.14	ppb v/v	1.5		TO 15 LL	Total/NA
Tetrachloroethene	60		0.80	0.16	ppb v/v	1.5		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	4.8		2.1	0.75	ug/m3	1.5		TO 15 LL	Total/NA
Tetrachloroethene	410		5.4	1.1	ug/m3	1.5		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-16 — Lab Sample ID: 140-8923-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.14	J	0.40	0.14	ppb v/v	1.87		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.77	J	2.1	0.75	ug/m3	1.87		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-17 — Lab Sample ID: 140-8923-12

No Detections.

Client Sample ID: G-170801-RA-18 — Lab Sample ID: 140-8923-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.72	J	0.80	0.15	ppb v/v	1.55		TO 15 LL	Total/NA
Chloroform	0.26	J	0.80	0.15	ppb v/v	1.55		TO 15 LL	Total/NA
Trichloroethene	31		0.40	0.14	ppb v/v	1.55		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: G-170801-RA-18 (Continued) — Lab Sample ID: 140-8923-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	4.5	J	5.0	0.94	ug/m3	1.55		TO 15 LL	Total/NA
Chloroform	1.3	J	3.9	0.73	ug/m3	1.55		TO 15 LL	Total/NA
Trichloroethene	170		2.1	0.75	ug/m3	1.55		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-19 — Lab Sample ID: 140-8923-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	4.0		0.80	0.15	ppb v/v	1.51		TO 15 LL	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Chloroform	20		3.9	0.73	ug/m3	1.51		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-20 — Lab Sample ID: 140-8923-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.8		0.80	0.15	ppb v/v	1.49		TO 15 LL	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Chloroform	14		3.9	0.73	ug/m3	1.49		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-21 — Lab Sample ID: 140-8923-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.20	J	0.80	0.15	ppb v/v	1.56		TO 15 LL	Total/NA
Chloroform	4.2		0.80	0.15	ppb v/v	1.56		TO 15 LL	Total/NA
Trichloroethene	12		0.40	0.14	ppb v/v	1.56		TO 15 LL	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Carbon tetrachloride	1.3	J	5.0	0.94	ug/m3	1.56		TO 15 LL	Total/NA
Chloroform	21		3.9	0.73	ug/m3	1.56		TO 15 LL	Total/NA
Trichloroethene	65		2.1	0.75	ug/m3	1.56		TO 15 LL	Total/NA

Client Sample ID: G-170802-RA-22 — Lab Sample ID: 140-8923-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.5		0.40	0.14	ppb v/v	1.36		TO 15 LL	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Trichloroethene	7.8		2.1	0.75	ug/m3	1.36		TO 15 LL	Total/NA

Client Sample ID: G-170802-RA-23 — Lab Sample ID: 140-8923-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.34	J	0.40	0.14	ppb v/v	1.39		TO 15 LL	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Trichloroethene	1.8	J	2.1	0.75	ug/m3	1.39		TO 15 LL	Total/NA

Client Sample ID: G-170802-RA-24 — Lab Sample ID: 140-8923-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.83		0.40	0.14	ppb v/v	1.41		TO 15 LL	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Trichloroethene	4.5		2.1	0.75	ug/m3	1.41		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170802-RA-25 — Lab Sample ID: 140-8923-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.15	J	0.80	0.15	ppb v/v	1.51		TO 15 LL	Total/NA
Trichloroethene	0.84		0.40	0.14	ppb v/v	1.51		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.75	J	3.9	0.73	ug/m3	1.51		TO 15 LL	Total/NA
Trichloroethene	4.5		2.1	0.75	ug/m3	1.51		TO 15 LL	Total/NA

Client Sample ID: G-170802-RA-26 — Lab Sample ID: 140-8923-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2.4		0.40	0.14	ppb v/v	1.54		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	13		2.1	0.75	ug/m3	1.54		TO 15 LL	Total/NA

Client Sample ID: G-170802-RA-27 — Lab Sample ID: 140-8923-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	31		0.40	0.14	ppb v/v	1.4		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	160		2.1	0.75	ug/m3	1.4		TO 15 LL	Total/NA

Client Sample ID: G-170802-RA-28 — Lab Sample ID: 140-8923-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	19		0.40	0.14	ppb v/v	1.54		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	100		2.1	0.75	ug/m3	1.54		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: SS-170801-RA-06

Lab Sample ID: 140-8923-1
Matrix: Air

Date Collected: 08/01/17 14:56
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/07/17 16:49	1.54
Chloroform	ND		0.80	0.15	ppb v/v			08/07/17 16:49	1.54
cis-1,2-Dichloroethene	**0.34**	**J**	0.80	0.24	ppb v/v			08/07/17 16:49	1.54
Trichloroethene	**52**		0.40	0.14	ppb v/v			08/07/17 16:49	1.54
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/07/17 16:49	1.54

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/07/17 16:49	1.54
Chloroform	ND		3.9	0.73	ug/m3			08/07/17 16:49	1.54
cis-1,2-Dichloroethene	**1.3**	**J**	3.2	0.95	ug/m3			08/07/17 16:49	1.54
Trichloroethene	**280**		2.1	0.75	ug/m3			08/07/17 16:49	1.54
Vinyl chloride	ND		1.0	0.74	ug/m3			08/07/17 16:49	1.54

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*08/07/17 16:49*	*1.54*

Client Sample ID: SS-170801-RA-07

Lab Sample ID: 140-8923-2
Matrix: Air

Date Collected: 08/01/17 16:20
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**290**		47	8.8	ppb v/v			08/07/17 17:31	16.34
Chloroform	**97**		47	8.8	ppb v/v			08/07/17 17:31	16.34
cis-1,2-Dichloroethene	**65**		47	14	ppb v/v			08/07/17 17:31	16.34
Trichloroethene	**2900**		23	8.2	ppb v/v			08/07/17 17:31	16.34
Vinyl chloride	ND		23	17	ppb v/v			08/07/17 17:31	16.34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**1800**		290	55	ug/m3			08/07/17 17:31	16.34
Chloroform	**470**		230	43	ug/m3			08/07/17 17:31	16.34
cis-1,2-Dichloroethene	**260**		190	56	ug/m3			08/07/17 17:31	16.34
Trichloroethene	**15000**		130	44	ug/m3			08/07/17 17:31	16.34
Vinyl chloride	ND		60	43	ug/m3			08/07/17 17:31	16.34

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*08/07/17 17:31*	*16.34*

Client Sample ID: SS-170801-RA-08

Lab Sample ID: 140-8923-3
Matrix: Air

Date Collected: 08/01/17 16:22
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.87**		0.80	0.15	ppb v/v			08/07/17 18:13	1.51
Chloroform	ND		0.80	0.15	ppb v/v			08/07/17 18:13	1.51
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/07/17 18:13	1.51
Trichloroethene	ND		0.40	0.14	ppb v/v			08/07/17 18:13	1.51
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/07/17 18:13	1.51

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**5.5**		5.0	0.94	ug/m3			08/07/17 18:13	1.51
Chloroform	ND		3.9	0.73	ug/m3			08/07/17 18:13	1.51
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/07/17 18:13	1.51
Trichloroethene	ND		2.1	0.75	ug/m3			08/07/17 18:13	1.51
Vinyl chloride	ND		1.0	0.74	ug/m3			08/07/17 18:13	1.51

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*08/07/17 18:13*	*1.51*

Client Sample ID: SS-170801-RA-09

Lab Sample ID: 140-8923-4

Date Collected: 08/01/17 17:12
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		13	2.4	ppb v/v			08/07/17 18:55	5.19
Chloroform	**10**	**J**	13	2.4	ppb v/v			08/07/17 18:55	5.19
cis-1,2-Dichloroethene	ND		13	3.9	ppb v/v			08/07/17 18:55	5.19
Trichloroethene	**910**		6.5	2.3	ppb v/v			08/07/17 18:55	5.19
Vinyl chloride	ND		6.5	4.7	ppb v/v			08/07/17 18:55	5.19

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		82	15	ug/m3			08/07/17 18:55	5.19
Chloroform	**50**	**J**	63	12	ug/m3			08/07/17 18:55	5.19
cis-1,2-Dichloroethene	ND		51	15	ug/m3			08/07/17 18:55	5.19
Trichloroethene	**4900**		35	12	ug/m3			08/07/17 18:55	5.19
Vinyl chloride	ND		17	12	ug/m3			08/07/17 18:55	5.19

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*08/07/17 18:55*	*5.19*

Client Sample ID: SS-170802-RA-10

Lab Sample ID: 140-8923-5

Date Collected: 08/02/17 09:54
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/07/17 19:38	1.45
Chloroform	ND		0.80	0.15	ppb v/v			08/07/17 19:38	1.45
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/07/17 19:38	1.45
Trichloroethene	**1.8**		0.40	0.14	ppb v/v			08/07/17 19:38	1.45
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/07/17 19:38	1.45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/07/17 19:38	1.45
Chloroform	ND		3.9	0.73	ug/m3			08/07/17 19:38	1.45
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/07/17 19:38	1.45
Trichloroethene	**9.4**		2.1	0.75	ug/m3			08/07/17 19:38	1.45
Vinyl chloride	ND		1.0	0.74	ug/m3			08/07/17 19:38	1.45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*08/07/17 19:38*	*1.45*

Client Sample ID: IA-170731-RA-07

Lab Sample ID: 140-8923-6
Matrix: Air

Date Collected: 07/31/17 16:56
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.072	J	0.080	0.015	ppb v/v			08/07/17 20:22	1
Chloroform	0.029	J	0.080	0.015	ppb v/v			08/07/17 20:22	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/07/17 20:22	1
Trichloroethene	0.031	J	0.040	0.014	ppb v/v			08/07/17 20:22	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/07/17 20:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.45	J	0.50	0.094	ug/m3			08/07/17 20:22	1
Chloroform	0.14	J	0.39	0.073	ug/m3			08/07/17 20:22	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/07/17 20:22	1
Trichloroethene	0.17	J	0.21	0.075	ug/m3			08/07/17 20:22	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/07/17 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/07/17 20:22*	*1*

Client Sample ID: IA-170731-RA-08

Lab Sample ID: 140-8923-7
Matrix: Air

Date Collected: 07/31/17 15:00
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.065	J	0.080	0.015	ppb v/v			08/07/17 21:10	1.75
Chloroform	0.030	J	0.080	0.015	ppb v/v			08/07/17 21:10	1.75
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/07/17 21:10	1.75
Trichloroethene	ND		0.040	0.014	ppb v/v			08/07/17 21:10	1.75
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/07/17 21:10	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.41	J	0.50	0.094	ug/m3			08/07/17 21:10	1.75
Chloroform	0.15	J	0.39	0.073	ug/m3			08/07/17 21:10	1.75
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/07/17 21:10	1.75
Trichloroethene	ND		0.21	0.075	ug/m3			08/07/17 21:10	1.75
Vinyl chloride	ND		0.10	0.074	ug/m3			08/07/17 21:10	1.75

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/07/17 21:10*	*1.75*

Client Sample ID: OA-170731-RA-02

Lab Sample ID: 140-8923-8
Matrix: Air

Date Collected: 07/31/17 14:25
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.070	J	0.080	0.015	ppb v/v			08/07/17 21:59	1.67
Chloroform	0.028	J	0.080	0.015	ppb v/v			08/07/17 21:59	1.67
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/07/17 21:59	1.67
Trichloroethene	ND		0.040	0.014	ppb v/v			08/07/17 21:59	1.67
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/07/17 21:59	1.67

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: OA-170731-RA-02

Lab Sample ID: 140-8923-8
Matrix: Air

Date Collected: 07/31/17 14:25
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.44**	**J**	0.50	0.094	ug/m3			08/07/17 21:59	1.67
Chloroform	**0.14**	**J**	0.39	0.073	ug/m3			08/07/17 21:59	1.67
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/07/17 21:59	1.67
Trichloroethene	ND		0.21	0.075	ug/m3			08/07/17 21:59	1.67
Vinyl chloride	ND		0.10	0.074	ug/m3			08/07/17 21:59	1.67

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*08/07/17 21:59*	*1.67*

Client Sample ID: G-170801-RA-15

Lab Sample ID: 140-8923-10
Matrix: Air

Date Collected: 08/01/17 14:03
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 02:59	1.5
Trichloroethene	**0.89**		0.40	0.14	ppb v/v			08/09/17 02:59	1.5
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 02:59	1.5
Tetrachloroethene	**60**		0.80	0.16	ppb v/v			08/09/17 02:59	1.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 02:59	1.5
Trichloroethene	**4.8**		2.1	0.75	ug/m3			08/09/17 02:59	1.5
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 02:59	1.5
Tetrachloroethene	**410**		5.4	1.1	ug/m3			08/09/17 02:59	1.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*08/09/17 02:59*	*1.5*

Client Sample ID: G-170801-RA-16

Lab Sample ID: 140-8923-11
Matrix: Air

Date Collected: 08/01/17 17:42
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 03:45	1.87
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 03:45	1.87
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 03:45	1.87
Trichloroethene	**0.14**	**J**	0.40	0.14	ppb v/v			08/09/17 03:45	1.87
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 03:45	1.87

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 03:45	1.87
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 03:45	1.87
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 03:45	1.87
Trichloroethene	**0.77**	**J**	2.1	0.75	ug/m3			08/09/17 03:45	1.87
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 03:45	1.87

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/09/17 03:45*	*1.87*

Client Sample ID: G-170801-RA-17

Lab Sample ID: 140-8923-12
Matrix: Air
Date Collected: 08/01/17 17:44
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 04:31	1.48
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 04:31	1.48
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 04:31	1.48
Trichloroethene	ND		0.40	0.14	ppb v/v			08/09/17 04:31	1.48
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 04:31	1.48

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 04:31	1.48
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 04:31	1.48
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 04:31	1.48
Trichloroethene	ND		2.1	0.75	ug/m3			08/09/17 04:31	1.48
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 04:31	1.48

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/09/17 04:31*	*1.48*

Client Sample ID: G-170801-RA-18

Lab Sample ID: 140-8923-13
Matrix: Air
Date Collected: 08/01/17 17:44
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.72**	**J**	0.80	0.15	ppb v/v			08/08/17 20:59	1.55
Chloroform	**0.26**	**J**	0.80	0.15	ppb v/v			08/08/17 20:59	1.55
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/08/17 20:59	1.55
Trichloroethene	**31**		0.40	0.14	ppb v/v			08/08/17 20:59	1.55
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/08/17 20:59	1.55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**4.5**	**J**	5.0	0.94	ug/m3			08/08/17 20:59	1.55
Chloroform	**1.3**	**J**	3.9	0.73	ug/m3			08/08/17 20:59	1.55
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/08/17 20:59	1.55
Trichloroethene	**170**		2.1	0.75	ug/m3			08/08/17 20:59	1.55
Vinyl chloride	ND		1.0	0.74	ug/m3			08/08/17 20:59	1.55

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/08/17 20:59*	*1.55*

Client Sample ID: G-170801-RA-19

Lab Sample ID: 140-8923-14
Matrix: Air
Date Collected: 08/01/17 18:25
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/08/17 21:46	1.51
Chloroform	**4.0**		0.80	0.15	ppb v/v			08/08/17 21:46	1.51
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/08/17 21:46	1.51
Trichloroethene	ND		0.40	0.14	ppb v/v			08/08/17 21:46	1.51
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/08/17 21:46	1.51

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170801-RA-19

Lab Sample ID: 140-8923-14
Matrix: Air
Date Collected: 08/01/17 18:25
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/08/17 21:46	1.51
Chloroform	**20**		3.9	0.73	ug/m3			08/08/17 21:46	1.51
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/08/17 21:46	1.51
Trichloroethene	ND		2.1	0.75	ug/m3			08/08/17 21:46	1.51
Vinyl chloride	ND		1.0	0.74	ug/m3			08/08/17 21:46	1.51

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*08/08/17 21:46*	*1.51*

Client Sample ID: G-170801-RA-20

Lab Sample ID: 140-8923-15
Matrix: Air
Date Collected: 08/01/17 18:21
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/08/17 22:33	1.49
Chloroform	**2.8**		0.80	0.15	ppb v/v			08/08/17 22:33	1.49
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/08/17 22:33	1.49
Trichloroethene	ND		0.40	0.14	ppb v/v			08/08/17 22:33	1.49
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/08/17 22:33	1.49

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/08/17 22:33	1.49
Chloroform	**14**		3.9	0.73	ug/m3			08/08/17 22:33	1.49
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/08/17 22:33	1.49
Trichloroethene	ND		2.1	0.75	ug/m3			08/08/17 22:33	1.49
Vinyl chloride	ND		1.0	0.74	ug/m3			08/08/17 22:33	1.49

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*08/08/17 22:33*	*1.49*

Client Sample ID: G-170801-RA-21

Lab Sample ID: 140-8923-16
Matrix: Air
Date Collected: 08/01/17 18:23
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**0.20**	**J**	0.80	0.15	ppb v/v			08/08/17 23:19	1.56
Chloroform	**4.2**		0.80	0.15	ppb v/v			08/08/17 23:19	1.56
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/08/17 23:19	1.56
Trichloroethene	**12**		0.40	0.14	ppb v/v			08/08/17 23:19	1.56
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/08/17 23:19	1.56

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**1.3**	**J**	5.0	0.94	ug/m3			08/08/17 23:19	1.56
Chloroform	**21**		3.9	0.73	ug/m3			08/08/17 23:19	1.56
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/08/17 23:19	1.56
Trichloroethene	**65**		2.1	0.75	ug/m3			08/08/17 23:19	1.56
Vinyl chloride	ND		1.0	0.74	ug/m3			08/08/17 23:19	1.56

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170801-RA-21

Lab Sample ID: 140-8923-16
Matrix: Air

Date Collected: 08/01/17 18:23
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140		08/08/17 23:19	1.56

Client Sample ID: G-170802-RA-22

Lab Sample ID: 140-8923-17
Matrix: Air

Date Collected: 08/02/17 07:54
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 00:05	1.36
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 00:05	1.36
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 00:05	1.36
Trichloroethene	**1.5**		0.40	0.14	ppb v/v			08/09/17 00:05	1.36
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 00:05	1.36

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 00:05	1.36
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 00:05	1.36
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 00:05	1.36
Trichloroethene	**7.8**		2.1	0.75	ug/m3			08/09/17 00:05	1.36
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 00:05	1.36

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140		08/09/17 00:05	1.36

Client Sample ID: G-170802-RA-23

Lab Sample ID: 140-8923-18
Matrix: Air

Date Collected: 08/02/17 07:49
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 00:52	1.39
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 00:52	1.39
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 00:52	1.39
Trichloroethene	**0.34**	**J**	0.40	0.14	ppb v/v			08/09/17 00:52	1.39
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 00:52	1.39

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 00:52	1.39
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 00:52	1.39
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 00:52	1.39
Trichloroethene	**1.8**	**J**	2.1	0.75	ug/m3			08/09/17 00:52	1.39
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 00:52	1.39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 140		08/09/17 00:52	1.39

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170802-RA-24

Lab Sample ID: 140-8923-19
Matrix: Air

Date Collected: 08/02/17 08:19
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 01:38	1.41
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 01:38	1.41
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 01:38	1.41
Trichloroethene	**0.83**		0.40	0.14	ppb v/v			08/09/17 01:38	1.41
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 01:38	1.41

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 01:38	1.41
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 01:38	1.41
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 01:38	1.41
Trichloroethene	**4.5**		2.1	0.75	ug/m3			08/09/17 01:38	1.41
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 01:38	1.41

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*08/09/17 01:38*	*1.41*

Client Sample ID: G-170802-RA-25

Lab Sample ID: 140-8923-20
Matrix: Air

Date Collected: 08/02/17 08:43
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 02:25	1.51
Chloroform	**0.15**	**J**	0.80	0.15	ppb v/v			08/09/17 02:25	1.51
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 02:25	1.51
Trichloroethene	**0.84**		0.40	0.14	ppb v/v			08/09/17 02:25	1.51
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 02:25	1.51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 02:25	1.51
Chloroform	**0.75**	**J**	3.9	0.73	ug/m3			08/09/17 02:25	1.51
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 02:25	1.51
Trichloroethene	**4.5**		2.1	0.75	ug/m3			08/09/17 02:25	1.51
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 02:25	1.51

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*08/09/17 02:25*	*1.51*

Client Sample ID: G-170802-RA-26

Lab Sample ID: 140-8923-21
Matrix: Air

Date Collected: 08/02/17 08:43
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 03:12	1.54
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 03:12	1.54
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 03:12	1.54
Trichloroethene	**2.4**		0.40	0.14	ppb v/v			08/09/17 03:12	1.54
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 03:12	1.54

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170802-RA-26

Lab Sample ID: 140-8923-21
Matrix: Air
Date Collected: 08/02/17 08:43
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 03:12	1.54
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 03:12	1.54
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 03:12	1.54
Trichloroethene	**13**		2.1	0.75	ug/m3			08/09/17 03:12	1.54
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 03:12	1.54

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 03:12*	*1.54*

Client Sample ID: G-170802-RA-27

Lab Sample ID: 140-8923-22
Matrix: Air
Date Collected: 08/02/17 09:15
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 04:45	1.4
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 04:45	1.4
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 04:45	1.4
Trichloroethene	**31**		0.40	0.14	ppb v/v			08/09/17 04:45	1.4
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 04:45	1.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 04:45	1.4
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 04:45	1.4
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 04:45	1.4
Trichloroethene	**160**		2.1	0.75	ug/m3			08/09/17 04:45	1.4
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 04:45	1.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*08/09/17 04:45*	*1.4*

Client Sample ID: G-170802-RA-28

Lab Sample ID: 140-8923-23
Matrix: Air
Date Collected: 08/02/17 09:13
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			08/09/17 05:32	1.54
Chloroform	ND		0.80	0.15	ppb v/v			08/09/17 05:32	1.54
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 05:32	1.54
Trichloroethene	**19**		0.40	0.14	ppb v/v			08/09/17 05:32	1.54
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 05:32	1.54

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0	0.94	ug/m3			08/09/17 05:32	1.54
Chloroform	ND		3.9	0.73	ug/m3			08/09/17 05:32	1.54
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 05:32	1.54
Trichloroethene	**100**		2.1	0.75	ug/m3			08/09/17 05:32	1.54
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 05:32	1.54

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170802-RA-28
Date Collected: 08/02/17 09:13
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-8923-23
Matrix: Air

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		08/09/17 05:32	1.54

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-8923-1	SS-170801-RA-06	102						
140-8923-2	SS-170801-RA-07	97						
140-8923-3	SS-170801-RA-08	98						
140-8923-4	SS-170801-RA-09	98						
140-8923-5	SS-170802-RA-10	95						
140-8923-6	IA-170731-RA-07	99						
140-8923-7	IA-170731-RA-08	99						
140-8923-8	OA-170731-RA-02	98						
140-8923-10	G-170801-RA-15	97						
140-8923-11	G-170801-RA-16	99						
140-8923-12	G-170801-RA-17	99						
140-8923-13	G-170801-RA-18	101						
140-8923-14	G-170801-RA-19	104						
140-8923-15	G-170801-RA-20	103						
140-8923-16	G-170801-RA-21	102						
140-8923-17	G-170802-RA-22	102						
140-8923-18	G-170802-RA-23	104						
140-8923-19	G-170802-RA-24	105						
140-8923-20	G-170802-RA-25	104						
140-8923-21	G-170802-RA-26	101						
140-8923-22	G-170802-RA-27	103						
140-8923-23	G-170802-RA-28	101						
LCS 140-13338/1006	Lab Control Sample	103						
LCS 140-13340/1008	Lab Control Sample	103						
LCS 140-13369/1006	Lab Control Sample	104						
MB 140-13338/23	Method Blank	95						
MB 140-13340/10	Method Blank	98						
MB 140-13369/8	Method Blank	102						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-13338/23
Matrix: Air
Analysis Batch: 13338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			08/09/17 02:13	1
Chloroform	ND		0.080	0.015	ppb v/v			08/09/17 02:13	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 02:13	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/09/17 02:13	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 02:13	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/09/17 02:13	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			08/09/17 02:13	1
Chloroform	ND		0.39	0.073	ug/m3			08/09/17 02:13	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 02:13	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/09/17 02:13	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 02:13	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/09/17 02:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*08/09/17 02:13*	*1*

Lab Sample ID: LCS 140-13338/1006
Matrix: Air
Analysis Batch: 13338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.31		ppb v/v		115	70 - 130
Chloroform	2.00	2.01		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	1.93		ppb v/v		96	70 - 130
Trichloroethene	2.00	1.87		ppb v/v		94	70 - 130
Vinyl chloride	2.00	2.10		ppb v/v		105	70 - 130
Tetrachloroethene	2.00	2.01		ppb v/v		101	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	14.5		ug/m3		115	70 - 130
Chloroform	9.8	9.81		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	7.64		ug/m3		96	70 - 130
Trichloroethene	11	10.1		ug/m3		94	70 - 130
Vinyl chloride	5.1	5.38		ug/m3		105	70 - 130
Tetrachloroethene	14	13.7		ug/m3		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*

Lab Sample ID: MB 140-13340/10
Matrix: Air
Analysis Batch: 13340

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			08/07/17 16:07	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-13340/10
Matrix: Air
Analysis Batch: 13340

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.080	0.015	ppb v/v			08/07/17 16:07	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/07/17 16:07	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/07/17 16:07	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/07/17 16:07	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/07/17 16:07	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			08/07/17 16:07	1
Chloroform	ND		0.39	0.073	ug/m3			08/07/17 16:07	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/07/17 16:07	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/07/17 16:07	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/07/17 16:07	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/07/17 16:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*08/07/17 16:07*	*1*

Lab Sample ID: LCS 140-13340/1008
Matrix: Air
Analysis Batch: 13340

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.03		ppb v/v		103	70 - 130
Chloroform	1.00	1.19		ppb v/v		119	70 - 130
cis-1,2-Dichloroethene	1.00	1.16		ppb v/v		116	70 - 130
Trichloroethene	1.00	1.05		ppb v/v		105	70 - 130
Vinyl chloride	1.00	1.21		ppb v/v		121	70 - 130
Tetrachloroethene	1.00	0.970		ppb v/v		97	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	6.3	6.50		ug/m3		103	70 - 130
Chloroform	4.9	5.83		ug/m3		119	70 - 130
cis-1,2-Dichloroethene	4.0	4.58		ug/m3		116	70 - 130
Trichloroethene	5.4	5.62		ug/m3		105	70 - 130
Vinyl chloride	2.6	3.10		ug/m3		121	70 - 130
Tetrachloroethene	6.8	6.58		ug/m3		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*

Lab Sample ID: MB 140-13369/8
Matrix: Air
Analysis Batch: 13369

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			08/08/17 13:28	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-13369/8
Matrix: Air
Analysis Batch: 13369

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.080	0.015	ppb v/v			08/08/17 13:28	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/08/17 13:28	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/08/17 13:28	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/08/17 13:28	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/08/17 13:28	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.094	ug/m3			08/08/17 13:28	1
Chloroform	ND		0.39	0.073	ug/m3			08/08/17 13:28	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/08/17 13:28	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/08/17 13:28	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/08/17 13:28	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/08/17 13:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*08/08/17 13:28*	*1*

Lab Sample ID: LCS 140-13369/1006
Matrix: Air
Analysis Batch: 13369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	0.999	1.23		ppb v/v		123	70 - 130
Chloroform	0.999	1.17		ppb v/v		117	70 - 130
cis-1,2-Dichloroethene	0.999	1.15		ppb v/v		115	70 - 130
Trichloroethene	0.999	1.14		ppb v/v		114	70 - 130
Vinyl chloride	0.999	1.07		ppb v/v		107	70 - 130
Tetrachloroethene	0.999	1.17		ppb v/v		117	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	6.3	7.74		ug/m3		123	70 - 130
Chloroform	4.9	5.70		ug/m3		117	70 - 130
cis-1,2-Dichloroethene	4.0	4.55		ug/m3		115	70 - 130
Trichloroethene	5.4	6.12		ug/m3		114	70 - 130
Vinyl chloride	2.6	2.74		ug/m3		107	70 - 130
Tetrachloroethene	6.8	7.90		ug/m3		117	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Air - GC/MS VOA

Analysis Batch: 13338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8923-10	G-170801-RA-15	Total/NA	Air	TO 15 LL	
140-8923-11	G-170801-RA-16	Total/NA	Air	TO 15 LL	
140-8923-12	G-170801-RA-17	Total/NA	Air	TO 15 LL	
MB 140-13338/23	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-13338/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 13340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8923-1	SS-170801-RA-06	Total/NA	Air	TO 15 LL	
140-8923-2	SS-170801-RA-07	Total/NA	Air	TO 15 LL	
140-8923-3	SS-170801-RA-08	Total/NA	Air	TO 15 LL	
140-8923-4	SS-170801-RA-09	Total/NA	Air	TO 15 LL	
140-8923-5	SS-170802-RA-10	Total/NA	Air	TO 15 LL	
140-8923-6	IA-170731-RA-07	Total/NA	Air	TO 15 LL	
140-8923-7	IA-170731-RA-08	Total/NA	Air	TO 15 LL	
140-8923-8	OA-170731-RA-02	Total/NA	Air	TO 15 LL	
MB 140-13340/10	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-13340/1008	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 13369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8923-13	G-170801-RA-18	Total/NA	Air	TO 15 LL	
140-8923-14	G-170801-RA-19	Total/NA	Air	TO 15 LL	
140-8923-15	G-170801-RA-20	Total/NA	Air	TO 15 LL	
140-8923-16	G-170801-RA-21	Total/NA	Air	TO 15 LL	
140-8923-17	G-170802-RA-22	Total/NA	Air	TO 15 LL	
140-8923-18	G-170802-RA-23	Total/NA	Air	TO 15 LL	
140-8923-19	G-170802-RA-24	Total/NA	Air	TO 15 LL	
140-8923-20	G-170802-RA-25	Total/NA	Air	TO 15 LL	
140-8923-21	G-170802-RA-26	Total/NA	Air	TO 15 LL	
140-8923-22	G-170802-RA-27	Total/NA	Air	TO 15 LL	
140-8923-23	G-170802-RA-28	Total/NA	Air	TO 15 LL	
MB 140-13369/8	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-13369/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: SS-170801-RA-06 — Lab Sample ID: 140-8923-1

Date Collected: 08/01/17 14:56
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.54	77 mL	500 mL	13340	08/07/17 16:49	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170801-RA-07 — Lab Sample ID: 140-8923-2

Date Collected: 08/01/17 16:20
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		16.34	14 mL	500 mL	13340	08/07/17 17:31	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170801-RA-08 — Lab Sample ID: 140-8923-3

Date Collected: 08/01/17 16:22
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.51	75.5 mL	500 mL	13340	08/07/17 18:13	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170801-RA-09 — Lab Sample ID: 140-8923-4

Date Collected: 08/01/17 17:12
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		5.19	16 mL	500 mL	13340	08/07/17 18:55	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170802-RA-10 — Lab Sample ID: 140-8923-5

Date Collected: 08/02/17 09:54
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.45	72.5 mL	500 mL	13340	08/07/17 19:38	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-170731-RA-07 — Lab Sample ID: 140-8923-6

Date Collected: 07/31/17 16:56
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13340	08/07/17 20:22	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: IA-170731-RA-08 — Lab Sample ID: 140-8923-7

Date Collected: 07/31/17 15:00 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.75	875 mL	500 mL	13340	08/07/17 21:10	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: OA-170731-RA-02 — Lab Sample ID: 140-8923-8

Date Collected: 07/31/17 14:25 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.67	835 mL	500 mL	13340	08/07/17 21:59	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: G-170801-RA-15 — Lab Sample ID: 140-8923-10

Date Collected: 08/01/17 14:03 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.5	75 mL	500 mL	13338	08/09/17 02:59	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: G-170801-RA-16 — Lab Sample ID: 140-8923-11

Date Collected: 08/01/17 17:42 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.87	93.5 mL	500 mL	13338	08/09/17 03:45	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: G-170801-RA-17 — Lab Sample ID: 140-8923-12

Date Collected: 08/01/17 17:44 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.48	74 mL	500 mL	13338	08/09/17 04:31	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: G-170801-RA-18 — Lab Sample ID: 140-8923-13

Date Collected: 08/01/17 17:44 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.55	77.5 mL	500 mL	13369	08/08/17 20:59	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170801-RA-19 — Lab Sample ID: 140-8923-14

Date Collected: 08/01/17 18:25 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.51	75.5 mL	500 mL	13369	08/08/17 21:46	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-20 — Lab Sample ID: 140-8923-15

Date Collected: 08/01/17 18:21 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.49	74.5 mL	500 mL	13369	08/08/17 22:33	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-21 — Lab Sample ID: 140-8923-16

Date Collected: 08/01/17 18:23 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.56	78 mL	500 mL	13369	08/08/17 23:19	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170802-RA-22 — Lab Sample ID: 140-8923-17

Date Collected: 08/02/17 07:54 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.36	68 mL	500 mL	13369	08/09/17 00:05	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170802-RA-23 — Lab Sample ID: 140-8923-18

Date Collected: 08/02/17 07:49 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.39	69.5 mL	500 mL	13369	08/09/17 00:52	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170802-RA-24 — Lab Sample ID: 140-8923-19

Date Collected: 08/02/17 08:19 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.41	70.5 mL	500 mL	13369	08/09/17 01:38	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: G-170802-RA-25 — Lab Sample ID: 140-8923-20

Date Collected: 08/02/17 08:43 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.51	75.5 mL	500 mL	13369	08/09/17 02:25	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170802-RA-26 — Lab Sample ID: 140-8923-21

Date Collected: 08/02/17 08:43 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.54	77 mL	500 mL	13369	08/09/17 03:12	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170802-RA-27 — Lab Sample ID: 140-8923-22

Date Collected: 08/02/17 09:15 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.4	70 mL	500 mL	13369	08/09/17 04:45	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170802-RA-28 — Lab Sample ID: 140-8923-23

Date Collected: 08/02/17 09:13 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.54	77 mL	500 mL	13369	08/09/17 05:32	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-13338/23

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13338	08/09/17 02:13	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-13340/10

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13340	08/07/17 16:07	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Client Sample ID: Method Blank — Lab Sample ID: MB 140-13369/8

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13369	08/08/17 13:28	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-13338/1006

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13338	08/08/17 13:04	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-13340/1008

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13340	08/07/17 13:41	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-13369/1006

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13369	08/08/17 11:56	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	Carbon tetrachloride
TO 15 LL		Air	Chloroform
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8923-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-8923-1	SS-170801-RA-06	Air	08/01/17 14:56	08/05/17 09:30
140-8923-2	SS-170801-RA-07	Air	08/01/17 16:20	08/05/17 09:30
140-8923-3	SS-170801-RA-08	Air	08/01/17 16:22	08/05/17 09:30
140-8923-4	SS-170801-RA-09	Air	08/01/17 17:12	08/05/17 09:30
140-8923-5	SS-170802-RA-10	Air	08/02/17 09:54	08/05/17 09:30
140-8923-6	IA-170731-RA-07	Air	07/31/17 16:56	08/05/17 09:30
140-8923-7	IA-170731-RA-08	Air	07/31/17 15:00	08/05/17 09:30
140-8923-8	OA-170731-RA-02	Air	07/31/17 14:25	08/05/17 09:30
140-8923-10	G-170801-RA-15	Air	08/01/17 14:03	08/05/17 09:30
140-8923-11	G-170801-RA-16	Air	08/01/17 17:42	08/05/17 09:30
140-8923-12	G-170801-RA-17	Air	08/01/17 17:44	08/05/17 09:30
140-8923-13	G-170801-RA-18	Air	08/01/17 17:44	08/05/17 09:30
140-8923-14	G-170801-RA-19	Air	08/01/17 18:25	08/05/17 09:30
140-8923-15	G-170801-RA-20	Air	08/01/17 18:21	08/05/17 09:30
140-8923-16	G-170801-RA-21	Air	08/01/17 18:23	08/05/17 09:30
140-8923-17	G-170802-RA-22	Air	08/02/17 07:54	08/05/17 09:30
140-8923-18	G-170802-RA-23	Air	08/02/17 07:49	08/05/17 09:30
140-8923-19	G-170802-RA-24	Air	08/02/17 08:19	08/05/17 09:30
140-8923-20	G-170802-RA-25	Air	08/02/17 08:43	08/05/17 09:30
140-8923-21	G-170802-RA-26	Air	08/02/17 08:43	08/05/17 09:30
140-8923-22	G-170802-RA-27	Air	08/02/17 09:15	08/05/17 09:30
140-8923-23	G-170802-RA-28	Air	08/02/17 09:13	08/05/17 09:30

TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Cus

140-8923 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Ahrens	**Samples Collected By:** RAamot	COC No: 1 of 3 COCs
Company Name: GHD	**Phone:**		
Address: 1801 Old Highway 8 NW 114	**Email:**		
City/State/Zip St. Paul MN 55112			**For Lab Use Only:**
Phone: 651-639-0913	**Site Contact:** Grant Anderson		Walk-in Client:
FAX:	**TA Contact:**		Lab Sampling:
Project Name: Wausau	**Anaylsis Turnaround Time**		
Site/Location: 3978	Standard (Specific):		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
SS-170801-RA-06	8/1/17	1447	1456	-29	-5	10952	11577	X											X			
SS-170801-RA-07	8/1/17	1610	1620	-28	-5	10548	10832	X											X			
SS-170801-RA-08	8/1/17	1612	1622	-29	-5	11519	11492	X											X			
SS-170801-RA-09	8/1/17	1703	1712	-28	-5	09567	10783	X											X			
SS-170802-RA-10	8/2/17	944	954	-30	-5	09884	10518	X											X			
IA-170731-RA-07	7/31/17	1750	1656	-30	-5	7589	10637	X									X					
IA-170731-RA-08	7/31/17	1800	1500	-30	-10	7580	11299	X									X					
OA-170731-RA-02	7/31/17	1757	1425	-26	-5	7786	10229	X										X				
G-170801-RA-14	8/1/17	1 no sample - water in tank																				
G-170801-RA-15	8/1/17	1354	1403	-30	-5	10958	11593	X											X			

Temperature (Fahrenheit)			
Start	Interior	Ambient	80
Stop			80

Received @ ambient, 6 boxes, Fedex PO
No custody seal, trK#7449 8095 5056
" " 5089
" " 5067
" " 5090
" " 5078
" " 5045

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

KW 8/5/17

Special Instructions/QC Requirements & Comments:
Only Analyze for TCE, ~~[illegible]~~, cis12DCE, VC, CT, Chloroform

Samples Shipped by: [signature]	**Date / Time:** 8/2/17 1600	**Samples Received by:** [signature] 8/5/17 0930	3 flows, 23 cams ~~19 KR~~ 20 KR
Samples Relinquished by:	**Date / Time:**	**Received by:**	
Relinquished by:	**Date / Time:**	**Received by:**	
Lab Use Only: **Shipper Name:**	**Opened by:**	**Condition:**	

Form No. CA-C-WI-003, Rev. 1.1, dated 07/15/2014

TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Ahrens	**Samples Collected By:** Ramos	COC No: 2 of 3 COCs
Company Name: GHD	Phone:		
Address: 1801 Old Highway 8 NW #14	Email:		
City/State/Zip St. Paul MN 55112			**For Lab Use Only:**
Phone: 651-639-0913	Site Contact: Grant Anderson		Walk-in Client:
FAX:	TA Contact:		Lab Sampling:
Project Name: Wausau	**Anaylsis Turnaround Time**		
Site/Location: 3978	Standard (Specific):		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
6-170801-RA-16	8/1/17	1734	1742	-25	-5	7739	11140	X											X			
6-170801-RA-17	|	1734	1744	-28	-5	7552	11557	X											X			
6-170801-RA-18	|	1734	1744	-28	-5	10616	10980	X											X			
6-170801-RA-19	|	1814	1825	-30	-5	09895	11277	X											X			
6-170801-RA-20	|	1814	1821	-30	-5	11010	09791	X											X			
6-170801-RA-21	↓	1814	1823	-27	-5	09883	10748	X											X			
6-170802-RA-22	8/2/17	739	754	-30	-5	10943	11267	X											X			
6-170802-RA-23	|	739	749	-30	-5	10014	09800	X											X			
6-170802-RA-24	|	808	819	-28	-4	11434	11590	X											X			
6-170802-RA-25	↓	833	843	-30	-5	11103	11517	X											X			

	Temperature (Fahrenheit)			
	Start	Interior	Ambient	80
	Stop			80

	Temperature (Fahrenheit)			
	Start	Interior	Ambient	
	Stop			

Special Instructions/QC Requirements & Comments:
Only Analyze for TCE, [redacted], cis12DCE, VC, CT, Chloroform

Samples Shipped by:	**Date / Time:** 8/2/17 1600	**Samples Received by:** 8/5/17 0930
Samples Relinquished by:	**Date / Time:**	**Received by:**
Relinquished by:	**Date / Time:**	**Received by:**

Lab Use Only: **Shipper Name:** **Opened by:** **Condition:**

Form No. CA-C-WI-003, Rev. 1.1, dated 07/15/2014

TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Ahrens	**Samples Collected By:** RAamot	COC No:
Company Name: GHD	**Phone:**		3 of 3 COCs
Address: 1801 Old Highway 8 NW #14	**Email:**		
City/State/Zip St. Paul MN 55112			**For Lab Use Only:**
Phone: 651-639-0913	**Site Contact:** Grant Anderson		Walk-in Client:
FAX:	**TA Contact:**		Lab Sampling:
Project Name: Watson	**Anaylsis Turnaround Time**		
Site/Location: 3978	Standard (Specific):		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
G-170802-RA-26	8/1/17	833	843	-28	-5	10677	10342	X											X			
G-170802-RA-27	|	9:04	915	-30	-5	10904	10964	X											X			
G-170802-RA-28	↓	9:04	913	-28	-5	10940	11111	X											X			

	Temperature (Fahrenheit)			
	Start	Interior	Ambient	80
	Stop			80

	Temperature (Fahrenheit)			
	Start	Interior	Ambient	
	Stop			

Special Instructions/QC Requirements & Comments:
Only Analyze for TCE, [redacted], cis12DCE, VC, CT, Chloroform

Samples Shipped by:	**Date / Time:** 8/2/17 1600	**Samples Received by:** 8/5/17 0930
Samples Relinquished by:	**Date / Time:**	**Received by:**
Relinquished by:	**Date / Time:**	**Received by:**

Lab Use Only: **Shipper Name:** **Opened by:** **Condition:**

Form No. CA-C-WI-003, Rev. 1.1, dated 07/15/2014

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 14003779 PM Instructions:

Sample Receiving Associate: [signature] Date: 8/5/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 8/7/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-8923-a-1	11577	8532	B	1	-6.6	1020	3.0
AFB	140-8923-a-2	10832	8660	B	1	-7.8	1021	2.9
AFB	140-8923-a-3	11492	8532	B	1	-6.4	1022	2.8
AFB	140-8923-a-4	10783	8596	B	1	-8.2	1023	2.6
AFB	140-8923-a-5	10518	8596	B	1	-5.0	1024	3.1
AFB	140-8923-a-6	10637	8682	B	6	-5.7	1025	
AFB	140-8923-a-7	11299	8682	B	6	-10.1	1026	2.3
AFB	140-8923-a-8	10229	8682	B	6	-8.9	1027	2.5
AFB	140-8923-a-9	09750	8532	B	1	-16.2	1028	3.4
AFB	140-8923-a-10	11593	8596	B	1	-6.1	1035	2.9
AFB	140-8923-a-11	11140	8596	B	1	-10.7	1036	3.0
AFB	140-8923-a-12	11557	8518	B	1	-6.1	1037	2.6
AFB	140-8923-a-13	10980	8596	B	1	-7.0	1038	2.7
AFB	140-8923-a-14	11277	8630	B	1	-6.8	1039	2.5
AFB	140-8923-a-15	09791	8660	B	1	-6.4	1040	2.5
AFB	140-8923-a-16	10748	8596	B	1	-7.2	1041	2.7
AFB	140-8923-a-17	11267	8660	B	1	-4.1	1042	2.6
AFB	140-8923-a-18	09800	8660	B	1	-4.4	1043	2.7
AFB	140-8923-a-19	11590	8660	B	1	-4.6	1044	2.9
AFB	140-8923-a-20	11517	8596	B	1	-6.1	1100	3.0
AFB	140-8923-a-21	10342	8518	B	1	-7.0	1101	2.6
AFB	140-8923-a-22	10964	8532	B	1	-4.7	1102	2.7
AFB	140-8923-a-23	11111	8630	B	1	-7.1	1103	2.6

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11165 | Lab Sample ID: 140-8518-1

Matrix: Air | Lab File ID: 8518BK01.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:16

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11165
Lab Sample ID: 140-8518-1
Matrix: Air
Lab File ID: 8518BK01.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 06/27/2017 11:16
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12318
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11165 Lab Sample ID: 140-8518-1

Matrix: Air Lab File ID: 8518BK01.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/27/2017 11:16

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11165 Lab Sample ID: 140-8518-1

Matrix: Air Lab File ID: 8518BK01.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/27/2017 11:16

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK01.D
Lims ID: 140-8518-A-1
Client ID: 11165
Sample Type: Client
Inject. Date: 27-Jun-2017 11:16:30 ALS Bottle#: 15 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005325-005
Misc. Info.: 11165
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Jun-2017 09:18:01 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 27-Jun-2017 13:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.931	-0.005	82	596498	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.088	-0.005	95	2993049	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.968	14.974	-0.006	89	2774018	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2210784	3.97	
11 Acetaldehyde	44	3.785	3.785	0.001	98	62316	1.28	
29 2-Methyl-2-propanol	59	5.472	5.429	0.043	56	4776	0.0207	
31 Methylene Chloride	84	5.618	5.623	-0.005	94	15059	0.1074	

Reagents:

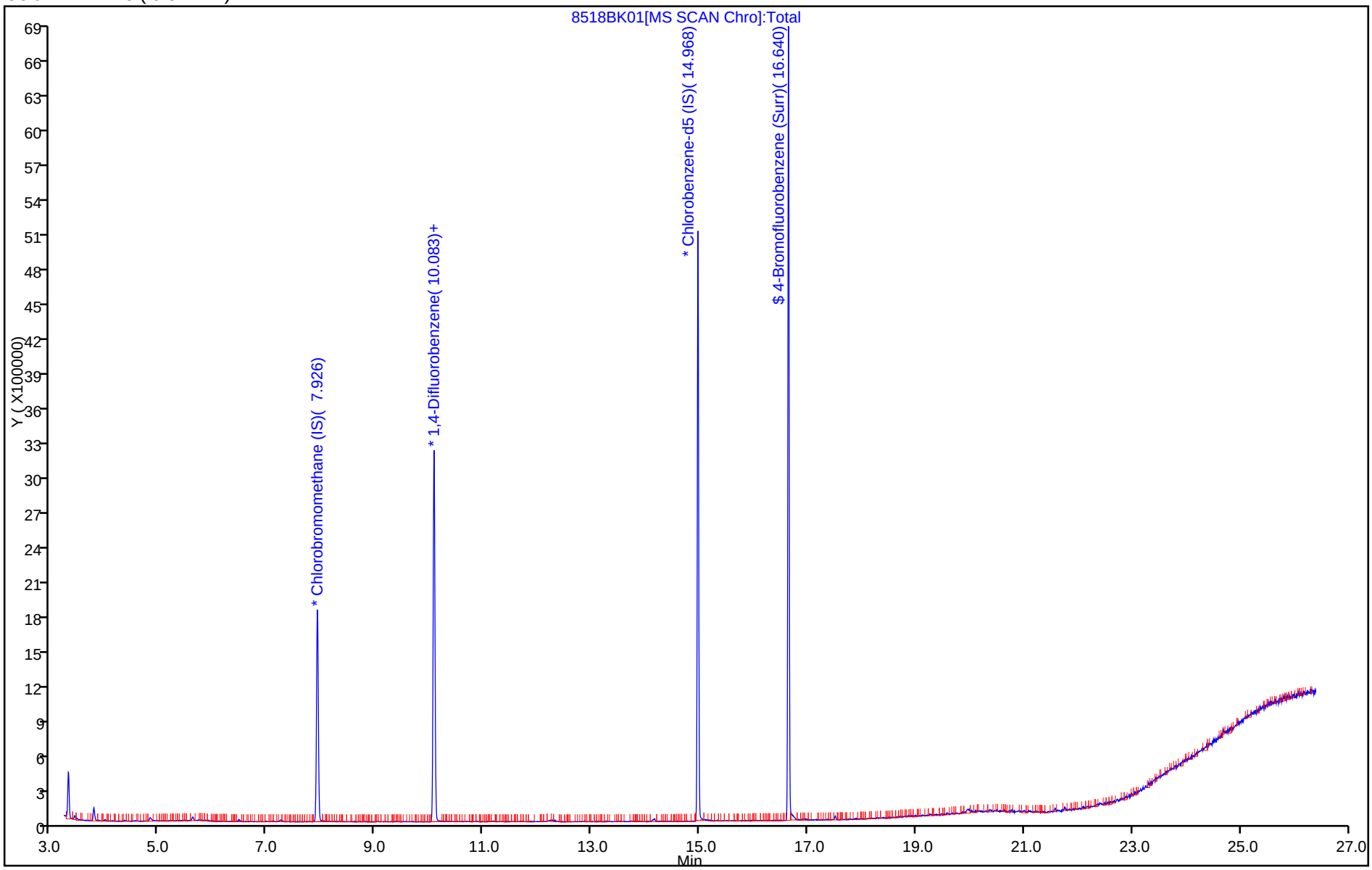
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 28-Jun-2017 09:18:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK01.D				
Injection Date:	27-Jun-2017 11:16:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-1	Lab Sample ID:	140-8518-1	Worklist Smp#:	5
Client ID:	11165				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10497 | Lab Sample ID: 140-8518-2
Matrix: Air | Lab File ID: 8518BK02.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:59
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10497 | Lab Sample ID: 140-8518-2
Matrix: Air | Lab File ID: 8518BK02.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:59
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10497 | Lab Sample ID: 140-8518-2

Matrix: Air | Lab File ID: 8518BK02.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10497 Lab Sample ID: 140-8518-2

Matrix: Air Lab File ID: 8518BK02.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/27/2017 11:59

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK02.D
Lims ID: 140-8518-A-2
Client ID: 10497
Sample Type: Client
Inject. Date: 27-Jun-2017 11:59:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005325-006
Misc. Info.: 10497
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Jun-2017 09:18:01 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 27-Jun-2017 13:10:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.931	-0.005	82	582538	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.088	-0.005	95	2735297	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.968	14.974	-0.006	88	2645810	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2057303	3.87	
14 Butane	43	3.876	3.876	0.000	92	6461	0.0320	
31 Methylene Chloride	84	5.623	5.623	0.000	87	18841	0.1376	
40 Hexane	56	7.279	7.284	-0.005	80	3374	0.0273	

Reagents:

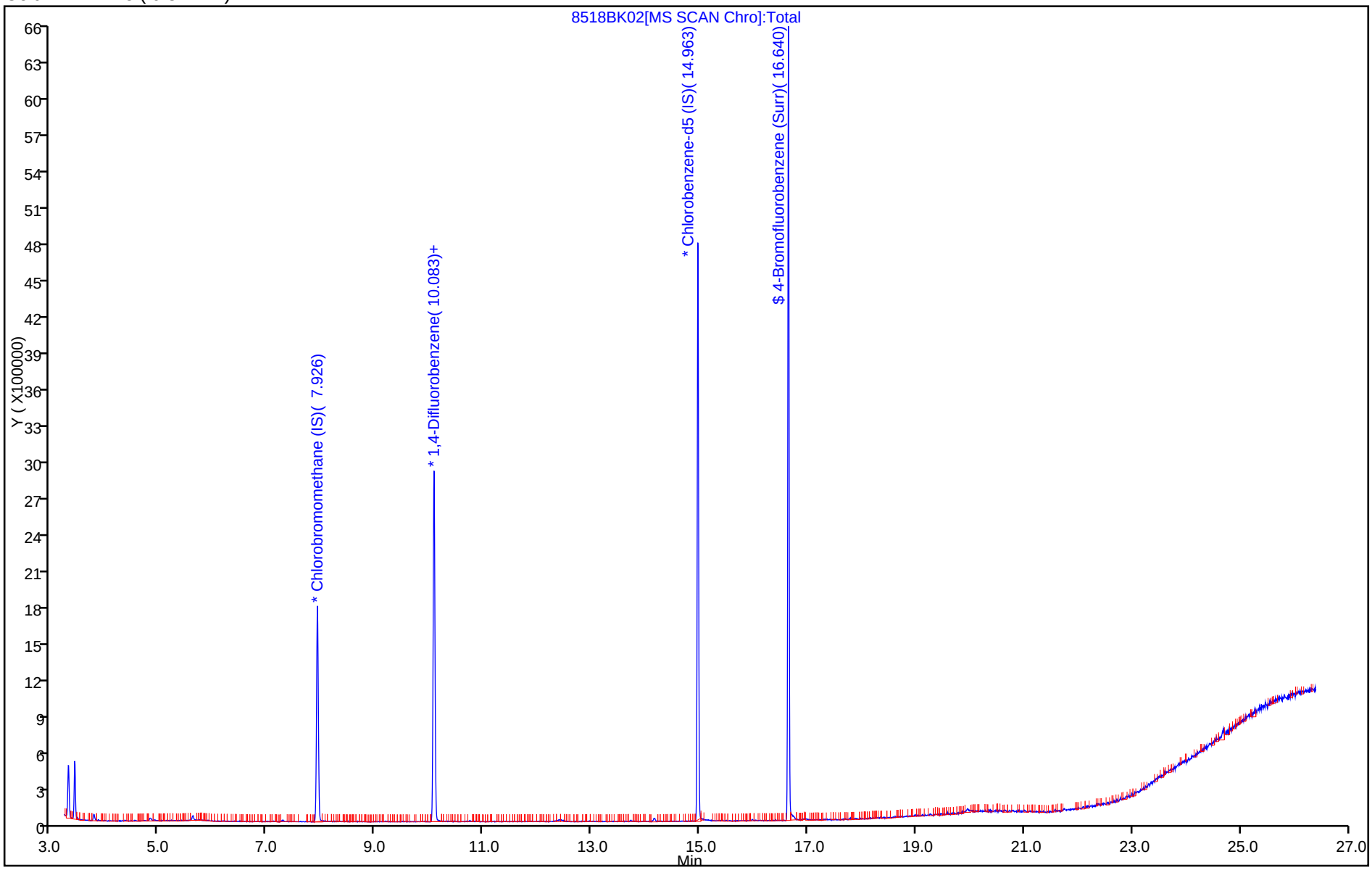
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 28-Jun-2017 09:18:23 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK02.D				
Injection Date:	27-Jun-2017 11:59:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-2	Lab Sample ID:	140-8518-2	Worklist Smp#:	6
Client ID:	10497				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11110 | Lab Sample ID: 140-8518-3
Matrix: Air | Lab File ID: 8518BK03.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 07:45
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11110
Lab Sample ID: 140-8518-3
Matrix: Air
Lab File ID: 8518BK03.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 06/28/2017 07:45
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12318
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11110 | Lab Sample ID: 140-8518-3

Matrix: Air | Lab File ID: 8518BK03.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 07:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11110 Lab Sample ID: 140-8518-3

Matrix: Air Lab File ID: 8518BK03.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/28/2017 07:45

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK03.D
Lims ID: 140-8518-A-3
Client ID: 11110
Sample Type: Client
Inject. Date: 28-Jun-2017 07:45:30 ALS Bottle#: 1 Worklist Smp#: 31
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005325-031
Misc. Info.: 11110
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Jun-2017 09:18:01 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 28-Jun-2017 09:01:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.921	7.931	-0.010	82	596497	4.00	
* 2 1,4-Difluorobenzene	114	10.078	10.088	-0.010	95	2871340	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.974	-0.011	89	2753894	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2180479	3.94	
31 Methylene Chloride	84	5.613	5.623	-0.010	90	15097	0.1077	
42 cis-1,2-Dichloroethene	96	7.619	7.629	-0.010	92	13614	0.0749	
76 Tetrachloroethene	129	14.127	14.132	-0.005	93	6414	0.0222	

Reagents:

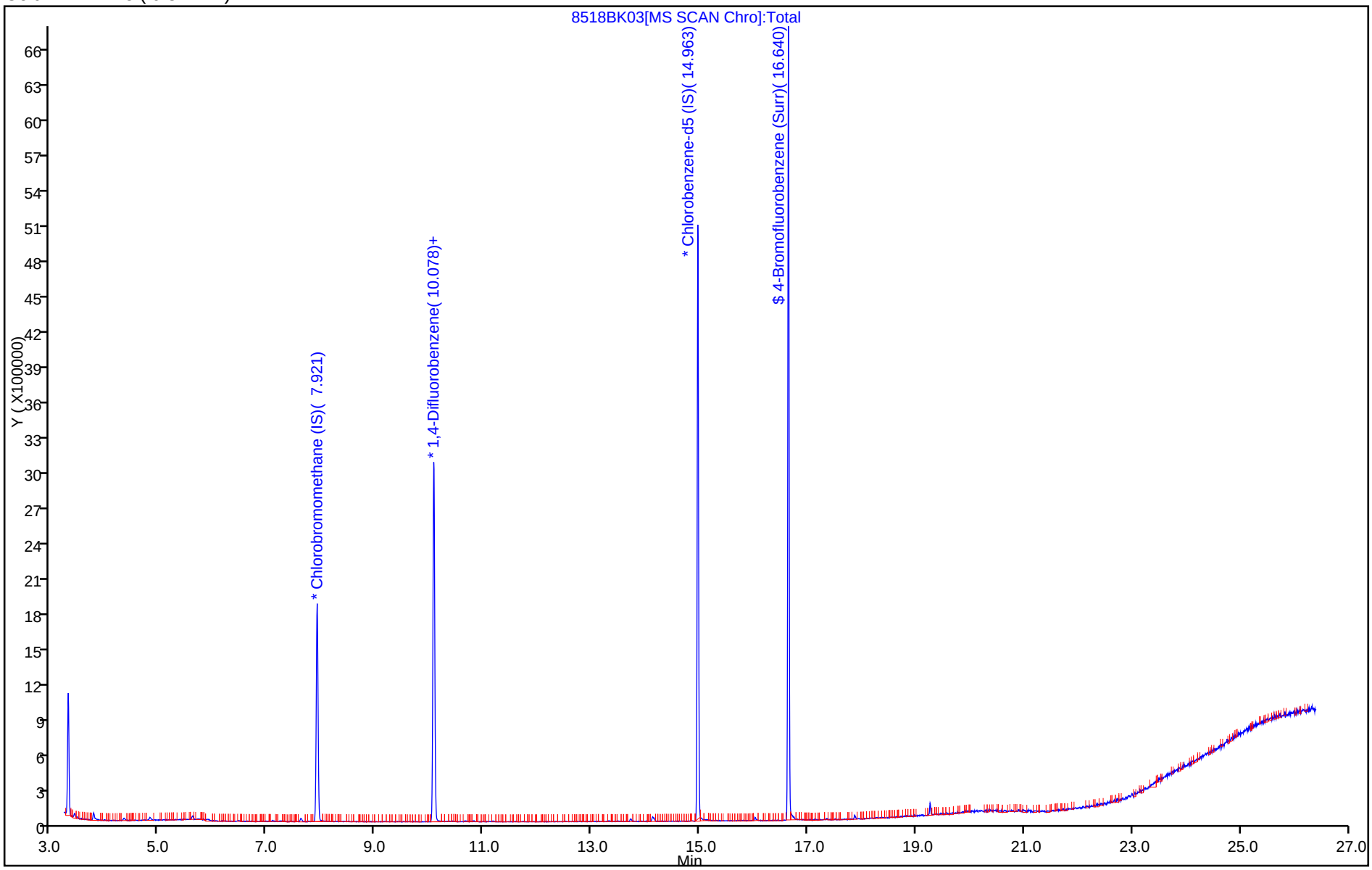
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 28-Jun-2017 09:19:25 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK03.D				
Injection Date:	28-Jun-2017 07:45:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-3	Lab Sample ID:	140-8518-3	Worklist Smp#:	31
Client ID:	11110				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10519 | Lab Sample ID: 140-8518-4
Matrix: Air | Lab File ID: 8518BK04.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 11:39
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-8518-4

Matrix: Air | Lab File ID: 8518BK04.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 11:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-8518-4

Matrix: Air | Lab File ID: 8518BK04.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 11:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-8518-4

Matrix: Air Lab File ID: 8518BK04.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/28/2017 11:39

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12319 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK04.D				
Lims ID:	140-8518-A-4				
Client ID:	10519				
Sample Type:	Client				
Inject. Date:	28-Jun-2017 11:39:30	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005326-005				
Misc. Info.:	10519				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	29-Jun-2017 11:03:08	Calib Date:	21-Jun-2017 22:43:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK016				

First Level Reviewer: tajh Date: 28-Jun-2017 12:15:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.920	7.937	-0.017	83	590744	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.094	-0.011	95	2936881	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.974	-0.011	89	2801021	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	91	2188230	3.89	
6 Chlorodifluoromethane	67	3.466	3.466	0.000	89	3258	0.0368	
31 Methylene Chloride	84	5.618	5.623	-0.005	93	17741	0.1278	

Reagents:

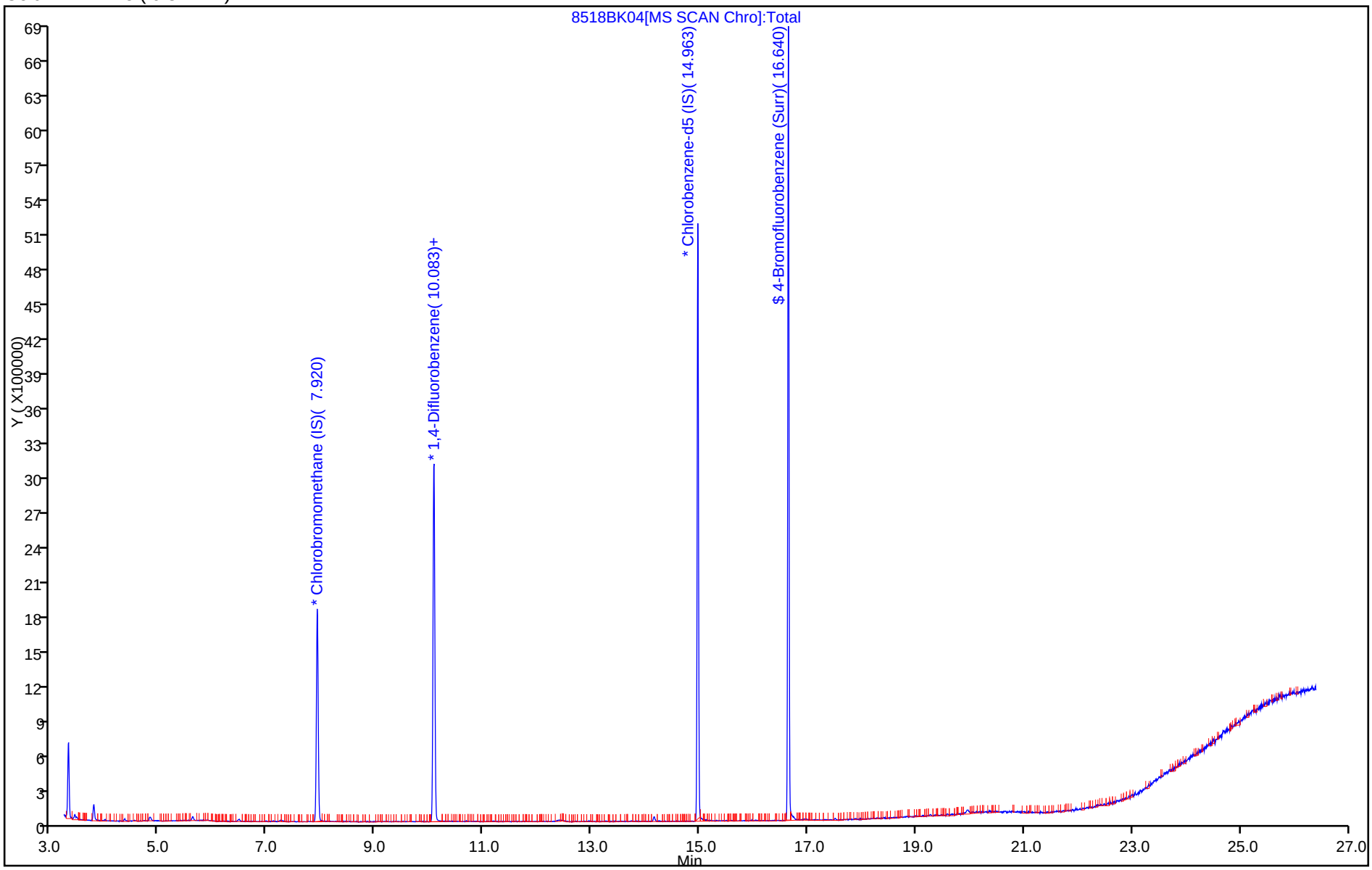
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 29-Jun-2017 11:03:28 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK04.D				
Injection Date:	28-Jun-2017 11:39:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-4	Lab Sample ID:	140-8518-4	Worklist Smp#:	5
Client ID:	10519				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10501 | Lab Sample ID: 140-8518-5

Matrix: Air | Lab File ID: 8518BK05.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 12:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10501
Lab Sample ID: 140-8518-5
Matrix: Air
Lab File ID: 8518BK05.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 06/28/2017 12:24
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12319
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10501 | Lab Sample ID: 140-8518-5

Matrix: Air | Lab File ID: 8518BK05.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 12:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10501 Lab Sample ID: 140-8518-5

Matrix: Air Lab File ID: 8518BK05.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/28/2017 12:24

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12319 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK05.D
Lims ID: 140-8518-A-5
Client ID: 10501
Sample Type: Client
Inject. Date: 28-Jun-2017 12:24:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005326-006
Misc. Info.: 10501
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Jun-2017 11:03:08 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: tajh Date: 28-Jun-2017 13:09:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.937	-0.011	83	618509	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.094	-0.011	95	2962865	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.974	-0.011	88	2906975	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2295079	3.93	
31 Methylene Chloride	84	5.623	5.623	0.000	92	17378	0.1195	

Reagents:

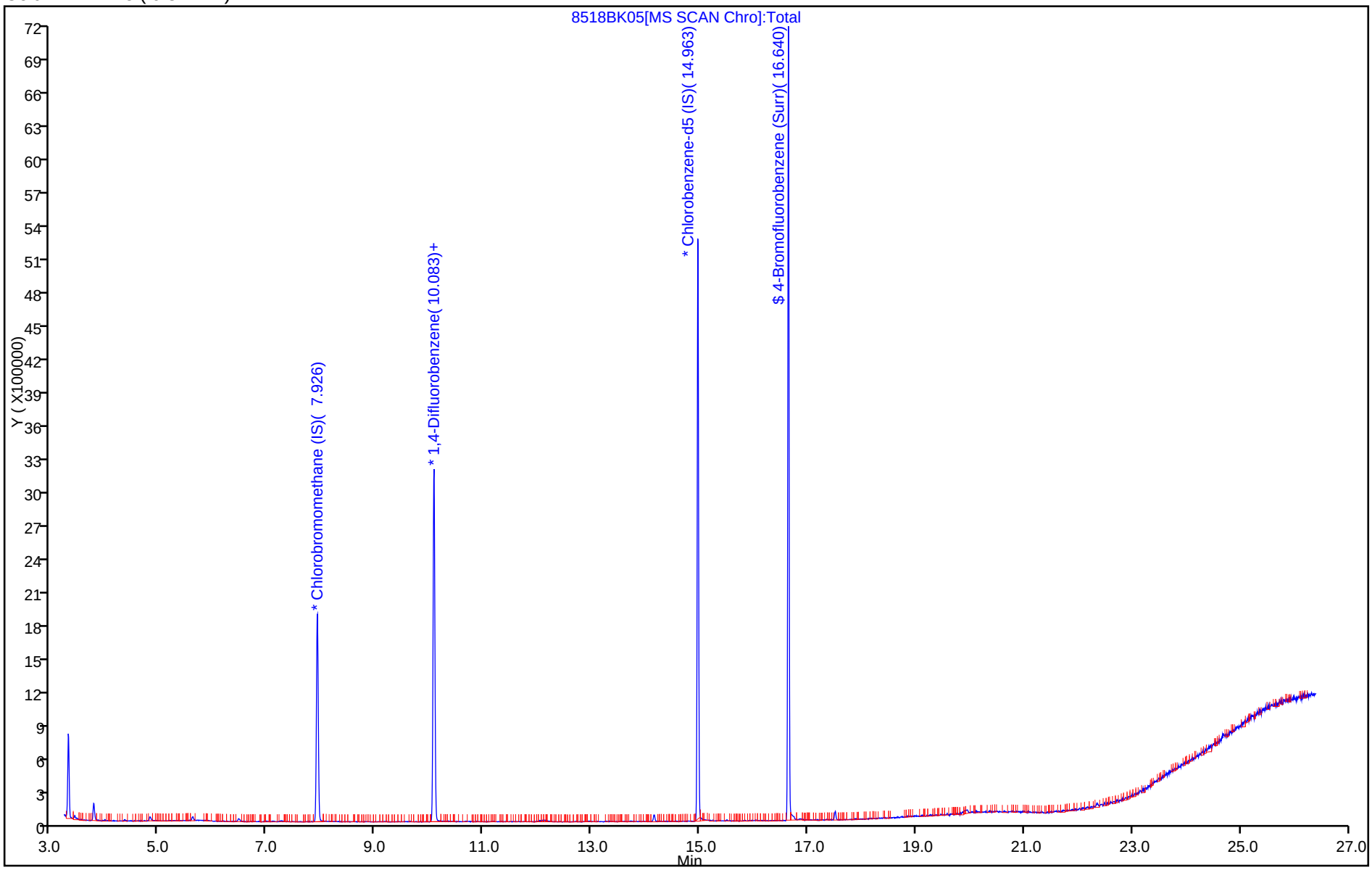
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 29-Jun-2017 11:03:41 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK05.D				
Injection Date:	28-Jun-2017 12:24:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-5	Lab Sample ID:	140-8518-5	Worklist Smp#:	6
Client ID:	10501				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10342 | Lab Sample ID: 140-8518-8

Matrix: Air | Lab File ID: 8518BK08.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 22:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10342
Lab Sample ID: 140-8518-8
Matrix: Air
Lab File ID: 8518BK08.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 06/30/2017 22:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10342
Lab Sample ID: 140-8518-8
Matrix: Air
Lab File ID: 8518BK08.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 06/30/2017 22:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10342 Lab Sample ID: 140-8518-8

Matrix: Air Lab File ID: 8518BK08.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/30/2017 22:38

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK08.D
Lims ID: 140-8518-A-8
Client ID: 10342
Sample Type: Client
Inject. Date: 30-Jun-2017 22:38:30 ALS Bottle#: 2 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-016
Misc. Info.: 10342
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	616474	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	95	2965933	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.956	14.961	-0.005	91	2472970	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.660	16.659	0.001	87	2078193	4.17	
31 Methylene Chloride	84	5.611	5.616	-0.005	90	17022	0.0963	

Reagents:

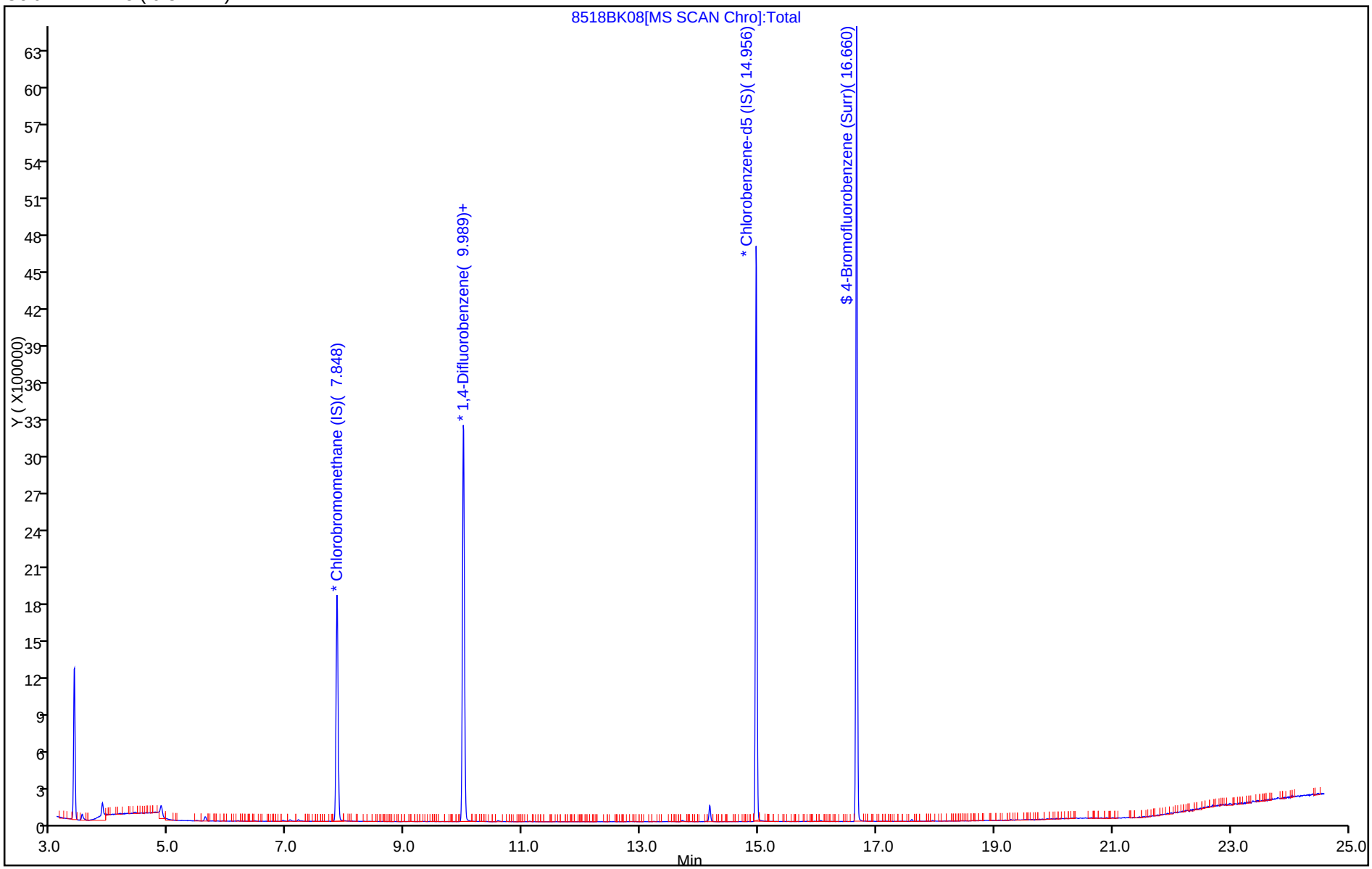
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:12 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK08.D				
Injection Date:	30-Jun-2017 22:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-8	Lab Sample ID:	140-8518-8	Worklist Smp#:	16
Client ID:	10342				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10942 | Lab Sample ID: 140-8518-9

Matrix: Air | Lab File ID: 8518BK09.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 23:26

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10942 | Lab Sample ID: 140-8518-9
Matrix: Air | Lab File ID: 8518BK09.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 23:26
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10942 | Lab Sample ID: 140-8518-9

Matrix: Air | Lab File ID: 8518BK09.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 23:26

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10942 Lab Sample ID: 140-8518-9

Matrix: Air Lab File ID: 8518BK09.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/30/2017 23:26

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK09.D				
Lims ID:	140-8518-A-9				
Client ID:	10942				
Sample Type:	Client				
Inject. Date:	30-Jun-2017 23:26:30	ALS Bottle#:	3	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005382-017				
Misc. Info.:	10942				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	03-Jul-2017 13:52:18	Calib Date:	28-Jun-2017 21:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK021				

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	602304	4.00	
* 2 1,4-Difluorobenzene	114	9.994	9.995	-0.001	95	2874241	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2412686	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	2042607	4.20	
31 Methylene Chloride	84	5.616	5.616	0.000	92	15748	0.0912	

Reagents:

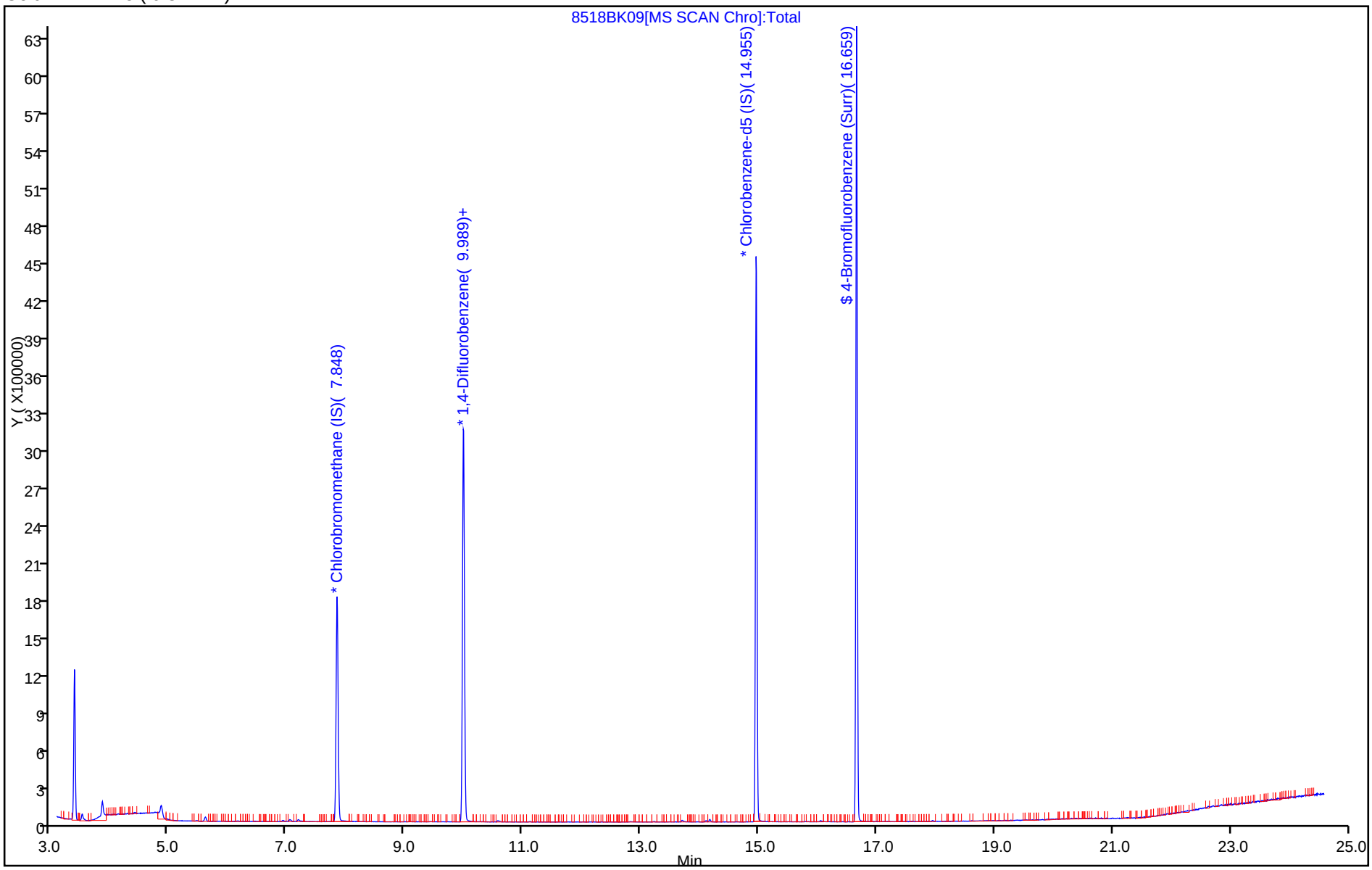
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:14 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK09.D				
Injection Date:	30-Jun-2017 23:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-9	Lab Sample ID:	140-8518-9	Worklist Smp#:	17
Client ID:	10942				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10758 | Lab Sample ID: 140-8518-10
Matrix: Air | Lab File ID: 8518BK10.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 00:14
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10758
Lab Sample ID: 140-8518-10
Matrix: Air
Lab File ID: 8518BK10.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 00:14
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10758 | Lab Sample ID: 140-8518-10

Matrix: Air | Lab File ID: 8518BK10.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 00:14

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10758 Lab Sample ID: 140-8518-10

Matrix: Air Lab File ID: 8518BK10.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 00:14

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK10.D
Lims ID: 140-8518-A-10
Client ID: 10758
Sample Type: Client
Inject. Date: 01-Jul-2017 00:14:30 ALS Bottle#: 4 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-018
Misc. Info.: 10758
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	599441	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	95	2886716	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2457326	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	87	2060483	4.16	
31 Methylene Chloride	84	5.616	5.616	0.000	89	16066	0.0934	

Reagents:

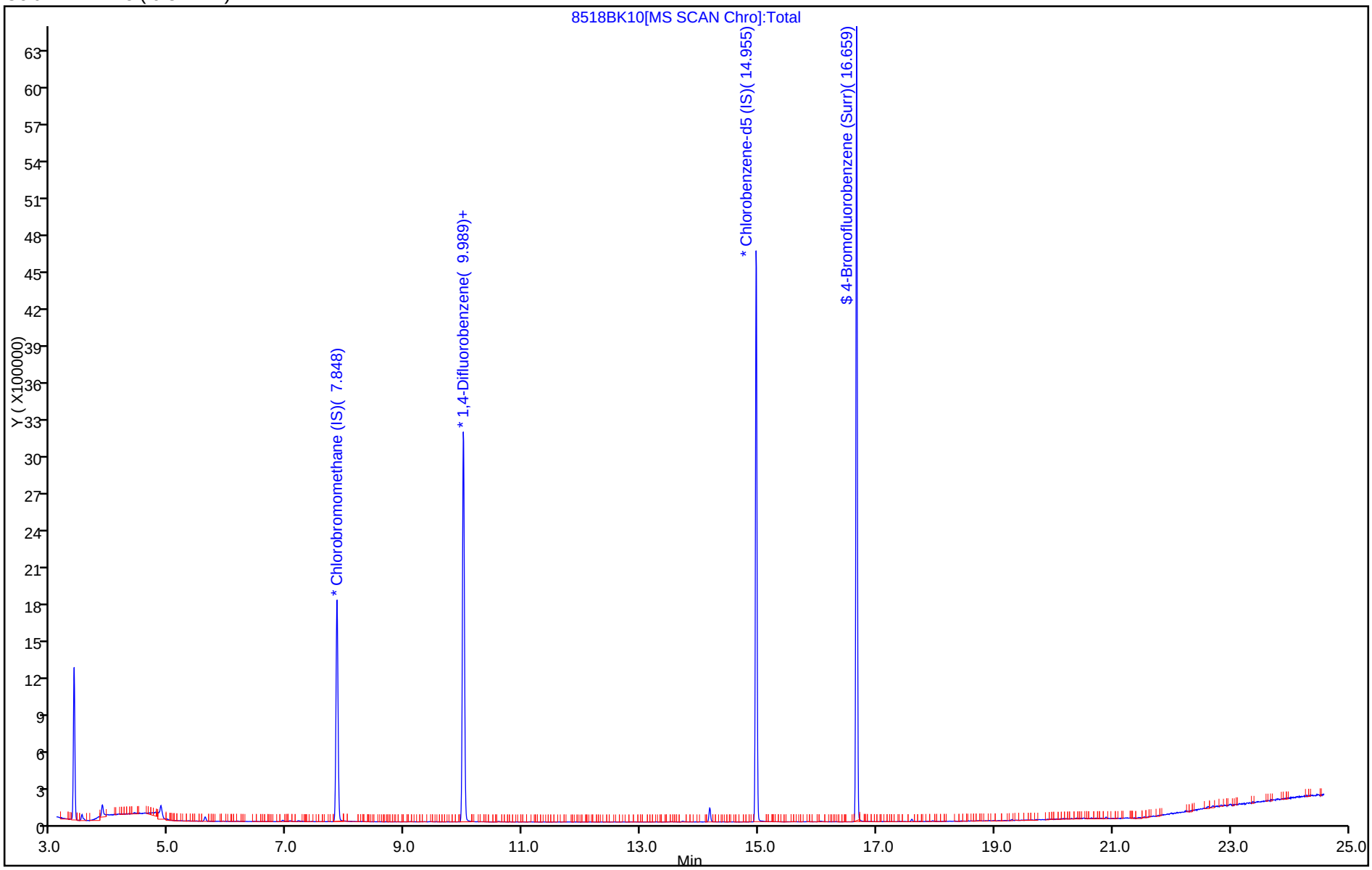
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:15 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK10.D				
Injection Date:	01-Jul-2017 00:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-10	Lab Sample ID:	140-8518-10	Worklist Smp#:	18
Client ID:	10758				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10605 | Lab Sample ID: 140-8518-11

Matrix: Air | Lab File ID: 8518BK11.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 01:01

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10605
Lab Sample ID: 140-8518-11
Matrix: Air
Lab File ID: 8518BK11.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 01:01
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10605 | Lab Sample ID: 140-8518-11

Matrix: Air | Lab File ID: 8518BK11.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 01:01

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10605 Lab Sample ID: 140-8518-11

Matrix: Air Lab File ID: 8518BK11.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 01:01

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D
Lims ID: 140-8518-A-11
Client ID: 10605
Sample Type: Client
Inject. Date: 01-Jul-2017 01:01:30 ALS Bottle#: 5 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-019
Misc. Info.: 10605
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	80	593427	4.00	
* 2 1,4-Difluorobenzene	114	9.995	9.995	0.000	95	2855049	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.956	14.961	-0.005	91	2447809	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	2033386	4.12	
31 Methylene Chloride	84	5.621	5.616	0.005	92	16518	0.0970	
120 2-Methylnaphthalene	142	21.734	21.728	0.006	99	32081	NC	
121 1-Methylnaphthalene	142	21.869	21.869	0.000	99	54646	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

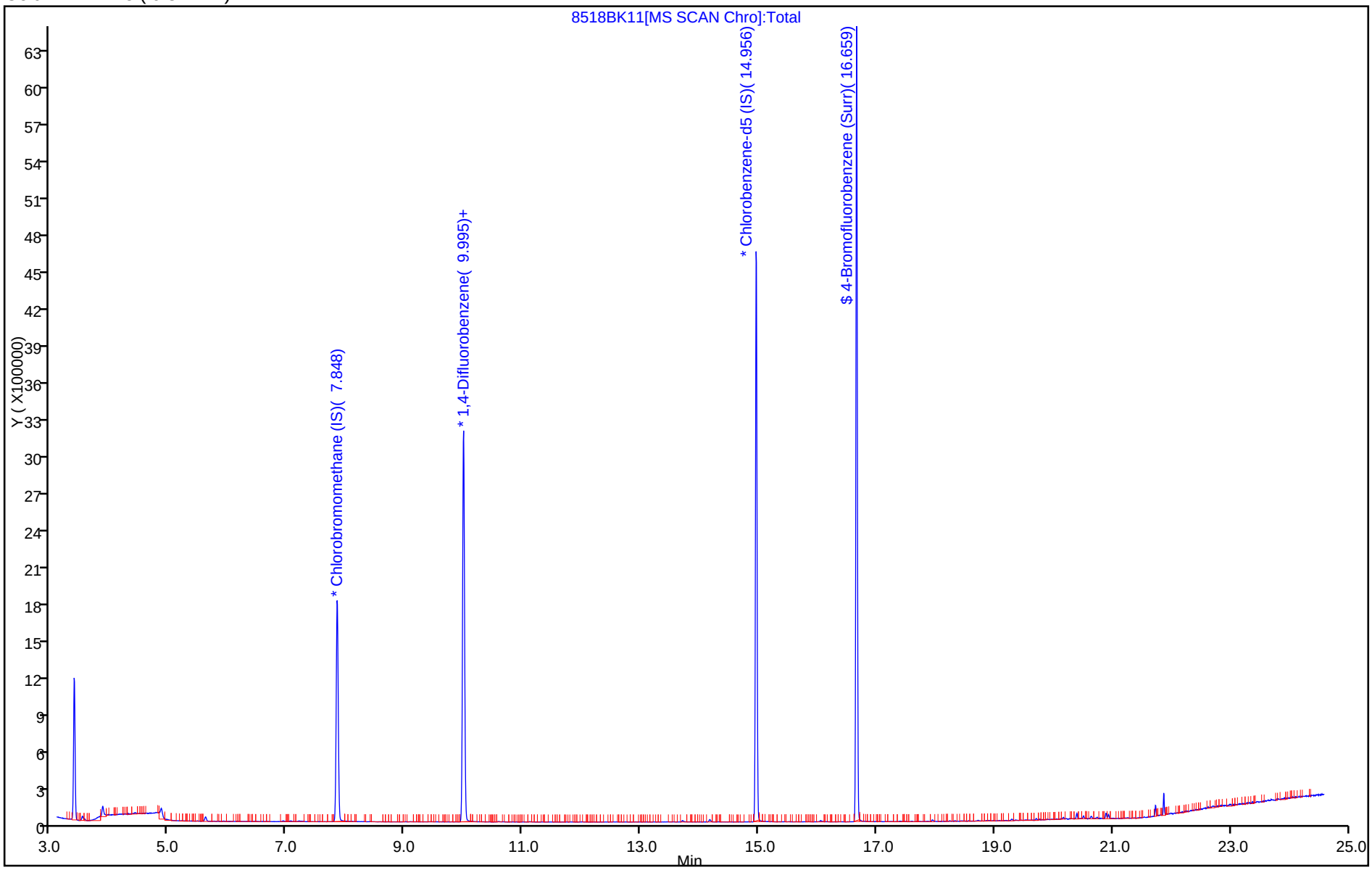
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D				
Injection Date:	01-Jul-2017 01:01:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-11	Lab Sample ID:	140-8518-11	Worklist Smp#:	19
Client ID:	10605				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

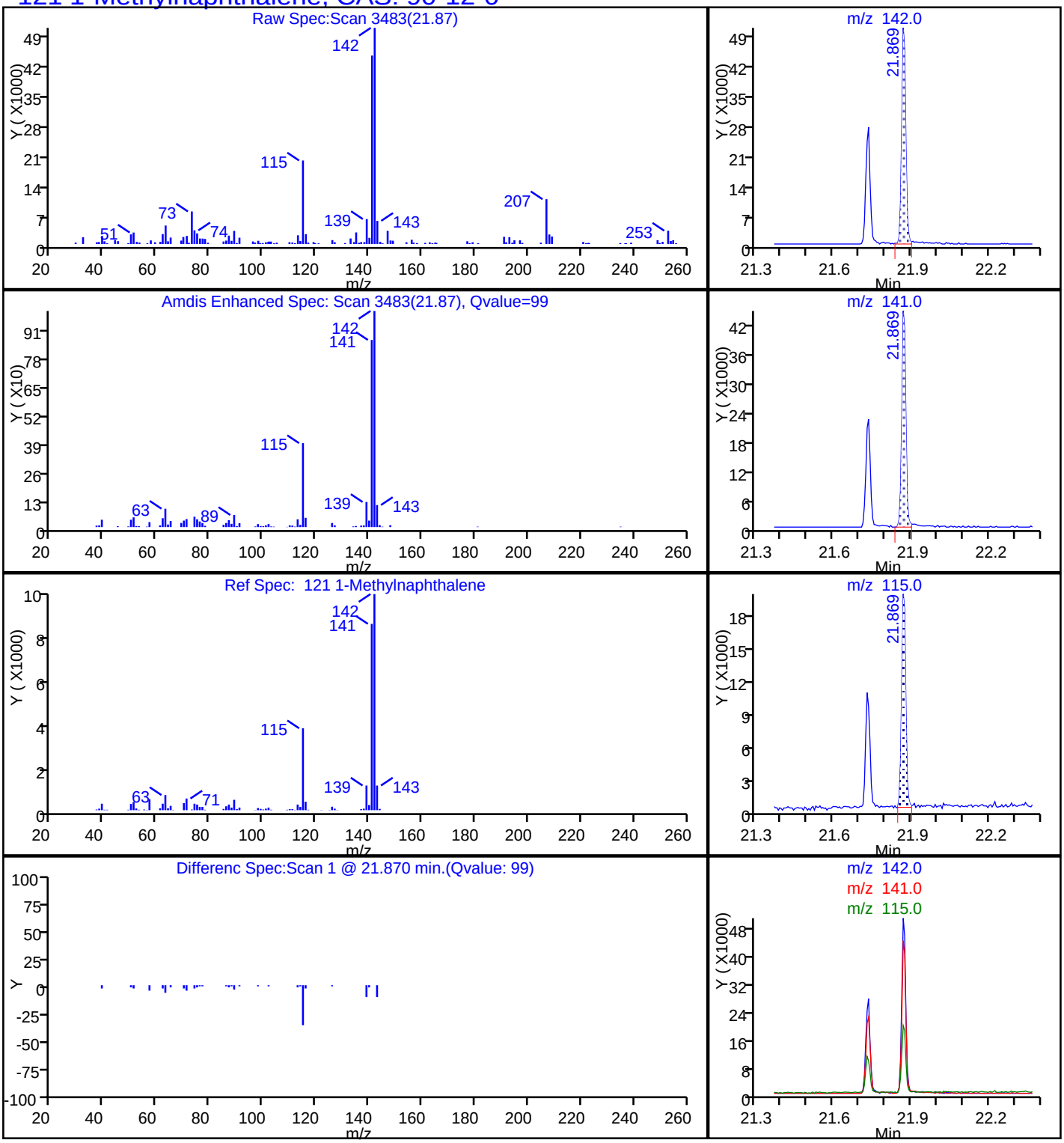


Report Date: 03-Jul-2017 14:13:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D				
Injection Date:	01-Jul-2017 01:01:30	Instrument ID:	MR		
Lims ID:	140-8518-A-11	Lab Sample ID:	140-8518-11		
Client ID:	10605				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

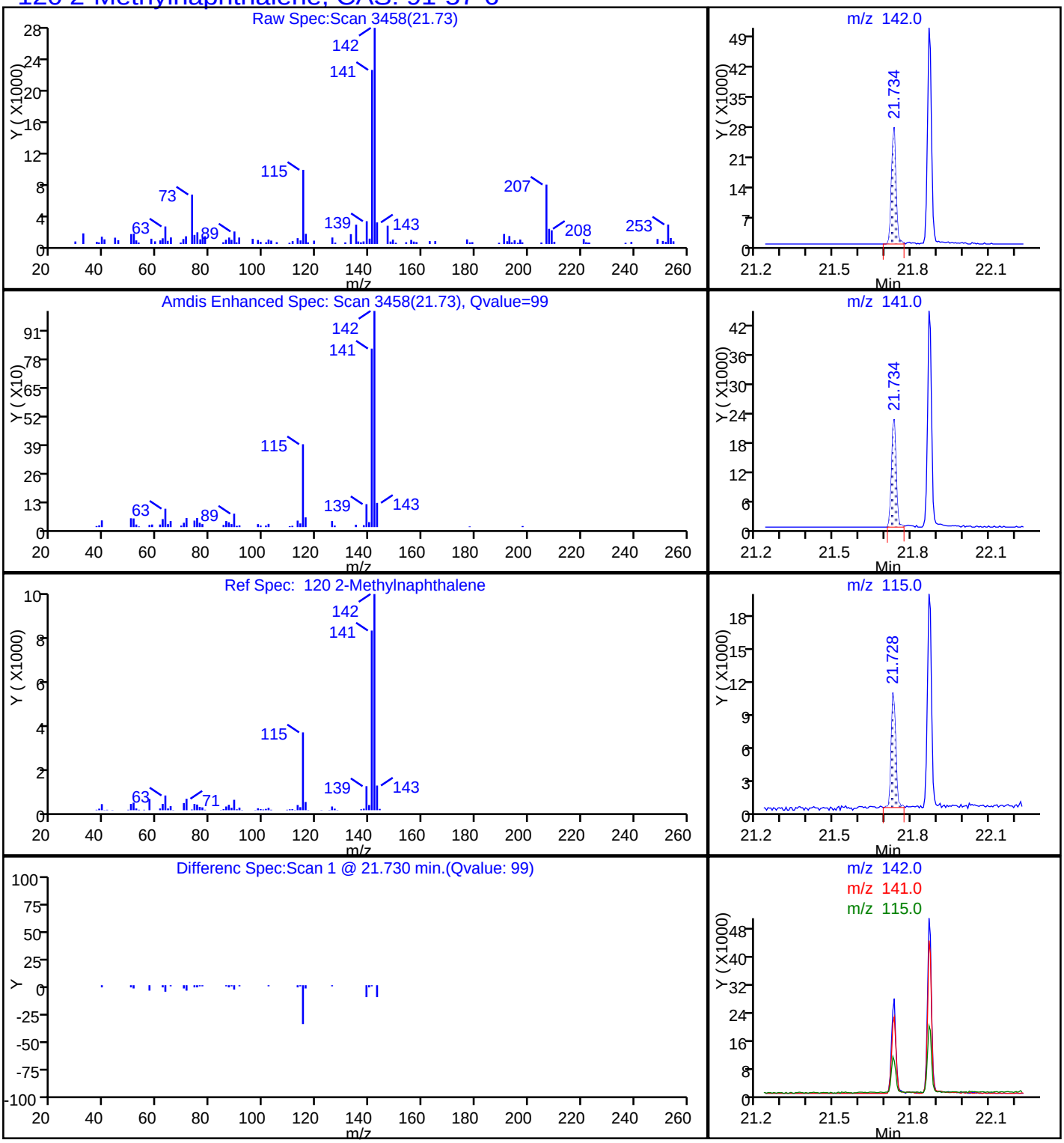


Report Date: 03-Jul-2017 14:13:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D				
Injection Date:	01-Jul-2017 01:01:30	Instrument ID:	MR		
Lims ID:	140-8518-A-11	Lab Sample ID:	140-8518-11		
Client ID:	10605				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 | Lab Sample ID: 140-8518-12

Matrix: Air | Lab File ID: 8518BK12.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11557 | Lab Sample ID: 140-8518-12
Matrix: Air | Lab File ID: 8518BK12.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 02:37
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 | Lab Sample ID: 140-8518-12

Matrix: Air | Lab File ID: 8518BK12.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 Lab Sample ID: 140-8518-12

Matrix: Air Lab File ID: 8518BK12.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D
Lims ID: 140-8518-A-12
Client ID: 11557
Sample Type: Client
Inject. Date: 01-Jul-2017 02:37:30 ALS Bottle#: 7 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-021
Misc. Info.: 11557
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.843	7.854	-0.011	79	582436	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	96	2794600	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2407149	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1999466	4.12	
11 Acetaldehyde	44	3.847	3.858	-0.011	93	75443	1.49	
20 Acrolein	56	4.758	4.759	-0.001	91	2944	0.0535	7M
23 Acetone	58	4.861	4.850	0.011	98	45172	0.6517	
29 2-Methyl-2-propanol	59	5.459	5.438	0.021	96	6970	0.0195	
31 Methylene Chloride	84	5.605	5.616	-0.011	92	15311	0.0916	
39 2-Butanone (MEK)	72	7.185	7.164	0.021	92	5420	0.0802	
121 1-Methylnaphthalene	142	21.874	21.869	0.005	8	300	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated

Reagents:

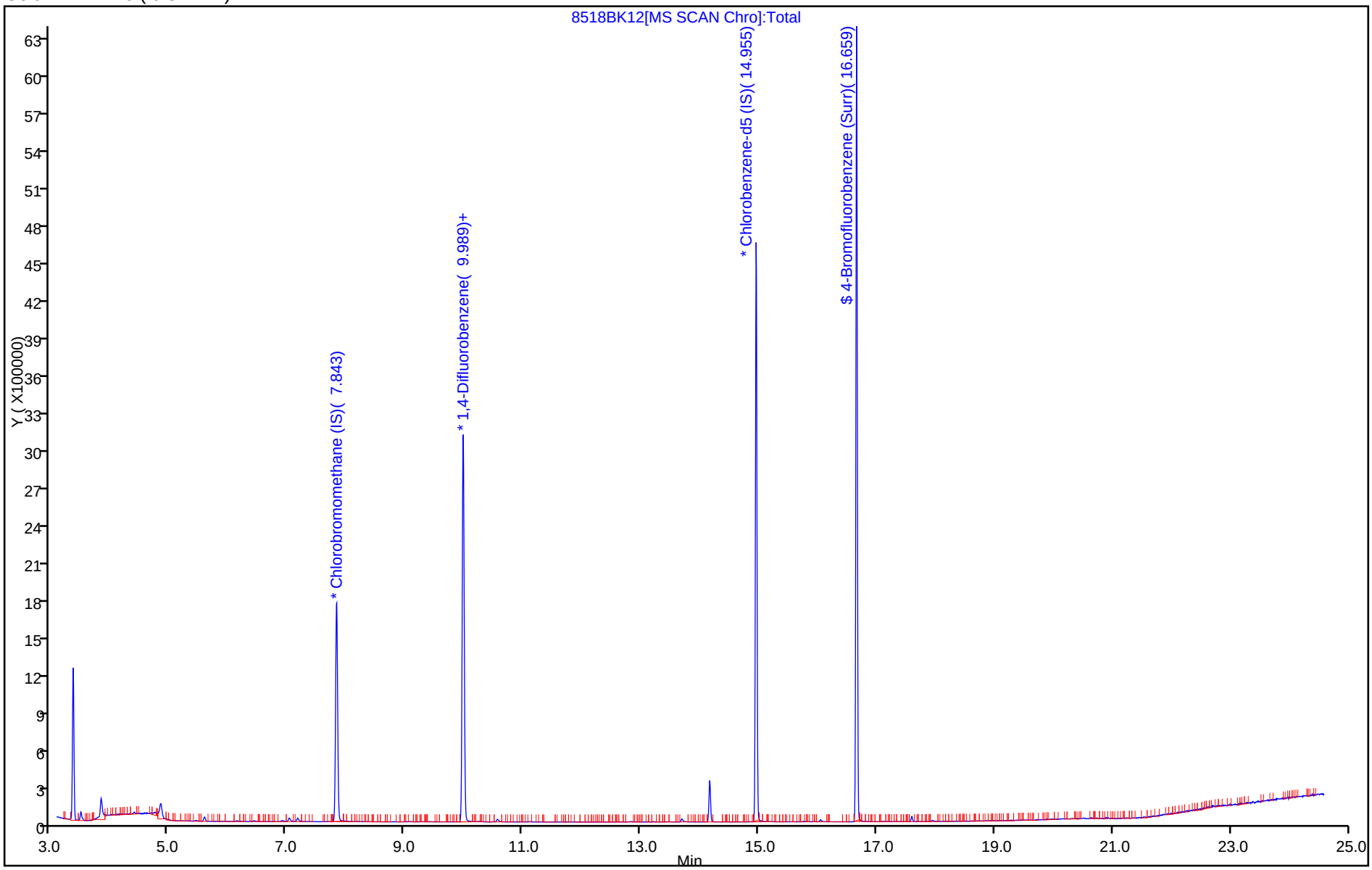
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D				
Injection Date:	01-Jul-2017 02:37:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-12	Lab Sample ID:	140-8518-12	Worklist Smp#:	21
Client ID:	11557				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

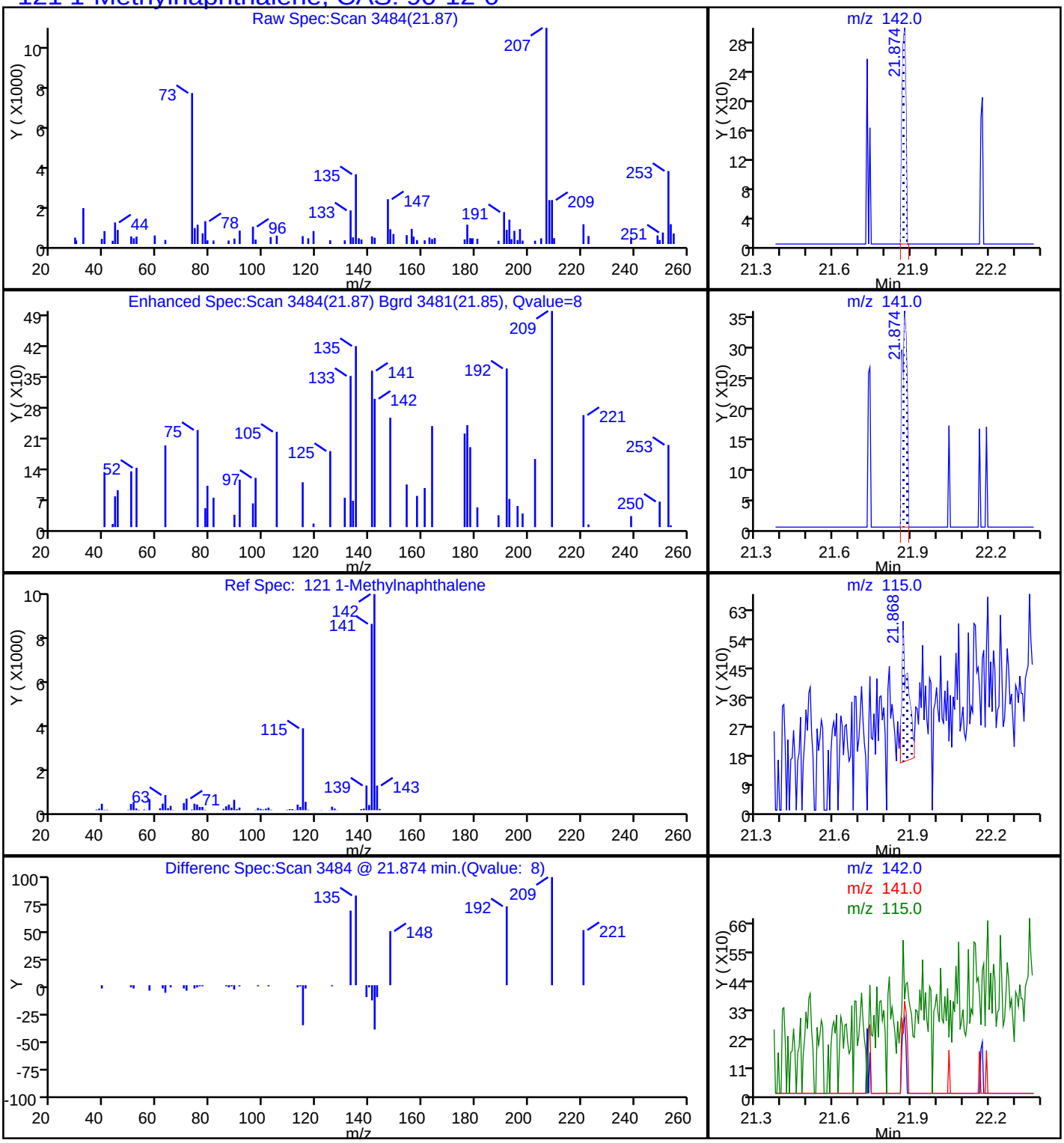


Report Date: 03-Jul-2017 14:13:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D				
Injection Date:	01-Jul-2017 02:37:30	Instrument ID:	MR		
Lims ID:	140-8518-A-12	Lab Sample ID:	140-8518-12		
Client ID:	11557				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

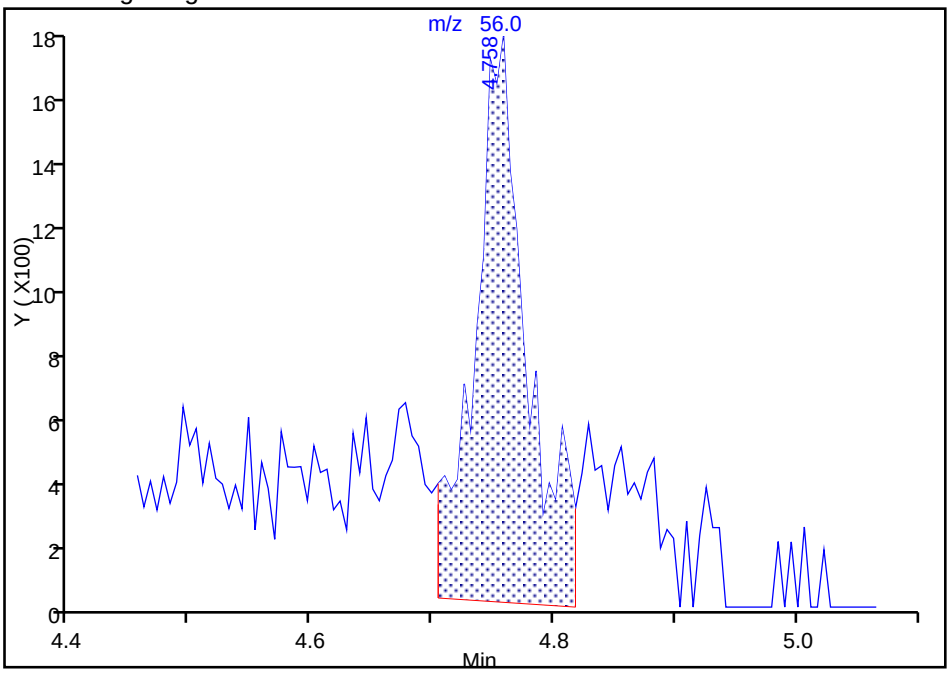
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D				
Injection Date:	01-Jul-2017 02:37:30	Instrument ID:	MR		
Lims ID:	140-8518-A-12	Lab Sample ID:	140-8518-12		
Client ID:	11557				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

20 Acrolein, CAS: 107-02-8

Signal: 1

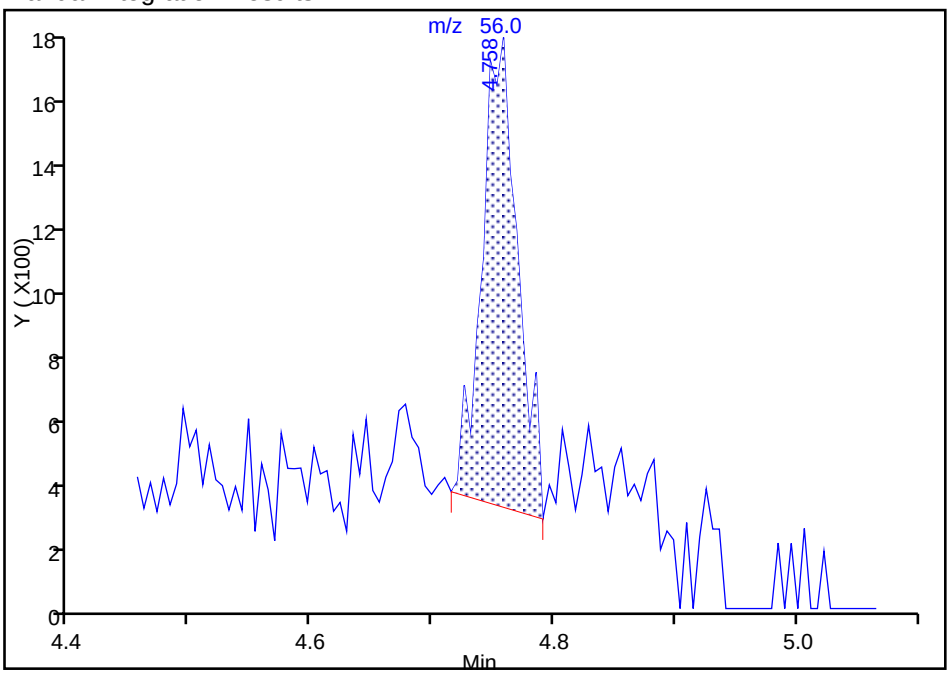
Processing Integration Results

RT: 4.76
Area: 5288
Amount: 0.096073
Amount Units: ppb v/v



Manual Integration Results

RT: 4.76
Area: 2944
Amount: 0.053487
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 03-Jul-2017 13:49:54

Audit Action: Manually Integrated Audit Reason: Baseline

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 | Lab Sample ID: 140-8518-13

Matrix: Air | Lab File ID: 8518BK13.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11124 | Lab Sample ID: 140-8518-13
Matrix: Air | Lab File ID: 8518BK13.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 03:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 | Lab Sample ID: 140-8518-13

Matrix: Air | Lab File ID: 8518BK13.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 Lab Sample ID: 140-8518-13

Matrix: Air Lab File ID: 8518BK13.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK13.D
Lims ID: 140-8518-A-13
Client ID: 11124
Sample Type: Client
Inject. Date: 01-Jul-2017 03:25:30 ALS Bottle#: 8 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-022
Misc. Info.: 11124
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	582344	4.00	
* 2 1,4-Difluorobenzene	114	9.994	9.995	-0.001	96	2790908	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2392357	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1988803	4.13	
29 2-Methyl-2-propanol	59	5.470	5.438	0.032	94	6549	0.0183	
31 Methylene Chloride	84	5.616	5.616	0.000	91	15506	0.0928	

Reagents:

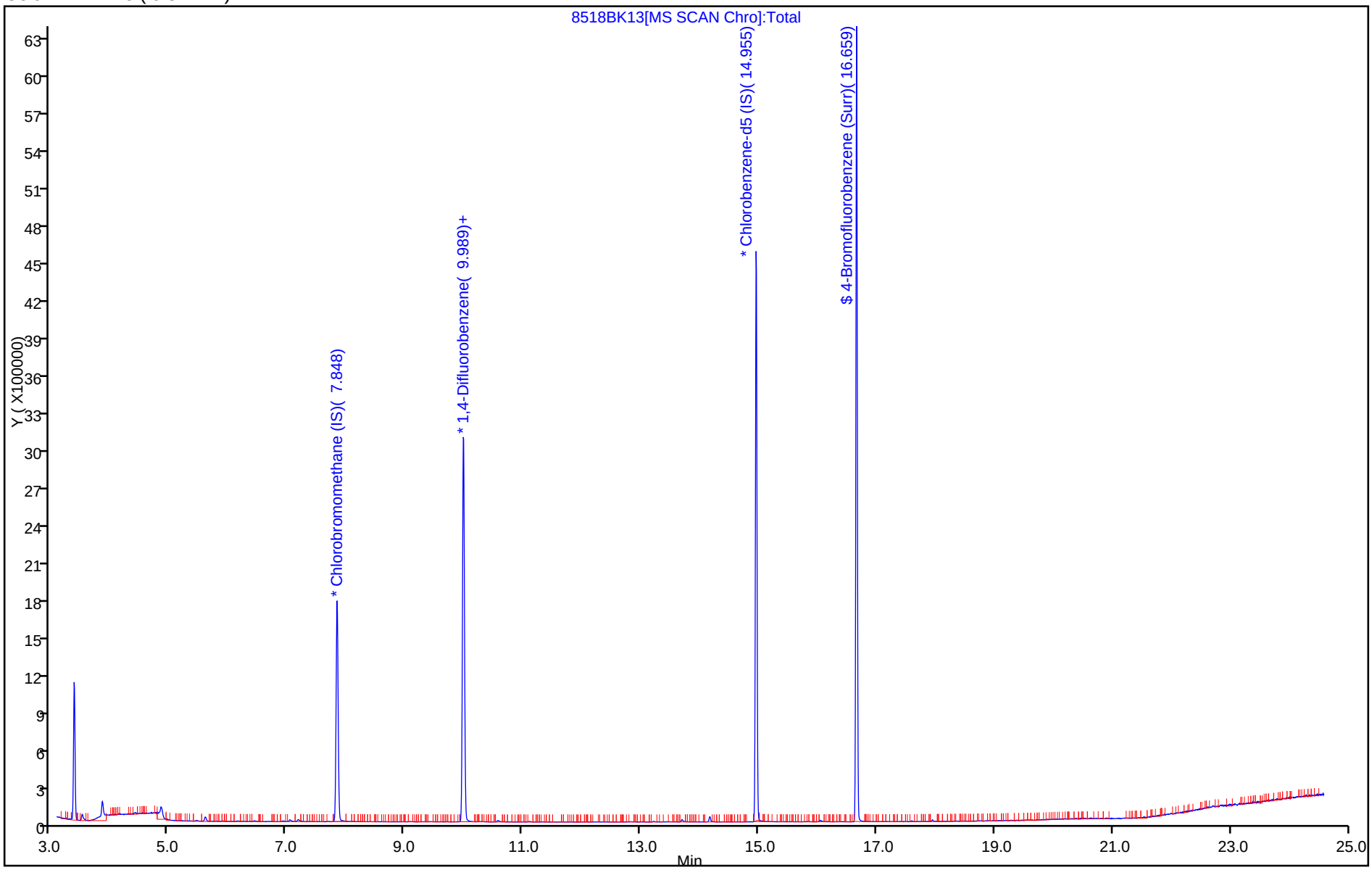
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:23 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK13.D				
Injection Date:	01-Jul-2017 03:25:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-13	Lab Sample ID:	140-8518-13	Worklist Smp#:	22
Client ID:	11124				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10973 | Lab Sample ID: 140-8518-14

Matrix: Air | Lab File ID: 8518BK14.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 04:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10973 | Lab Sample ID: 140-8518-14
Matrix: Air | Lab File ID: 8518BK14.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 04:12
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10973 | Lab Sample ID: 140-8518-14

Matrix: Air | Lab File ID: 8518BK14.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 04:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10973 Lab Sample ID: 140-8518-14

Matrix: Air Lab File ID: 8518BK14.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 04:12

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK14.D
Lims ID: 140-8518-A-14
Client ID: 10973
Sample Type: Client
Inject. Date: 01-Jul-2017 04:12:30 ALS Bottle#: 9 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-023
Misc. Info.: 10973
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.837	7.854	-0.017	79	569398	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	95	2745057	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2361182	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1965320	4.13	
11 Acetaldehyde	44	3.847	3.858	-0.011	91	64638	1.31	
20 Acrolein	56	4.758	4.759	-0.001	91	4398	0.0817	
23 Acetone	58	4.850	4.850	0.000	100	41180	0.6077	
31 Methylene Chloride	84	5.600	5.616	-0.016	94	15641	0.0958	
39 2-Butanone (MEK)	72	7.185	7.164	0.021	98	7020	0.1062	
76 Tetrachloroethene	129	14.103	14.109	-0.006	92	12779	0.0560	

Reagents:

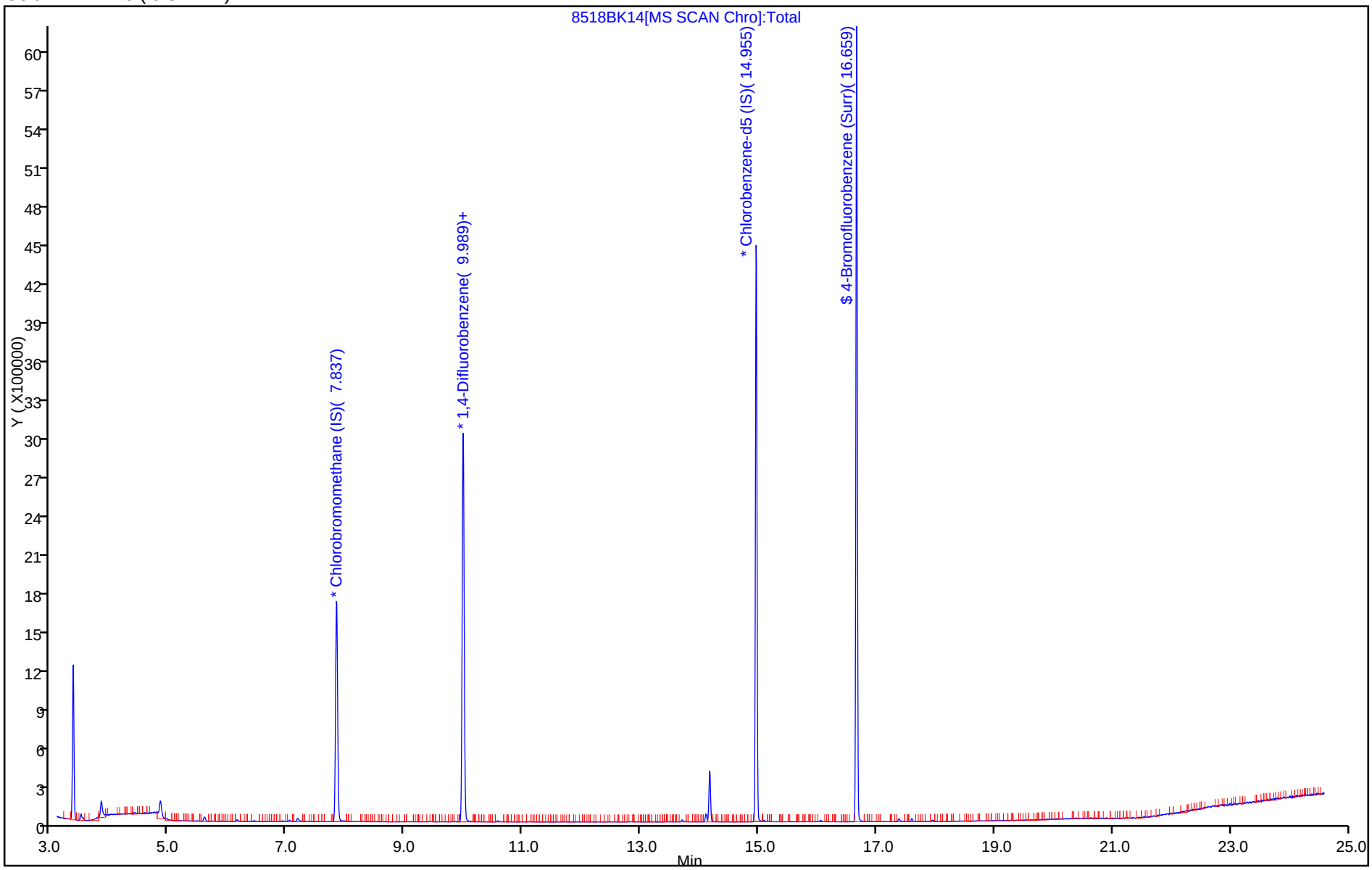
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:25 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK14.D				
Injection Date:	01-Jul-2017 04:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-14	Lab Sample ID:	140-8518-14	Worklist Smp#:	23
Client ID:	10973				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10918 | Lab Sample ID: 140-8518-16
Matrix: Air | Lab File ID: 8518BK16.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 05:48
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10918 | Lab Sample ID: 140-8518-16
Matrix: Air | Lab File ID: 8518BK16.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 05:48
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10918 | Lab Sample ID: 140-8518-16

Matrix: Air | Lab File ID: 8518BK16.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 05:48

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10918 Lab Sample ID: 140-8518-16

Matrix: Air Lab File ID: 8518BK16.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 05:48

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK16.D
Lims ID: 140-8518-A-16
Client ID: 10918
Sample Type: Client
Inject. Date: 01-Jul-2017 05:48:30 ALS Bottle#: 11 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-025
Misc. Info.: 10918
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:54:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	566222	4.00	
* 2 1,4-Difluorobenzene	114	9.994	9.995	-0.001	95	2715346	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2345490	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1954947	4.14	
6 Chlorodifluoromethane	67	3.556	3.534	0.022	31	1251	0.0183	
11 Acetaldehyde	44	3.863	3.858	0.005	91	65684	1.34	
19 2-Methylbutane	43	4.613	4.591	0.022	43	2488	0.0162	
31 Methylene Chloride	84	5.610	5.616	-0.006	94	19914	0.1226	
33 Carbon disulfide	76	5.745	5.745	0.000	98	49433	0.1232	

Reagents:

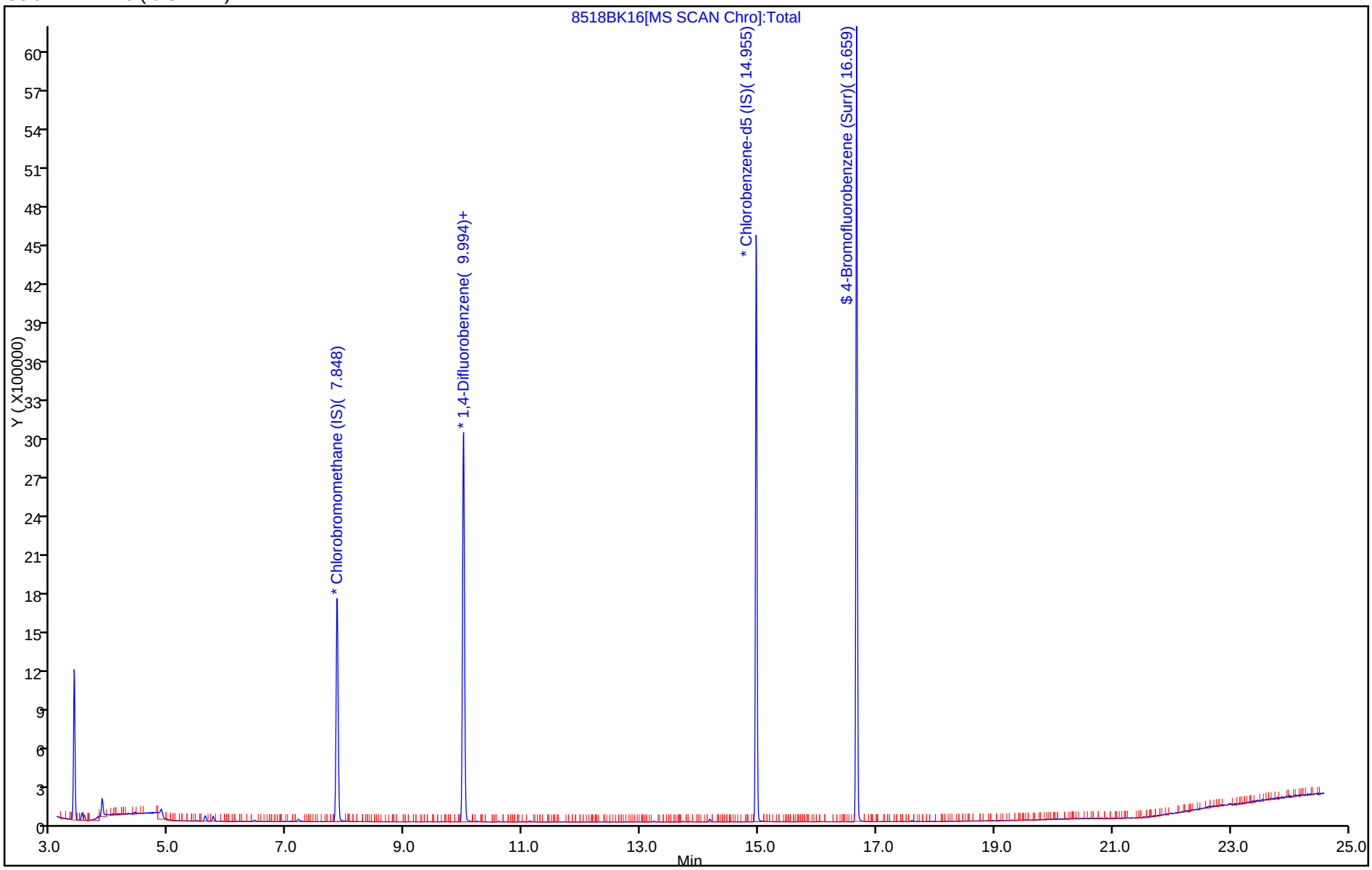
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:29 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK16.D				
Injection Date:	01-Jul-2017 05:48:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-16	Lab Sample ID:	140-8518-16	Worklist Smp#:	25
Client ID:	10918				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09636 | Lab Sample ID: 140-8532-2
Matrix: Air | Lab File ID: RG13BK8532-02.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:04
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09636 | Lab Sample ID: 140-8532-2
Matrix: Air | Lab File ID: RG13BK8532-02.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:04
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09636 | Lab Sample ID: 140-8532-2

Matrix: Air | Lab File ID: RG13BK8532-02.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09636 Lab Sample ID: 140-8532-2

Matrix: Air Lab File ID: RG13BK8532-02.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 14:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D
Lims ID: 140-8532-A-2
Client ID: 09636
Sample Type: Client
Inject. Date: 13-Jul-2017 14:04:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-005
Misc. Info.: 09636
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:01:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	80	419060	4.00	
* 2 1,4-Difluorobenzene	114	9.973	9.984	-0.011	96	2010958	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	96	1734824	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1496128	4.28	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	95	3315	0.0656	
31 Methylene Chloride	84	5.589	5.600	-0.011	92	13602	0.1132	
120 2-Methylnaphthalene	142	21.728	21.728	0.000	91	1229	NC	
121 1-Methylnaphthalene	142	21.868	21.868	0.000	95	1440	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

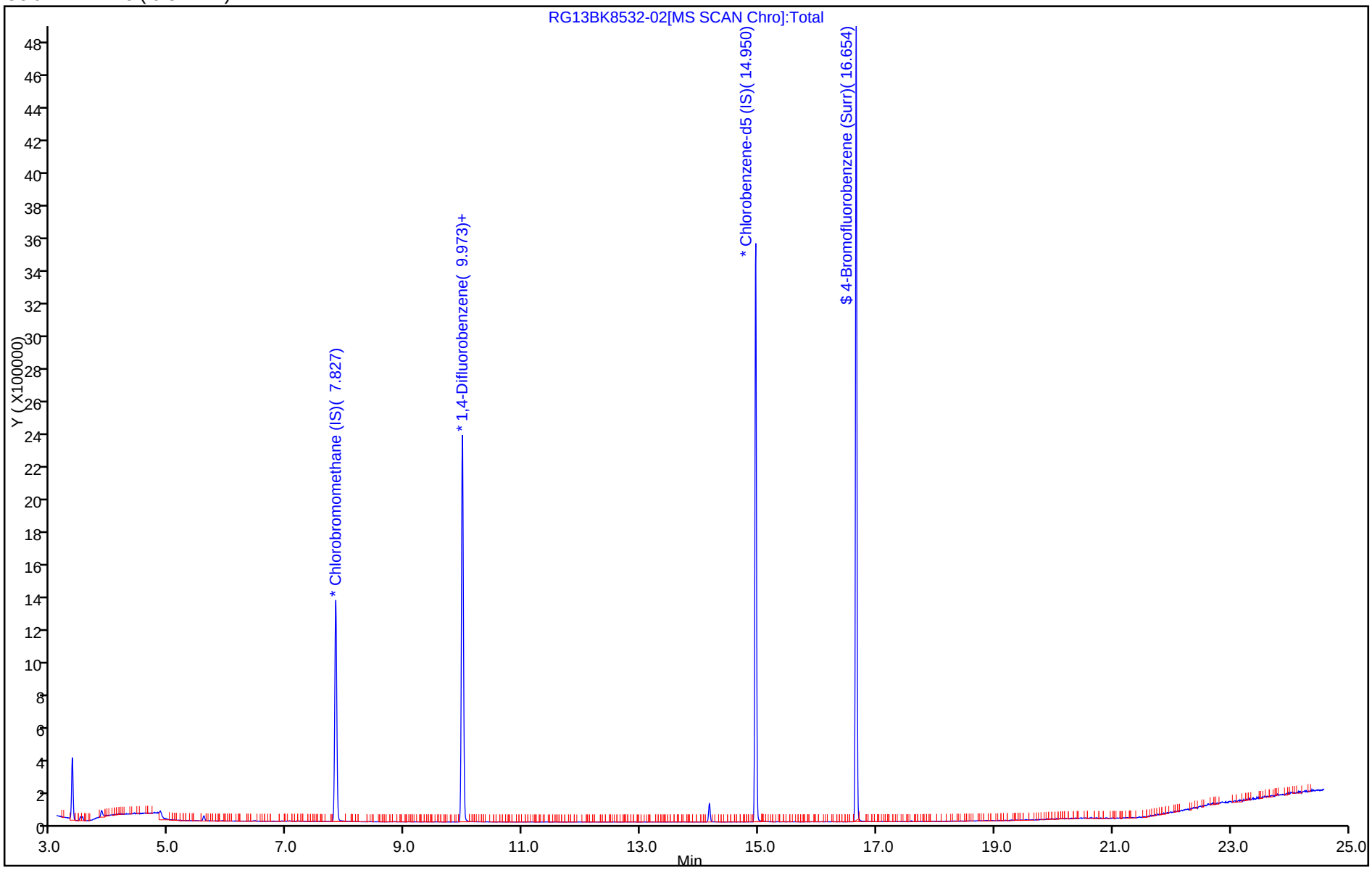
Report Date: 14-Jul-2017 09:09:59 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D

Injection Date:	13-Jul-2017 14:04:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-2	Lab Sample ID:	140-8532-2	Worklist Smp#:	5
Client ID:	09636				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

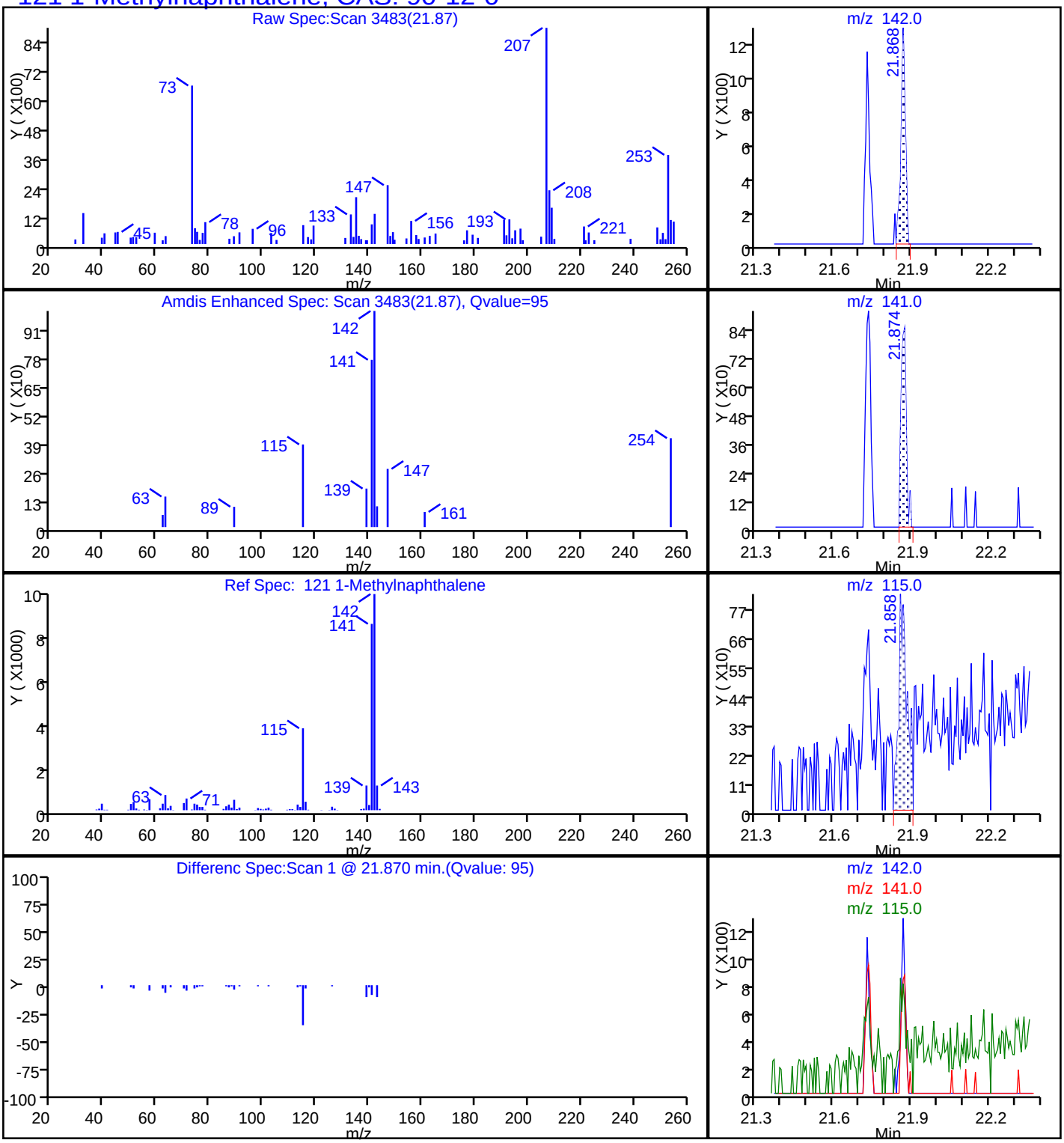


Report Date: 14-Jul-2017 09:09:59 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D				
Injection Date:	13-Jul-2017 14:04:30	Instrument ID:	MR		
Lims ID:	140-8532-A-2	Lab Sample ID:	140-8532-2		
Client ID:	09636				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

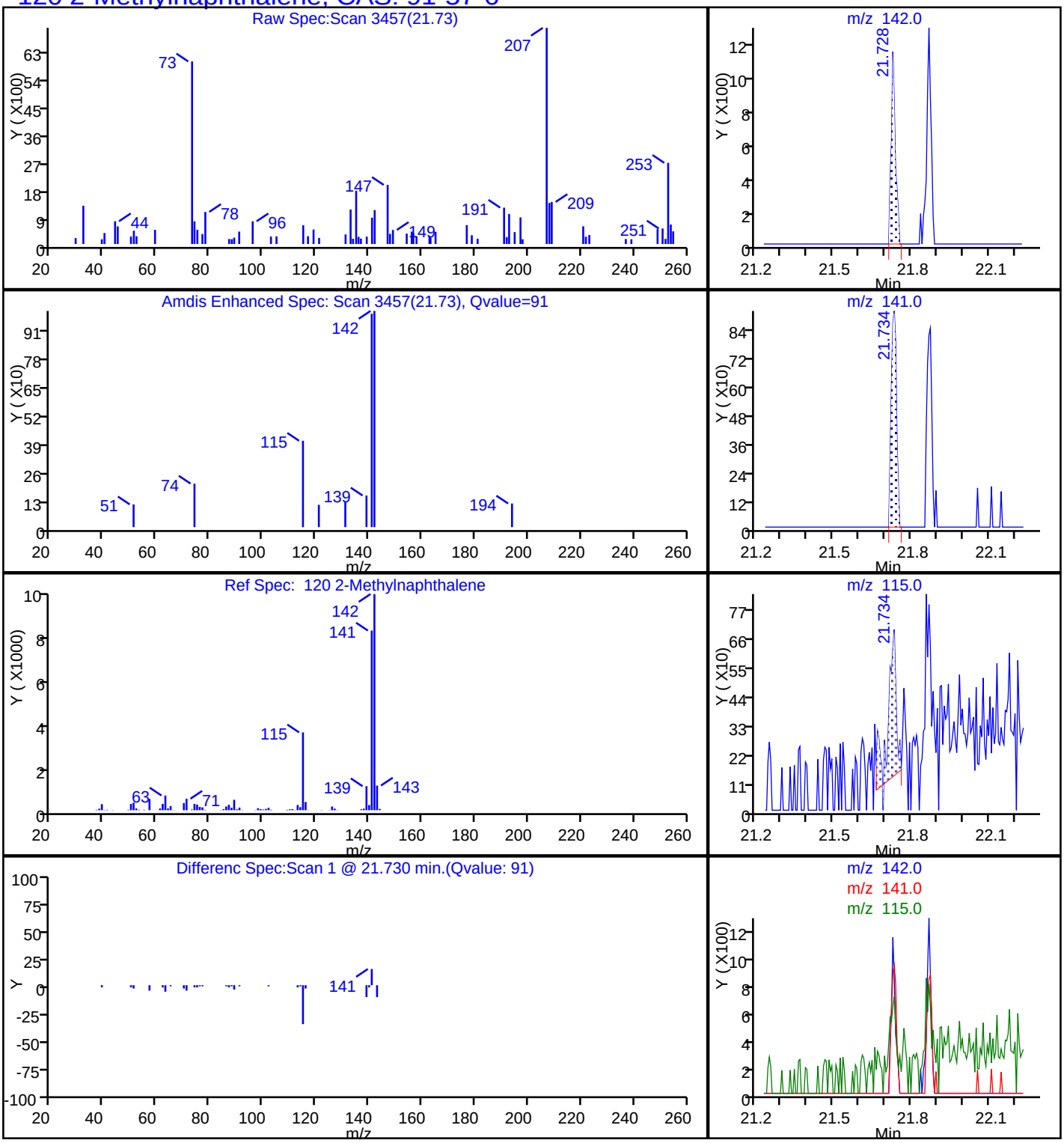


Report Date: 14-Jul-2017 09:09:59 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D				
Injection Date:	13-Jul-2017 14:04:30	Instrument ID:	MR		
Lims ID:	140-8532-A-2	Lab Sample ID:	140-8532-2		
Client ID:	09636				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10941 | Lab Sample ID: 140-8532-3

Matrix: Air | Lab File ID: RG13BK8532-03.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10941 | Lab Sample ID: 140-8532-3
Matrix: Air | Lab File ID: RG13BK8532-03.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:54
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10941 | Lab Sample ID: 140-8532-3

Matrix: Air | Lab File ID: RG13BK8532-03.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10941 Lab Sample ID: 140-8532-3

Matrix: Air Lab File ID: RG13BK8532-03.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 14:54

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D
Lims ID: 140-8532-A-3
Client ID: 10941
Sample Type: Client
Inject. Date: 13-Jul-2017 14:54:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-006
Misc. Info.: 10941
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:01:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.832	7.837	-0.005	81	413779	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	2005209	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1767987	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1512078	4.24	
6 Chlorodifluoromethane	67	3.540	3.513	0.027	96	2973	0.0596	
31 Methylene Chloride	84	5.594	5.600	-0.006	94	12113	0.1021	
120 2-Methylnaphthalene	142	21.868	21.728	0.140	93	662	NC	
121 1-Methylnaphthalene	142	21.868	21.868	0.000	92	662	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

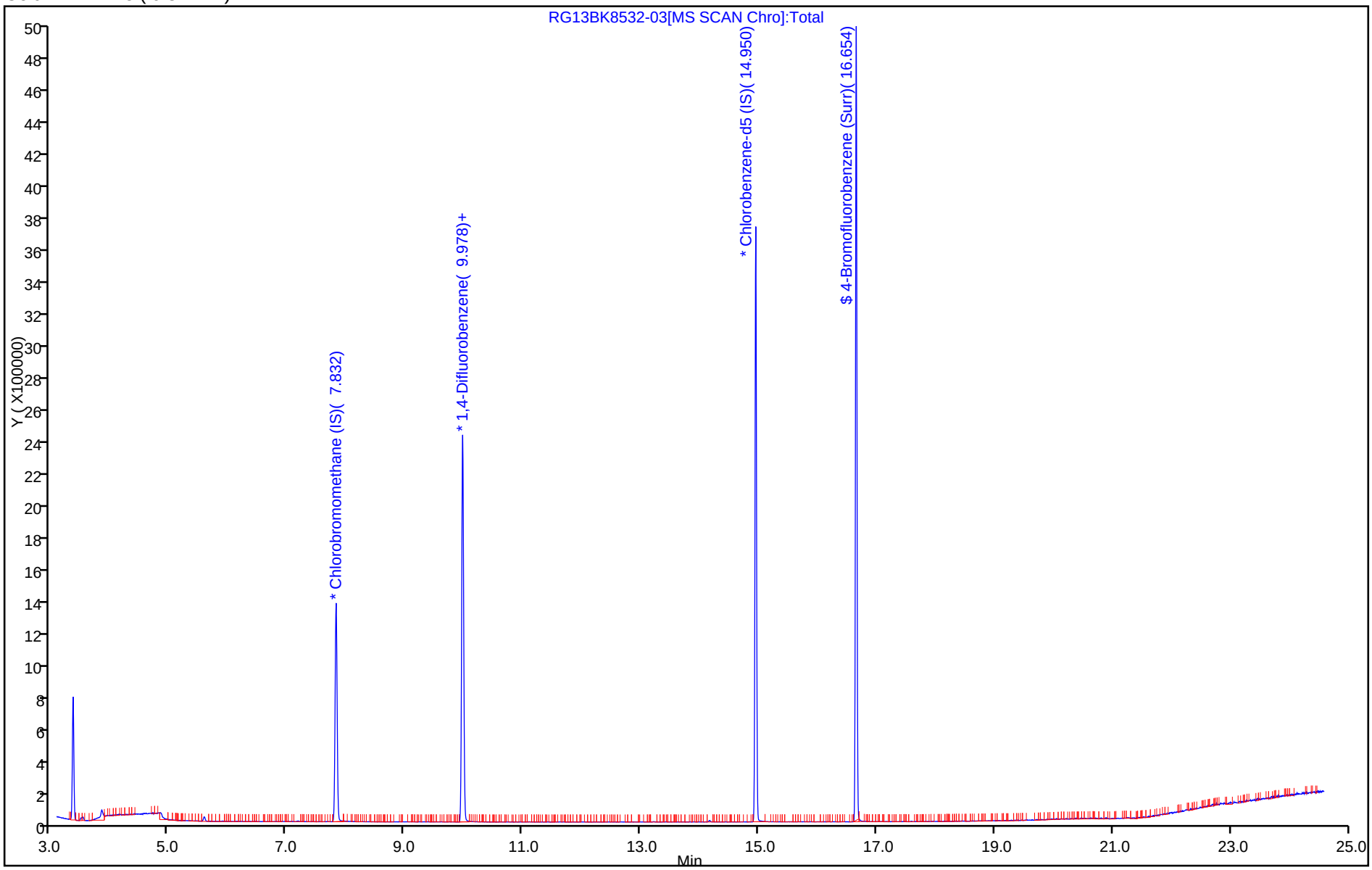
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:01 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D				
Injection Date:	13-Jul-2017 14:54:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-3	Lab Sample ID:	140-8532-3	Worklist Smp#:	6
Client ID:	10941				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

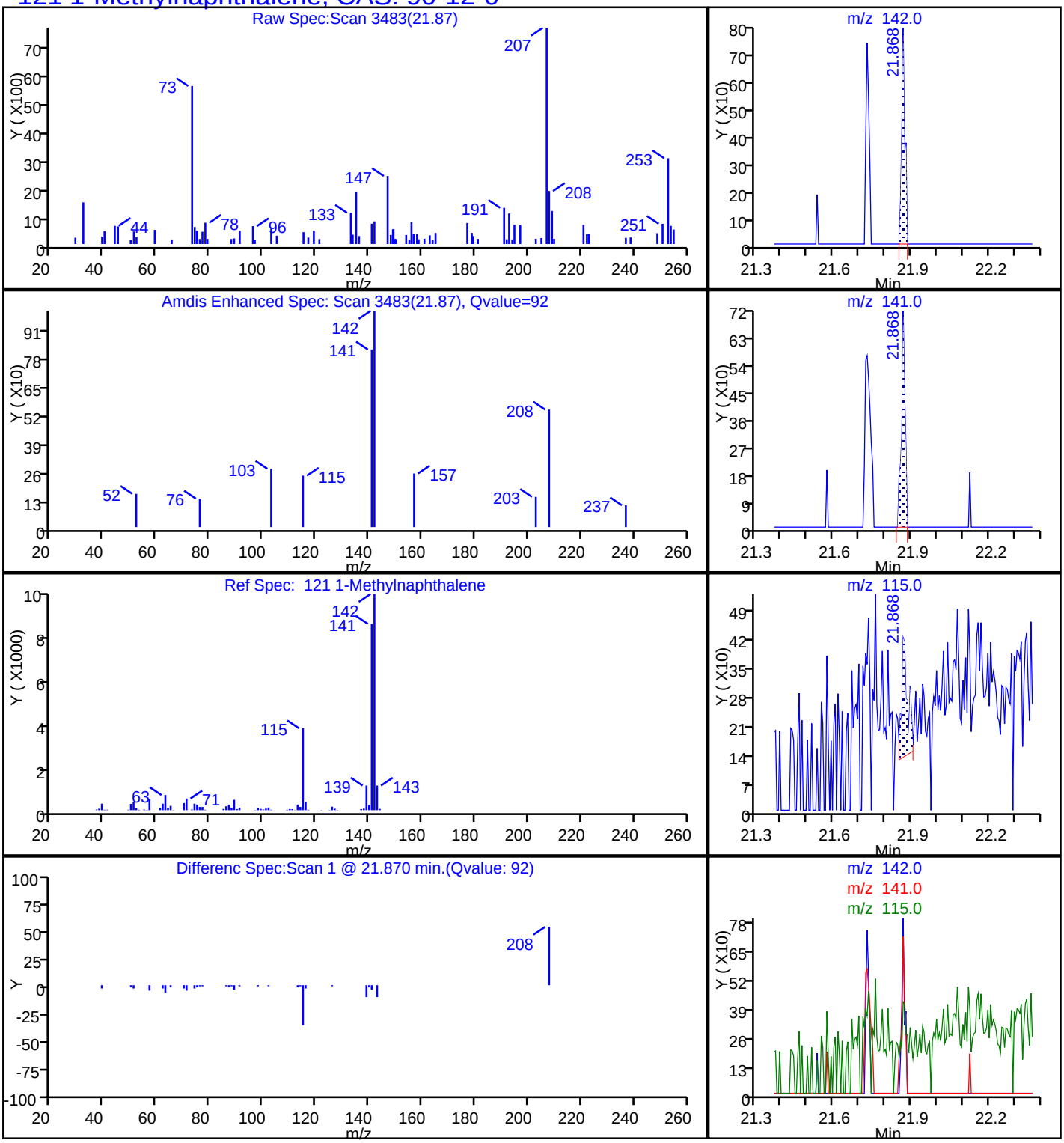


Report Date: 14-Jul-2017 09:10:01 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D				
Injection Date:	13-Jul-2017 14:54:30	Instrument ID:	MR		
Lims ID:	140-8532-A-3	Lab Sample ID:	140-8532-3		
Client ID:	10941				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

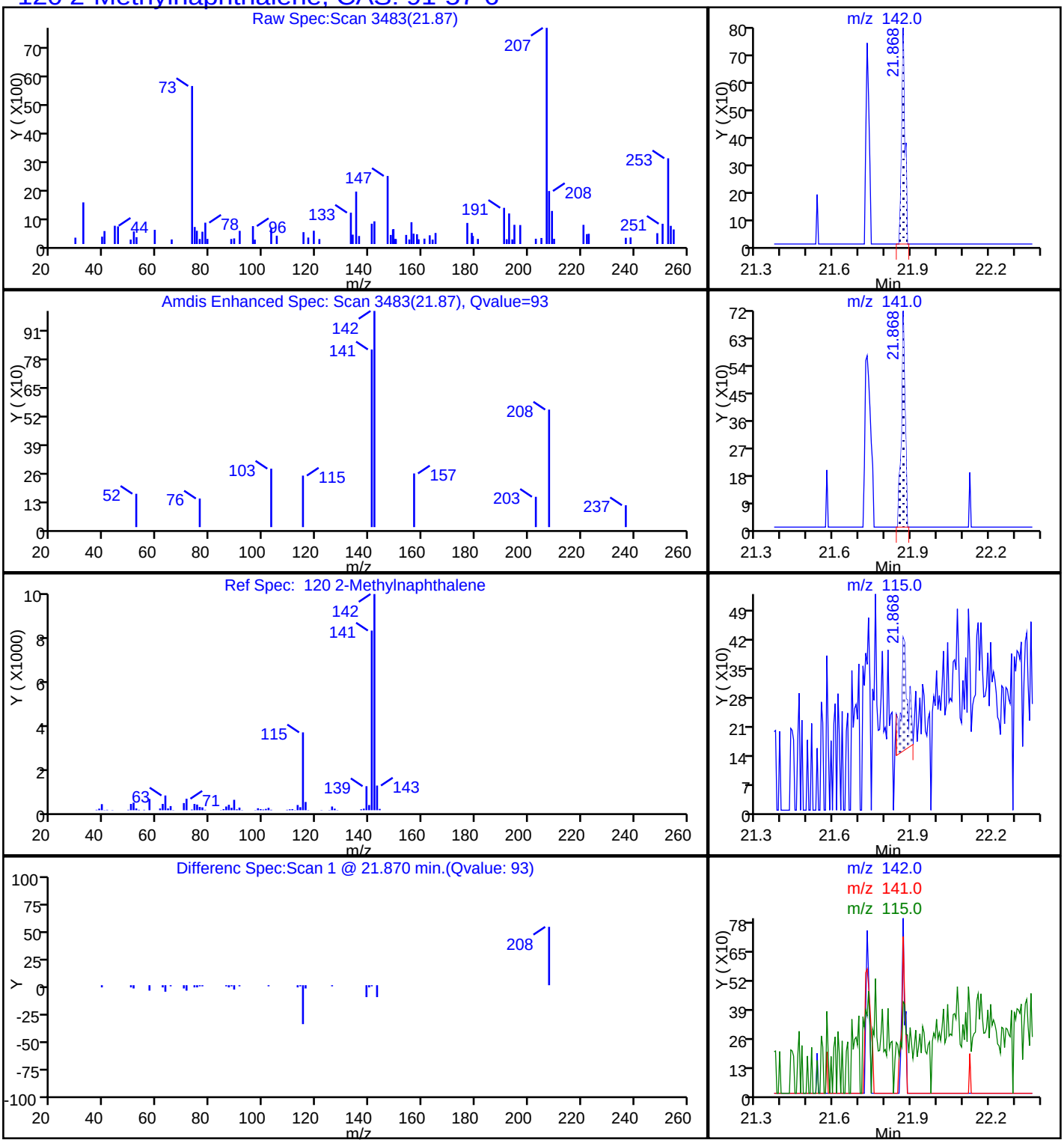


Report Date: 14-Jul-2017 09:10:01 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D				
Injection Date:	13-Jul-2017 14:54:30	Instrument ID:	MR		
Lims ID:	140-8532-A-3	Lab Sample ID:	140-8532-3		
Client ID:	10941				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10795 | Lab Sample ID: 140-8532-4

Matrix: Air | Lab File ID: RG13BK8532-04.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 15:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10795 | Lab Sample ID: 140-8532-4
Matrix: Air | Lab File ID: RG13BK8532-04.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 15:41
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10795 | Lab Sample ID: 140-8532-4

Matrix: Air | Lab File ID: RG13BK8532-04.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 15:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10795 Lab Sample ID: 140-8532-4

Matrix: Air Lab File ID: RG13BK8532-04.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 15:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D
Lims ID: 140-8532-A-4
Client ID: 10795
Sample Type: Client
Inject. Date: 13-Jul-2017 15:41:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-007
Misc. Info.: 10795
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:02:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	85	405061	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1952349	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1706152	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1467107	4.27	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	96	3374	0.0691	
31 Methylene Chloride	84	5.594	5.600	-0.006	95	11734	0.1010	
120 2-Methylnaphthalene	142	21.728	21.728	0.000	6	665	NC	
121 1-Methylnaphthalene	142	21.874	21.868	0.006	16	398	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

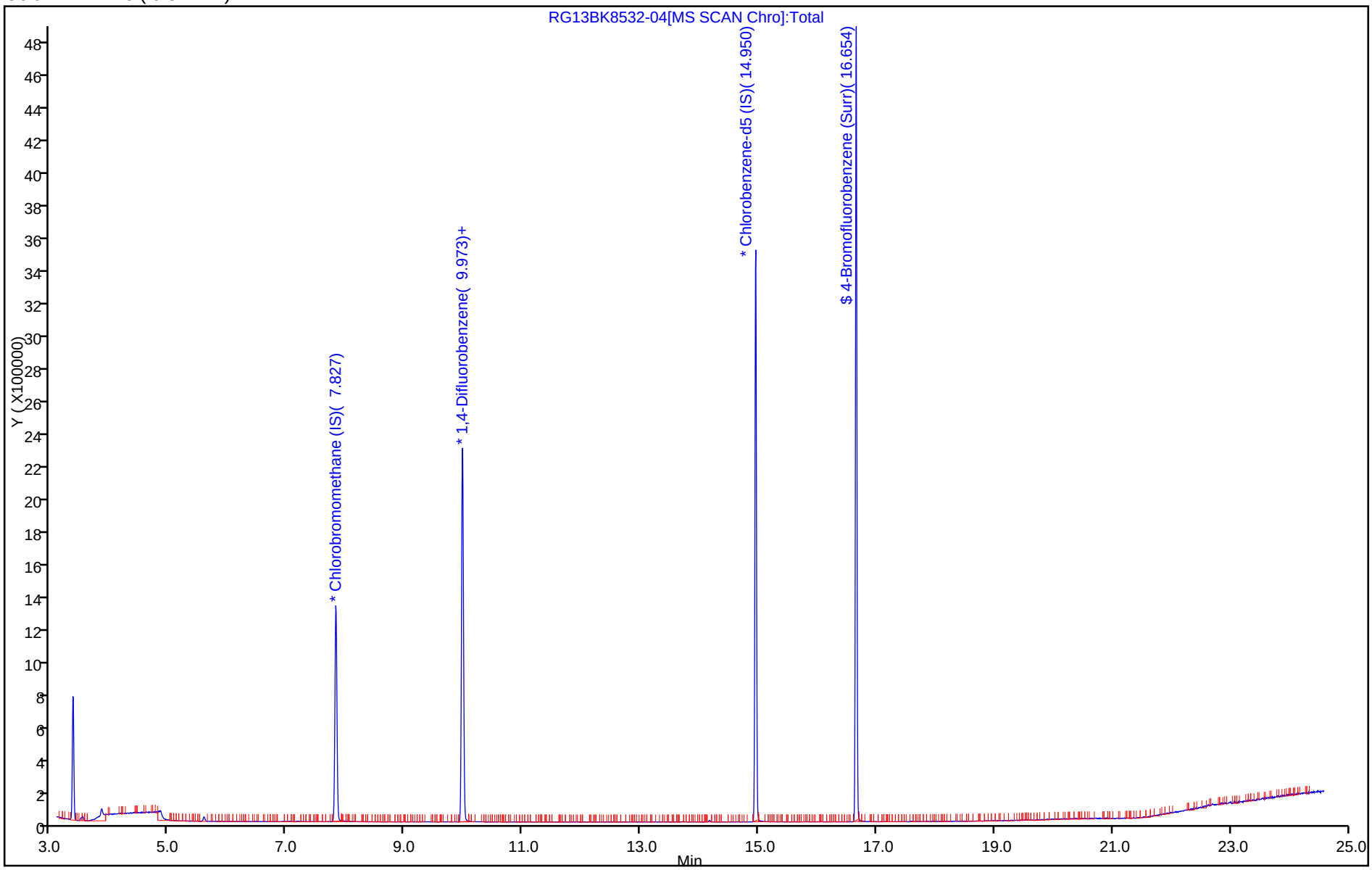
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:04 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D				
Injection Date:	13-Jul-2017 15:41:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-4	Lab Sample ID:	140-8532-4	Worklist Smp#:	7
Client ID:	10795				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

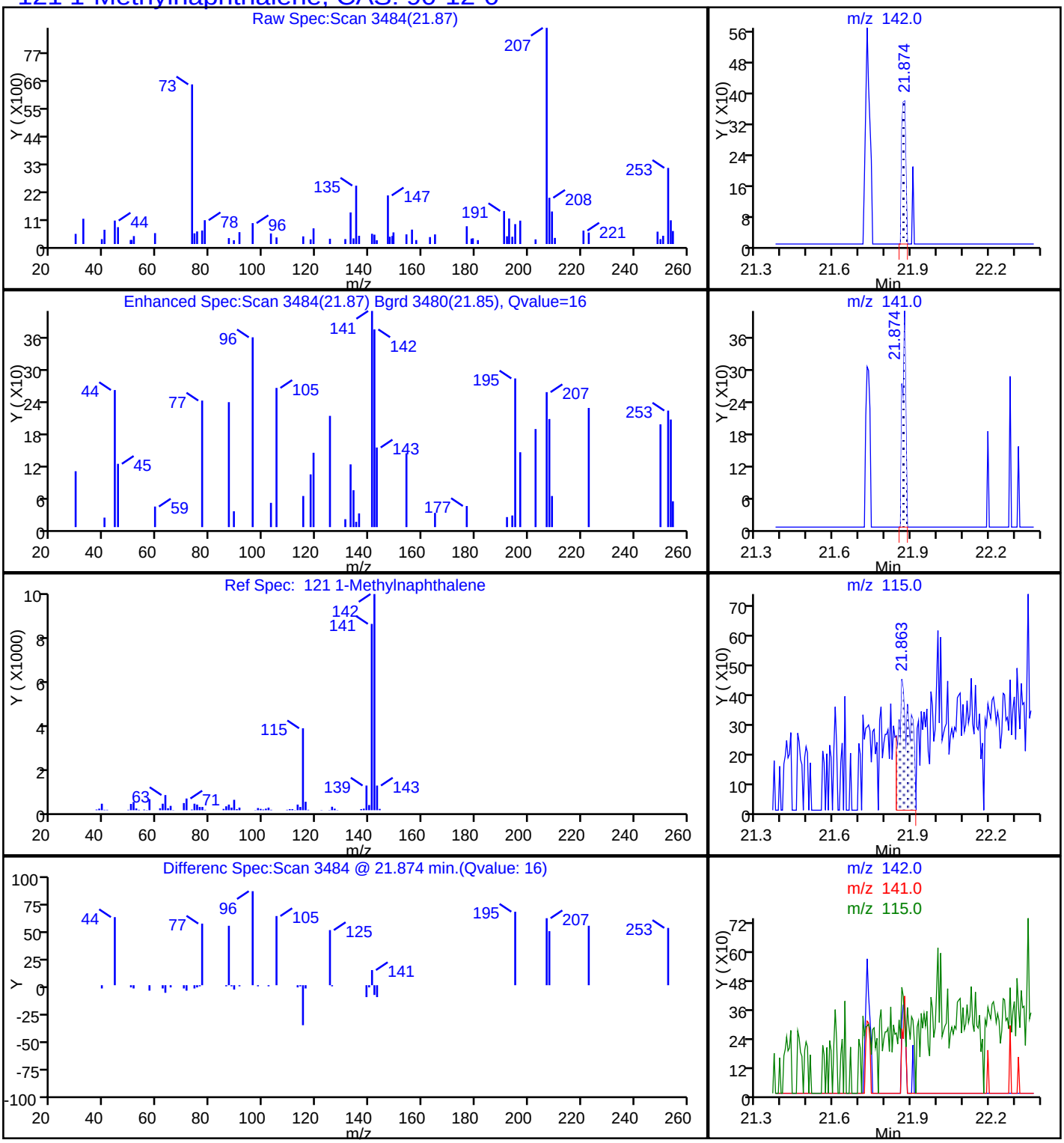


Report Date: 14-Jul-2017 09:10:04 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D				
Injection Date:	13-Jul-2017 15:41:30	Instrument ID:	MR		
Lims ID:	140-8532-A-4	Lab Sample ID:	140-8532-4		
Client ID:	10795				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

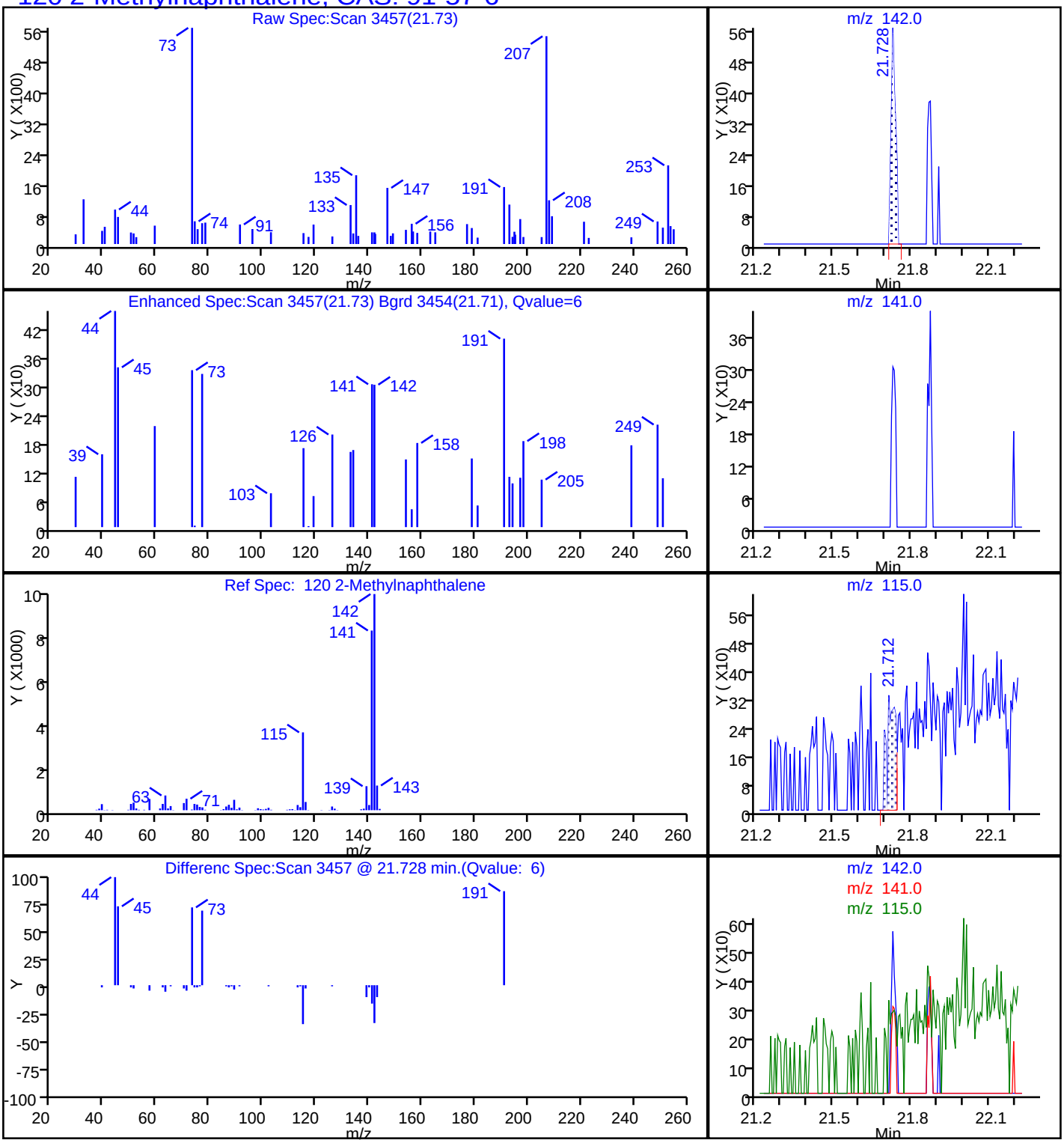


Report Date: 14-Jul-2017 09:10:04 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D				
Injection Date:	13-Jul-2017 15:41:30	Instrument ID:	MR		
Lims ID:	140-8532-A-4	Lab Sample ID:	140-8532-4		
Client ID:	10795				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11577 | Lab Sample ID: 140-8532-5

Matrix: Air | Lab File ID: RG13BK8532-05.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 16:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 11577 | Lab Sample ID: 140-8532-5
Matrix: Air | Lab File ID: RG13BK8532-05.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 16:29
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11577 | Lab Sample ID: 140-8532-5

Matrix: Air | Lab File ID: RG13BK8532-05.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 16:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11577 Lab Sample ID: 140-8532-5

Matrix: Air Lab File ID: RG13BK8532-05.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 16:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-05.D
Lims ID: 140-8532-A-5
Client ID: 11577
Sample Type: Client
Inject. Date: 13-Jul-2017 16:29:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-008
Misc. Info.: 11577
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:02:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.832	7.837	-0.005	81	399902	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1931738	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1688523	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1443808	4.24	
6 Chlorodifluoromethane	67	3.540	3.513	0.027	95	2545	0.0528	
31 Methylene Chloride	84	5.594	5.600	-0.006	93	11801	0.1029	
121 1-Methylnaphthalene	142	21.868	21.868	0.000	1	270	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

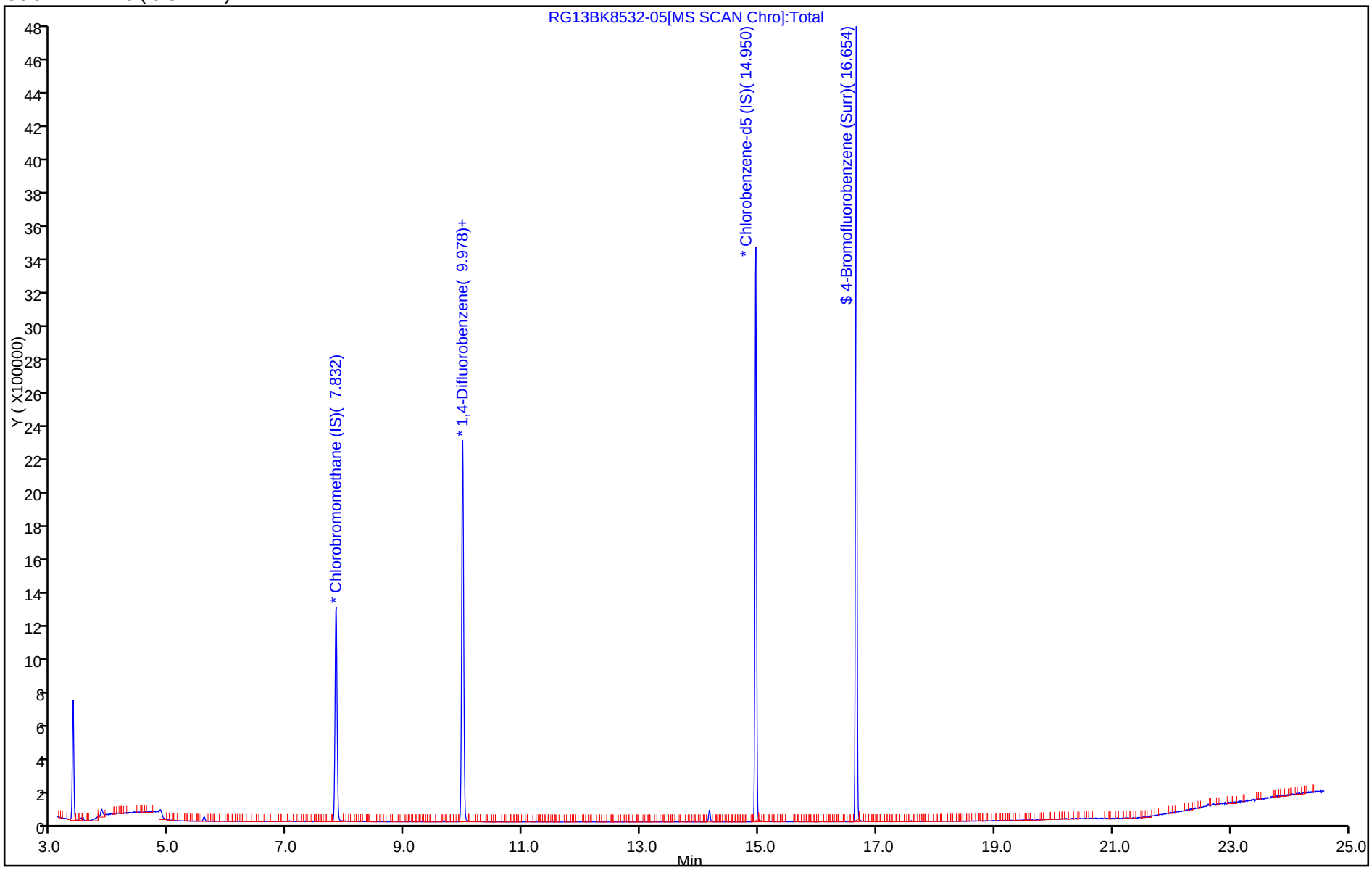
Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:06 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-05.D				
Injection Date:	13-Jul-2017 16:29:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-5	Lab Sample ID:	140-8532-5	Worklist Smp#:	8
Client ID:	11577				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					

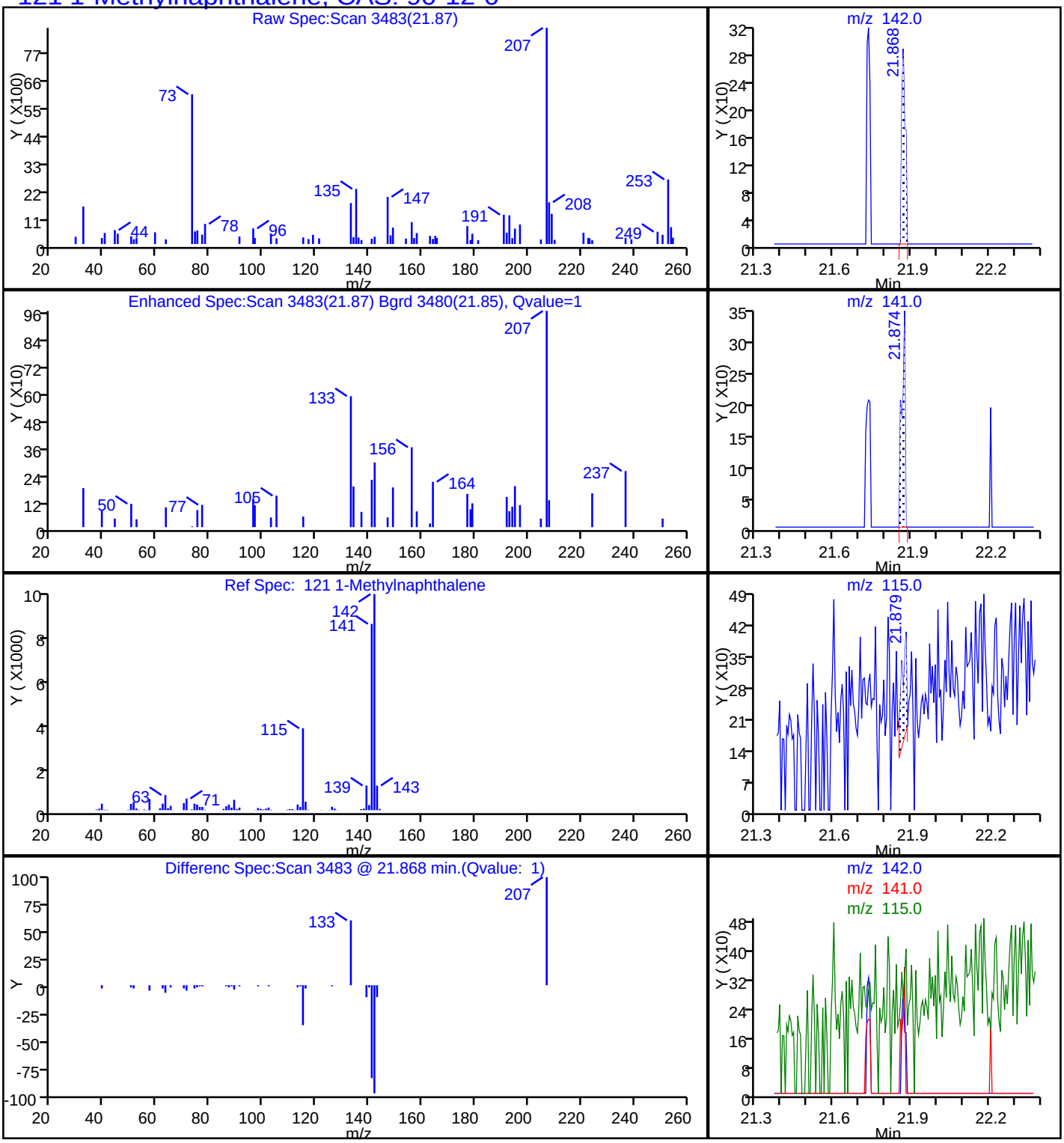


Report Date: 14-Jul-2017 09:10:06 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-05.D				
Injection Date:	13-Jul-2017 16:29:30	Instrument ID:	MR		
Lims ID:	140-8532-A-5	Lab Sample ID:	140-8532-5		
Client ID:	11577				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10964 | Lab Sample ID: 140-8532-6

Matrix: Air | Lab File ID: RG13BK8532-06.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 17:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10964 | Lab Sample ID: 140-8532-6
Matrix: Air | Lab File ID: RG13BK8532-06.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 17:17
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10964 | Lab Sample ID: 140-8532-6

Matrix: Air | Lab File ID: RG13BK8532-06.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 17:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10964 Lab Sample ID: 140-8532-6

Matrix: Air Lab File ID: RG13BK8532-06.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 17:17

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-06.D
Lims ID: 140-8532-A-6
Client ID: 10964
Sample Type: Client
Inject. Date: 13-Jul-2017 17:17:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-009
Misc. Info.: 10964
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:02:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	402413	4.00	
* 2 1,4-Difluorobenzene	114	9.973	9.984	-0.011	96	1933647	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1702472	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1456263	4.24	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	94	2550	0.0526	
31 Methylene Chloride	84	5.584	5.600	-0.016	94	11565	0.1002	
121 1-Methylnaphthalene	142	21.734	21.868	-0.134	1	215	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

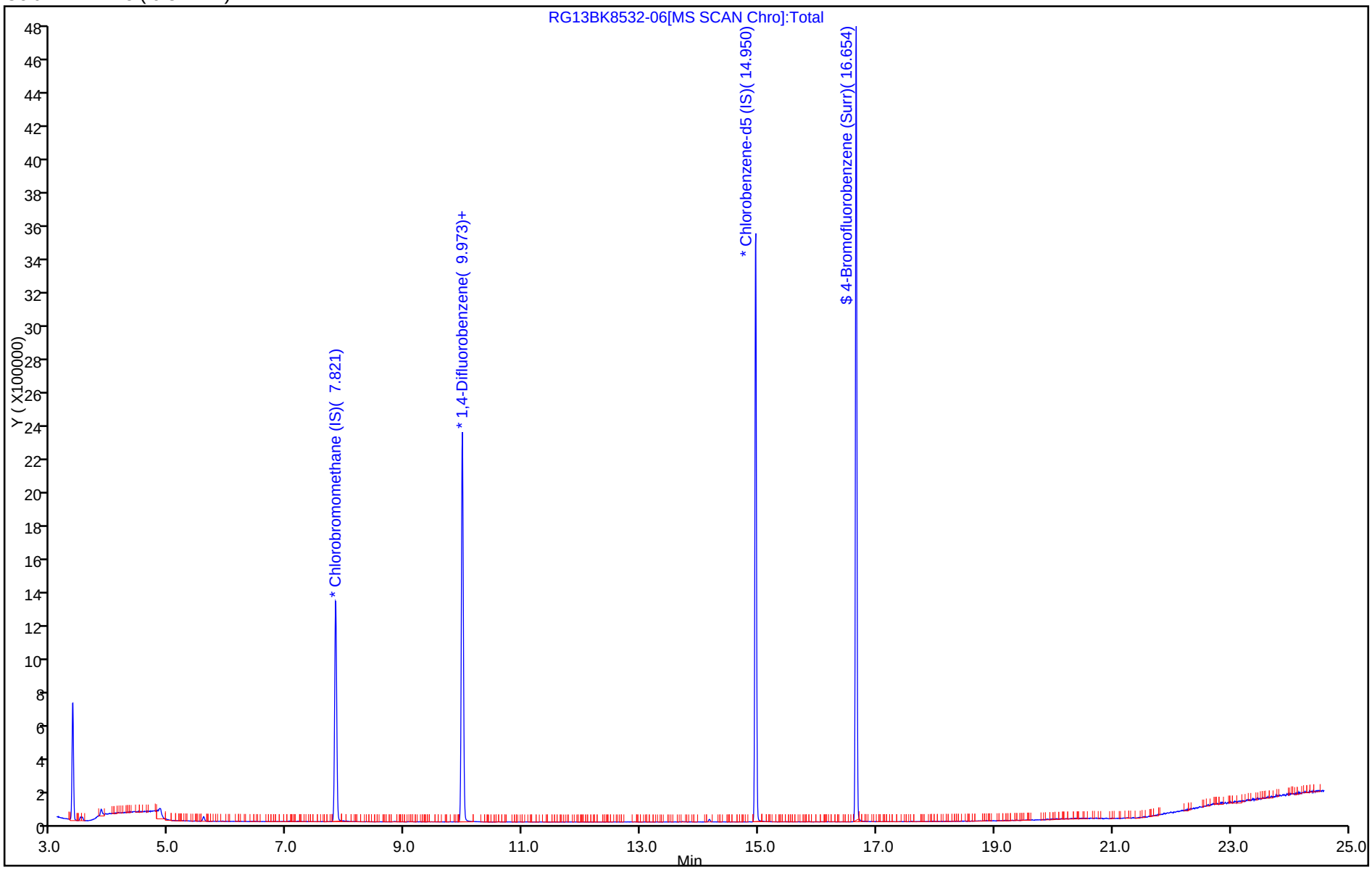
Report Date: 14-Jul-2017 09:10:07 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-06.D

Injection Date:	13-Jul-2017 17:17:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-6	Lab Sample ID:	140-8532-6	Worklist Smp#:	9
Client ID:	10964				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

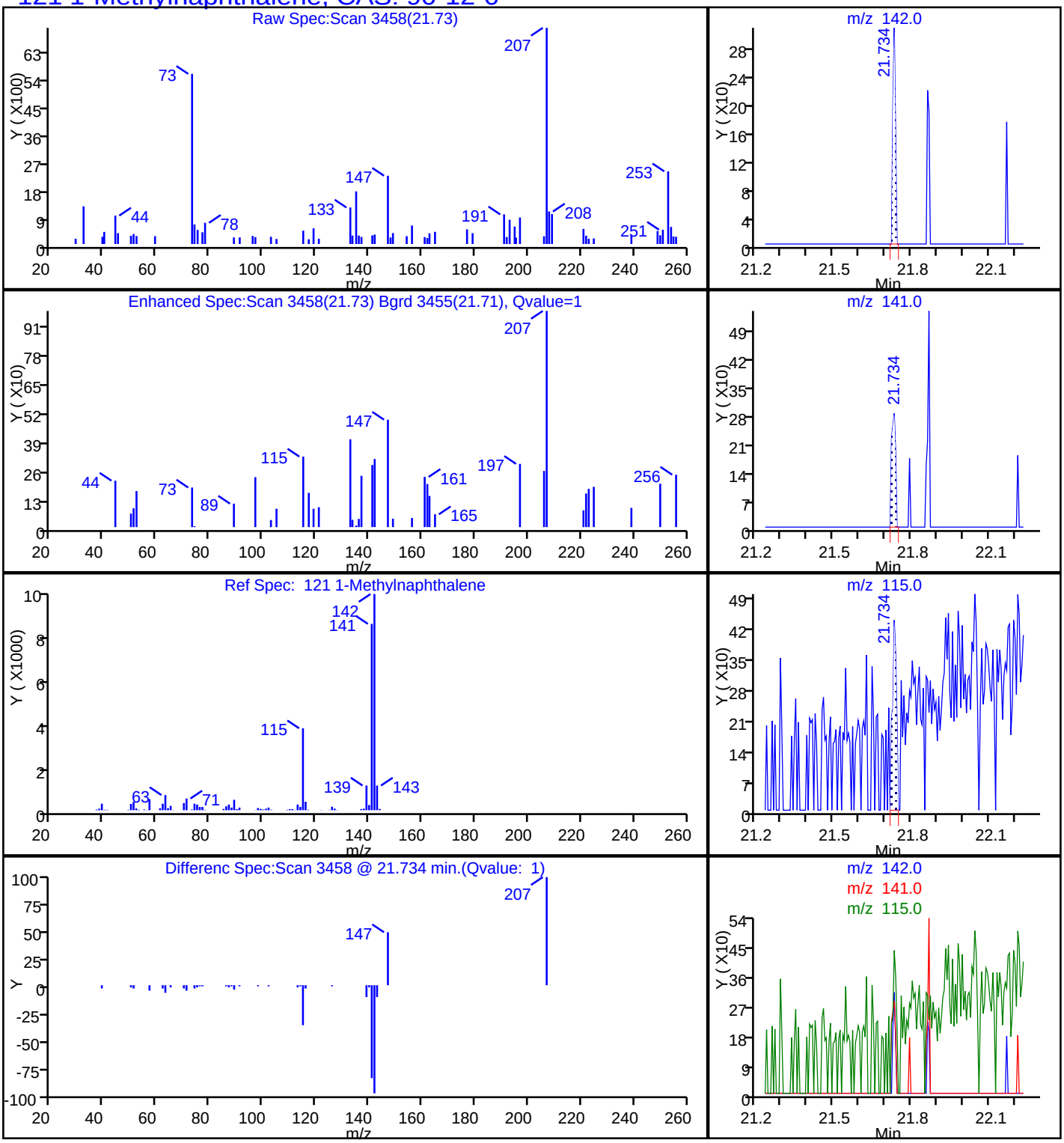


Report Date: 14-Jul-2017 09:10:07 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-06.D				
Injection Date:	13-Jul-2017 17:17:30	Instrument ID:	MR		
Lims ID:	140-8532-A-6	Lab Sample ID:	140-8532-6		
Client ID:	10964				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 | Lab Sample ID: 140-8532-7

Matrix: Air | Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 11554 | Lab Sample ID: 140-8532-7
Matrix: Air | Lab File ID: RG13BK8532-07.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:04
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 | Lab Sample ID: 140-8532-7

Matrix: Air | Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 Lab Sample ID: 140-8532-7

Matrix: Air Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-07.D
Lims ID: 140-8532-A-7
Client ID: 11554
Sample Type: Client
Inject. Date: 13-Jul-2017 18:04:30 ALS Bottle#: 7 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-010
Misc. Info.: 11554
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:03:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	395945	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1899545	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1664866	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1429396	4.26	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	92	3281	0.0688	
31 Methylene Chloride	84	5.584	5.600	-0.016	94	11256	0.0991	

Reagents:

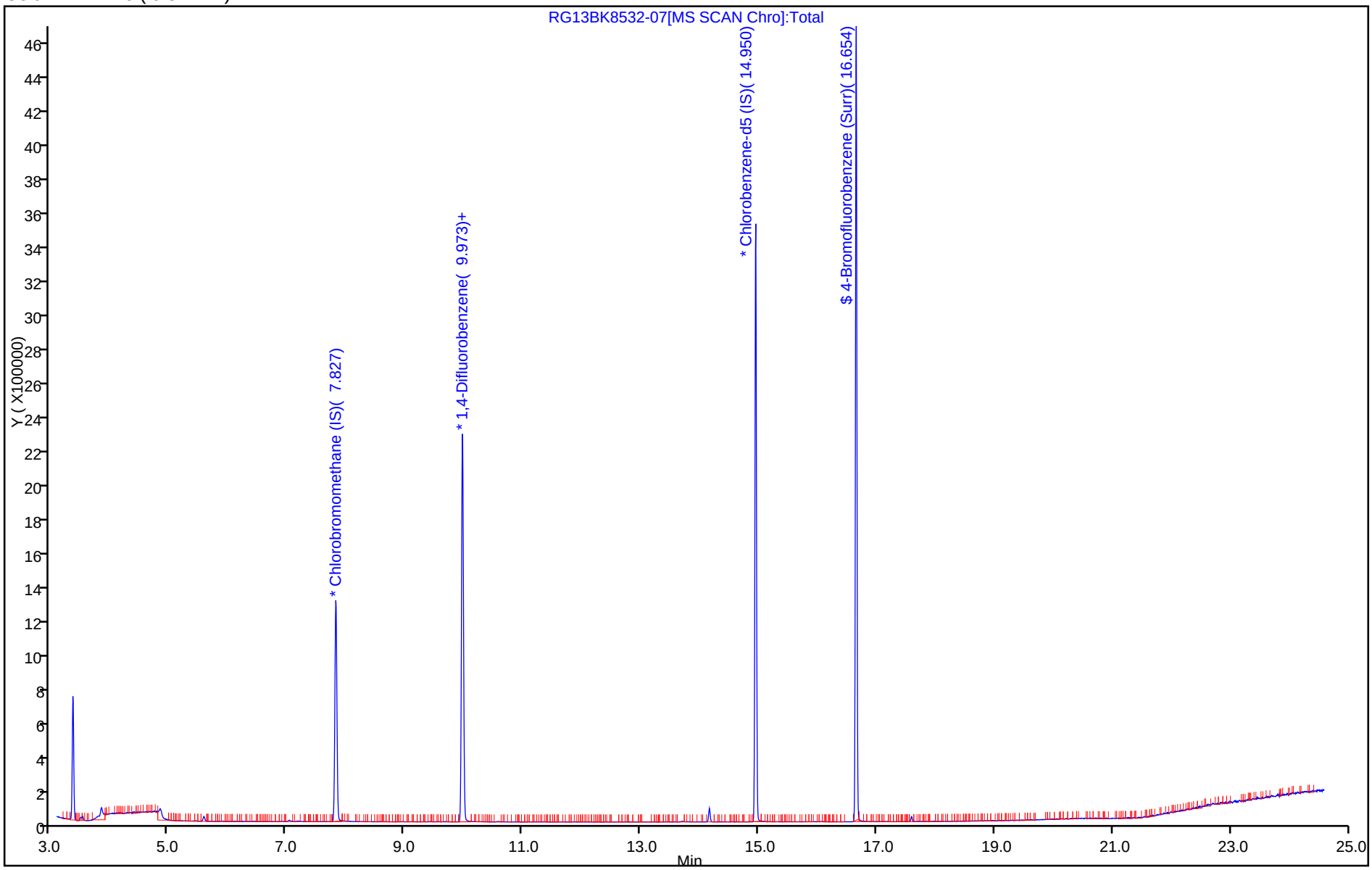
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:09 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-07.D				
Injection Date:	13-Jul-2017 18:04:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-7	Lab Sample ID:	140-8532-7	Worklist Smp#:	10
Client ID:	11554				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09750 | Lab Sample ID: 140-8532-8
Matrix: Air | Lab File ID: RG13BK8532-08.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:52
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09750 | Lab Sample ID: 140-8532-8
Matrix: Air | Lab File ID: RG13BK8532-08.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:52
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09750 | Lab Sample ID: 140-8532-8

Matrix: Air | Lab File ID: RG13BK8532-08.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:52

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09750 Lab Sample ID: 140-8532-8

Matrix: Air Lab File ID: RG13BK8532-08.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 18:52

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

Report Date: 14-Jul-2017 09:10:10 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-08.D
Lims ID: 140-8532-A-8
Client ID: 09750
Sample Type: Client
Inject. Date: 13-Jul-2017 18:52:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-011
Misc. Info.: 09750
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:03:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	391163	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1897106	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1663844	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	83	1422393	4.24	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	95	2825	0.0599	
31 Methylene Chloride	84	5.594	5.600	-0.006	95	11669	0.1040	

Reagents:

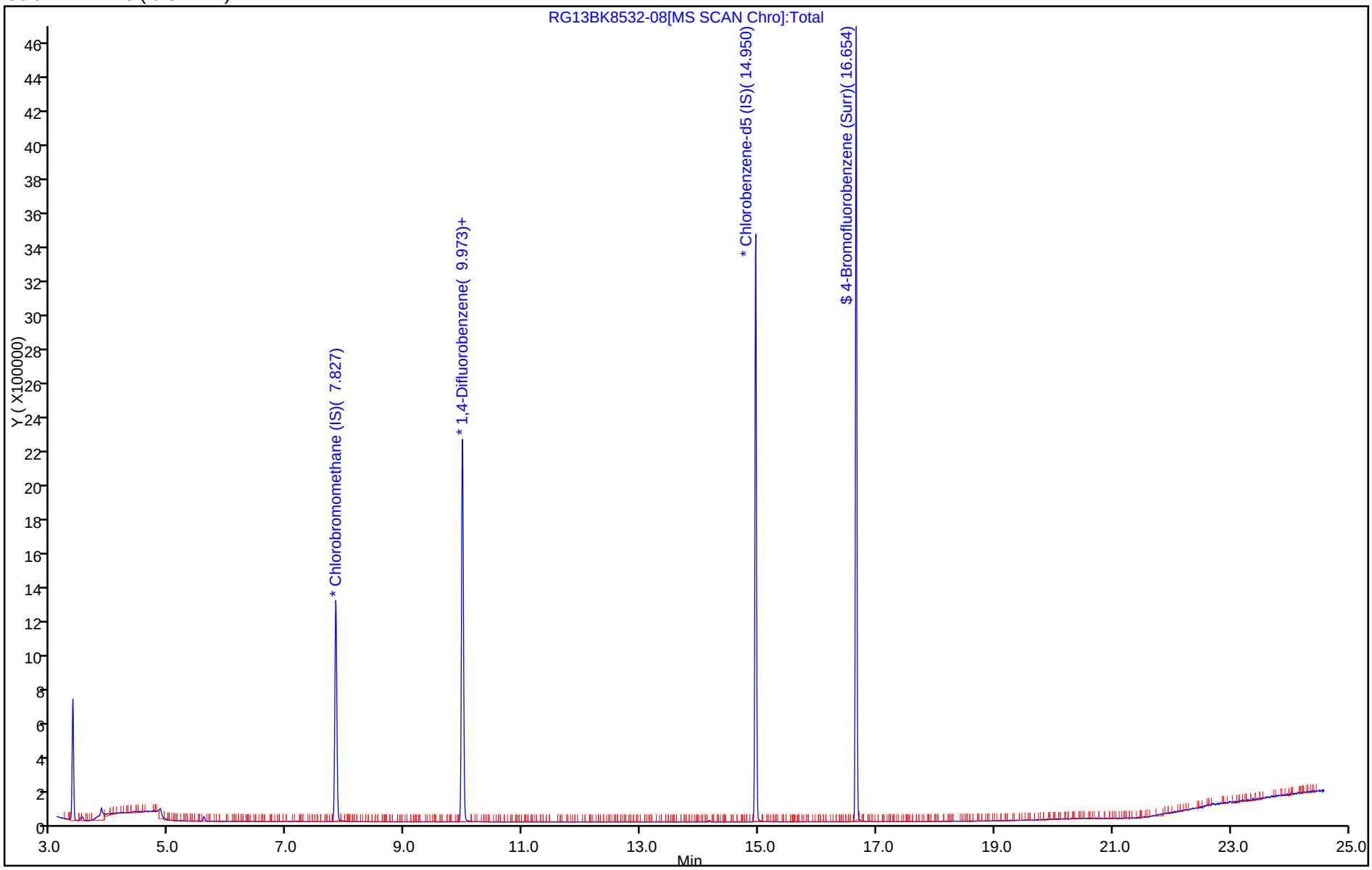
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:10 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-08.D				
Injection Date:	13-Jul-2017 18:52:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-8	Lab Sample ID:	140-8532-8	Worklist Smp#:	11
Client ID:	09750				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09642 | Lab Sample ID: 140-8532-12

Matrix: Air | Lab File ID: RG13BK8532-12.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09642 | Lab Sample ID: 140-8532-12
Matrix: Air | Lab File ID: RG13BK8532-12.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:03
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09642 | Lab Sample ID: 140-8532-12

Matrix: Air | Lab File ID: RG13BK8532-12.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09642 Lab Sample ID: 140-8532-12

Matrix: Air Lab File ID: RG13BK8532-12.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 22:03

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-12.D
Lims ID: 140-8532-A-12
Client ID: 09642
Sample Type: Client
Inject. Date: 13-Jul-2017 22:03:30 ALS Bottle#: 12 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-015
Misc. Info.: 09642
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:05:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.838	7.837	0.001	81	387434	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1864812	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1636612	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1413367	4.29	
6 Chlorodifluoromethane	67	3.551	3.513	0.038	97	3609	0.0773	
11 Acetaldehyde	44	3.853	3.842	0.011	87	53107	1.58	
31 Methylene Chloride	84	5.605	5.600	0.005	95	12248	0.1102	

Reagents:

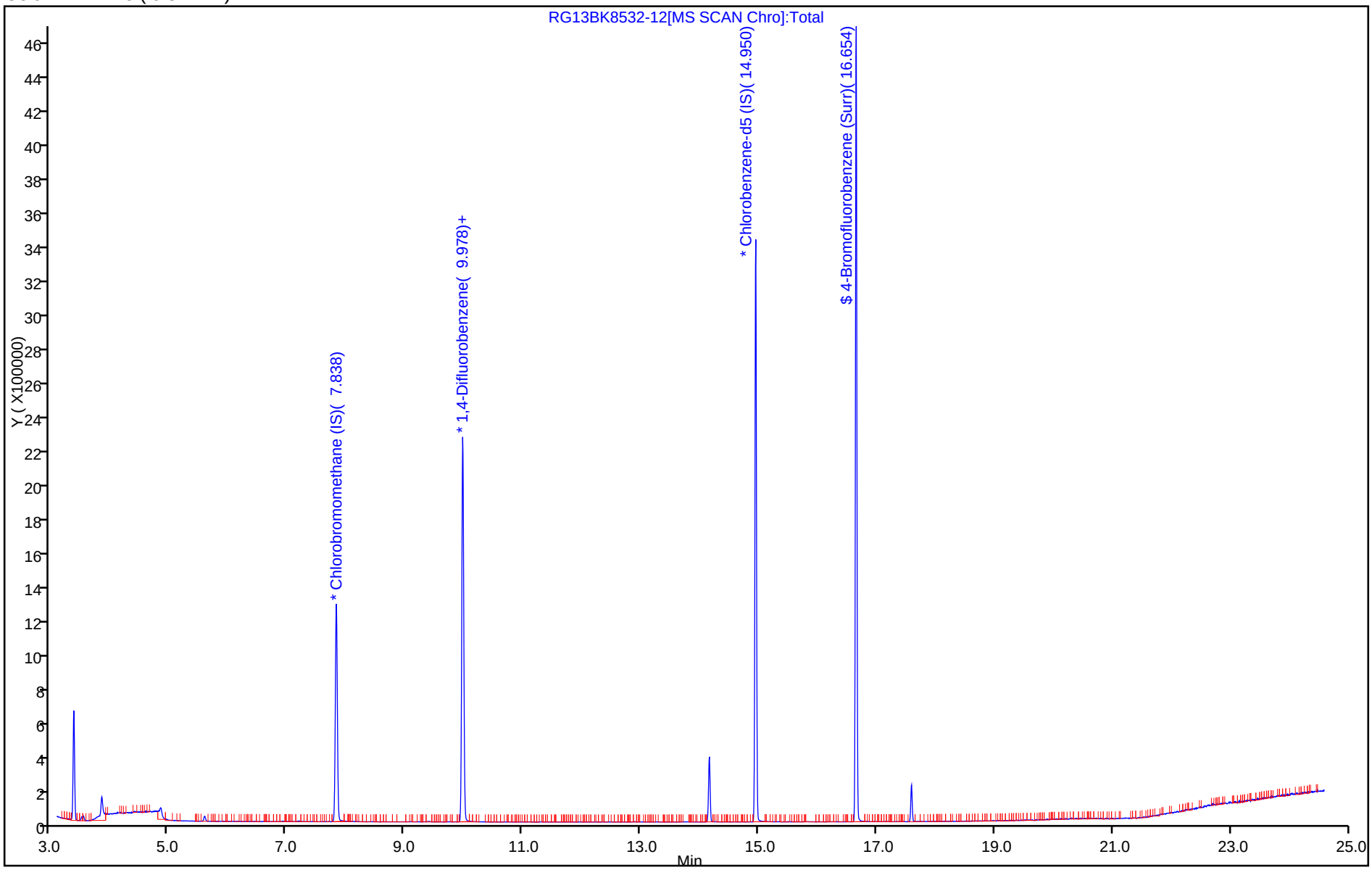
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:16 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-12.D				
Injection Date:	13-Jul-2017 22:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-12	Lab Sample ID:	140-8532-12	Worklist Smp#:	15
Client ID:	09642				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 | Lab Sample ID: 140-8532-13

Matrix: Air | Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 11492 | Lab Sample ID: 140-8532-13
Matrix: Air | Lab File ID: RG13BK8532-13.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:51
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 | Lab Sample ID: 140-8532-13

Matrix: Air | Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 Lab Sample ID: 140-8532-13

Matrix: Air Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

Report Date: 14-Jul-2017 09:10:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-13.D
Lims ID: 140-8532-A-13
Client ID: 11492
Sample Type: Client
Inject. Date: 13-Jul-2017 22:51:30 ALS Bottle#: 13 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-016
Misc. Info.: 11492
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:05:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	389985	4.00	
* 2 1,4-Difluorobenzene	114	9.973	9.984	-0.011	96	1879645	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1632337	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	83	1407362	4.28	
6 Chlorodifluoromethane	67	3.529	3.513	0.016	95	3111	0.0662	
31 Methylene Chloride	84	5.589	5.600	-0.011	96	11284	0.1009	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

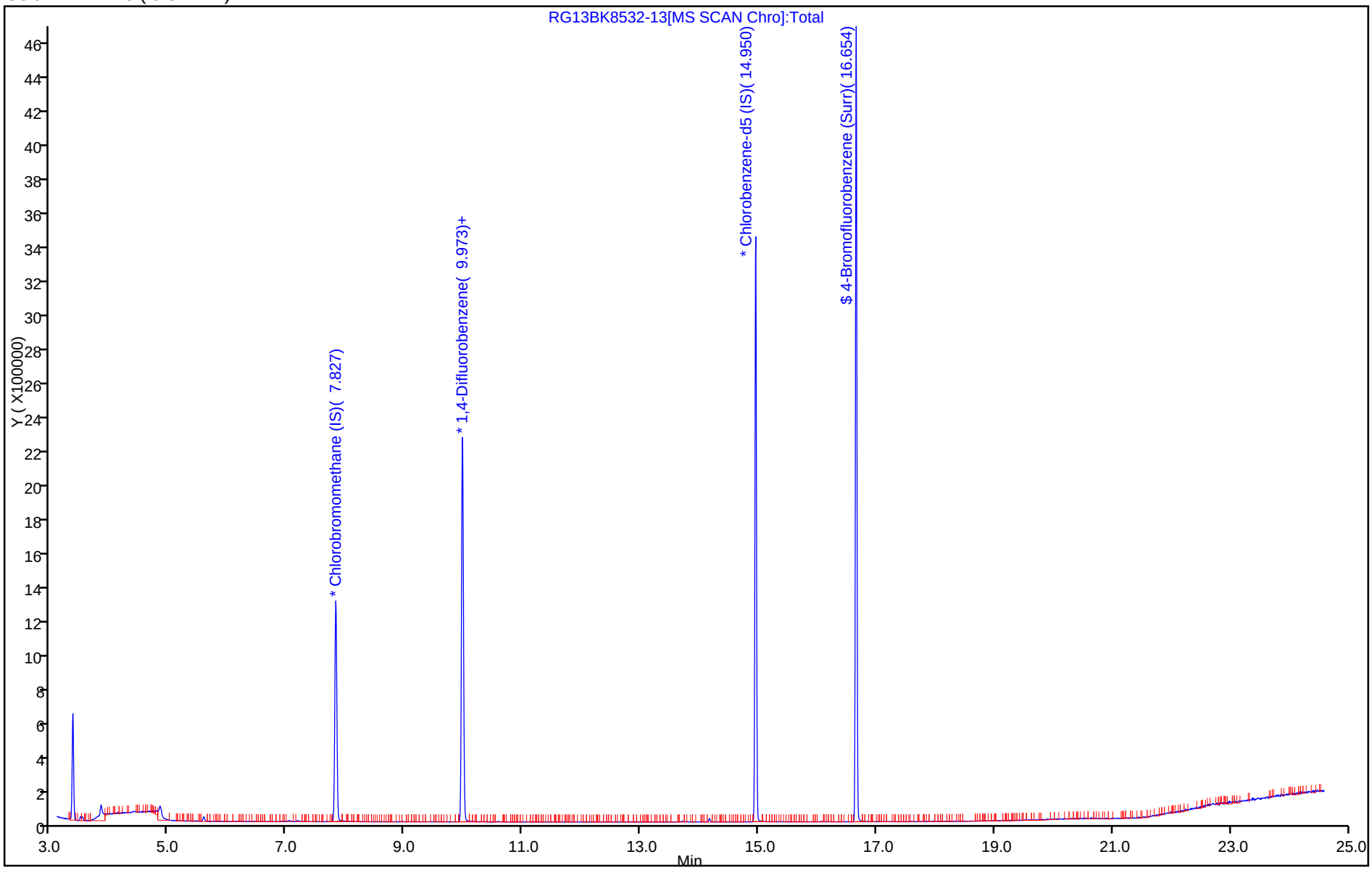
Report Date: 14-Jul-2017 09:10:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-13.D

Injection Date:	13-Jul-2017 22:51:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-13	Lab Sample ID:	140-8532-13	Worklist Smp#:	16
Client ID:	11492				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-8532-14

Matrix: Air | Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-8532-14

Matrix: Air | Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-8532-14

Matrix: Air | Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 Lab Sample ID: 140-8532-14

Matrix: Air Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-14.D
Lims ID: 140-8532-A-14
Client ID: 11572
Sample Type: Client
Inject. Date: 13-Jul-2017 23:39:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-017
Misc. Info.: 11572
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:05:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.832	7.837	-0.005	81	388215	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1850356	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1610892	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	83	1411174	4.35	
6 Chlorodifluoromethane	67	3.550	3.513	0.037	96	2159	0.0461	
31 Methylene Chloride	84	5.600	5.600	0.000	95	10374	0.0932	

Reagents:

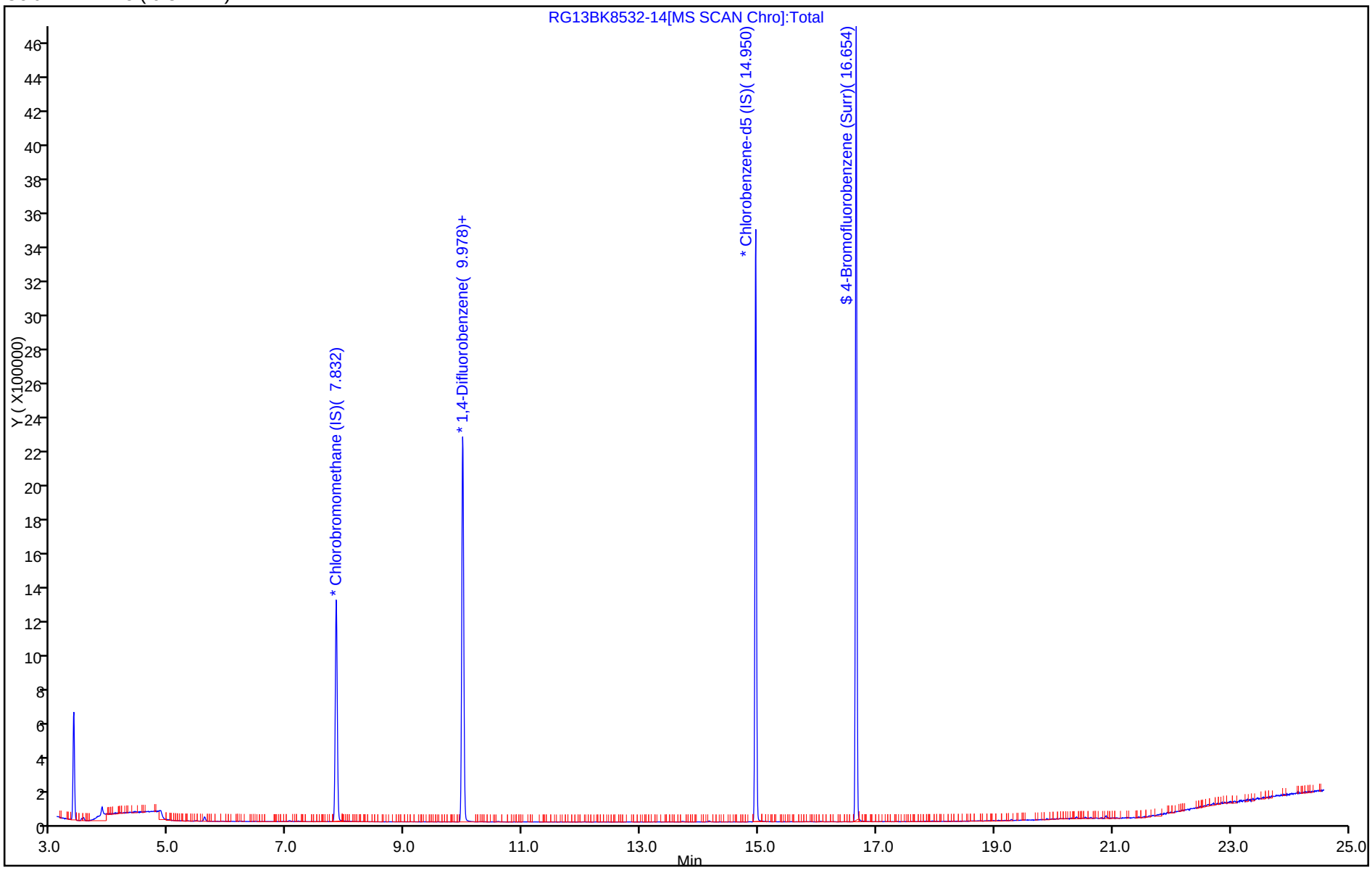
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:18 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-14.D				
Injection Date:	13-Jul-2017 23:39:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-14	Lab Sample ID:	140-8532-14	Worklist Smp#:	17
Client ID:	11572				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8596-1
SDG No.:
Client Sample ID: 11545 | Lab Sample ID: 140-8596-1
Matrix: Air | Lab File ID: GG05lot8596.D
Analysis Method: TO-15 | Date Collected: 07/03/2017 18:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2017 05:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12501 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND	*	2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND	*	0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8596-1
SDG No.:
Client Sample ID: 11545 | Lab Sample ID: 140-8596-1
Matrix: Air | Lab File ID: GG05lot8596.D
Analysis Method: TO-15 | Date Collected: 07/03/2017 18:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2017 05:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12501 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	*	0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8596-1

SDG No.:

Client Sample ID: 11545 | Lab Sample ID: 140-8596-1

Matrix: Air | Lab File ID: GG05lot8596.D

Analysis Method: TO-15 | Date Collected: 07/03/2017 18:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2017 05:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12501 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND	*	1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND	*	1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8596-1

SDG No.:

Client Sample ID: 11545 Lab Sample ID: 140-8596-1

Matrix: Air Lab File ID: GG05lot8596.D

Analysis Method: TO-15 Date Collected: 07/03/2017 18:00

Sample wt/vol: 200(mL) Date Analyzed: 07/06/2017 05:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12501 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

Report Date: 06-Jul-2017 10:40:16 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170703-5384.b\GG05lot8596.D				
Lims ID:	140-8596-A-1				
Client ID:	11545				
Sample Type:	Client				
Inject. Date:	06-Jul-2017 05:25:30	ALS Bottle#:	5	Worklist Smp#:	27
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005384-027				
Misc. Info.:	11545				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170703-5384.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	06-Jul-2017 10:29:28	Calib Date:	21-Jun-2017 22:43:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK034				

First Level Reviewer: tajh Date: 06-Jul-2017 10:29:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.942	-0.016	85	691145	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.094	-0.011	95	3364615	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.968	-0.005	89	3243310	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.635	16.646	-0.011	89	2520956	3.87	
31 Methylene Chloride	84	5.634	5.629	0.005	93	19344	0.1191	

Reagents:

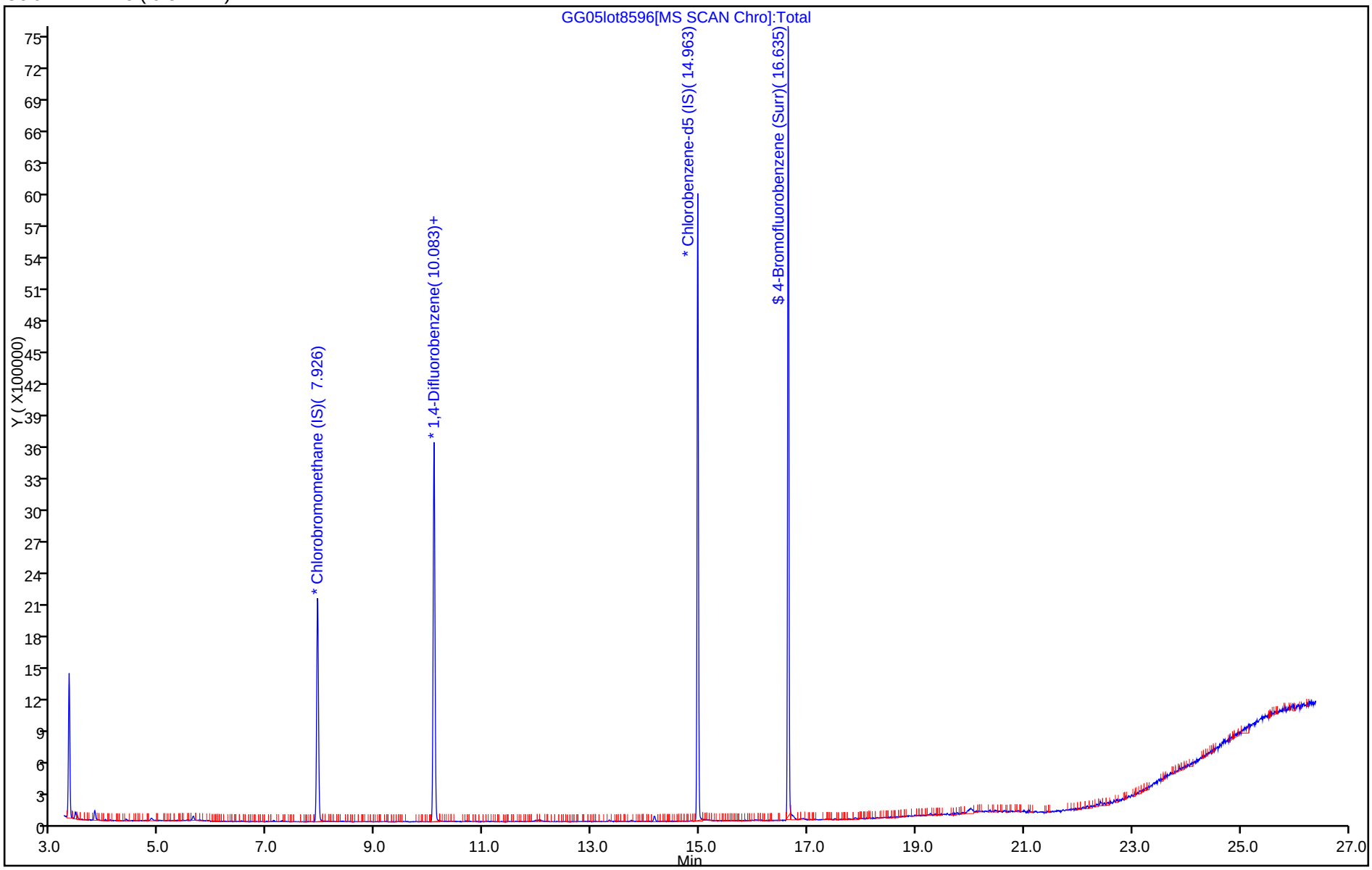
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 06-Jul-2017 10:40:16 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170703-5384.b\GG05lot8596.D				
Injection Date:	06-Jul-2017 05:25:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-8596-A-1	Lab Sample ID:	140-8596-1	Worklist Smp#:	27
Client ID:	11545				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11645 | Lab Sample ID: 140-8630-1

Matrix: Air | Lab File ID: JG14BK8630-01.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 21:30

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11645 | Lab Sample ID: 140-8630-1

Matrix: Air | Lab File ID: JG14BK8630-01.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 21:30

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11645 | Lab Sample ID: 140-8630-1

Matrix: Air | Lab File ID: JG14BK8630-01.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 21:30

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11645 Lab Sample ID: 140-8630-1

Matrix: Air Lab File ID: JG14BK8630-01.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/14/2017 21:30

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-01.D
Lims ID: 140-8630-A-1
Client ID: 11645
Sample Type: Client
Inject. Date: 14-Jul-2017 21:30:30 ALS Bottle#: 11 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-016
Misc. Info.: 11645
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 17-Jul-2017 09:41:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.729	9.737	-0.008	81	562294	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	94	2765471	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.480	16.483	-0.003	87	2467663	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	95	1433730	3.84	
6 Chlorodifluoromethane	67	4.102	4.110	-0.008	48	2380	0.0513	M
31 Methylene Chloride	84	7.044	7.048	-0.004	93	16150	0.1037	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

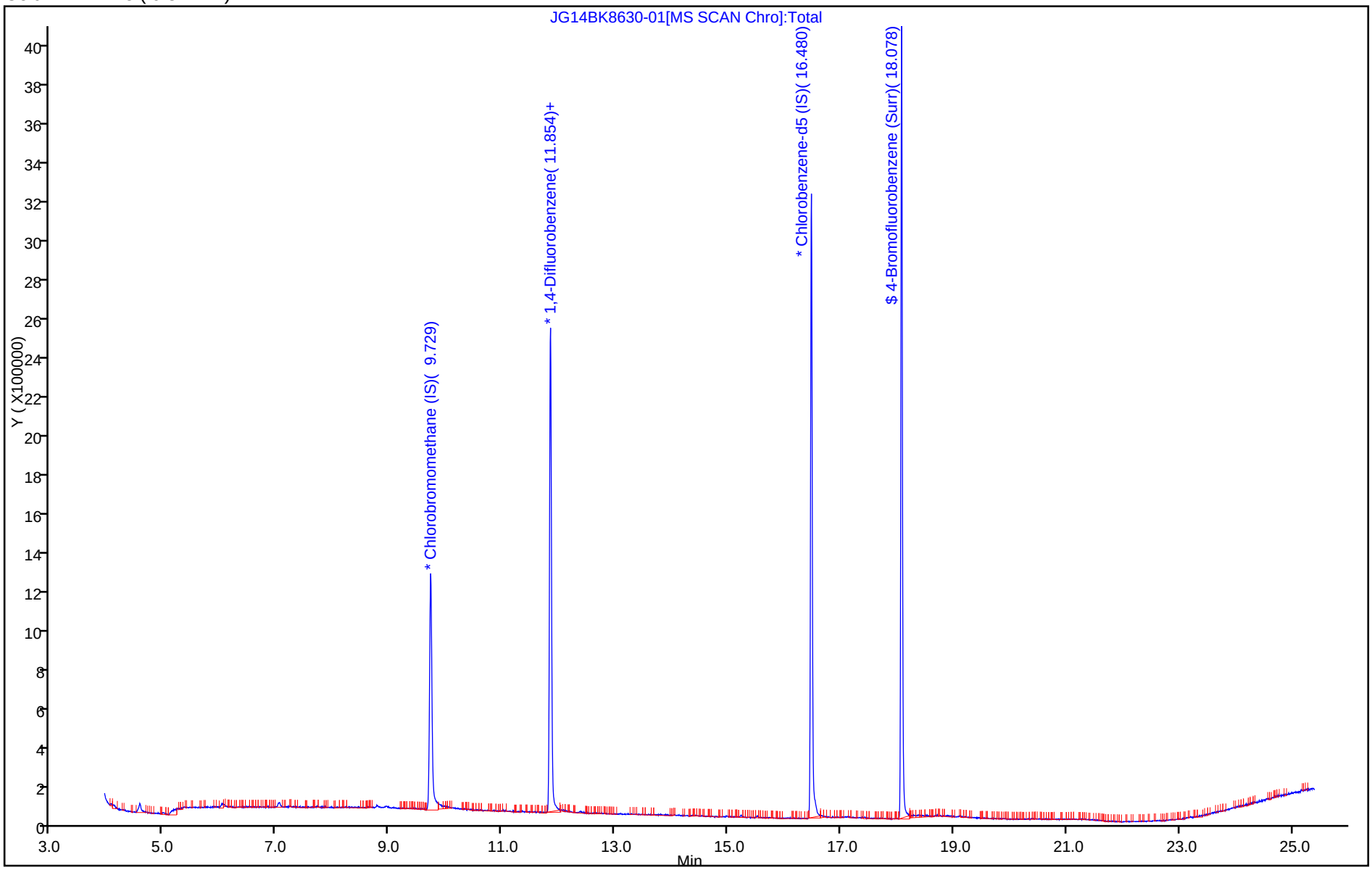
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:45 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-01.D				
Injection Date:	14-Jul-2017 21:30:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-1	Lab Sample ID:	140-8630-1	Worklist Smp#:	16
Client ID:	11645				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

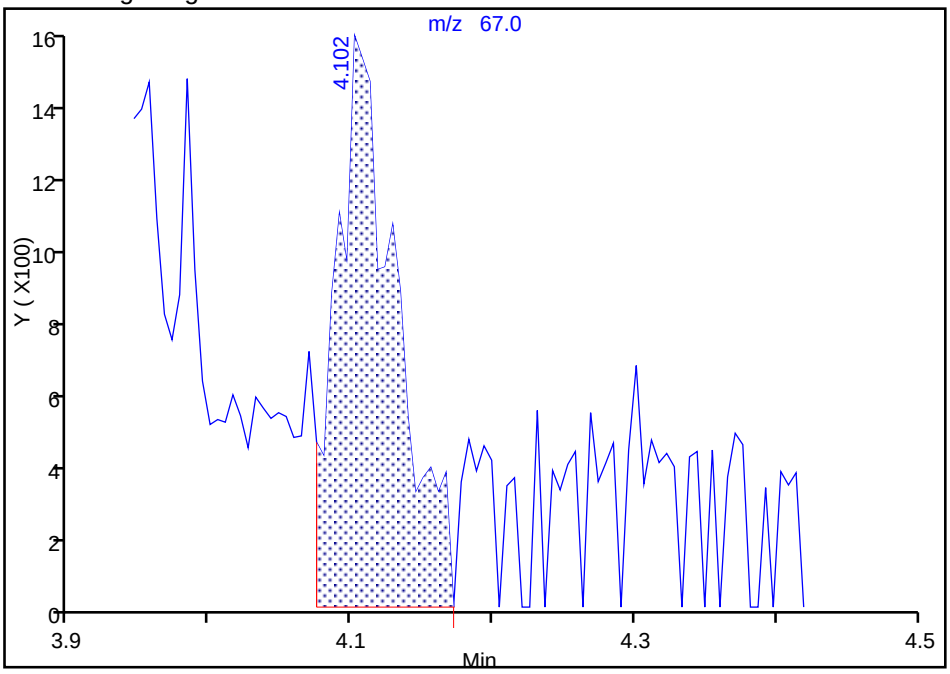
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-01.D				
Injection Date:	14-Jul-2017 21:30:30	Instrument ID:	MJ		
Lims ID:	140-8630-A-1	Lab Sample ID:	140-8630-1		
Client ID:	11645				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

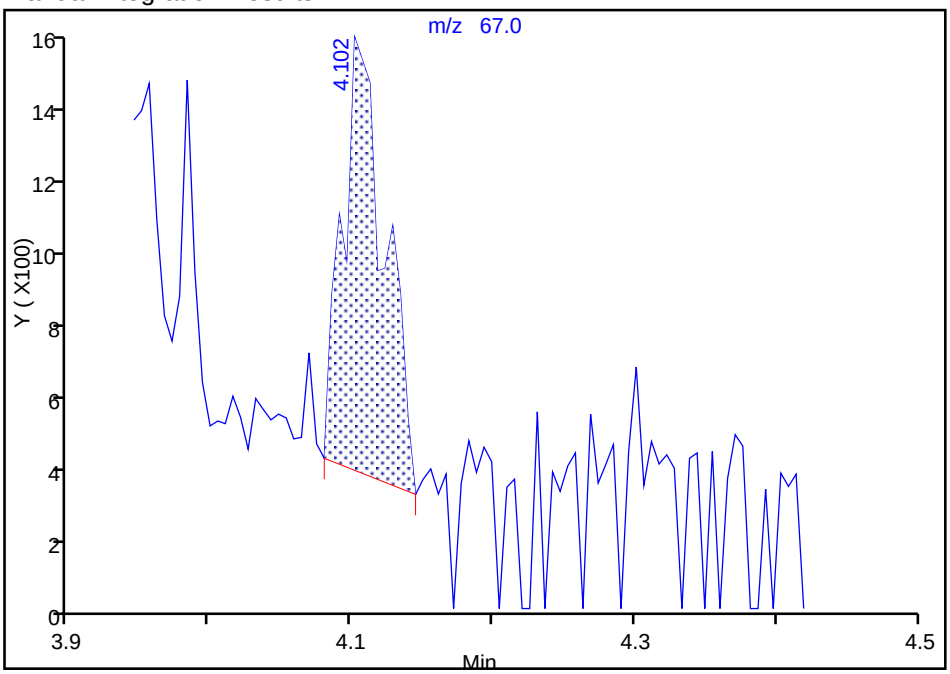
Processing Integration Results

RT: 4.10
Area: 4419
Amount: 0.095160
Amount Units: ppb v/v



Manual Integration Results

RT: 4.10
Area: 2380
Amount: 0.051252
Amount Units: ppb v/v



Reviewer: tajh, 17-Jul-2017 09:41:06

Audit Action: Manually Integrated Audit Reason: Baseline

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11641 | Lab Sample ID: 140-8630-2
Matrix: Air | Lab File ID: JG14BK8630-02.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 22:15
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11641 | Lab Sample ID: 140-8630-2
Matrix: Air | Lab File ID: JG14BK8630-02.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 22:15
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11641 | Lab Sample ID: 140-8630-2

Matrix: Air | Lab File ID: JG14BK8630-02.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 22:15

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11641 Lab Sample ID: 140-8630-2

Matrix: Air Lab File ID: JG14BK8630-02.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/14/2017 22:15

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-02.D
Lims ID: 140-8630-A-2
Client ID: 11641
Sample Type: Client
Inject. Date: 14-Jul-2017 22:15:30 ALS Bottle#: 12 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-017
Misc. Info.: 11641
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 17-Jul-2017 09:41:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.730	9.737	-0.007	80	554096	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	94	2797807	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.481	16.483	-0.002	84	2480058	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	95	1428528	3.81	
6 Chlorodifluoromethane	67	4.113	4.110	0.003	94	2928	0.0640	
31 Methylene Chloride	84	7.040	7.048	-0.008	93	15323	0.0999	

Reagents:

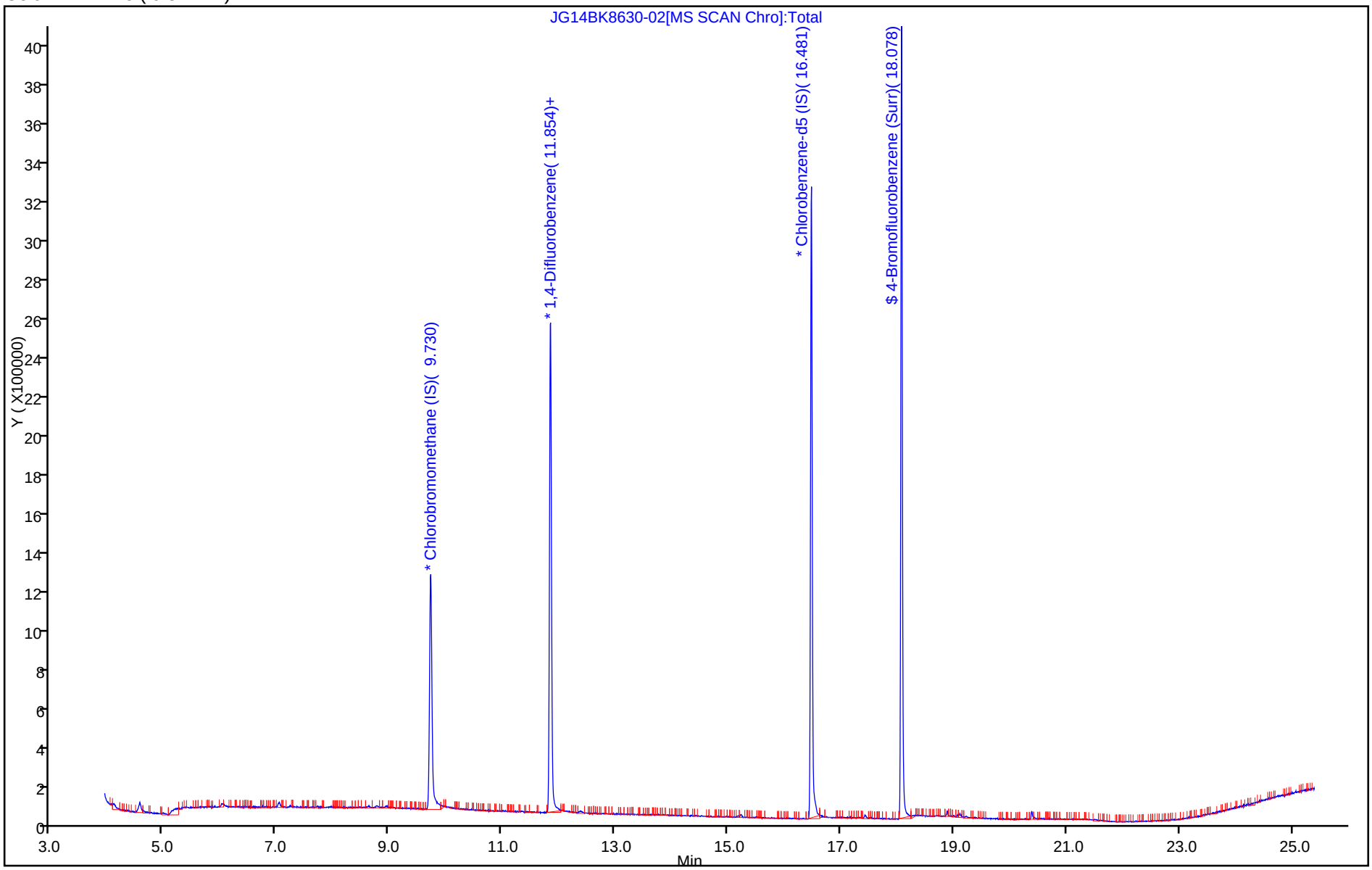
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:46 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-02.D				
Injection Date:	14-Jul-2017 22:15:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-2	Lab Sample ID:	140-8630-2	Worklist Smp#:	17
Client ID:	11641				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11646 | Lab Sample ID: 140-8630-3
Matrix: Air | Lab File ID: JG14BK8630-03.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 23:00
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11646 | Lab Sample ID: 140-8630-3
Matrix: Air | Lab File ID: JG14BK8630-03.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 23:00
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11646 Lab Sample ID: 140-8630-3

Matrix: Air Lab File ID: JG14BK8630-03.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/14/2017 23:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11646 Lab Sample ID: 140-8630-3

Matrix: Air Lab File ID: JG14BK8630-03.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/14/2017 23:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-03.D
Lims ID: 140-8630-A-3
Client ID: 11646
Sample Type: Client
Inject. Date: 14-Jul-2017 23:00:30 ALS Bottle#: 13 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-018
Misc. Info.: 11646
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 17-Jul-2017 09:42:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.732	9.737	-0.005	80	552845	4.00	
* 2 1,4-Difluorobenzene	114	11.851	11.857	-0.006	94	2715339	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.478	16.483	-0.005	84	2390528	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.081	18.081	0.000	95	1387319	3.84	
6 Chlorodifluoromethane	67	4.099	4.110	-0.011	95	2722	0.0596	
31 Methylene Chloride	84	7.037	7.048	-0.011	94	15396	0.1006	

Reagents:

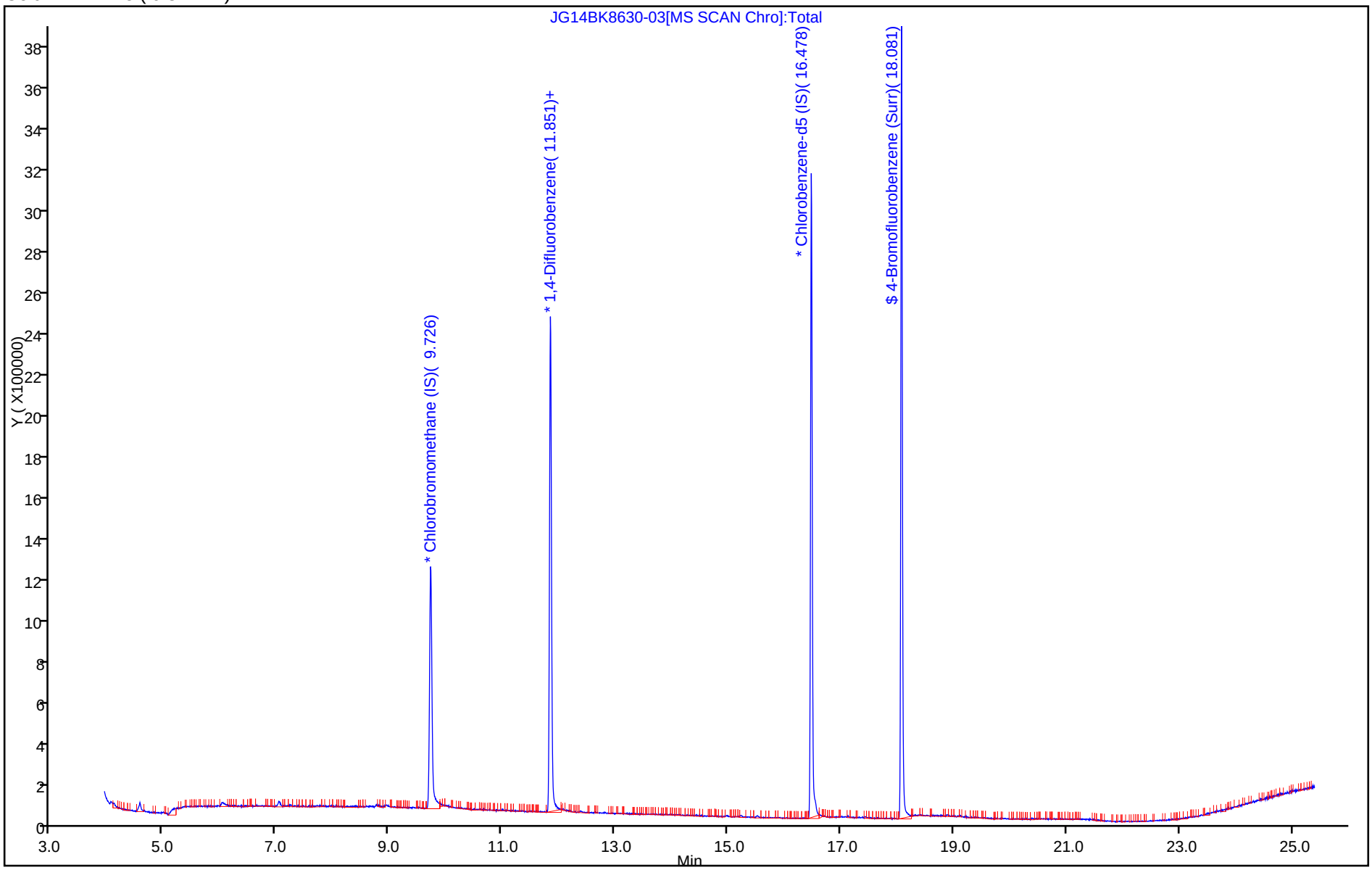
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:48 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-03.D				
Injection Date:	14-Jul-2017 23:00:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-3	Lab Sample ID:	140-8630-3	Worklist Smp#:	18
Client ID:	11646				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11639 | Lab Sample ID: 140-8630-4

Matrix: Air | Lab File ID: JG14BK8630-04.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 23:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11639 | Lab Sample ID: 140-8630-4
Matrix: Air | Lab File ID: JG14BK8630-04.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 23:45
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11639 | Lab Sample ID: 140-8630-4

Matrix: Air | Lab File ID: JG14BK8630-04.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 23:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11639 Lab Sample ID: 140-8630-4

Matrix: Air Lab File ID: JG14BK8630-04.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/14/2017 23:45

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-04.D
Lims ID: 140-8630-A-4
Client ID: 11639
Sample Type: Client
Inject. Date: 14-Jul-2017 23:45:30 ALS Bottle#: 14 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-019
Misc. Info.: 11639
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 17-Jul-2017 09:42:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.727	9.737	-0.010	81	533548	4.00	
* 2 1,4-Difluorobenzene	114	11.852	11.857	-0.005	94	2690058	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.478	16.483	-0.005	84	2431543	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.076	18.081	-0.005	95	1439775	3.91	
6 Chlorodifluoromethane	67	4.105	4.110	-0.005	94	2502	0.0568	
31 Methylene Chloride	84	7.043	7.048	-0.005	90	13851	0.0937	

Reagents:

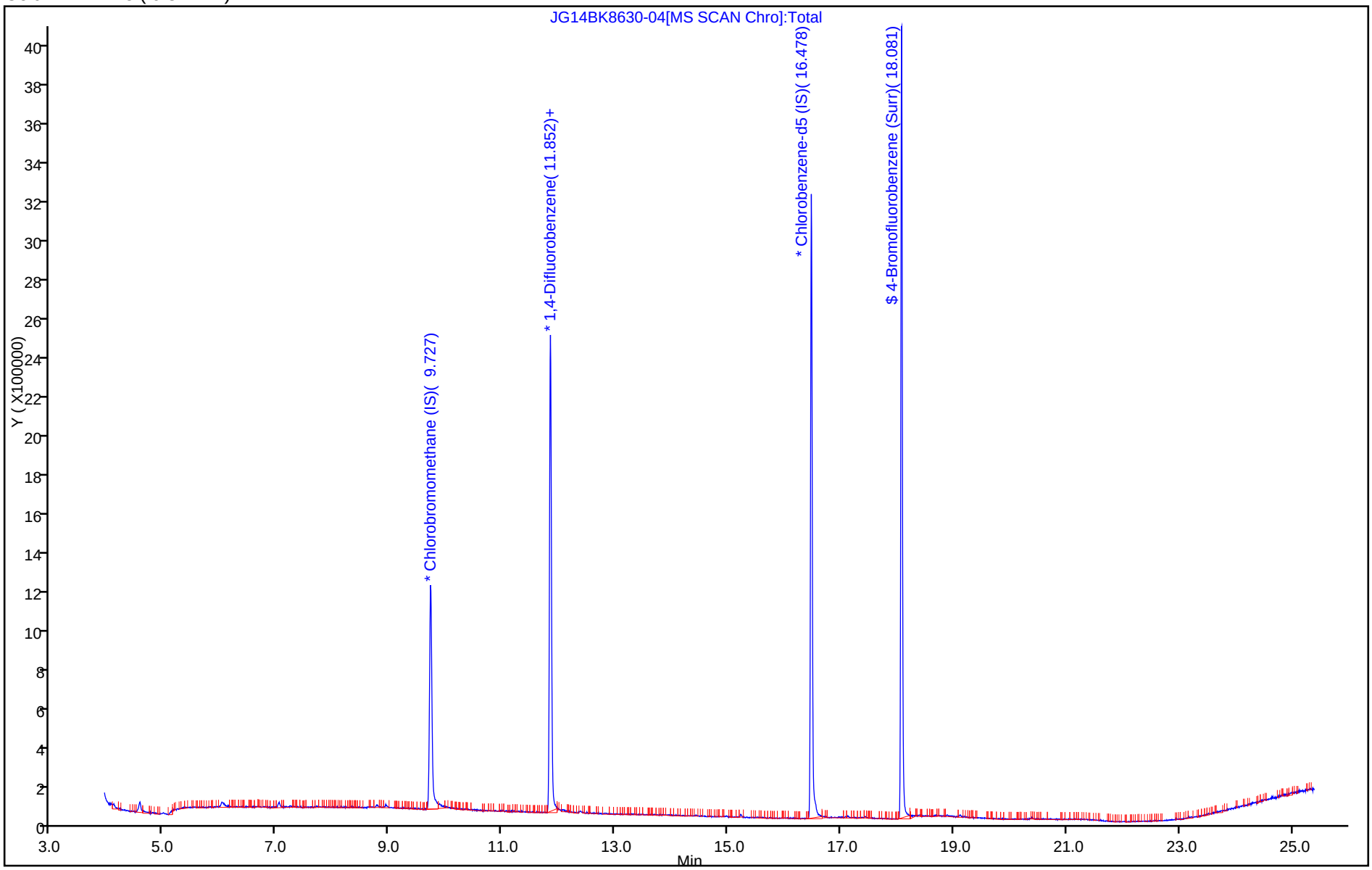
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:50 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-04.D				
Injection Date:	14-Jul-2017 23:45:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-4	Lab Sample ID:	140-8630-4	Worklist Smp#:	19
Client ID:	11639				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11277 | Lab Sample ID: 140-8630-5

Matrix: Air | Lab File ID: JG14BK8630-05.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 00:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11277 | Lab Sample ID: 140-8630-5

Matrix: Air | Lab File ID: JG14BK8630-05.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 00:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11277 | Lab Sample ID: 140-8630-5

Matrix: Air | Lab File ID: JG14BK8630-05.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 00:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11277 Lab Sample ID: 140-8630-5

Matrix: Air Lab File ID: JG14BK8630-05.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/15/2017 00:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

Report Date: 17-Jul-2017 09:59:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-05.D				
Lims ID:	140-8630-A-5				
Client ID:	11277				
Sample Type:	Client				
Inject. Date:	15-Jul-2017 00:29:30	ALS Bottle#:	15	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005447-020				
Misc. Info.:	11277				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	17-Jul-2017 09:59:27	Calib Date:	29-May-2017 00:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK011				

First Level Reviewer: tajh Date: 17-Jul-2017 09:42:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.727	9.737	-0.010	80	563270	4.00	
* 2 1,4-Difluorobenzene	114	11.852	11.857	-0.005	94	2737456	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.478	16.483	-0.005	84	2436261	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.076	18.081	-0.005	95	1423722	3.86	
31 Methylene Chloride	84	7.037	7.048	-0.011	91	15513	0.0995	

Reagents:

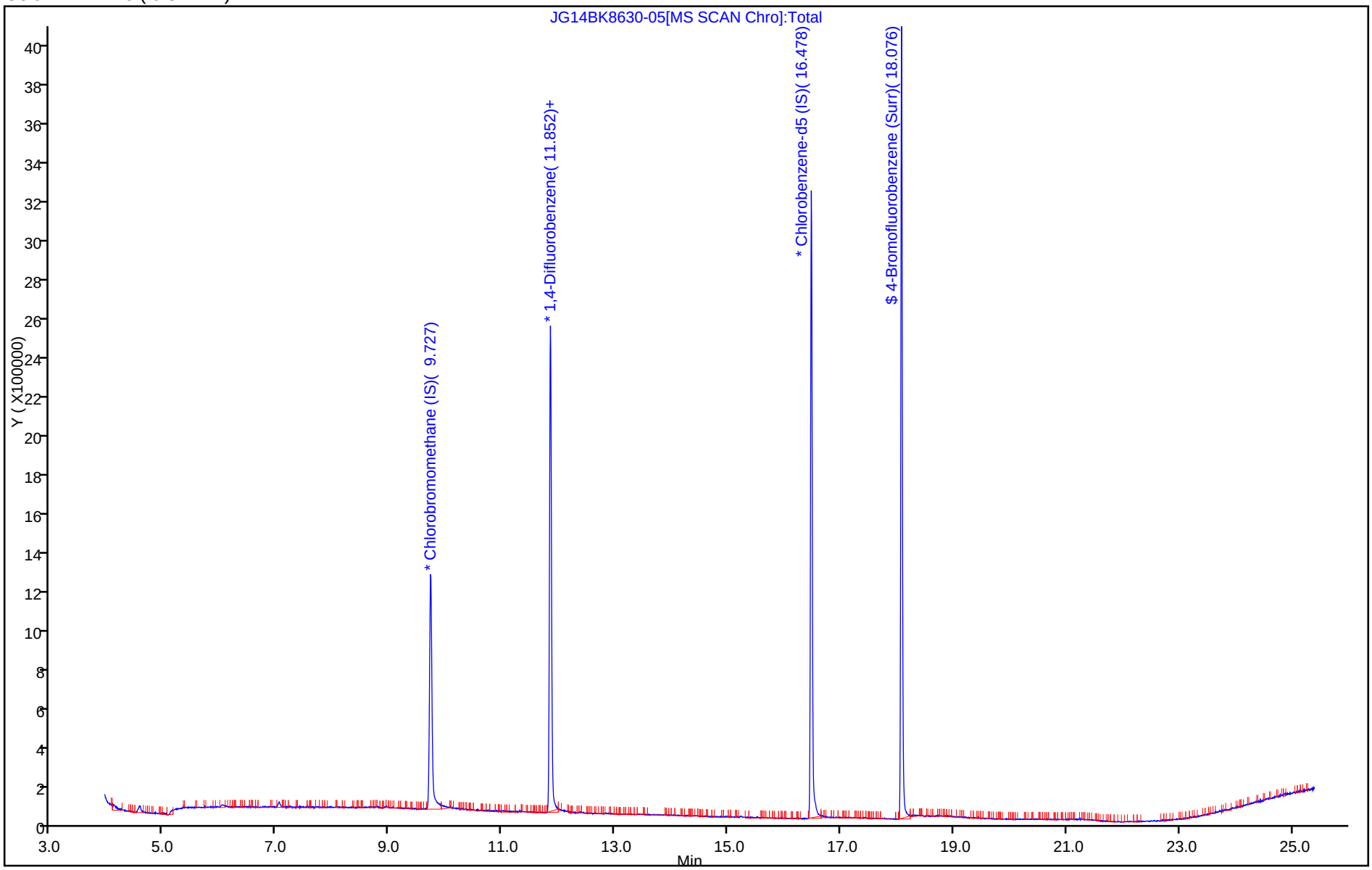
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-05.D				
Injection Date:	15-Jul-2017 00:29:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-5	Lab Sample ID:	140-8630-5	Worklist Smp#:	20
Client ID:	11277				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 10757 | Lab Sample ID: 140-8630-6

Matrix: Air | Lab File ID: JG14BK8630-06.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 01:15

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 10757 | Lab Sample ID: 140-8630-6
Matrix: Air | Lab File ID: JG14BK8630-06.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 01:15
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 10757 | Lab Sample ID: 140-8630-6

Matrix: Air | Lab File ID: JG14BK8630-06.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 01:15

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 10757 Lab Sample ID: 140-8630-6

Matrix: Air Lab File ID: JG14BK8630-06.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/15/2017 01:15

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-06.D
Lims ID: 140-8630-A-6
Client ID: 10757
Sample Type: Client
Inject. Date: 15-Jul-2017 01:15:30 ALS Bottle#: 16 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-021
Misc. Info.: 10757
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 17-Jul-2017 09:43:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.727	9.737	-0.010	81	532135	4.00	
* 2 1,4-Difluorobenzene	114	11.852	11.857	-0.005	94	2477326	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.478	16.483	-0.005	84	2204098	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.076	18.081	-0.005	95	1261776	3.78	
6 Chlorodifluoromethane	67	4.105	4.110	-0.005	93	2040	0.0464	M
31 Methylene Chloride	84	7.037	7.048	-0.011	93	14359	0.0974	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

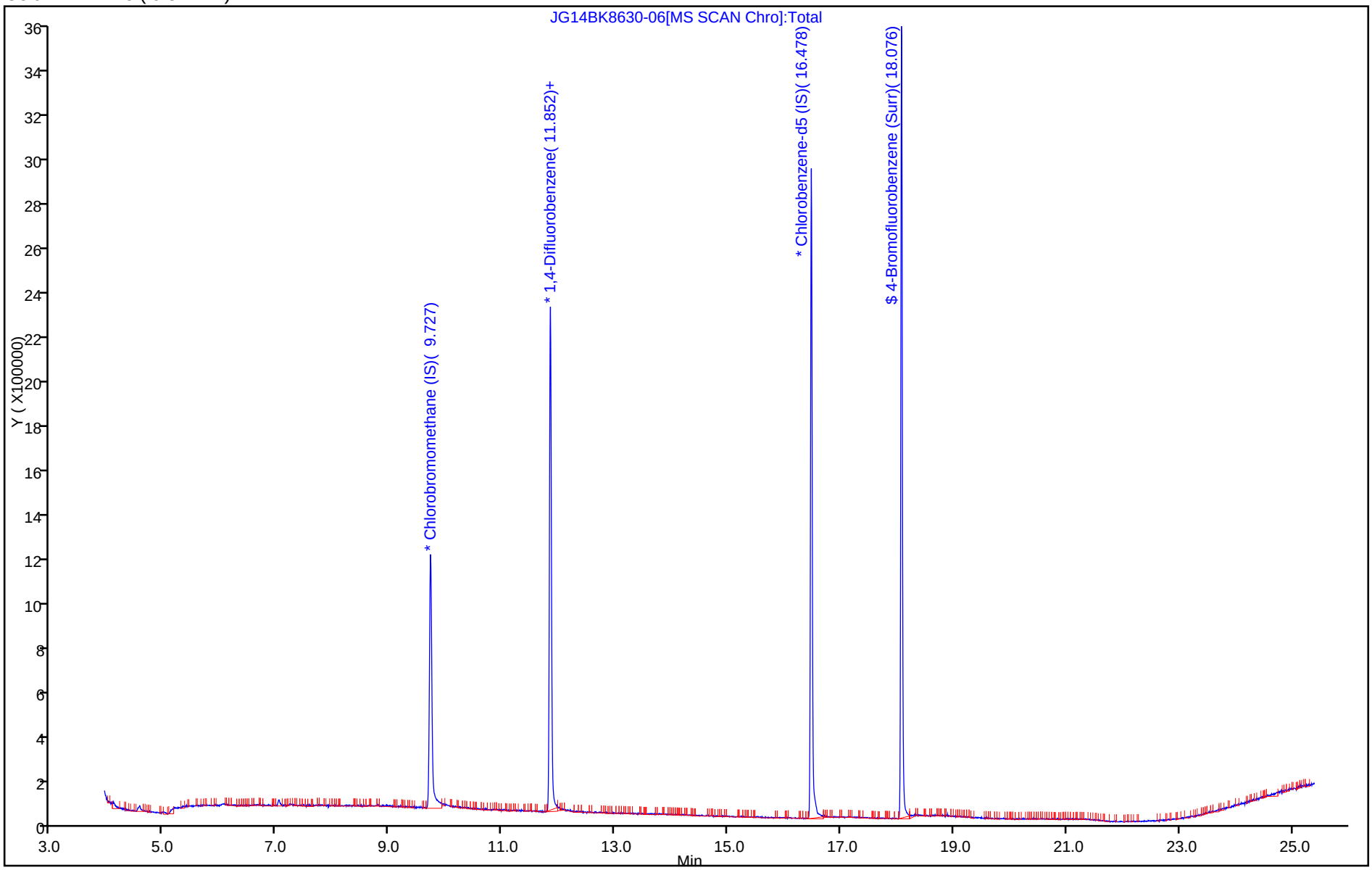
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:52 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-06.D				
Injection Date:	15-Jul-2017 01:15:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-6	Lab Sample ID:	140-8630-6	Worklist Smp#:	21
Client ID:	10757				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

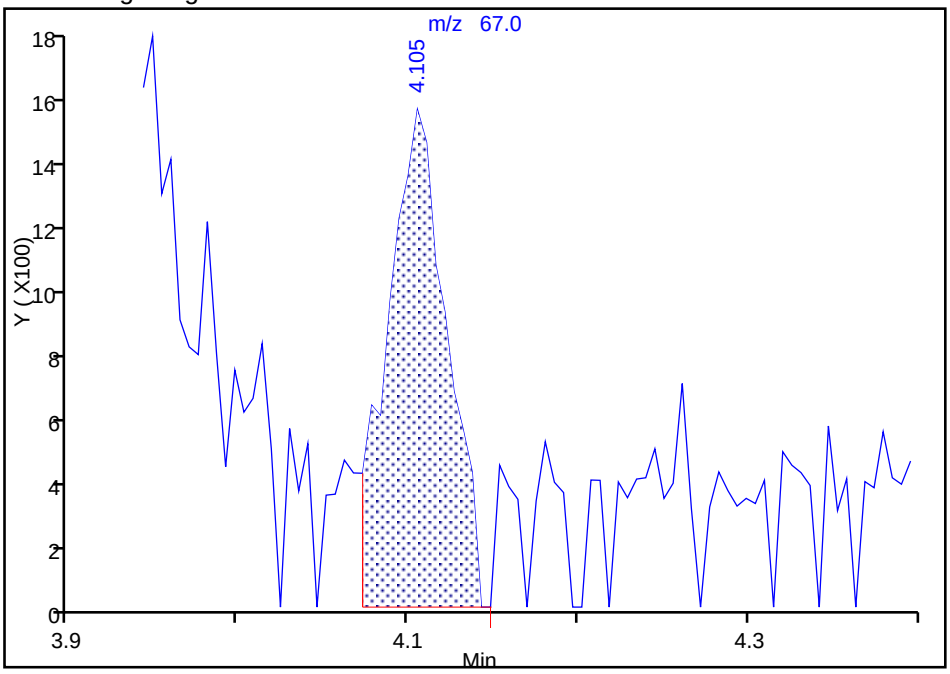
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-06.D				
Injection Date:	15-Jul-2017 01:15:30	Instrument ID:	MJ		
Lims ID:	140-8630-A-6	Lab Sample ID:	140-8630-6		
Client ID:	10757				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

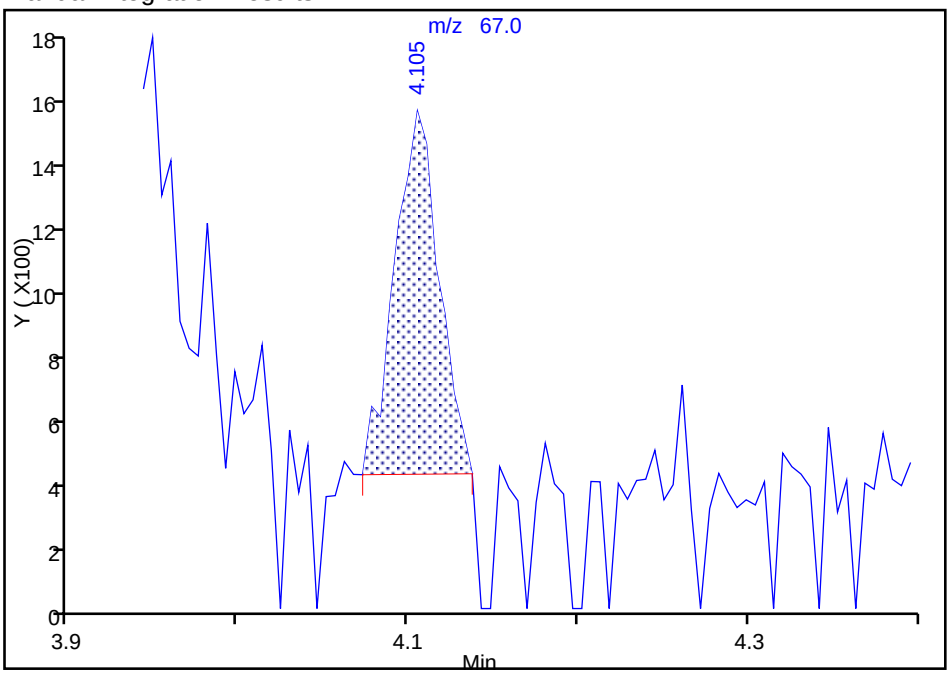
Processing Integration Results

RT: 4.11
Area: 3792
Amount: 0.086286
Amount Units: ppb v/v



Manual Integration Results

RT: 4.11
Area: 2040
Amount: 0.046420
Amount Units: ppb v/v



Reviewer: tajh, 17-Jul-2017 09:43:04

Audit Action: Manually Integrated Audit Reason: Baseline

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11111 | Lab Sample ID: 140-8630-7

Matrix: Air | Lab File ID: JG14BK8630-07.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 01:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11111 | Lab Sample ID: 140-8630-7
Matrix: Air | Lab File ID: JG14BK8630-07.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 01:59
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11111 | Lab Sample ID: 140-8630-7

Matrix: Air | Lab File ID: JG14BK8630-07.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 01:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11111 Lab Sample ID: 140-8630-7

Matrix: Air Lab File ID: JG14BK8630-07.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/15/2017 01:59

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-07.D
Lims ID: 140-8630-A-7
Client ID: 11111
Sample Type: Client
Inject. Date: 15-Jul-2017 01:59:30 ALS Bottle#: 1 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-022
Misc. Info.: 11111
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 10:46:20 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 17-Jul-2017 10:46:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.730	9.737	-0.007	81	512989	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	94	2516793	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.481	16.483	-0.002	84	2271719	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	95	1299412	3.78	
6 Chlorodifluoromethane	67	4.103	4.110	-0.007	94	2783	0.0657	M
31 Methylene Chloride	84	7.045	7.048	-0.003	93	13639	0.0960	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

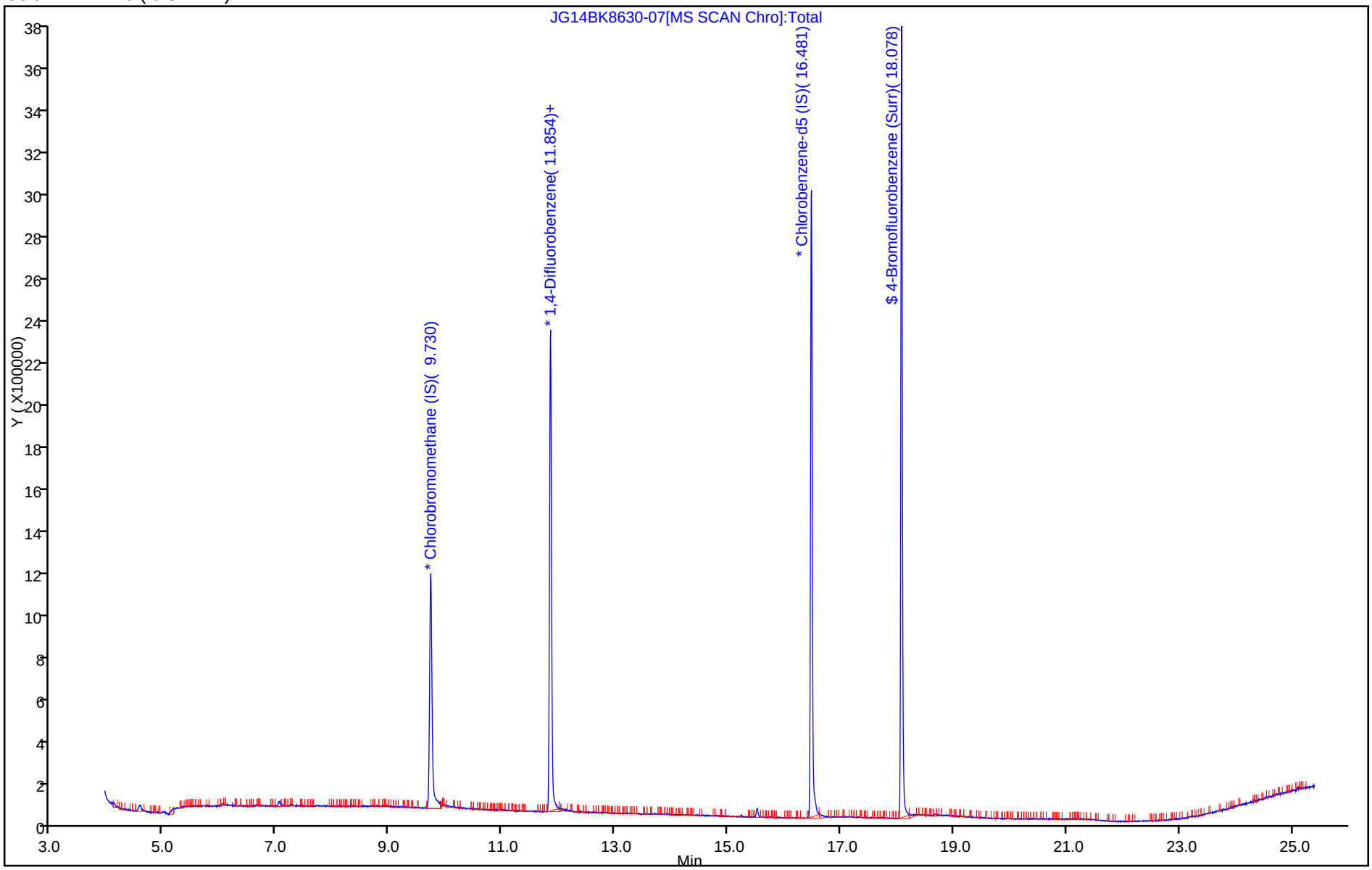
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 10:46:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-07.D				
Injection Date:	15-Jul-2017 01:59:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-7	Lab Sample ID:	140-8630-7	Worklist Smp#:	22
Client ID:	11111				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

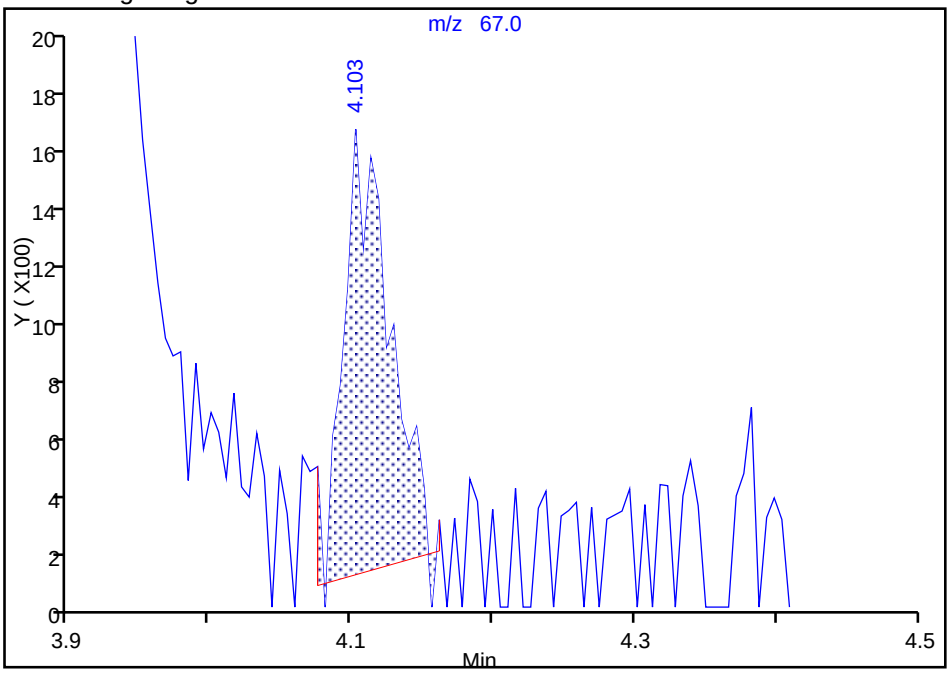
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-07.D				
Injection Date:	15-Jul-2017 01:59:30	Instrument ID:	MJ		
Lims ID:	140-8630-A-7	Lab Sample ID:	140-8630-7		
Client ID:	11111				
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

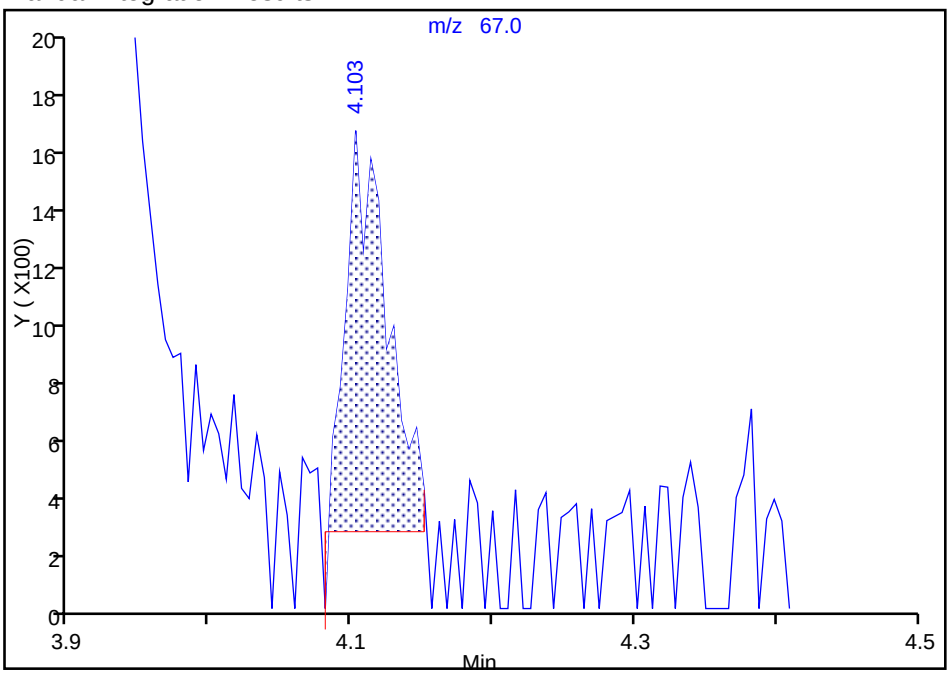
Processing Integration Results

RT: 4.10
Area: 3496
Amount: 0.082520
Amount Units: ppb v/v



Manual Integration Results

RT: 4.10
Area: 2783
Amount: 0.065690
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 17-Jul-2017 10:46:05

Audit Action: Manually Integrated Audit Reason: Baseline

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11644 | Lab Sample ID: 140-8630-9

Matrix: Air | Lab File ID: JG14BK8630-09.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 03:28

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11644 | Lab Sample ID: 140-8630-9

Matrix: Air | Lab File ID: JG14BK8630-09.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 03:28

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11644 | Lab Sample ID: 140-8630-9

Matrix: Air | Lab File ID: JG14BK8630-09.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/15/2017 03:28

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11644 Lab Sample ID: 140-8630-9

Matrix: Air Lab File ID: JG14BK8630-09.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/15/2017 03:28

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

Report Date: 17-Jul-2017 09:59:57 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-09.D
Lims ID: 140-8630-A-9
Client ID: 11644
Sample Type: Client
Inject. Date: 15-Jul-2017 03:28:30 ALS Bottle#: 3 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-024
Misc. Info.: 11644
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 17-Jul-2017 09:45:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.730	9.737	-0.007	82	551546	4.00	
* 2 1,4-Difluorobenzene	114	11.855	11.857	-0.002	94	2659237	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.481	16.483	-0.002	84	2374590	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.079	18.081	-0.002	95	1352405	3.76	
6 Chlorodifluoromethane	67	4.108	4.110	-0.002	93	3272	0.0718	
31 Methylene Chloride	84	7.040	7.048	-0.008	92	15759	0.1032	

Reagents:

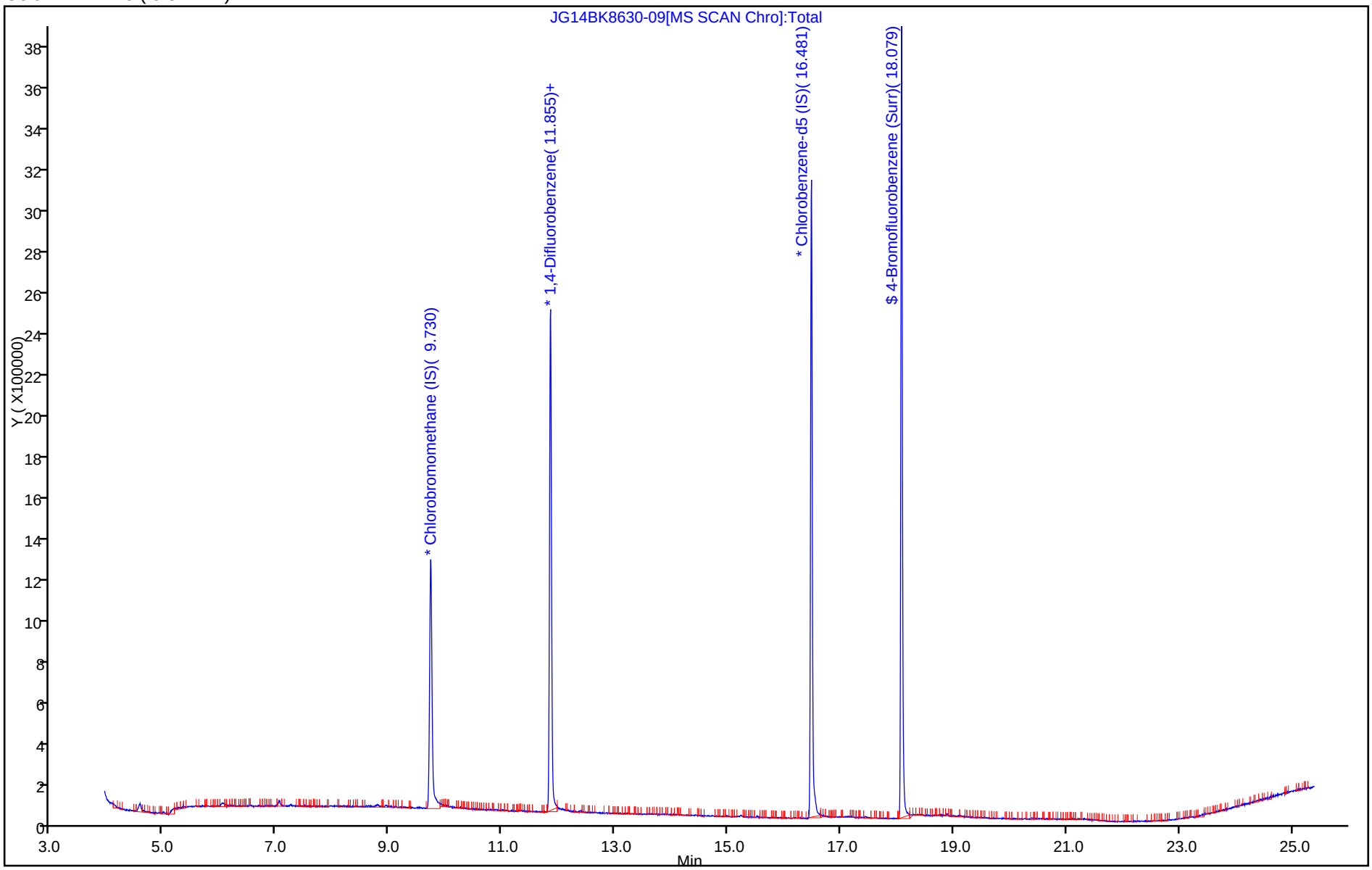
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:57 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\JG14BK8630-09.D				
Injection Date:	15-Jul-2017 03:28:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-9	Lab Sample ID:	140-8630-9	Worklist Smp#:	24
Client ID:	11644				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11640 | Lab Sample ID: 140-8630-11

Matrix: Air | Lab File ID: JG17P114.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/17/2017 23:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11640 | Lab Sample ID: 140-8630-11
Matrix: Air | Lab File ID: JG17P114.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/17/2017 23:20
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11640 | Lab Sample ID: 140-8630-11

Matrix: Air | Lab File ID: JG17P114.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/17/2017 23:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11640 Lab Sample ID: 140-8630-11

Matrix: Air Lab File ID: JG17P114.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/17/2017 23:20

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12696 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P114.D
Lims ID: 140-8630-A-11
Client ID: 11640
Sample Type: Client
Inject. Date: 17-Jul-2017 23:20:30 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005448-022
Misc. Info.: 11640
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 18-Jul-2017 09:04:18 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: tajh Date: 18-Jul-2017 08:58:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.728	9.732	-0.004	80	572508	4.00	
* 2 1,4-Difluorobenzene	114	11.853	11.857	-0.004	94	2876738	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.480	16.483	-0.003	84	2604272	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.077	18.081	-0.004	95	1477742	3.75	
6 Chlorodifluoromethane	67	4.107	4.110	-0.003	93	2462	0.0521	
11 Acetaldehyde	44	4.575	4.573	0.002	98	80153	1.86	
23 Acetone	58	6.065	6.014	0.051	98	36745	0.7901	
31 Methylene Chloride	84	7.049	7.042	0.007	92	15853	0.1000	
39 2-Butanone (MEK)	72	8.932	8.914	0.018	97	8004	0.1484	
72 2-Hexanone	58	14.973	14.966	0.007	94	3953	0.0302	

Reagents:

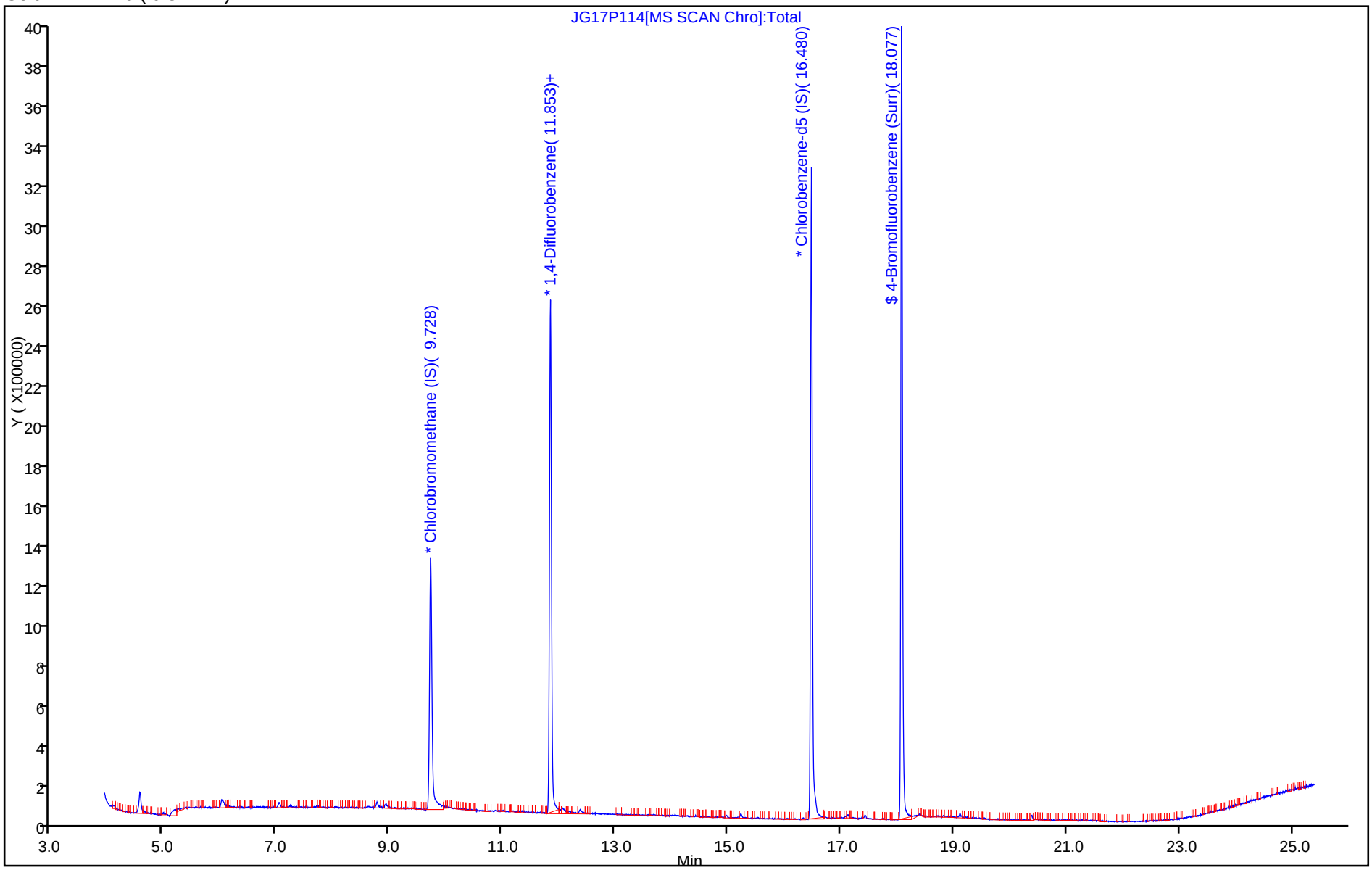
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Jul-2017 09:04:52 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P114.D				
Injection Date:	17-Jul-2017 23:20:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-11	Lab Sample ID:	140-8630-11	Worklist Smp#:	22
Client ID:	11640				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11643 | Lab Sample ID: 140-8630-12

Matrix: Air | Lab File ID: JG17P115.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/18/2017 00:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11643 | Lab Sample ID: 140-8630-12
Matrix: Air | Lab File ID: JG17P115.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/18/2017 00:04
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11643 | Lab Sample ID: 140-8630-12

Matrix: Air | Lab File ID: JG17P115.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/18/2017 00:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11643 Lab Sample ID: 140-8630-12

Matrix: Air Lab File ID: JG17P115.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/18/2017 00:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12696 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P115.D
Lims ID: 140-8630-A-12
Client ID: 11643
Sample Type: Client
Inject. Date: 18-Jul-2017 00:04:30 ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005448-023
Misc. Info.: 11643
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 18-Jul-2017 09:04:18 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: tajh Date: 18-Jul-2017 08:58:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.729	9.732	-0.003	87	599510	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	94	2977936	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.480	16.483	-0.003	84	2688487	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	95	1550571	3.81	
6 Chlorodifluoromethane	67	4.097	4.110	-0.013	55	2213	0.0447	M
11 Acetaldehyde	44	4.570	4.573	-0.003	100	79753	1.77	
13 Butane	43	4.699	4.696	0.003	94	9069	0.0373	
23 Acetone	58	6.055	6.014	0.041	47	41719	0.8567	M
24 Isopropyl alcohol	45	6.103	6.090	0.013	88	9079	0.0467	
31 Methylene Chloride	84	7.045	7.042	0.003	92	17076	0.1029	
39 2-Butanone (MEK)	72	8.933	8.914	0.019	97	8875	0.1572	
72 2-Hexanone	58	14.979	14.966	0.013	88	3607	0.0267	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

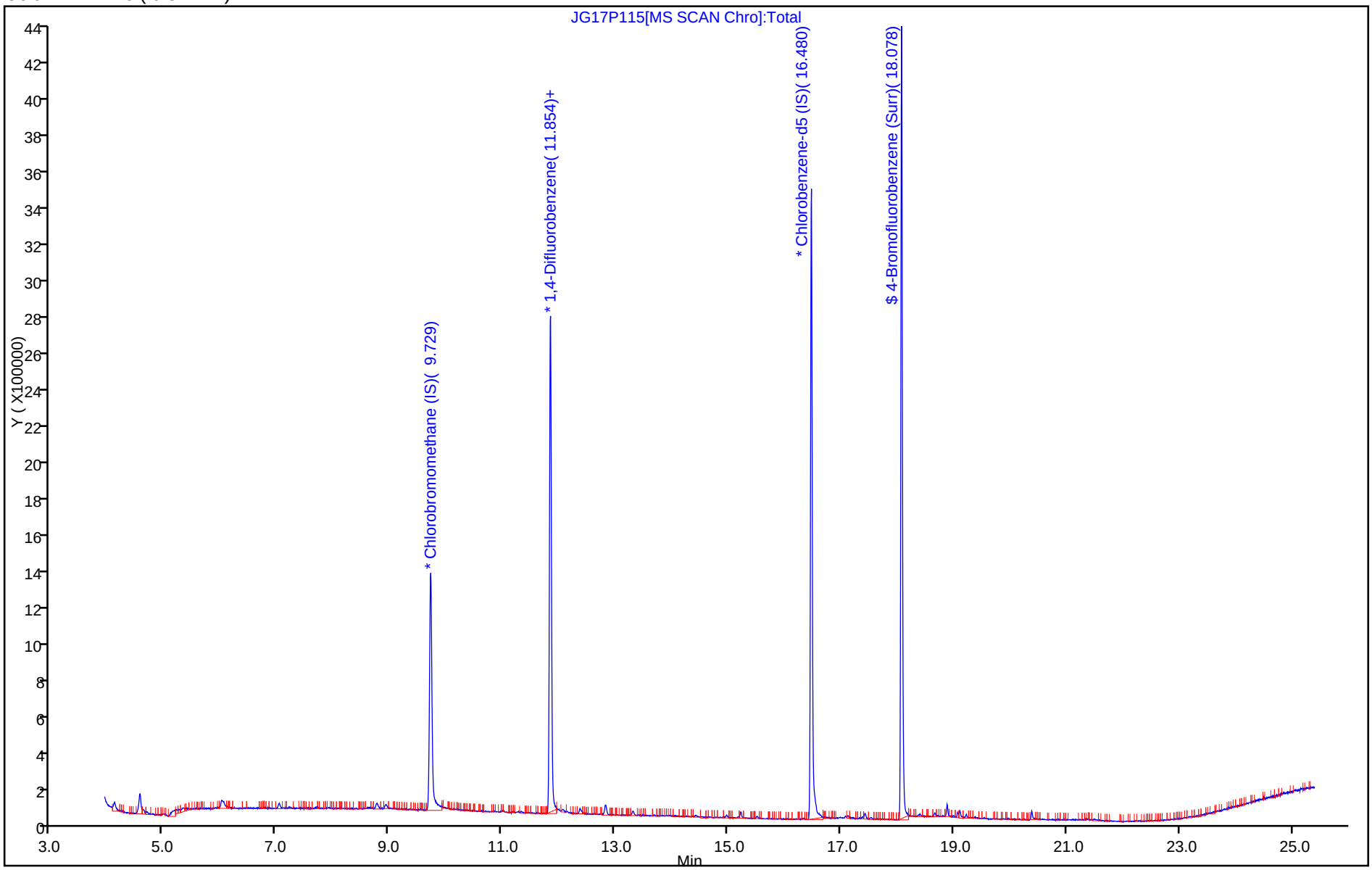
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Jul-2017 09:04:53 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P115.D				
Injection Date:	18-Jul-2017 00:04:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-12	Lab Sample ID:	140-8630-12	Worklist Smp#:	23
Client ID:	11643				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

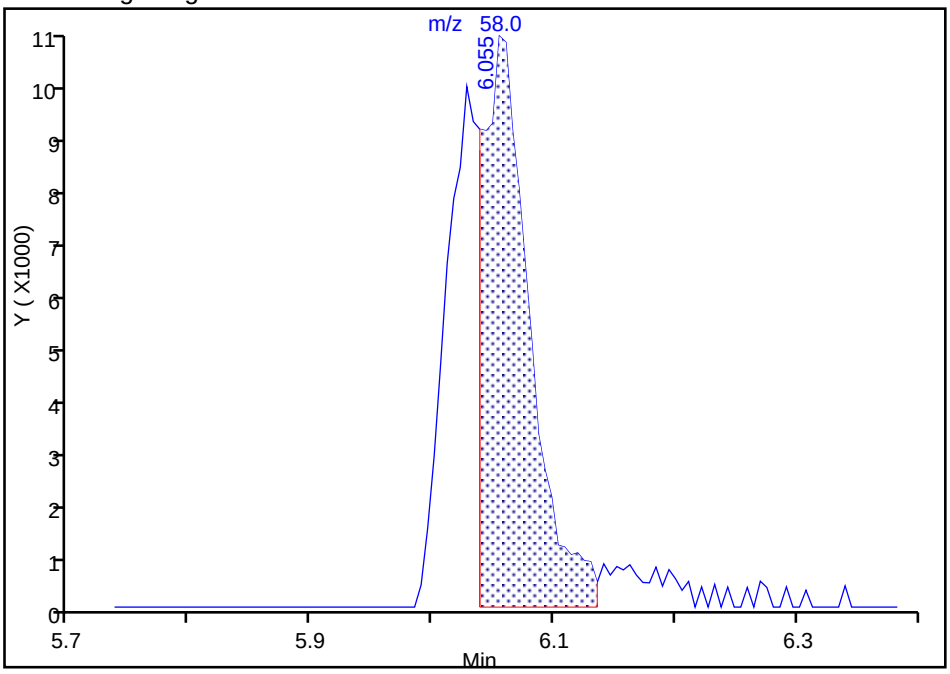
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P115.D				
Injection Date:	18-Jul-2017 00:04:30	Instrument ID:	MJ		
Lims ID:	140-8630-A-12	Lab Sample ID:	140-8630-12		
Client ID:	11643				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetone, CAS: 67-64-1

Signal: 1

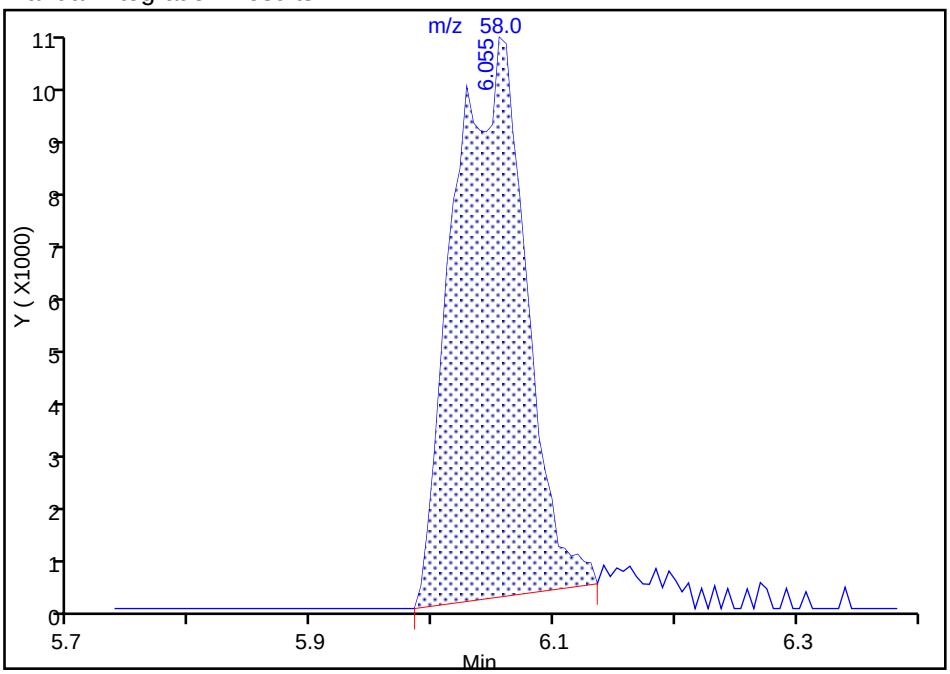
Processing Integration Results

RT: 6.05
Area: 28134
Amount: 0.577722
Amount Units: ppb v/v



Manual Integration Results

RT: 6.05
Area: 41719
Amount: 0.856685
Amount Units: ppb v/v



Reviewer: tajh, 18-Jul-2017 08:58:26

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Knoxville

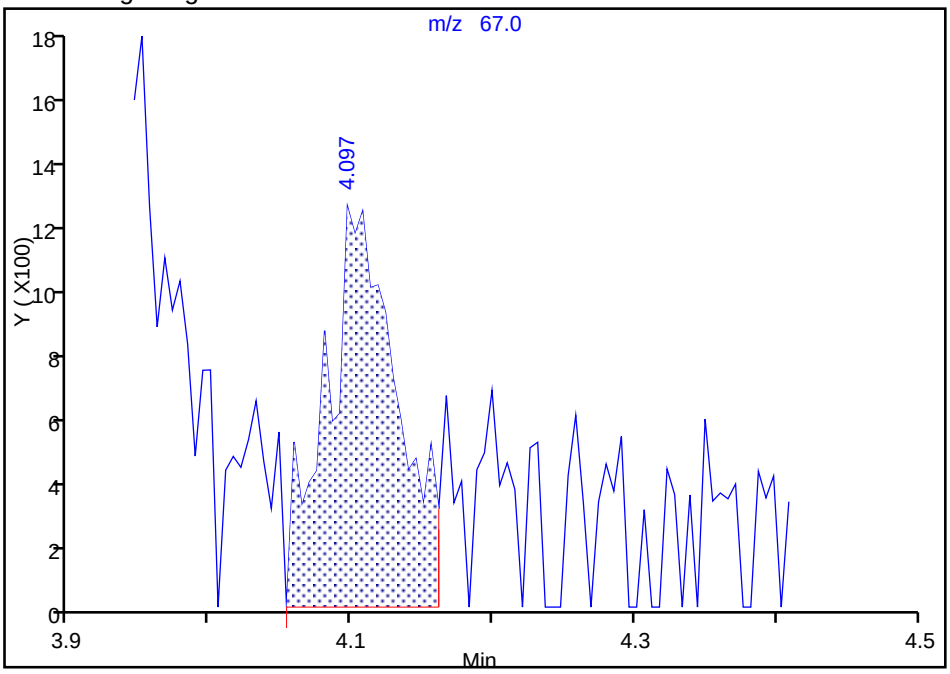
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P115.D				
Injection Date:	18-Jul-2017 00:04:30	Instrument ID:	MJ		
Lims ID:	140-8630-A-12	Lab Sample ID:	140-8630-12		
Client ID:	11643				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

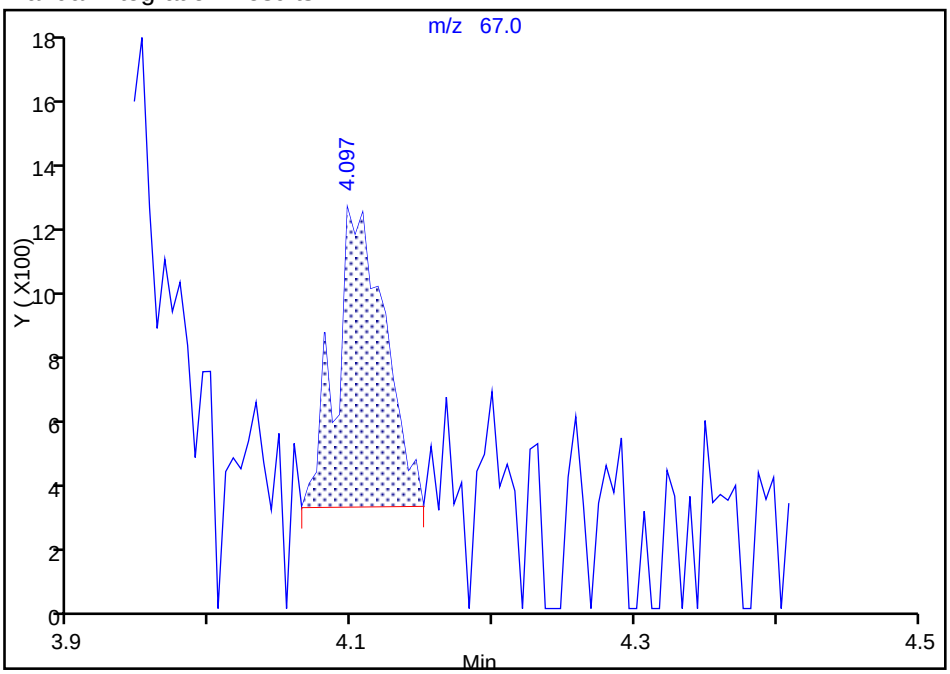
Processing Integration Results

RT: 4.10
Area: 4374
Amount: 0.088344
Amount Units: ppb v/v



Manual Integration Results

RT: 4.10
Area: 2213
Amount: 0.044697
Amount Units: ppb v/v



Reviewer: tajh, 18-Jul-2017 08:58:14

Audit Action: Manually Integrated Audit Reason: Baseline

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11570 | Lab Sample ID: 140-8630-14
Matrix: Air | Lab File ID: GG17P116.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/18/2017 04:00
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12731 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11570 | Lab Sample ID: 140-8630-14

Matrix: Air | Lab File ID: GG17P116.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/18/2017 04:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12731 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11570 | Lab Sample ID: 140-8630-14

Matrix: Air | Lab File ID: GG17P116.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/18/2017 04:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12731 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11570 Lab Sample ID: 140-8630-14

Matrix: Air Lab File ID: GG17P116.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/18/2017 04:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12731 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170713-5459.b\GG17P116.D
Lims ID: 140-8630-A-14
Client ID: 11570
Sample Type: Client
Inject. Date: 18-Jul-2017 04:00:30 ALS Bottle#: 16 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005459-025
Misc. Info.: 11570
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170713-5459.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 18-Jul-2017 10:21:33 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: tajh Date: 18-Jul-2017 10:20:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.915	7.931	-0.016	87	605799	4.00	
* 2 1,4-Difluorobenzene	114	10.072	10.083	-0.011	96	2917691	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.952	14.963	-0.011	90	2793833	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.629	16.635	-0.006	87	2168669	3.86	
6 Chlorodifluoromethane	67	3.466	3.472	-0.006	96	5946	0.0655	
11 Acetaldehyde	44	3.790	3.795	-0.005	91	68233	1.38	
23 Acetone	58	4.852	4.820	0.032	99	33483	0.5823	
29 2-Methyl-2-propanol	59	5.462	5.446	0.016	67	6781	0.0289	
31 Methylene Chloride	84	5.618	5.623	-0.005	95	15984	0.1123	

Reagents:

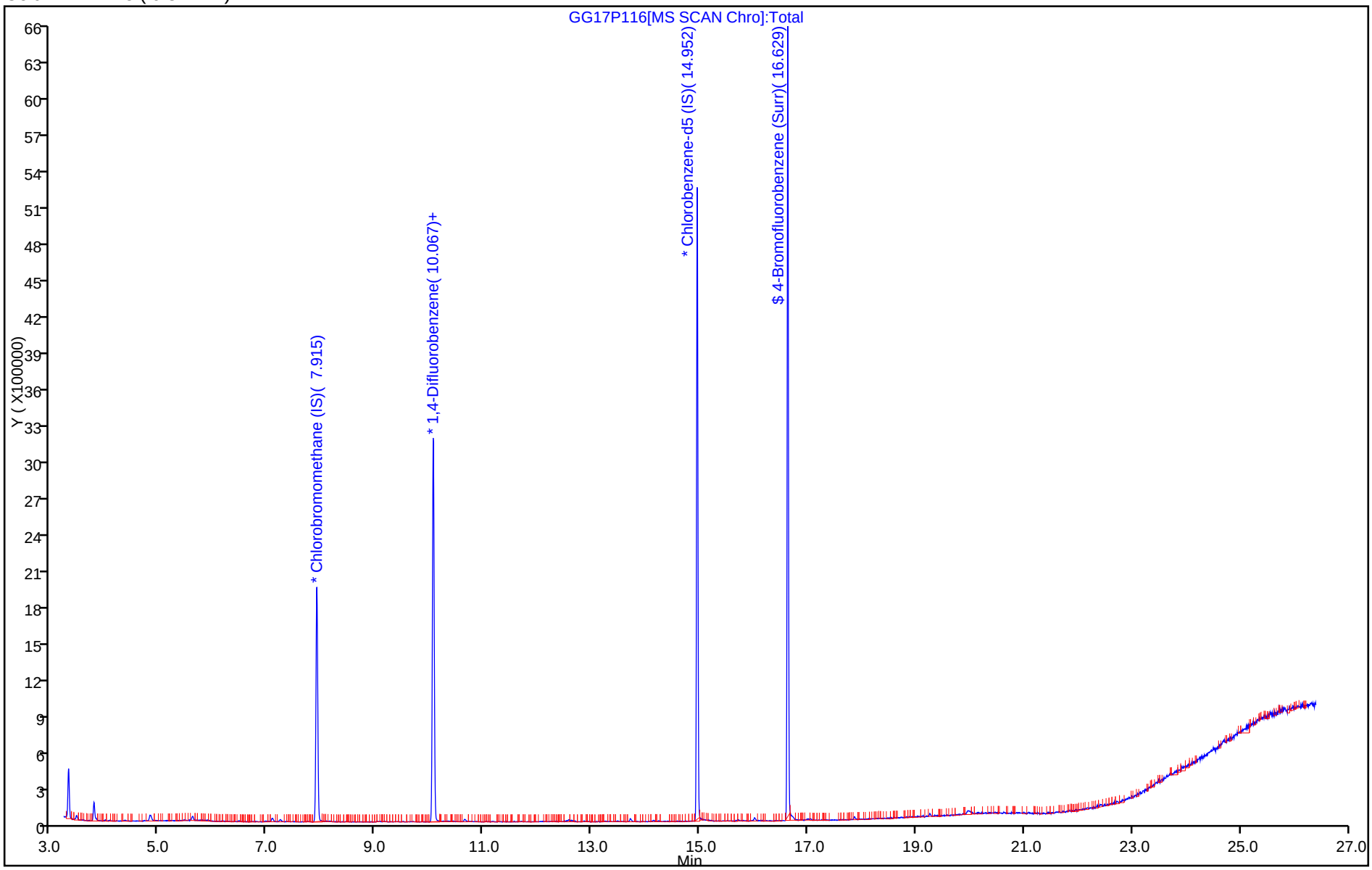
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Jul-2017 10:22:16 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170713-5459.b\GG17P116.D				
Injection Date:	18-Jul-2017 04:00:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8630-A-14	Lab Sample ID:	140-8630-14	Worklist Smp#:	25
Client ID:	11570				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11642 | Lab Sample ID: 140-8630-16
Matrix: Air | Lab File ID: JG17P204.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/17/2017 17:19
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1
SDG No.:
Client Sample ID: 11642 | Lab Sample ID: 140-8630-16
Matrix: Air | Lab File ID: JG17P204.D
Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55
Sample wt/vol: 200(mL) | Date Analyzed: 07/17/2017 17:19
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11642 | Lab Sample ID: 140-8630-16

Matrix: Air | Lab File ID: JG17P204.D

Analysis Method: TO-15 | Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 07/17/2017 17:19

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12696 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8630-1

SDG No.:

Client Sample ID: 11642 Lab Sample ID: 140-8630-16

Matrix: Air Lab File ID: JG17P204.D

Analysis Method: TO-15 Date Collected: 07/07/2017 11:55

Sample wt/vol: 200(mL) Date Analyzed: 07/17/2017 17:19

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12696 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P204.D
Lims ID: 140-8630-A-16
Client ID: 11642
Sample Type: Client
Inject. Date: 17-Jul-2017 17:19:30 ALS Bottle#: 17 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005448-025
Misc. Info.: 11642
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 18-Jul-2017 09:04:18 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: barlozhetskayaa Date: 17-Jul-2017 18:00:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.730	9.732	-0.002	80	559230	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	93	2767618	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.481	16.483	-0.002	84	2583285	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	96	1530545	3.92	
6 Chlorodifluoromethane	67	4.108	4.110	-0.002	94	2795	0.0605	
11 Acetaldehyde	44	4.581	4.573	0.008	99	61831	1.47	
31 Methylene Chloride	84	7.045	7.042	0.003	93	15118	0.0976	
39 2-Butanone (MEK)	72	8.944	8.914	0.030	97	4800	0.0911	
116 Naphthalene	128	21.715	21.712	0.003	98	15920	0.0428	

Reagents:

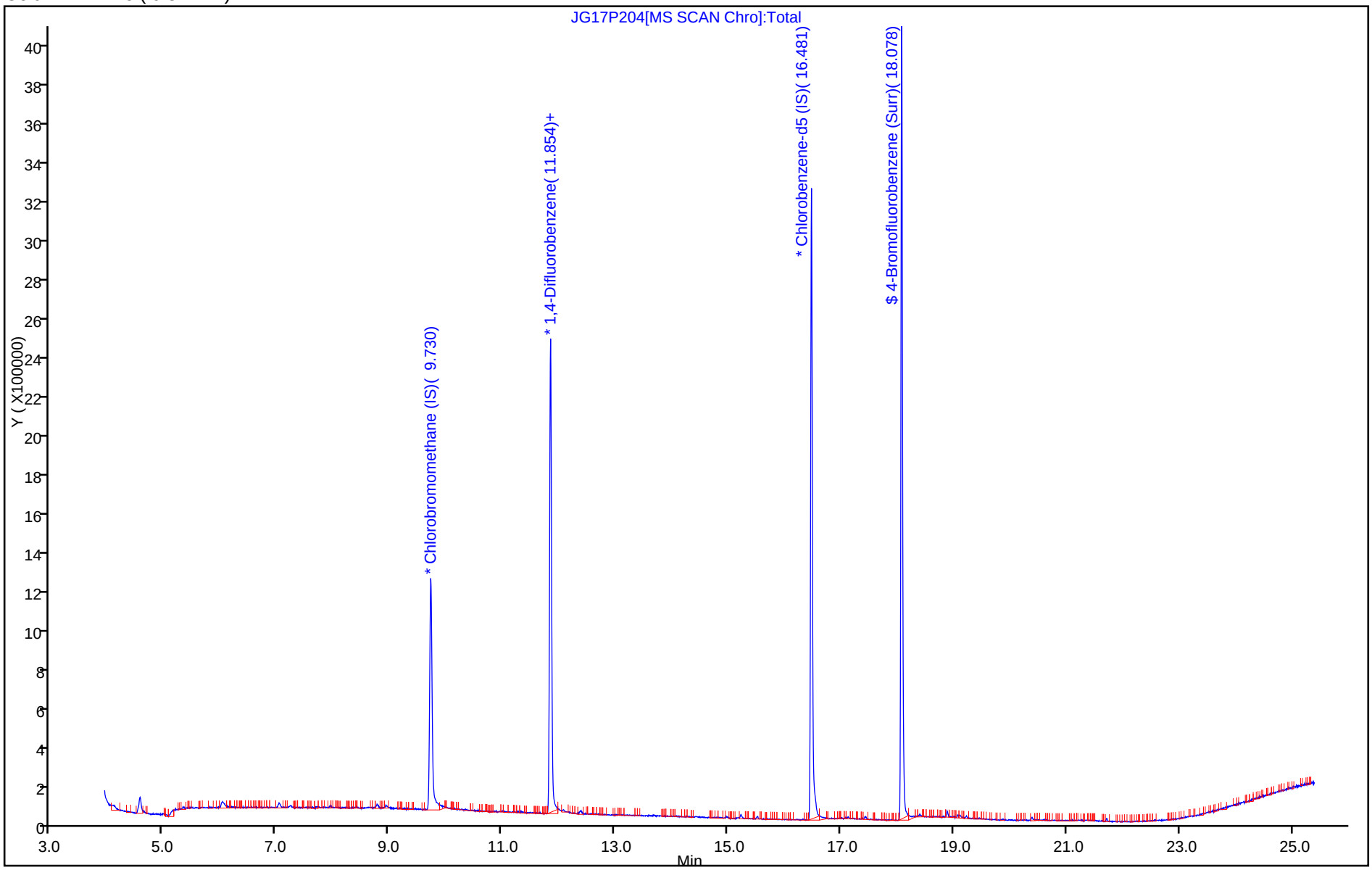
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 18-Jul-2017 09:04:36 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5448.b\JG17P204.D				
Injection Date:	17-Jul-2017 17:19:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8630-A-16	Lab Sample ID:	140-8630-16	Worklist Smp#:	25
Client ID:	11642				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132 | Lab Sample ID: 140-8660-2
Matrix: Air | Lab File ID: GG13lot8660.D
Analysis Method: TO-15 | Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12614 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132 | Lab Sample ID: 140-8660-2
Matrix: Air | Lab File ID: GG13lot8660.D
Analysis Method: TO-15 | Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12614 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	0.91		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132
Lab Sample ID: 140-8660-2
Matrix: Air
Lab File ID: GG13lot8660.D
Analysis Method: TO-15
Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL)
Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12614
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8660-1

SDG No.:

Client Sample ID: 11132 Lab Sample ID: 140-8660-2

Matrix: Air Lab File ID: GG13lot8660.D

Analysis Method: TO-15 Date Collected: 07/12/2017 12:05

Sample wt/vol: 200(mL) Date Analyzed: 07/14/2017 04:27

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12614 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

Report Date: 14-Jul-2017 11:43:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\GG13lot8660.D
Lims ID: 140-8660-A-2
Client ID: 11132
Sample Type: Client
Inject. Date: 14-Jul-2017 04:27:30 ALS Bottle#: 1 Worklist Smp#: 26
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005428-026
Misc. Info.: 11132
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 11:43:04 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 11:42:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.915	7.926	-0.011	87	559188	4.00	
* 2 1,4-Difluorobenzene	114	10.072	10.083	-0.011	95	2707006	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.958	14.963	-0.005	90	2579111	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.629	16.635	-0.006	86	2049700	3.96	
6 Chlorodifluoromethane	67	3.467	3.467	0.000	96	30575	0.3648	
31 Methylene Chloride	84	5.618	5.624	-0.006	95	21215	0.1614	

Reagents:

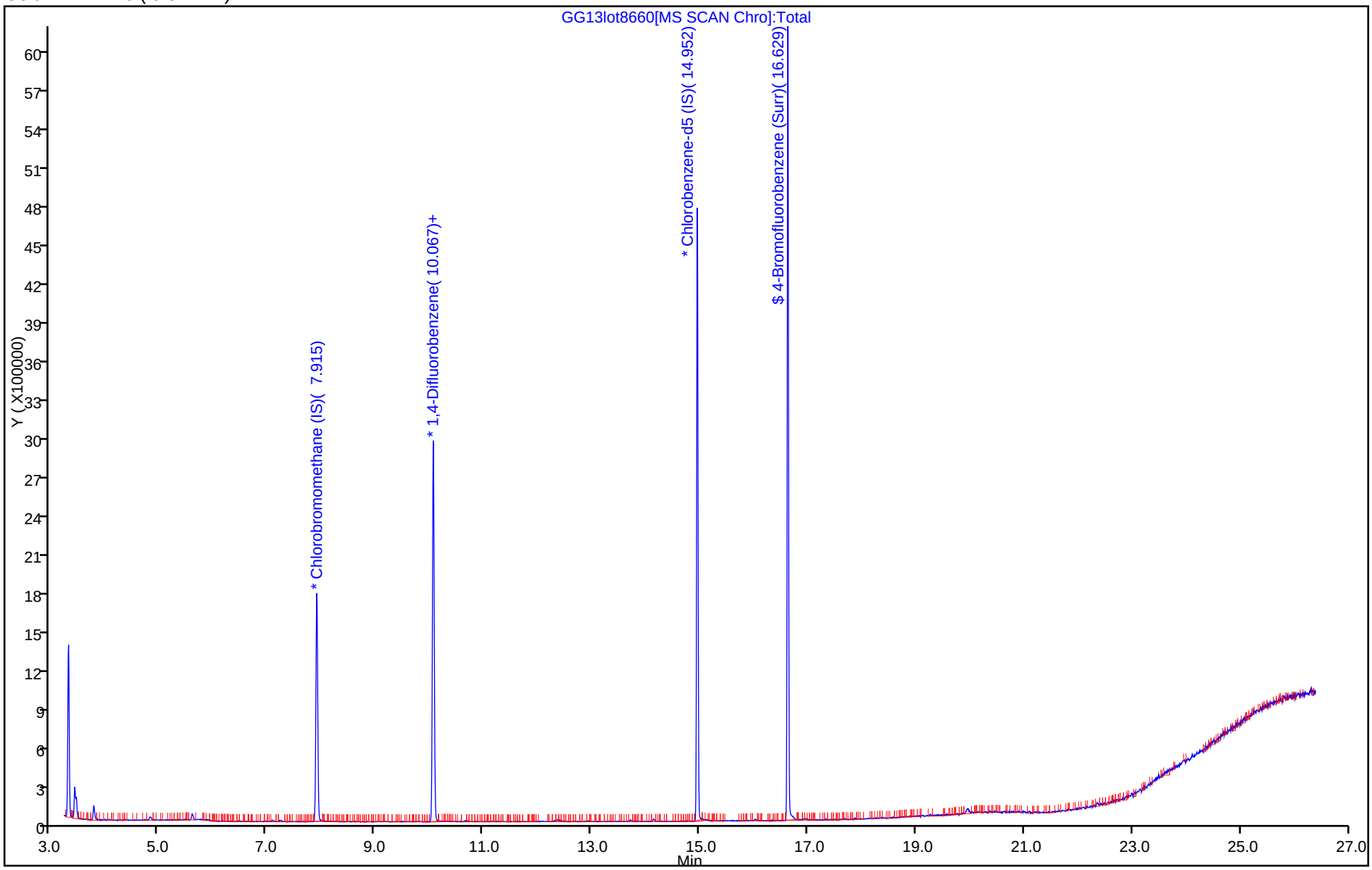
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 11:43:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\GG13lot8660.D				
Injection Date:	14-Jul-2017 04:27:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-8660-A-2	Lab Sample ID:	140-8660-2	Worklist Smp#:	26
Client ID:	11132				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

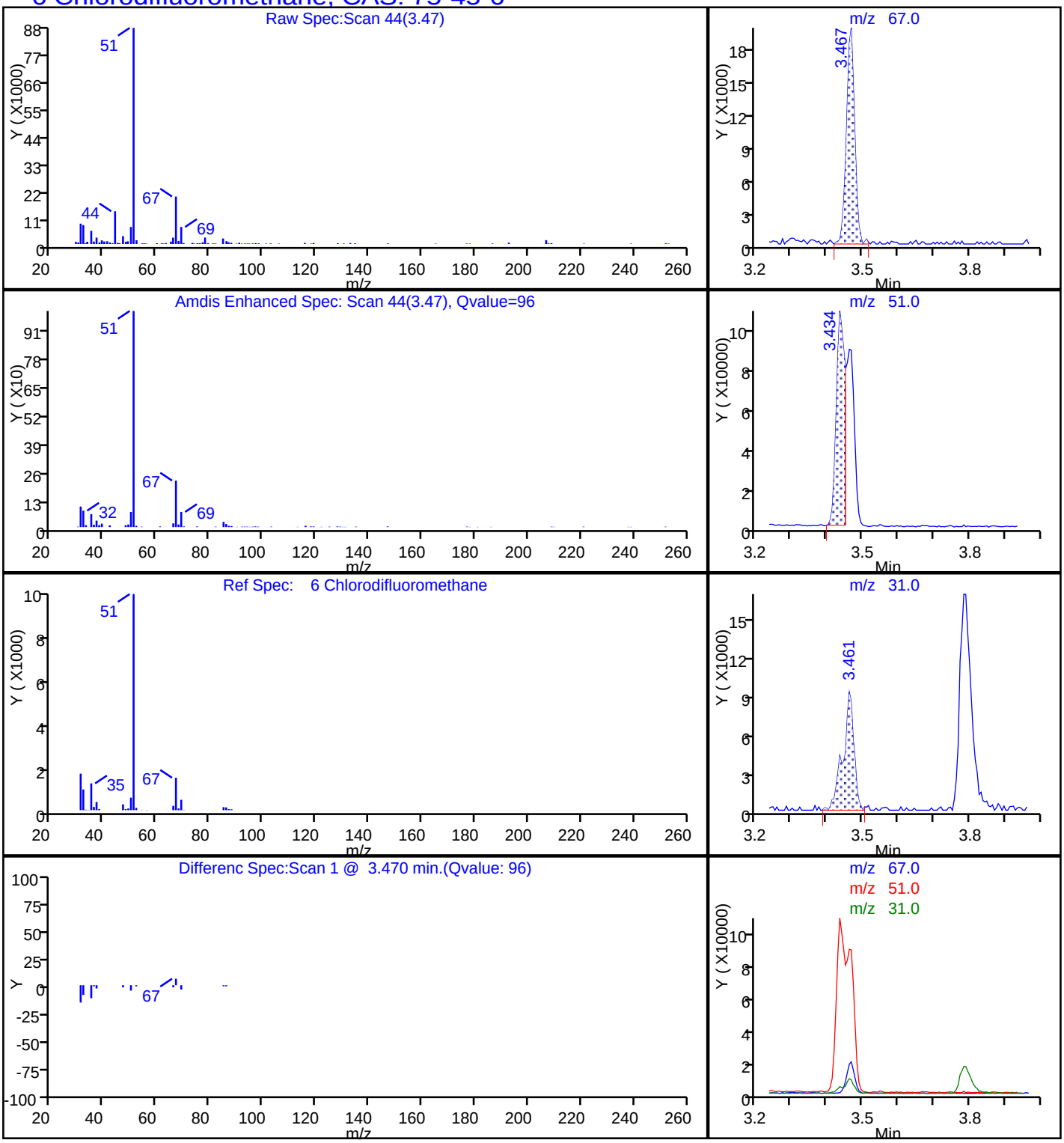


Report Date: 14-Jul-2017 11:43:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\GG13lot8660.D				
Injection Date:	14-Jul-2017 04:27:30	Instrument ID:	MG		
Lims ID:	140-8660-A-2	Lab Sample ID:	140-8660-2		
Client ID:	11132				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 | Lab Sample ID: 140-8682-4

Matrix: Air | Lab File ID: G14L8682.D

Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND	*	0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 | Lab Sample ID: 140-8682-4

Matrix: Air | Lab File ID: G14L8682.D

Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	0.27		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 | Lab Sample ID: 140-8682-4

Matrix: Air | Lab File ID: G14L8682.D

Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 Lab Sample ID: 140-8682-4

Matrix: Air Lab File ID: G14L8682.D

Analysis Method: TO 15 LL Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\G14L8682.D
Lims ID: 140-8682-A-4
Client ID: 10363
Sample Type: Client
Inject. Date: 14-Jul-2017 14:31:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-007
Misc. Info.: 10363
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 14-Jul-2017 15:42:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.729	9.737	-0.008	80	623873	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	94	3091583	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.480	16.483	-0.003	84	2754111	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	95	1599752	3.84	
6 Chlorodifluoromethane	67	4.107	4.110	-0.003	93	13976	0.2713	
20 Trichlorofluoromethane	101	5.882	5.886	-0.004	95	7070	0.0126	
31 Methylene Chloride	84	7.039	7.048	-0.009	90	18300	0.1059	
47 1,1,1-Trichloroethane	97	10.778	10.781	-0.003	88	12483	0.0272	

Reagents:

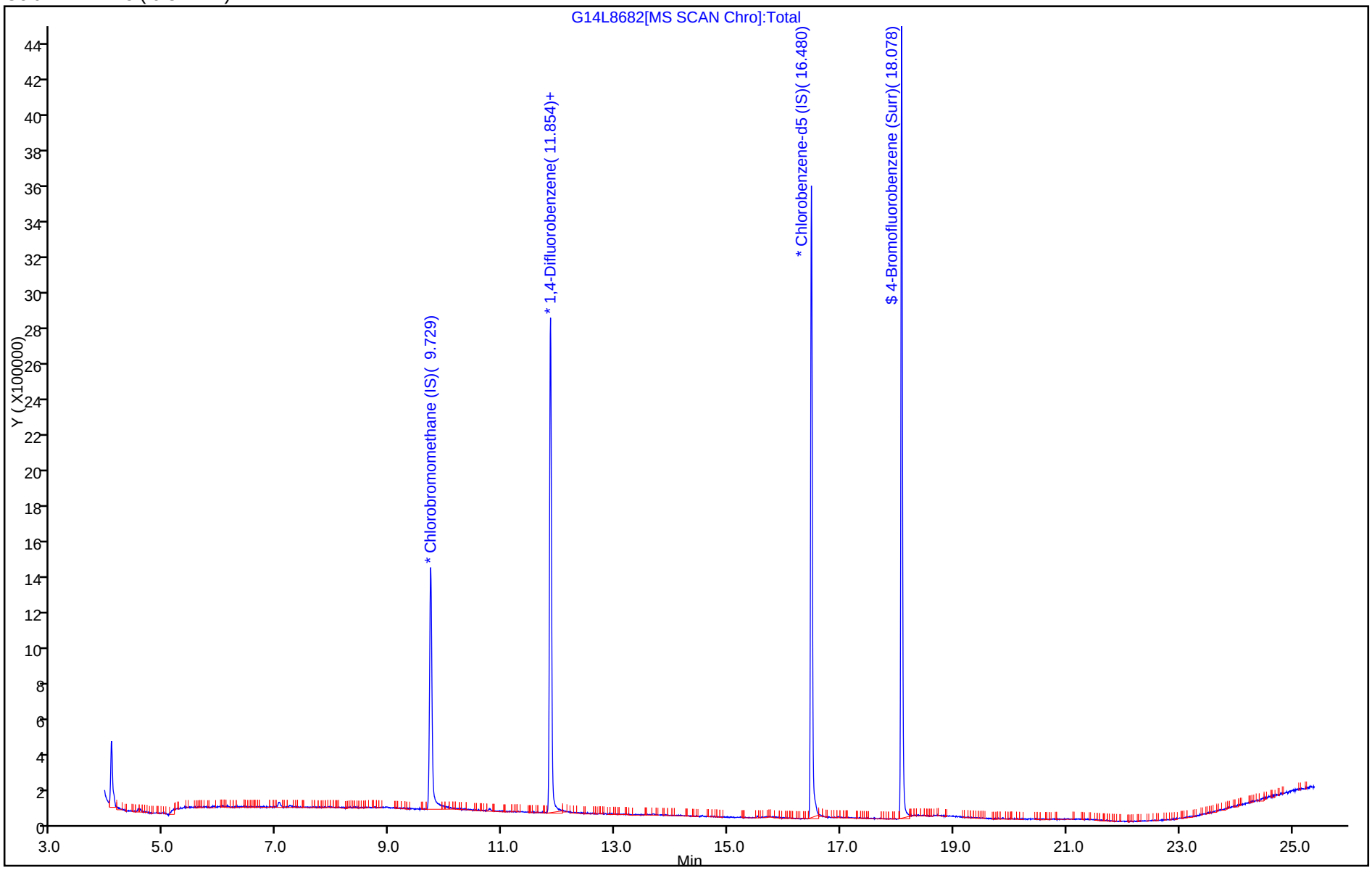
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:38 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\G14L8682.D				
Injection Date:	14-Jul-2017 14:31:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8682-A-4	Lab Sample ID:	140-8682-4	Worklist Smp#:	7
Client ID:	10363				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

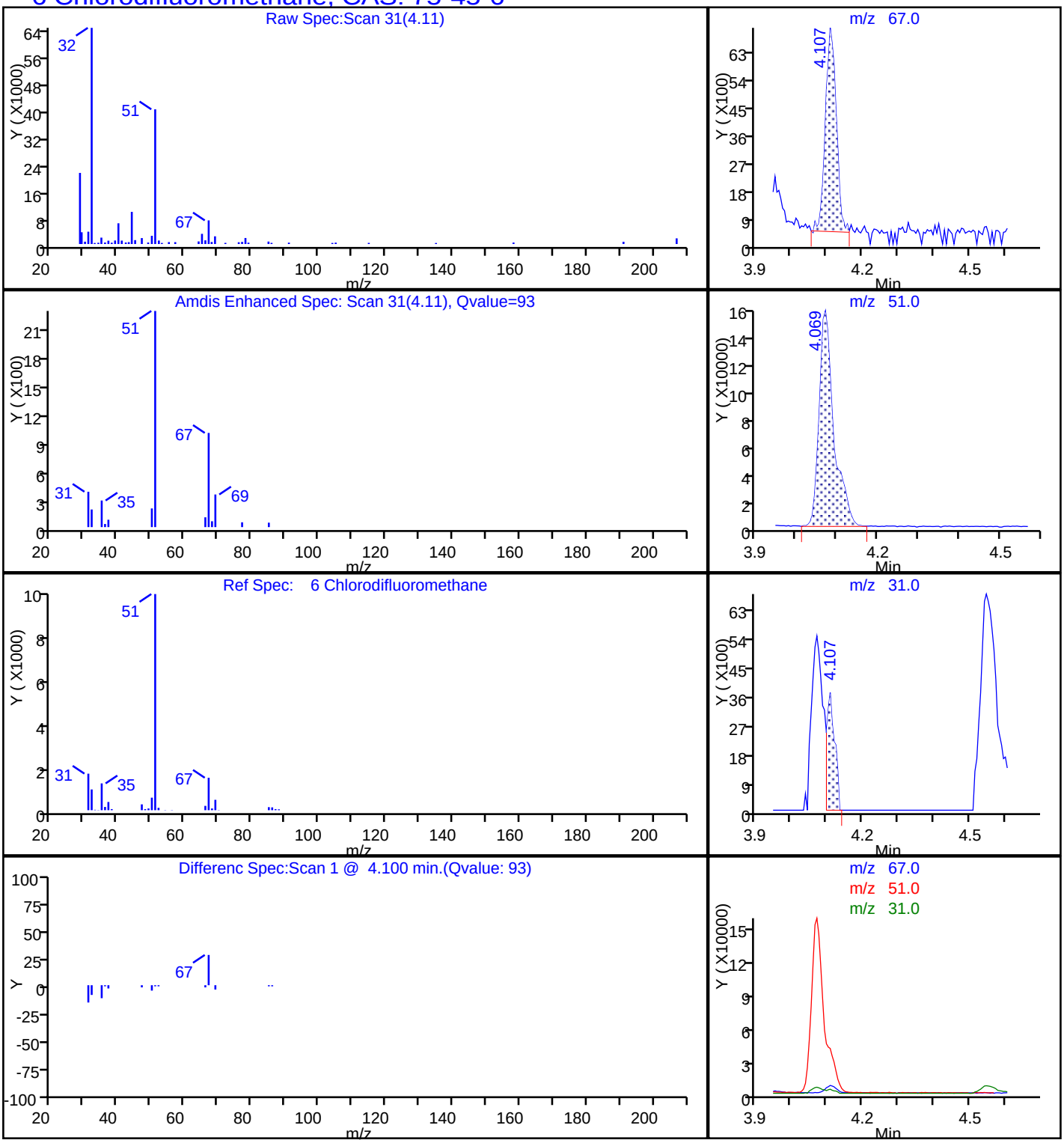


Report Date: 17-Jul-2017 09:59:38 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\G14L8682.D				
Injection Date:	14-Jul-2017 14:31:30	Instrument ID:	MJ		
Lims ID:	140-8682-A-4	Lab Sample ID:	140-8682-4		
Client ID:	10363				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-8924-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Diane Lange

Authorized for release by:
8/14/2017 1:24:55 PM
Diana Lange, Project Management Assistant II
diane.lange@testamericainc.com

Designee for

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-8924-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-8924-1

Comments
No additional comments.

Receipt
The samples were received on 8/5/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

This report includes canister certification data for the batch certified canisters used to collect samples. All of the canisters used for sample collection for this job were batch certified clean to the levels listed on the results page. Additionally, the canisters were checked down to the method detection limit (MDL) for chloroform.

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-01 — Lab Sample ID: 140-8924-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	6.4		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	43		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-02 — Lab Sample ID: 140-8924-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	9.9		0.80	0.24	ppb v/v	1.58		TO 15 LL	Total/NA
Tetrachloroethene	7.5		0.80	0.16	ppb v/v	1.58		TO 15 LL	Total/NA
Trichloroethene	8.5		0.40	0.14	ppb v/v	1.58		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	39		3.2	0.95	ug/m3	1.58		TO 15 LL	Total/NA
Tetrachloroethene	51		5.4	1.1	ug/m3	1.58		TO 15 LL	Total/NA
Trichloroethene	46		2.1	0.75	ug/m3	1.58		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-03 — Lab Sample ID: 140-8924-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	3.7		0.80	0.16	ppb v/v	1.5		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	25		5.4	1.1	ug/m3	1.5		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-04 — Lab Sample ID: 140-8924-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.35	J	0.80	0.16	ppb v/v	1.45		TO 15 LL	Total/NA
Trichloroethene	0.23	J	0.40	0.14	ppb v/v	1.45		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.3	J	5.4	1.1	ug/m3	1.45		TO 15 LL	Total/NA
Trichloroethene	1.2	J	2.1	0.75	ug/m3	1.45		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-05 — Lab Sample ID: 140-8924-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	9.7		0.80	0.16	ppb v/v	1.48		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	66		5.4	1.1	ug/m3	1.48		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-06 — Lab Sample ID: 140-8924-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	9.5		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	64		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-07 — Lab Sample ID: 140-8924-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	25		0.80	0.16	ppb v/v	1.46		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: G-170801-RA-07 (Continued) — Lab Sample ID: 140-8924-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.0		0.40	0.14	ppb v/v	1.46		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	170		5.4	1.1	ug/m3	1.46		TO 15 LL	Total/NA
Trichloroethene	5.4		2.1	0.75	ug/m3	1.46		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-08 — Lab Sample ID: 140-8924-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	250		2.9	0.57	ppb v/v	1.43		TO 15 LL	Total/NA
Trichloroethene	4.5		1.4	0.50	ppb v/v	1.43		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1700		19	3.9	ug/m3	1.43		TO 15 LL	Total/NA
Trichloroethene	24		7.7	2.7	ug/m3	1.43		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-09 — Lab Sample ID: 140-8924-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.31	J	0.80	0.24	ppb v/v	1.45		TO 15 LL	Total/NA
Tetrachloroethene	260	E	0.80	0.16	ppb v/v	1.45		TO 15 LL	Total/NA
Trichloroethene	4.2		0.40	0.14	ppb v/v	1.45		TO 15 LL	Total/NA
Tetrachloroethene - DL	280		2.9	0.58	ppb v/v	1.45		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.2	J	3.2	0.95	ug/m3	1.45		TO 15 LL	Total/NA
Tetrachloroethene	1800	E	5.4	1.1	ug/m3	1.45		TO 15 LL	Total/NA
Trichloroethene	23		2.1	0.75	ug/m3	1.45		TO 15 LL	Total/NA
Tetrachloroethene - DL	1900		20	3.9	ug/m3	1.45		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-10 — Lab Sample ID: 140-8924-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	34		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.31	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	230		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.6	J	2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-11 — Lab Sample ID: 140-8924-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.24	J	0.80	0.24	ppb v/v	1.44		TO 15 LL	Total/NA
Tetrachloroethene	33		0.80	0.16	ppb v/v	1.44		TO 15 LL	Total/NA
Trichloroethene	1.5		0.40	0.14	ppb v/v	1.44		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.96	J	3.2	0.95	ug/m3	1.44		TO 15 LL	Total/NA
Tetrachloroethene	220		5.4	1.1	ug/m3	1.44		TO 15 LL	Total/NA
Trichloroethene	7.8		2.1	0.75	ug/m3	1.44		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-12 — Lab Sample ID: 140-8924-12

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-12 (Continued) — Lab Sample ID: 140-8924-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	4.5		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.22	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	30		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.2	J	2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: G-170801-RA-13 — Lab Sample ID: 140-8924-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	14		0.80	0.16	ppb v/v	1.46		TO 15 LL	Total/NA
Trichloroethene	1.9		0.40	0.14	ppb v/v	1.46		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	92		5.4	1.1	ug/m3	1.46		TO 15 LL	Total/NA
Trichloroethene	10		2.1	0.75	ug/m3	1.46		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-01 — Lab Sample ID: 140-8924-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.30		0.080	0.016	ppb v/v	1.55		TO 15 LL	Total/NA
Trichloroethene	0.064		0.040	0.014	ppb v/v	1.55		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.1		0.54	0.11	ug/m3	1.55		TO 15 LL	Total/NA
Trichloroethene	0.34		0.21	0.075	ug/m3	1.55		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-02 — Lab Sample ID: 140-8924-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.082		0.080	0.016	ppb v/v	1.54		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.56		0.54	0.11	ug/m3	1.54		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-03 — Lab Sample ID: 140-8924-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.056	J	0.080	0.016	ppb v/v	1.53		TO 15 LL	Total/NA
Trichloroethene	0.052		0.040	0.014	ppb v/v	1.53		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.38	J	0.54	0.11	ug/m3	1.53		TO 15 LL	Total/NA
Trichloroethene	0.28		0.21	0.075	ug/m3	1.53		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-04 — Lab Sample ID: 140-8924-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.036	J	0.080	0.016	ppb v/v	1.44		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.24	J	0.54	0.11	ug/m3	1.44		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-05 — Lab Sample ID: 140-8924-18

This Detection Summary does not include radiochemical test results.

Client Sample ID: IA-170731-RA-05 (Continued) — Lab Sample ID: 140-8924-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.042	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.28	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-170731-RA-06 — Lab Sample ID: 140-8924-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.064	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.44	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: OA-170731-RA-01 — Lab Sample ID: 140-8924-20

No Detections.

Client Sample ID: SS-170731-RA-01 — Lab Sample ID: 140-8924-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	390		5.7	1.1	ppb v/v	4.24		TO 15 LL	Total/NA
Trichloroethene	12		2.8	0.99	ppb v/v	4.24		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2700		38	7.7	ug/m3	4.24		TO 15 LL	Total/NA
Trichloroethene	65		15	5.3	ug/m3	4.24		TO 15 LL	Total/NA

Client Sample ID: SS-170731-RA-02 — Lab Sample ID: 140-8924-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	7.3		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.62		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	49		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.3		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170731-RA-03 — Lab Sample ID: 140-8924-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	6.1		0.80	0.16	ppb v/v	1.48		TO 15 LL	Total/NA
Trichloroethene	0.19	J	0.40	0.14	ppb v/v	1.48		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	42		5.4	1.1	ug/m3	1.48		TO 15 LL	Total/NA
Trichloroethene	1.0	J	2.1	0.75	ug/m3	1.48		TO 15 LL	Total/NA

Client Sample ID: SS-170731-RA-04 — Lab Sample ID: 140-8924-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	8.4		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.16	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	57		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: SS-170731-RA-04 (Continued) — Lab Sample ID: 140-8924-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.86	J	2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-170731-RA-05 — Lab Sample ID: 140-8924-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.26	J	0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.2		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.0	J	3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	7.8		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.4	J	2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-01

Lab Sample ID: 140-8924-1
Matrix: Air

Date Collected: 08/01/17 09:42
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/08/17 23:35	1
Tetrachloroethene	**6.4**		0.80	0.16	ppb v/v			08/08/17 23:35	1
Trichloroethene	ND		0.40	0.14	ppb v/v			08/08/17 23:35	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/08/17 23:35	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/08/17 23:35	1
Tetrachloroethene	**43**		5.4	1.1	ug/m3			08/08/17 23:35	1
Trichloroethene	ND		2.1	0.75	ug/m3			08/08/17 23:35	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/08/17 23:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/08/17 23:35*	*1*

Client Sample ID: G-170801-RA-02

Lab Sample ID: 140-8924-2
Matrix: Air

Date Collected: 08/01/17 09:42
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**9.9**		0.80	0.24	ppb v/v			08/09/17 00:18	1.58
Tetrachloroethene	**7.5**		0.80	0.16	ppb v/v			08/09/17 00:18	1.58
Trichloroethene	**8.5**		0.40	0.14	ppb v/v			08/09/17 00:18	1.58
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 00:18	1.58

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**39**		3.2	0.95	ug/m3			08/09/17 00:18	1.58
Tetrachloroethene	**51**		5.4	1.1	ug/m3			08/09/17 00:18	1.58
Trichloroethene	**46**		2.1	0.75	ug/m3			08/09/17 00:18	1.58
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 00:18	1.58

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 00:18*	*1.58*

Client Sample ID: G-170801-RA-03

Lab Sample ID: 140-8924-3
Matrix: Air

Date Collected: 08/01/17 10:14
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 01:00	1.5
Tetrachloroethene	**3.7**		0.80	0.16	ppb v/v			08/09/17 01:00	1.5
Trichloroethene	ND		0.40	0.14	ppb v/v			08/09/17 01:00	1.5
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 01:00	1.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 01:00	1.5
Tetrachloroethene	**25**		5.4	1.1	ug/m3			08/09/17 01:00	1.5
Trichloroethene	ND		2.1	0.75	ug/m3			08/09/17 01:00	1.5

Client Sample ID: G-170801-RA-03 — Lab Sample ID: 140-8924-3

Date Collected: 08/01/17 10:14
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 01:00	1.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 01:00*	*1.5*

Client Sample ID: G-170801-RA-04 — Lab Sample ID: 140-8924-4

Date Collected: 08/01/17 10:10
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 01:43	1.45
Tetrachloroethene	**0.35**	**J**	0.80	0.16	ppb v/v			08/09/17 01:43	1.45
Trichloroethene	**0.23**	**J**	0.40	0.14	ppb v/v			08/09/17 01:43	1.45
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 01:43	1.45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 01:43	1.45
Tetrachloroethene	**2.3**	**J**	5.4	1.1	ug/m3			08/09/17 01:43	1.45
Trichloroethene	**1.2**	**J**	2.1	0.75	ug/m3			08/09/17 01:43	1.45
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 01:43	1.45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 01:43*	*1.45*

Client Sample ID: G-170801-RA-05 — Lab Sample ID: 140-8924-5

Date Collected: 08/01/17 10:53
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 02:25	1.48
Tetrachloroethene	**9.7**		0.80	0.16	ppb v/v			08/09/17 02:25	1.48
Trichloroethene	ND		0.40	0.14	ppb v/v			08/09/17 02:25	1.48
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 02:25	1.48

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 02:25	1.48
Tetrachloroethene	**66**		5.4	1.1	ug/m3			08/09/17 02:25	1.48
Trichloroethene	ND		2.1	0.75	ug/m3			08/09/17 02:25	1.48
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 02:25	1.48

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*08/09/17 02:25*	*1.48*

Client Sample ID: G-170801-RA-06 — Lab Sample ID: 140-8924-6

Date Collected: 08/01/17 10:51
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 03:07	1
Tetrachloroethene	**9.5**		0.80	0.16	ppb v/v			08/09/17 03:07	1
Trichloroethene	ND		0.40	0.14	ppb v/v			08/09/17 03:07	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 03:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 03:07	1
Tetrachloroethene	**64**		5.4	1.1	ug/m3			08/09/17 03:07	1
Trichloroethene	ND		2.1	0.75	ug/m3			08/09/17 03:07	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*08/09/17 03:07*	*1*

Client Sample ID: G-170801-RA-07 — Lab Sample ID: 140-8924-7

Date Collected: 08/01/17 10:54
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 17:42	1.46
Tetrachloroethene	**25**		0.80	0.16	ppb v/v			08/09/17 17:42	1.46
Trichloroethene	**1.0**		0.40	0.14	ppb v/v			08/09/17 17:42	1.46
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 17:42	1.46

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 17:42	1.46
Tetrachloroethene	**170**		5.4	1.1	ug/m3			08/09/17 17:42	1.46
Trichloroethene	**5.4**		2.1	0.75	ug/m3			08/09/17 17:42	1.46
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 17:42	1.46

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 17:42*	*1.46*

Client Sample ID: G-170801-RA-08 — Lab Sample ID: 140-8924-8

Date Collected: 08/01/17 11:30
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		2.9	0.86	ppb v/v			08/09/17 18:28	1.43
Tetrachloroethene	**250**		2.9	0.57	ppb v/v			08/09/17 18:28	1.43
Trichloroethene	**4.5**		1.4	0.50	ppb v/v			08/09/17 18:28	1.43
Vinyl chloride	ND		1.4	1.0	ppb v/v			08/09/17 18:28	1.43

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		11	3.4	ug/m3			08/09/17 18:28	1.43
Tetrachloroethene	**1700**		19	3.9	ug/m3			08/09/17 18:28	1.43
Trichloroethene	**24**		7.7	2.7	ug/m3			08/09/17 18:28	1.43
Vinyl chloride	ND		3.7	2.7	ug/m3			08/09/17 18:28	1.43

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		08/09/17 18:28	1.43

Client Sample ID: G-170801-RA-09 — Lab Sample ID: 140-8924-9

Date Collected: 08/01/17 11:30 — **Matrix: Air**
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.31	J	0.80	0.24	ppb v/v			08/09/17 19:15	1.45
Tetrachloroethene	260	E	0.80	0.16	ppb v/v			08/09/17 19:15	1.45
Trichloroethene	4.2		0.40	0.14	ppb v/v			08/09/17 19:15	1.45
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 19:15	1.45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.2	J	3.2	0.95	ug/m3			08/09/17 19:15	1.45
Tetrachloroethene	1800	E	5.4	1.1	ug/m3			08/09/17 19:15	1.45
Trichloroethene	23		2.1	0.75	ug/m3			08/09/17 19:15	1.45
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 19:15	1.45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140		08/09/17 19:15	1.45

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	280		2.9	0.58	ppb v/v			08/10/17 09:43	1.45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1900		20	3.9	ug/m3			08/10/17 09:43	1.45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		08/10/17 09:43	1.45

Client Sample ID: G-170801-RA-10 — Lab Sample ID: 140-8924-10

Date Collected: 08/01/17 13:02 — **Matrix: Air**
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 20:01	1
Tetrachloroethene	34		0.80	0.16	ppb v/v			08/09/17 20:01	1
Trichloroethene	0.31	J	0.40	0.14	ppb v/v			08/09/17 20:01	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 20:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 20:01	1
Tetrachloroethene	230		5.4	1.1	ug/m3			08/09/17 20:01	1
Trichloroethene	1.6	J	2.1	0.75	ug/m3			08/09/17 20:01	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 20:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 140		08/09/17 20:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-11

Lab Sample ID: 140-8924-11
Matrix: Air

Date Collected: 08/01/17 12:57
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.24	J	0.80	0.24	ppb v/v			08/09/17 20:48	1.44
Tetrachloroethene	33		0.80	0.16	ppb v/v			08/09/17 20:48	1.44
Trichloroethene	1.5		0.40	0.14	ppb v/v			08/09/17 20:48	1.44
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 20:48	1.44

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.96	J	3.2	0.95	ug/m3			08/09/17 20:48	1.44
Tetrachloroethene	220		5.4	1.1	ug/m3			08/09/17 20:48	1.44
Trichloroethene	7.8		2.1	0.75	ug/m3			08/09/17 20:48	1.44
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 20:48	1.44

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*08/09/17 20:48*	*1.44*

Client Sample ID: G-170801-RA-12

Lab Sample ID: 140-8924-12
Matrix: Air

Date Collected: 08/01/17 13:29
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 21:34	1
Tetrachloroethene	4.5		0.80	0.16	ppb v/v			08/09/17 21:34	1
Trichloroethene	0.22	J	0.40	0.14	ppb v/v			08/09/17 21:34	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 21:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 21:34	1
Tetrachloroethene	30		5.4	1.1	ug/m3			08/09/17 21:34	1
Trichloroethene	1.2	J	2.1	0.75	ug/m3			08/09/17 21:34	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 21:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 21:34*	*1*

Client Sample ID: G-170801-RA-13

Lab Sample ID: 140-8924-13
Matrix: Air

Date Collected: 08/01/17 13:34
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 22:20	1.46
Tetrachloroethene	14		0.80	0.16	ppb v/v			08/09/17 22:20	1.46
Trichloroethene	1.9		0.40	0.14	ppb v/v			08/09/17 22:20	1.46
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 22:20	1.46

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 22:20	1.46
Tetrachloroethene	92		5.4	1.1	ug/m3			08/09/17 22:20	1.46
Trichloroethene	10		2.1	0.75	ug/m3			08/09/17 22:20	1.46
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 22:20	1.46

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		08/09/17 22:20	1.46

Client Sample ID: IA-170731-RA-01 — Lab Sample ID: 140-8924-14

Date Collected: 07/31/17 12:24
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 23:17	1.55
Tetrachloroethene	**0.30**		0.080	0.016	ppb v/v			08/09/17 23:17	1.55
Trichloroethene	**0.064**		0.040	0.014	ppb v/v			08/09/17 23:17	1.55
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 23:17	1.55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 23:17	1.55
Tetrachloroethene	**2.1**		0.54	0.11	ug/m3			08/09/17 23:17	1.55
Trichloroethene	**0.34**		0.21	0.075	ug/m3			08/09/17 23:17	1.55
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 23:17	1.55

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		60 - 140		08/09/17 23:17	1.55

Client Sample ID: IA-170731-RA-02 — Lab Sample ID: 140-8924-15

Date Collected: 07/31/17 12:31
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/10/17 00:13	1.54
Tetrachloroethene	**0.082**		0.080	0.016	ppb v/v			08/10/17 00:13	1.54
Trichloroethene	ND		0.040	0.014	ppb v/v			08/10/17 00:13	1.54
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/10/17 00:13	1.54

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/10/17 00:13	1.54
Tetrachloroethene	**0.56**		0.54	0.11	ug/m3			08/10/17 00:13	1.54
Trichloroethene	ND		0.21	0.075	ug/m3			08/10/17 00:13	1.54
Vinyl chloride	ND		0.10	0.074	ug/m3			08/10/17 00:13	1.54

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		60 - 140		08/10/17 00:13	1.54

Client Sample ID: IA-170731-RA-03 — Lab Sample ID: 140-8924-16

Date Collected: 07/31/17 12:31
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/10/17 01:08	1.53
Tetrachloroethene	**0.056**	**J**	0.080	0.016	ppb v/v			08/10/17 01:08	1.53
Trichloroethene	**0.052**		0.040	0.014	ppb v/v			08/10/17 01:08	1.53
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/10/17 01:08	1.53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/10/17 01:08	1.53

Client Sample ID: IA-170731-RA-03 — Lab Sample ID: 140-8924-16

Date Collected: 07/31/17 12:31
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**0.38**	**J**	0.54	0.11	ug/m3			08/10/17 01:08	1.53
Trichloroethene	**0.28**		0.21	0.075	ug/m3			08/10/17 01:08	1.53
Vinyl chloride	ND		0.10	0.074	ug/m3			08/10/17 01:08	1.53

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*60 - 140*		*08/10/17 01:08*	*1.53*

Client Sample ID: IA-170731-RA-04 — Lab Sample ID: 140-8924-17

Date Collected: 07/31/17 15:14
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/10/17 02:03	1.44
Tetrachloroethene	**0.036**	**J**	0.080	0.016	ppb v/v			08/10/17 02:03	1.44
Trichloroethene	ND		0.040	0.014	ppb v/v			08/10/17 02:03	1.44
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/10/17 02:03	1.44

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/10/17 02:03	1.44
Tetrachloroethene	**0.24**	**J**	0.54	0.11	ug/m3			08/10/17 02:03	1.44
Trichloroethene	ND		0.21	0.075	ug/m3			08/10/17 02:03	1.44
Vinyl chloride	ND		0.10	0.074	ug/m3			08/10/17 02:03	1.44

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*60 - 140*		*08/10/17 02:03*	*1.44*

Client Sample ID: IA-170731-RA-05 — Lab Sample ID: 140-8924-18

Date Collected: 07/31/17 15:20
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 19:18	1
Tetrachloroethene	**0.042**	**J**	0.080	0.016	ppb v/v			08/09/17 19:18	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/09/17 19:18	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 19:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 19:18	1
Tetrachloroethene	**0.28**	**J**	0.54	0.11	ug/m3			08/09/17 19:18	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/09/17 19:18	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/09/17 19:18*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: IA-170731-RA-06

Lab Sample ID: 140-8924-19
Matrix: Air

Date Collected: 07/31/17 16:40
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 20:01	1
Tetrachloroethene	**0.064**	**J**	0.080	0.016	ppb v/v			08/09/17 20:01	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/09/17 20:01	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 20:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 20:01	1
Tetrachloroethene	**0.44**	**J**	0.54	0.11	ug/m3			08/09/17 20:01	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/09/17 20:01	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*08/09/17 20:01*	*1*

Client Sample ID: OA-170731-RA-01

Lab Sample ID: 140-8924-20
Matrix: Air

Date Collected: 07/31/17 15:15
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 20:47	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/09/17 20:47	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/09/17 20:47	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 20:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 20:47	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/09/17 20:47	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/09/17 20:47	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*08/09/17 20:47*	*1*

Client Sample ID: SS-170731-RA-01

Lab Sample ID: 140-8924-21
Matrix: Air

Date Collected: 07/31/17 14:58
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.7	1.7	ppb v/v			08/09/17 21:27	4.24
Tetrachloroethene	**390**		5.7	1.1	ppb v/v			08/09/17 21:27	4.24
Trichloroethene	**12**		2.8	0.99	ppb v/v			08/09/17 21:27	4.24
Vinyl chloride	ND		2.8	2.0	ppb v/v			08/09/17 21:27	4.24

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		22	6.7	ug/m3			08/09/17 21:27	4.24
Tetrachloroethene	**2700**		38	7.7	ug/m3			08/09/17 21:27	4.24
Trichloroethene	**65**		15	5.3	ug/m3			08/09/17 21:27	4.24
Vinyl chloride	ND		7.2	5.2	ug/m3			08/09/17 21:27	4.24

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140		08/09/17 21:27	4.24

Client Sample ID: SS-170731-RA-02 — Lab Sample ID: 140-8924-22

Date Collected: 07/31/17 15:43
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 22:09	1
Tetrachloroethene	**7.3**		0.80	0.16	ppb v/v			08/09/17 22:09	1
Trichloroethene	**0.62**		0.40	0.14	ppb v/v			08/09/17 22:09	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 22:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 22:09	1
Tetrachloroethene	**49**		5.4	1.1	ug/m3			08/09/17 22:09	1
Trichloroethene	**3.3**		2.1	0.75	ug/m3			08/09/17 22:09	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 22:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		08/09/17 22:09	1

Client Sample ID: SS-170731-RA-03 — Lab Sample ID: 140-8924-23

Date Collected: 07/31/17 16:13
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 22:51	1.48
Tetrachloroethene	**6.1**		0.80	0.16	ppb v/v			08/09/17 22:51	1.48
Trichloroethene	**0.19**	**J**	0.40	0.14	ppb v/v			08/09/17 22:51	1.48
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 22:51	1.48

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 22:51	1.48
Tetrachloroethene	**42**		5.4	1.1	ug/m3			08/09/17 22:51	1.48
Trichloroethene	**1.0**	**J**	2.1	0.75	ug/m3			08/09/17 22:51	1.48
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 22:51	1.48

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140		08/09/17 22:51	1.48

Client Sample ID: SS-170731-RA-04 — Lab Sample ID: 140-8924-24

Date Collected: 07/31/17 16:39
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			08/09/17 23:34	1
Tetrachloroethene	**8.4**		0.80	0.16	ppb v/v			08/09/17 23:34	1
Trichloroethene	**0.16**	**J**	0.40	0.14	ppb v/v			08/09/17 23:34	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/09/17 23:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			08/09/17 23:34	1

Client Sample ID: SS-170731-RA-04

Lab Sample ID: 140-8924-24

Date Collected: 07/31/17 16:39
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	57		5.4	1.1	ug/m3			08/09/17 23:34	1
Trichloroethene	0.86	J	2.1	0.75	ug/m3			08/09/17 23:34	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/09/17 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*08/09/17 23:34*	*1*

Client Sample ID: SS-170731-RA-05

Lab Sample ID: 140-8924-25

Date Collected: 07/31/17 17:12
Matrix: Air
Date Received: 08/05/17 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.26	J	0.80	0.24	ppb v/v			08/10/17 00:17	1
Tetrachloroethene	1.2		0.80	0.16	ppb v/v			08/10/17 00:17	1
Trichloroethene	0.26	J	0.40	0.14	ppb v/v			08/10/17 00:17	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			08/10/17 00:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	J	3.2	0.95	ug/m3			08/10/17 00:17	1
Tetrachloroethene	7.8		5.4	1.1	ug/m3			08/10/17 00:17	1
Trichloroethene	1.4	J	2.1	0.75	ug/m3			08/10/17 00:17	1
Vinyl chloride	ND		1.0	0.74	ug/m3			08/10/17 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*08/10/17 00:17*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-8924-1	G-170801-RA-01	99						
140-8924-2	G-170801-RA-02	101						
140-8924-3	G-170801-RA-03	101						
140-8924-4	G-170801-RA-04	101						
140-8924-5	G-170801-RA-05	100						
140-8924-6	G-170801-RA-06	103						
140-8924-7	G-170801-RA-07	101						
140-8924-8	G-170801-RA-08	101						
140-8924-9	G-170801-RA-09	102						
140-8924-9 - DL	G-170801-RA-09	101						
140-8924-10	G-170801-RA-10	104						
140-8924-11	G-170801-RA-11	103						
140-8924-12	G-170801-RA-12	101						
140-8924-13	G-170801-RA-13	101						
140-8924-14	IA-170731-RA-01	82						
140-8924-15	IA-170731-RA-02	88						
140-8924-16	IA-170731-RA-03	87						
140-8924-17	IA-170731-RA-04	87						
140-8924-18	IA-170731-RA-05	101						
140-8924-19	IA-170731-RA-06	103						
140-8924-20	OA-170731-RA-01	97						
140-8924-21	SS-170731-RA-01	98						
140-8924-22	SS-170731-RA-02	101						
140-8924-23	SS-170731-RA-03	97						
140-8924-24	SS-170731-RA-04	104						
140-8924-25	SS-170731-RA-05	101						
LCS 140-13341/1006	Lab Control Sample	105						
LCS 140-13370/1002	Lab Control Sample	99						
LCS 140-13396/1008	Lab Control Sample	109						
MB 140-13341/10	Method Blank	98						
MB 140-13370/4	Method Blank	99						
MB 140-13396/10	Method Blank	99						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-13341/10
Matrix: Air
Analysis Batch: 13341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/08/17 13:23	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/08/17 13:23	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/08/17 13:23	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/08/17 13:23	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/08/17 13:23	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/08/17 13:23	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/08/17 13:23	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/08/17 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*08/08/17 13:23*	*1*

Lab Sample ID: LCS 140-13341/1006
Matrix: Air
Analysis Batch: 13341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	1.98		ppb v/v		99	70 - 130
Tetrachloroethene	2.00	1.70		ppb v/v		85	70 - 130
Trichloroethene	2.00	1.83		ppb v/v		92	70 - 130
Vinyl chloride	2.00	2.13		ppb v/v		106	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	7.83		ug/m3		99	70 - 130
Tetrachloroethene	14	11.5		ug/m3		85	70 - 130
Trichloroethene	11	9.86		ug/m3		92	70 - 130
Vinyl chloride	5.1	5.44		ug/m3		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

Lab Sample ID: MB 140-13370/4
Matrix: Air
Analysis Batch: 13370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 12:35	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/09/17 12:35	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/09/17 12:35	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 12:35	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 12:35	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/09/17 12:35	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/09/17 12:35	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-13370/4
Matrix: Air
Analysis Batch: 13370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 12:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/09/17 12:35*	*1*

Lab Sample ID: LCS 140-13370/1002
Matrix: Air
Analysis Batch: 13370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.999	1.18		ppb v/v		118	70 - 130
Tetrachloroethene	0.999	1.13		ppb v/v		113	70 - 130
Trichloroethene	0.999	1.14		ppb v/v		114	70 - 130
Vinyl chloride	0.999	1.04		ppb v/v		104	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	4.0	4.68		ug/m3		118	70 - 130
Tetrachloroethene	6.8	7.64		ug/m3		113	70 - 130
Trichloroethene	5.4	6.14		ug/m3		114	70 - 130
Vinyl chloride	2.6	2.67		ug/m3		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*

Lab Sample ID: MB 140-13396/10
Matrix: Air
Analysis Batch: 13396

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/09/17 16:29	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/09/17 16:29	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/09/17 16:29	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/09/17 16:29	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/09/17 16:29	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/09/17 16:29	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/09/17 16:29	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/09/17 16:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*08/09/17 16:29*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-13396/1008
Matrix: Air
Analysis Batch: 13396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Tetrachloroethene	2.00	1.85		ppb v/v		92	70 - 130
Trichloroethene	2.00	1.93		ppb v/v		97	70 - 130
Vinyl chloride	2.00	2.23		ppb v/v		111	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	8.29		ug/m3		104	70 - 130
Tetrachloroethene	14	12.5		ug/m3		92	70 - 130
Trichloroethene	11	10.4		ug/m3		97	70 - 130
Vinyl chloride	5.1	5.70		ug/m3		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Air - GC/MS VOA

Analysis Batch: 13341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8924-1	G-170801-RA-01	Total/NA	Air	TO 15 LL	
140-8924-2	G-170801-RA-02	Total/NA	Air	TO 15 LL	
140-8924-3	G-170801-RA-03	Total/NA	Air	TO 15 LL	
140-8924-4	G-170801-RA-04	Total/NA	Air	TO 15 LL	
140-8924-5	G-170801-RA-05	Total/NA	Air	TO 15 LL	
140-8924-6	G-170801-RA-06	Total/NA	Air	TO 15 LL	
MB 140-13341/10	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-13341/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 13370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8924-7	G-170801-RA-07	Total/NA	Air	TO 15 LL	
140-8924-8	G-170801-RA-08	Total/NA	Air	TO 15 LL	
140-8924-9	G-170801-RA-09	Total/NA	Air	TO 15 LL	
140-8924-9 - DL	G-170801-RA-09	Total/NA	Air	TO 15 LL	
140-8924-10	G-170801-RA-10	Total/NA	Air	TO 15 LL	
140-8924-11	G-170801-RA-11	Total/NA	Air	TO 15 LL	
140-8924-12	G-170801-RA-12	Total/NA	Air	TO 15 LL	
140-8924-13	G-170801-RA-13	Total/NA	Air	TO 15 LL	
140-8924-14	IA-170731-RA-01	Total/NA	Air	TO 15 LL	
140-8924-15	IA-170731-RA-02	Total/NA	Air	TO 15 LL	
140-8924-16	IA-170731-RA-03	Total/NA	Air	TO 15 LL	
140-8924-17	IA-170731-RA-04	Total/NA	Air	TO 15 LL	
MB 140-13370/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-13370/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 13396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-8924-18	IA-170731-RA-05	Total/NA	Air	TO 15 LL	
140-8924-19	IA-170731-RA-06	Total/NA	Air	TO 15 LL	
140-8924-20	OA-170731-RA-01	Total/NA	Air	TO 15 LL	
140-8924-21	SS-170731-RA-01	Total/NA	Air	TO 15 LL	
140-8924-22	SS-170731-RA-02	Total/NA	Air	TO 15 LL	
140-8924-23	SS-170731-RA-03	Total/NA	Air	TO 15 LL	
140-8924-24	SS-170731-RA-04	Total/NA	Air	TO 15 LL	
140-8924-25	SS-170731-RA-05	Total/NA	Air	TO 15 LL	
MB 140-13396/10	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-13396/1008	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-01 — Lab Sample ID: 140-8924-1

Date Collected: 08/01/17 09:42 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13341	08/08/17 23:35	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: G-170801-RA-02 — Lab Sample ID: 140-8924-2

Date Collected: 08/01/17 09:42 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.58	79 mL	500 mL	13341	08/09/17 00:18	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: G-170801-RA-03 — Lab Sample ID: 140-8924-3

Date Collected: 08/01/17 10:14 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.5	75 mL	500 mL	13341	08/09/17 01:00	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: G-170801-RA-04 — Lab Sample ID: 140-8924-4

Date Collected: 08/01/17 10:10 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.45	72.5 mL	500 mL	13341	08/09/17 01:43	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: G-170801-RA-05 — Lab Sample ID: 140-8924-5

Date Collected: 08/01/17 10:53 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.48	74 mL	500 mL	13341	08/09/17 02:25	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: G-170801-RA-06 — Lab Sample ID: 140-8924-6

Date Collected: 08/01/17 10:51 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13341	08/09/17 03:07	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-07 — Lab Sample ID: 140-8924-7

Date Collected: 08/01/17 10:54 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.46	73 mL	500 mL	13370	08/09/17 17:42	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-08 — Lab Sample ID: 140-8924-8

Date Collected: 08/01/17 11:30 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.43	20 mL	500 mL	13370	08/09/17 18:28	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-09 — Lab Sample ID: 140-8924-9

Date Collected: 08/01/17 11:30 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.45	72.5 mL	500 mL	13370	08/09/17 19:15	HMT	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL	DL	1.45	20 mL	500 mL	13370	08/10/17 09:43	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-10 — Lab Sample ID: 140-8924-10

Date Collected: 08/01/17 13:02 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13370	08/09/17 20:01	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-11 — Lab Sample ID: 140-8924-11

Date Collected: 08/01/17 12:57 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.44	72 mL	500 mL	13370	08/09/17 20:48	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: G-170801-RA-12 — Lab Sample ID: 140-8924-12

Date Collected: 08/01/17 13:29 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13370	08/09/17 21:34	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: G-170801-RA-13 — Lab Sample ID: 140-8924-13

Date Collected: 08/01/17 13:34 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.46	73 mL	500 mL	13370	08/09/17 22:20	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170731-RA-01 — Lab Sample ID: 140-8924-14

Date Collected: 07/31/17 12:24 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.55	775 mL	500 mL	13370	08/09/17 23:17	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170731-RA-02 — Lab Sample ID: 140-8924-15

Date Collected: 07/31/17 12:31 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.54	770 mL	500 mL	13370	08/10/17 00:13	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170731-RA-03 — Lab Sample ID: 140-8924-16

Date Collected: 07/31/17 12:31 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.53	765 mL	500 mL	13370	08/10/17 01:08	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-170731-RA-04 — Lab Sample ID: 140-8924-17

Date Collected: 07/31/17 15:14 — **Matrix: Air**
Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.44	720 mL	500 mL	13370	08/10/17 02:03	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: IA-170731-RA-05 — Lab Sample ID: 140-8924-18

Date Collected: 07/31/17 15:20
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13396	08/09/17 19:18	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-170731-RA-06 — Lab Sample ID: 140-8924-19

Date Collected: 07/31/17 16:40
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13396	08/09/17 20:01	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: OA-170731-RA-01 — Lab Sample ID: 140-8924-20

Date Collected: 07/31/17 15:15
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13396	08/09/17 20:47	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170731-RA-01 — Lab Sample ID: 140-8924-21

Date Collected: 07/31/17 14:58
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		4.24	30 mL	500 mL	13396	08/09/17 21:27	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170731-RA-02 — Lab Sample ID: 140-8924-22

Date Collected: 07/31/17 15:43
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13396	08/09/17 22:09	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170731-RA-03 — Lab Sample ID: 140-8924-23

Date Collected: 07/31/17 16:13
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.48	74 mL	500 mL	13396	08/09/17 22:51	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: SS-170731-RA-04 — Lab Sample ID: 140-8924-24

Date Collected: 07/31/17 16:39
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13396	08/09/17 23:34	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-170731-RA-05 — Lab Sample ID: 140-8924-25

Date Collected: 07/31/17 17:12
Date Received: 08/05/17 09:30
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	13396	08/10/17 00:17	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-13341/10

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13341	08/08/17 13:23	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-13370/4

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13370	08/09/17 12:35	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-13396/10

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13396	08/09/17 16:29	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-13341/1006

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13341	08/08/17 11:51	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-13370/1002

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13370	08/09/17 10:26	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-13396/1008

Date Collected: N/A
Date Received: N/A
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	13396	08/09/17 14:39	HMT	TAL KNX
	Instrument ID: MG									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-8924-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-8924-1	G-170801-RA-01	Air	08/01/17 09:42	08/05/17 09:30
140-8924-2	G-170801-RA-02	Air	08/01/17 09:42	08/05/17 09:30
140-8924-3	G-170801-RA-03	Air	08/01/17 10:14	08/05/17 09:30
140-8924-4	G-170801-RA-04	Air	08/01/17 10:10	08/05/17 09:30
140-8924-5	G-170801-RA-05	Air	08/01/17 10:53	08/05/17 09:30
140-8924-6	G-170801-RA-06	Air	08/01/17 10:51	08/05/17 09:30
140-8924-7	G-170801-RA-07	Air	08/01/17 10:54	08/05/17 09:30
140-8924-8	G-170801-RA-08	Air	08/01/17 11:30	08/05/17 09:30
140-8924-9	G-170801-RA-09	Air	08/01/17 11:30	08/05/17 09:30
140-8924-10	G-170801-RA-10	Air	08/01/17 13:02	08/05/17 09:30
140-8924-11	G-170801-RA-11	Air	08/01/17 12:57	08/05/17 09:30
140-8924-12	G-170801-RA-12	Air	08/01/17 13:29	08/05/17 09:30
140-8924-13	G-170801-RA-13	Air	08/01/17 13:34	08/05/17 09:30
140-8924-14	IA-170731-RA-01	Air	07/31/17 12:24	08/05/17 09:30
140-8924-15	IA-170731-RA-02	Air	07/31/17 12:31	08/05/17 09:30
140-8924-16	IA-170731-RA-03	Air	07/31/17 12:31	08/05/17 09:30
140-8924-17	IA-170731-RA-04	Air	07/31/17 15:14	08/05/17 09:30
140-8924-18	IA-170731-RA-05	Air	07/31/17 15:20	08/05/17 09:30
140-8924-19	IA-170731-RA-06	Air	07/31/17 16:40	08/05/17 09:30
140-8924-20	OA-170731-RA-01	Air	07/31/17 15:15	08/05/17 09:30
140-8924-21	SS-170731-RA-01	Air	07/31/17 14:58	08/05/17 09:30
140-8924-22	SS-170731-RA-02	Air	07/31/17 15:43	08/05/17 09:30
140-8924-23	SS-170731-RA-03	Air	07/31/17 16:13	08/05/17 09:30
140-8924-24	SS-170731-RA-04	Air	07/31/17 16:39	08/05/17 09:30
140-8924-25	SS-170731-RA-05	Air	07/31/17 17:12	08/05/17 09:30

TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custod

140-8924 Chain of Custody

TestAmerica
LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Athens	**Samples Collected By:** Ragmot	COC No: 1 of 3 COCs
Company Name: GHD	**Phone:**		
Address: 1801 Old Highway 8 NW 114	**Email:**		
City/State/Zip St. Paul MN 55112			**For Lab Use Only:**
Phone: 651-639-0913	**Site Contact:** Grant Anderson		Walk-in Client:
FAX:	**TA Contact:**		Lab Sampling:
Project Name: Warsaw	**Anaylsis Turnaround Time**		
Site/Location: 3978	Standard (Specific):		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
G-170801-RA-01	8/1/17	934	942	>-30	-18	11433	10341	X											X			
RA02		934	942	>-30	-12	10914	10960	X											X			
RA-03		1004	1014	>-30	-10	10767	09643	X											X			
RA-04		1004	1010	-30	-5	11062	11495	X											X			
RA-05		1044	1053	-29	-5	17728	10753	X											X			
RA-06		1044	1051	-28	-3	10110	09636	X											X			
RA-07		1044	1054	-28	-5	10019	10754	X											X			
RA-08		1120	1130	-30	-5	10246	11554	X											X			
RA09		1120	1130	-29	-5	11246	11545	X											X			
G-170801-RA-10		1250	1302	-30	-5	09897	11578	X											X			

Temperature (Fahrenheit)			
Start	Interior	Ambient	80
Stop			80

Received @ ambient, 6 boxes, FedexPO
No custody seal, trK# 7449 8095 5078

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

KW 8/5/17

" " 5090
" " 5067
" " 5089
" " 5056
" " 5045

Special Instructions/QC Requirements & Comments:
Only analyze for: PCE, TCE, Cis12DCE, VC

Samples Shipped by:	**Date / Time:**	**Samples Received by:** KW 8/5/17 0930	1cc, 7 flows 23 KR, 31 cans
Samples Relinquished by:	**Date / Time:**	**Received by:**	
Relinquished by:	**Date / Time:**	**Received by:**	
Lab Use Only: **Shipper Name:**	**Opened by:**	**Condition:**	

Form No. CA-C-WI-003, Rev. 1.1, dated 07/15/2014

TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact Information	Project Manager: Ahrens	Samples Collected By: RAgmot	COC No:
Company Name: GHD	Phone:		2 of 3 COCs
Address: 1801 Old Highway 8 NW 114	Email:		
City/State/Zip St. Paul MN 55112			For Lab Use Only:
Phone: 651-639-0913	Site Contact: Grant Anderson		Walk-in Client:
FAX:	TA Contact:		Lab Sampling:
Project Name: Warsaw	Anaylsis Turnaround Time		
Site/Location: 3978	Standard (Specific):		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type: Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
G-170801-RA-11	8/1/17	1250	1257	-30	-5	7504	11124	X										X			
G-170801-RA-12	8/1/17	1323	1329	<-30	-5	11432	12520	X										X			
G-170801-RA-13	8/1/17	1323	1334	-29	-5	10934	10746	X										X			
IA-170731-RA-01	7/31/17	1442	1224	-27	-6	7076	10989	X								X					
IA-170731-RA-02	|	1526	1231	-30	-8	7461	11007	X								X					
IA-170731-RA-03	|	1530	1231	-30	-9	7283	11213	X								X					
IA-170731-RA-04	|	1600	1514	-30	-7	11584	11045	X								X					
IA-170731-RA-05	|	1625	1520	>-30	-6	7616	09877	X								X					
IA-170731-RA-06	|	1700	1640	-27	-5	8797	10561	X								X					
OA-170731-RA-~~0~~01	↓	1520	1515	-30	-7	7156	09528	X									X				

	Temperature (Fahrenheit)			
	Start	Interior	Ambient	80
	Stop			80

	Temperature (Fahrenheit)			
	Start	Interior	Ambient	
	Stop			

Special Instructions/QC Requirements & Comments:
Only analyze for: PCE, TCE, cis12DCE, VC

Samples Shipped by:	Date / Time: 8/2/17 1600	Samples Received by: 8/5/17 0930
Samples Relinquished by:	Date / Time:	Received by:
Relinquished by:	Date / Time:	Received by:

Lab Use Only: Shipper Name: Opened by: Condition:

Form No. CA-C-WI-003, Rev. 1.1, dated 07/15/2014

TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Canister Samples Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact Information	Project Manager: Ahrens	Samples Collected By: RAgmot	COC No:
Company Name: GEO	Phone:		3 of 3 COCs
Address: 1801 Old Highway 8 NW 114	Email:		
City/State/Zip St. Paul MN 55112			For Lab Use Only:
Phone: 651-639-0913	Site Contact: Grant Anderson		Walk-in Client:
FAX:	TA Contact:		Lab Sampling:
Project Name: Wausau	Anaylsis Turnaround Time		
Site/Location: 3978	Standard (Specific):		Job / SDG No.:
P O #	Rush (Specifiy):		(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
SS-170731-RA-01	7/31/17	1448	1458	-30	-5	11438	09666	X											X			
SS-170731-RA-02	|	1531	1543	-27.5	-5	10670	11572	X											X			
SS-170731-RA-03	|	1602	1613	-28	-5	11128	09742	X											X			
SS-170731-RA-04	|	1628	1639	-30	-5	09570	10795	X											X			
SS-170731-RA-05	↓	1701	1712	-30	-5	11091	09642	X											X			

Temperature (Fahrenheit)			
Start	Interior	Ambient	80
Stop			80

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Special Instructions/QC Requirements & Comments:
Only analyze for: PCE, TCE, cis12DCE, VC

Samples Shipped by:	Date / Time: 8/2/17 1600	Samples Received by: 8/5/17 0930
Samples Relinquished by:	Date / Time:	Received by:
Relinquished by:	Date / Time:	Received by:
Lab Use Only: Shipper Name:	Opened by:	Condition:

Form No. CA-C-WI-003, Rev. 1.1, dated 07/15/2014

Loc: 140
8924

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 14003779 PM Instructions:

Sample Receiving Associate: Date: 8/8/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 8/7/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-8924-a-1	10341	8596	B	1	-3.9	1310	
AFB	140-8924-a-2	10960	8596	B	1	-8.6	1311	1.8
AFB	140-8924-a-3	09643	8596	B	1	-6.8	1312	2.3
AFB	140-8924-a-4	11495	8596	B	1	-6.4	1313	2.1
AFB	140-8924-a-5	10753	8660	B	1	-7.0	1314	2.0
AFB	140-8924-a-6	09636	8532	B	1	-4.7	1315	
AFB	140-8924-a-7	10754	8596	B	1	-6.5	1320	2.1
AFB	140-8924-a-8	11554	8532	B	1	-6.3	1321	1.9
AFB	140-8924-a-9	11545	8596	B	1	-6.5	1322	2.0
AFB	140-8924-a-10	11578	8660	B	1	-5.4	1323	
AFB	140-8924-a-11	11124	8518	B	1	-6.3	1324	2.0
AFB	140-8924-a-12	10520	8660	B	1	-4.6	1325	
AFB	140-8924-a-13	10746	8660	B	1	-6.2	1345	2.3
AFB	140-8924-a-14	10989	8682	B	6	-8.2	1346	1.8
AFB	140-8924-a-15	11007	8682	B	6	-8.3	1347	1.7
AFB	140-8924-a-16	11213	8682	B	6	-7.9	1348	1.9
AFB	140-8924-a-17	11045	8682	B	6	-6.7	1349	1.7
AFB	140-8924-a-18	09877	8682	B	6	-4.1	1350	
AFB	140-8924-a-19	10561	8681	B	6	-5.0	1400	
AFB	140-8924-a-20	09528	8682	B	6	-1.6	1401	
AFB	140-8924-a-21	09666	8596	B	1	-5.8	1402	
AFB	140-8924-a-22	11572	8532	B	1	-4.2	1403	
AFB	140-8924-a-23	09742	8660	B	1	-6.5	1404	2.3
AFB	140-8924-a-24	10795	8532	B	1	-4.4	1405	
AFB	140-8924-a-25	09642	8532	B	1	-5.4	1406	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11165 | Lab Sample ID: 140-8518-1
Matrix: Air | Lab File ID: 8518BK01.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:16
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11165 | Lab Sample ID: 140-8518-1
Matrix: Air | Lab File ID: 8518BK01.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:16
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11165 | Lab Sample ID: 140-8518-1

Matrix: Air | Lab File ID: 8518BK01.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:16

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11165 Lab Sample ID: 140-8518-1

Matrix: Air Lab File ID: 8518BK01.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/27/2017 11:16

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK01.D
Lims ID: 140-8518-A-1
Client ID: 11165
Sample Type: Client
Inject. Date: 27-Jun-2017 11:16:30 ALS Bottle#: 15 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005325-005
Misc. Info.: 11165
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Jun-2017 09:18:01 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 27-Jun-2017 13:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.931	-0.005	82	596498	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.088	-0.005	95	2993049	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.968	14.974	-0.006	89	2774018	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2210784	3.97	
11 Acetaldehyde	44	3.785	3.785	0.001	98	62316	1.28	
29 2-Methyl-2-propanol	59	5.472	5.429	0.043	56	4776	0.0207	
31 Methylene Chloride	84	5.618	5.623	-0.005	94	15059	0.1074	

Reagents:

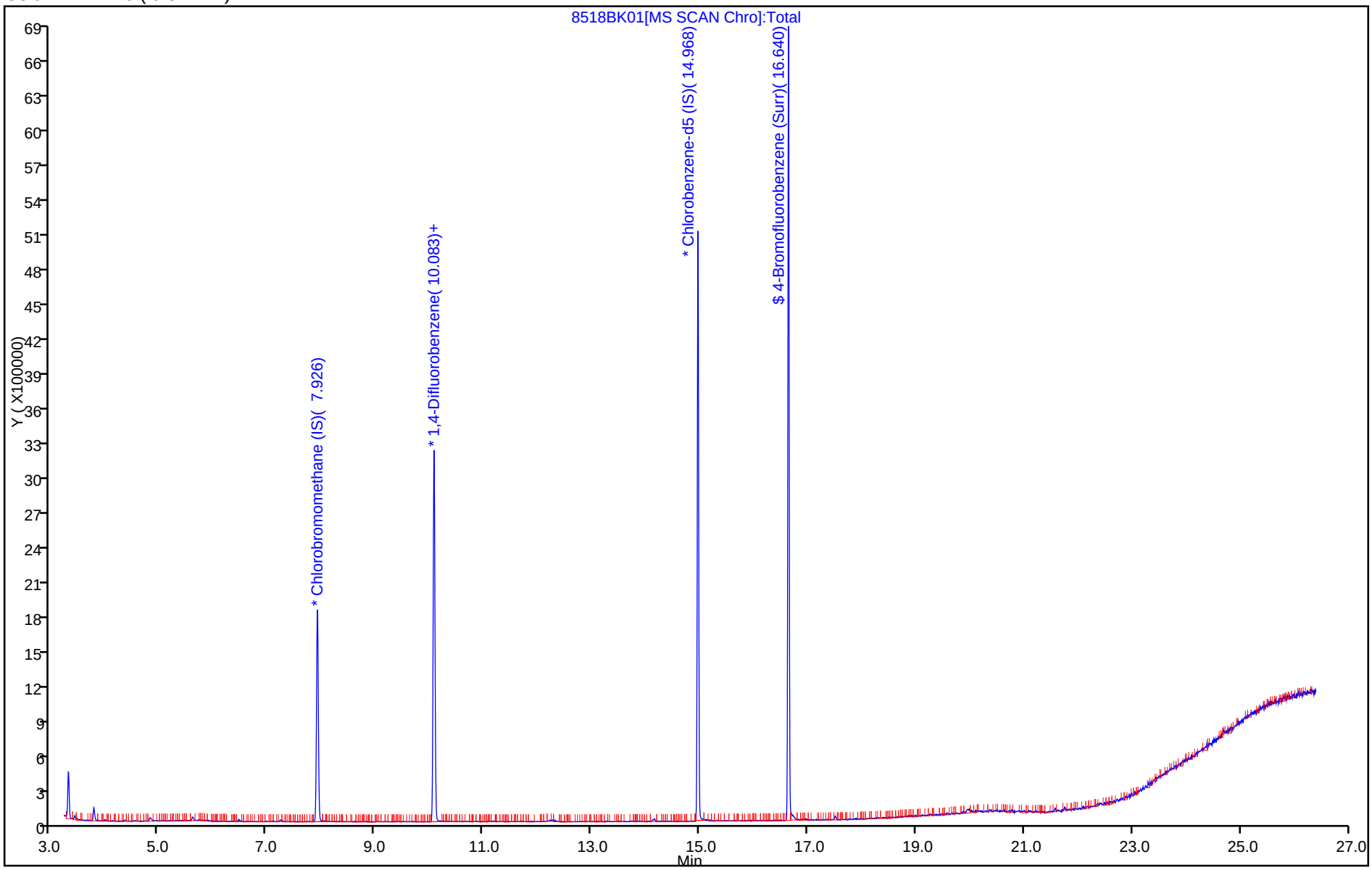
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 28-Jun-2017 09:18:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK01.D				
Injection Date:	27-Jun-2017 11:16:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-1	Lab Sample ID:	140-8518-1	Worklist Smp#:	5
Client ID:	11165				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10497 | Lab Sample ID: 140-8518-2
Matrix: Air | Lab File ID: 8518BK02.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:59
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10497 | Lab Sample ID: 140-8518-2
Matrix: Air | Lab File ID: 8518BK02.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:59
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10497 | Lab Sample ID: 140-8518-2

Matrix: Air | Lab File ID: 8518BK02.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/27/2017 11:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10497 Lab Sample ID: 140-8518-2

Matrix: Air Lab File ID: 8518BK02.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/27/2017 11:59

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK02.D
Lims ID: 140-8518-A-2
Client ID: 10497
Sample Type: Client
Inject. Date: 27-Jun-2017 11:59:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005325-006
Misc. Info.: 10497
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Jun-2017 09:18:01 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 27-Jun-2017 13:10:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.931	-0.005	82	582538	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.088	-0.005	95	2735297	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.968	14.974	-0.006	88	2645810	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2057303	3.87	
14 Butane	43	3.876	3.876	0.000	92	6461	0.0320	
31 Methylene Chloride	84	5.623	5.623	0.000	87	18841	0.1376	
40 Hexane	56	7.279	7.284	-0.005	80	3374	0.0273	

Reagents:

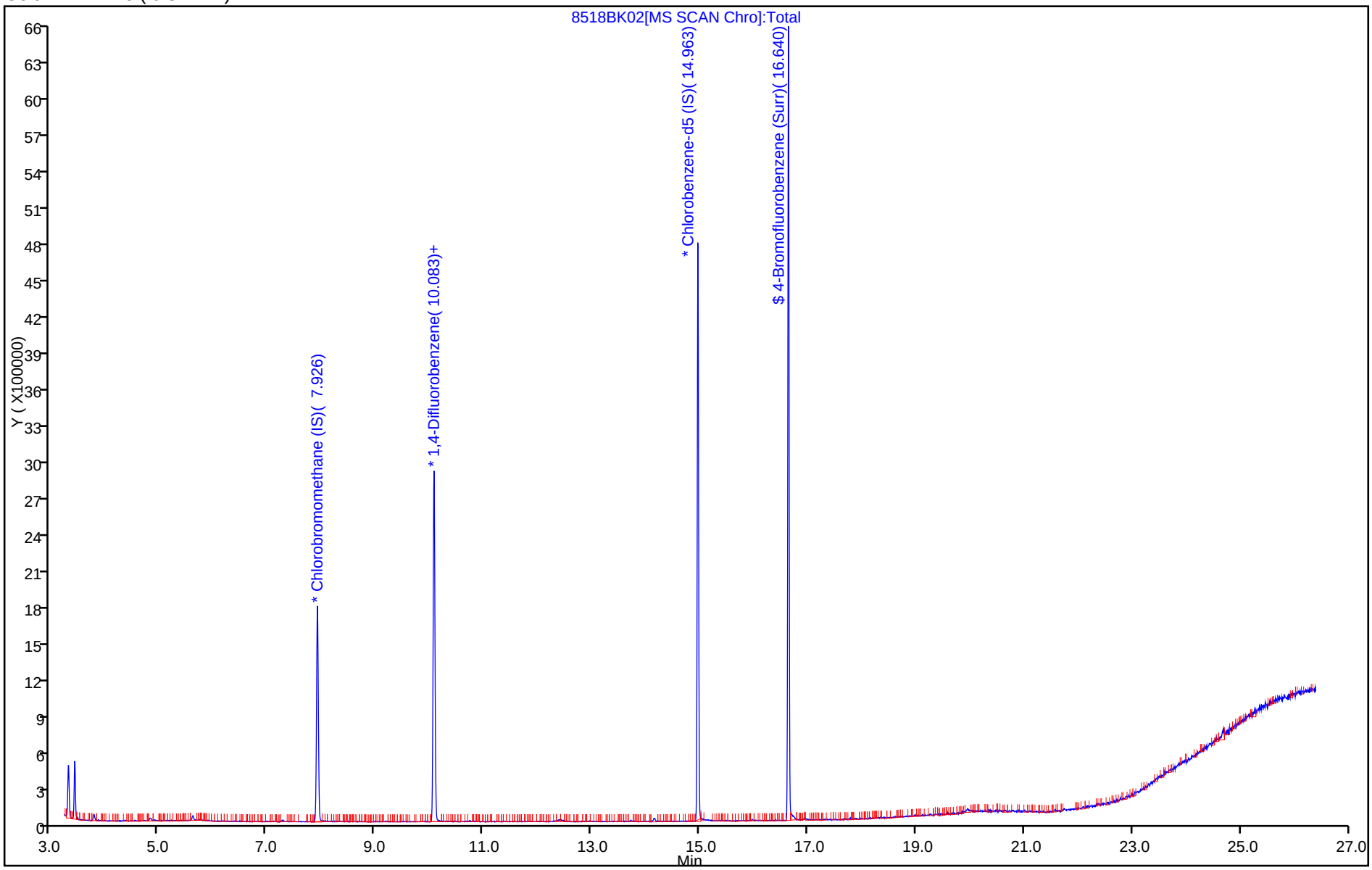
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 28-Jun-2017 09:18:23 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK02.D				
Injection Date:	27-Jun-2017 11:59:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-2	Lab Sample ID:	140-8518-2	Worklist Smp#:	6
Client ID:	10497				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11110 | Lab Sample ID: 140-8518-3
Matrix: Air | Lab File ID: 8518BK03.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 07:45
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 11110
Lab Sample ID: 140-8518-3
Matrix: Air
Lab File ID: 8518BK03.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 06/28/2017 07:45
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12318
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11110 | Lab Sample ID: 140-8518-3

Matrix: Air | Lab File ID: 8518BK03.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 07:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12318 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11110 Lab Sample ID: 140-8518-3

Matrix: Air Lab File ID: 8518BK03.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/28/2017 07:45

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12318 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK03.D
Lims ID: 140-8518-A-3
Client ID: 11110
Sample Type: Client
Inject. Date: 28-Jun-2017 07:45:30 ALS Bottle#: 1 Worklist Smp#: 31
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005325-031
Misc. Info.: 11110
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Jun-2017 09:18:01 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 28-Jun-2017 09:01:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.921	7.931	-0.010	82	596497	4.00	
* 2 1,4-Difluorobenzene	114	10.078	10.088	-0.010	95	2871340	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.974	-0.011	89	2753894	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2180479	3.94	
31 Methylene Chloride	84	5.613	5.623	-0.010	90	15097	0.1077	
42 cis-1,2-Dichloroethene	96	7.619	7.629	-0.010	92	13614	0.0749	
76 Tetrachloroethene	129	14.127	14.132	-0.005	93	6414	0.0222	

Reagents:

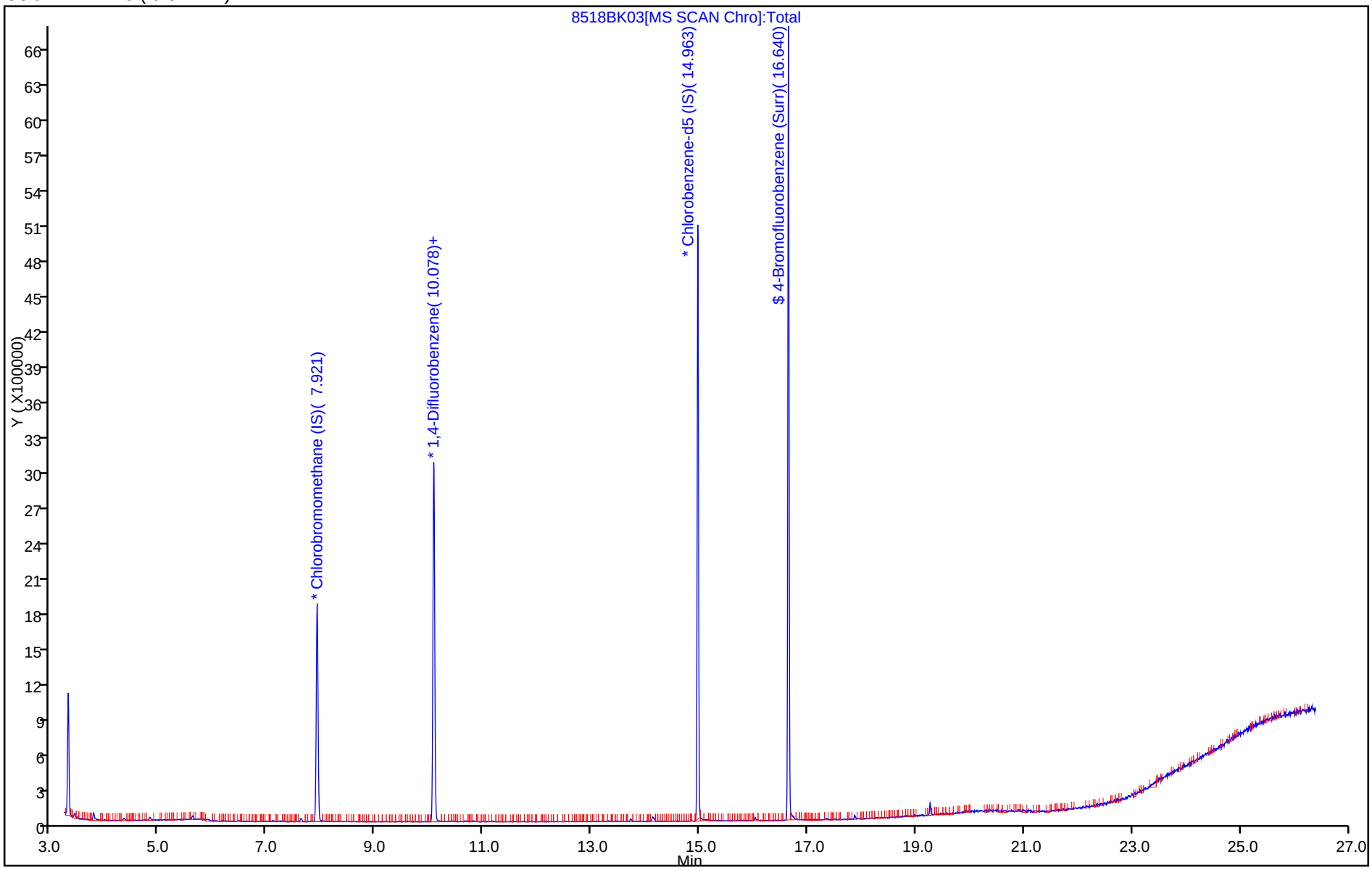
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 28-Jun-2017 09:19:25 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5325.b\8518BK03.D				
Injection Date:	28-Jun-2017 07:45:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-3	Lab Sample ID:	140-8518-3	Worklist Smp#:	31
Client ID:	11110				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-8518-4

Matrix: Air | Lab File ID: 8518BK04.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 11:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10519 | Lab Sample ID: 140-8518-4
Matrix: Air | Lab File ID: 8518BK04.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 11:39
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-8518-4

Matrix: Air | Lab File ID: 8518BK04.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 11:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-8518-4

Matrix: Air Lab File ID: 8518BK04.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/28/2017 11:39

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12319 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK04.D				
Lims ID:	140-8518-A-4				
Client ID:	10519				
Sample Type:	Client				
Inject. Date:	28-Jun-2017 11:39:30	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005326-005				
Misc. Info.:	10519				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	29-Jun-2017 11:03:08	Calib Date:	21-Jun-2017 22:43:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK016				

First Level Reviewer: tajh Date: 28-Jun-2017 12:15:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.920	7.937	-0.017	83	590744	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.094	-0.011	95	2936881	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.974	-0.011	89	2801021	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	91	2188230	3.89	
6 Chlorodifluoromethane	67	3.466	3.466	0.000	89	3258	0.0368	
31 Methylene Chloride	84	5.618	5.623	-0.005	93	17741	0.1278	

Reagents:

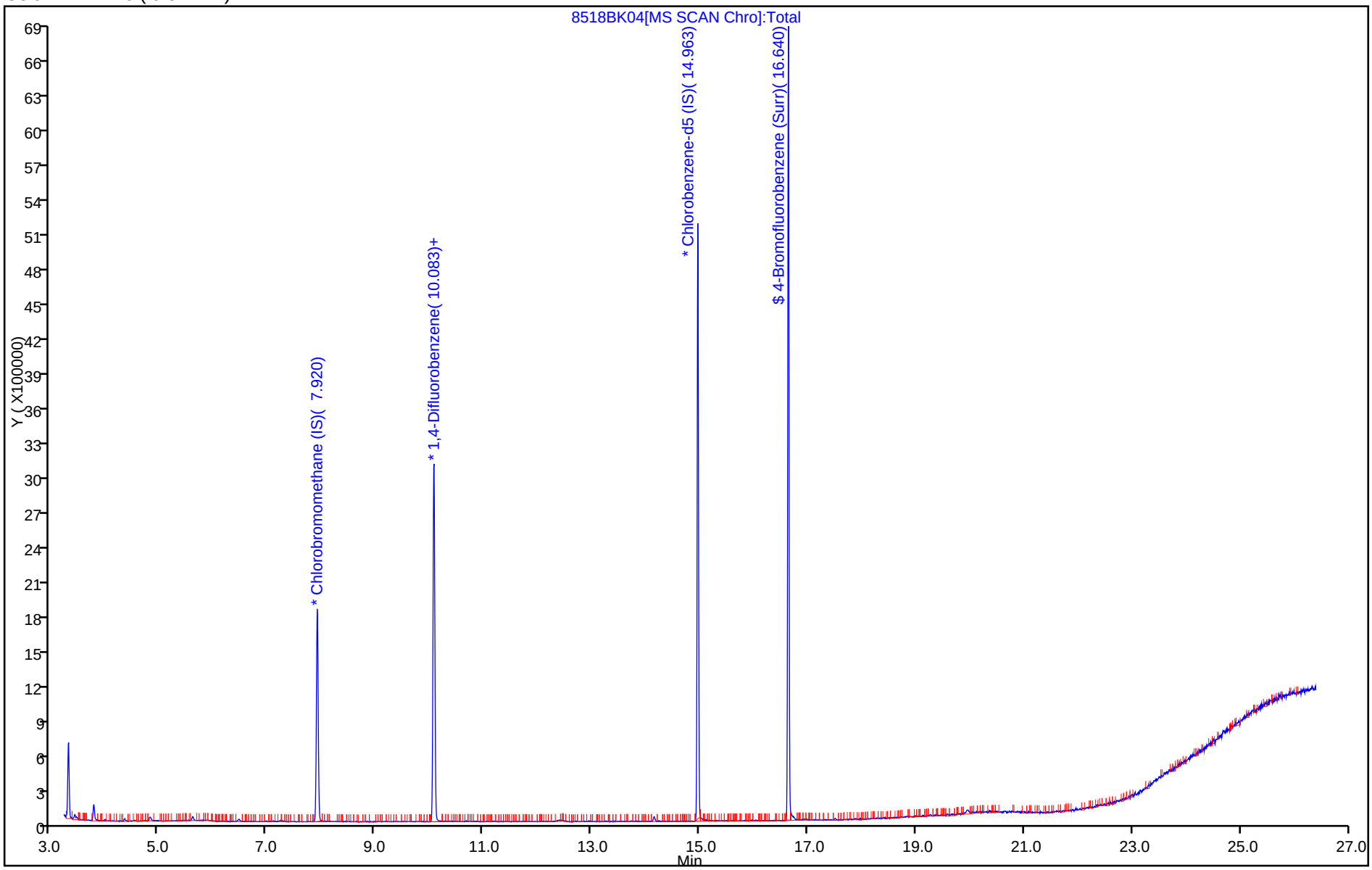
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 29-Jun-2017 11:03:28 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK04.D				
Injection Date:	28-Jun-2017 11:39:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-4	Lab Sample ID:	140-8518-4	Worklist Smp#:	5
Client ID:	10519				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10501 | Lab Sample ID: 140-8518-5

Matrix: Air | Lab File ID: 8518BK05.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 12:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10501 | Lab Sample ID: 140-8518-5
Matrix: Air | Lab File ID: 8518BK05.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 12:24
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10501 | Lab Sample ID: 140-8518-5

Matrix: Air | Lab File ID: 8518BK05.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/28/2017 12:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12319 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10501 Lab Sample ID: 140-8518-5

Matrix: Air Lab File ID: 8518BK05.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/28/2017 12:24

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12319 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK05.D
Lims ID: 140-8518-A-5
Client ID: 10501
Sample Type: Client
Inject. Date: 28-Jun-2017 12:24:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005326-006
Misc. Info.: 10501
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Jun-2017 11:03:08 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: tajh Date: 28-Jun-2017 13:09:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.937	-0.011	83	618509	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.094	-0.011	95	2962865	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.974	-0.011	88	2906975	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.640	16.645	-0.005	90	2295079	3.93	
31 Methylene Chloride	84	5.623	5.623	0.000	92	17378	0.1195	

Reagents:

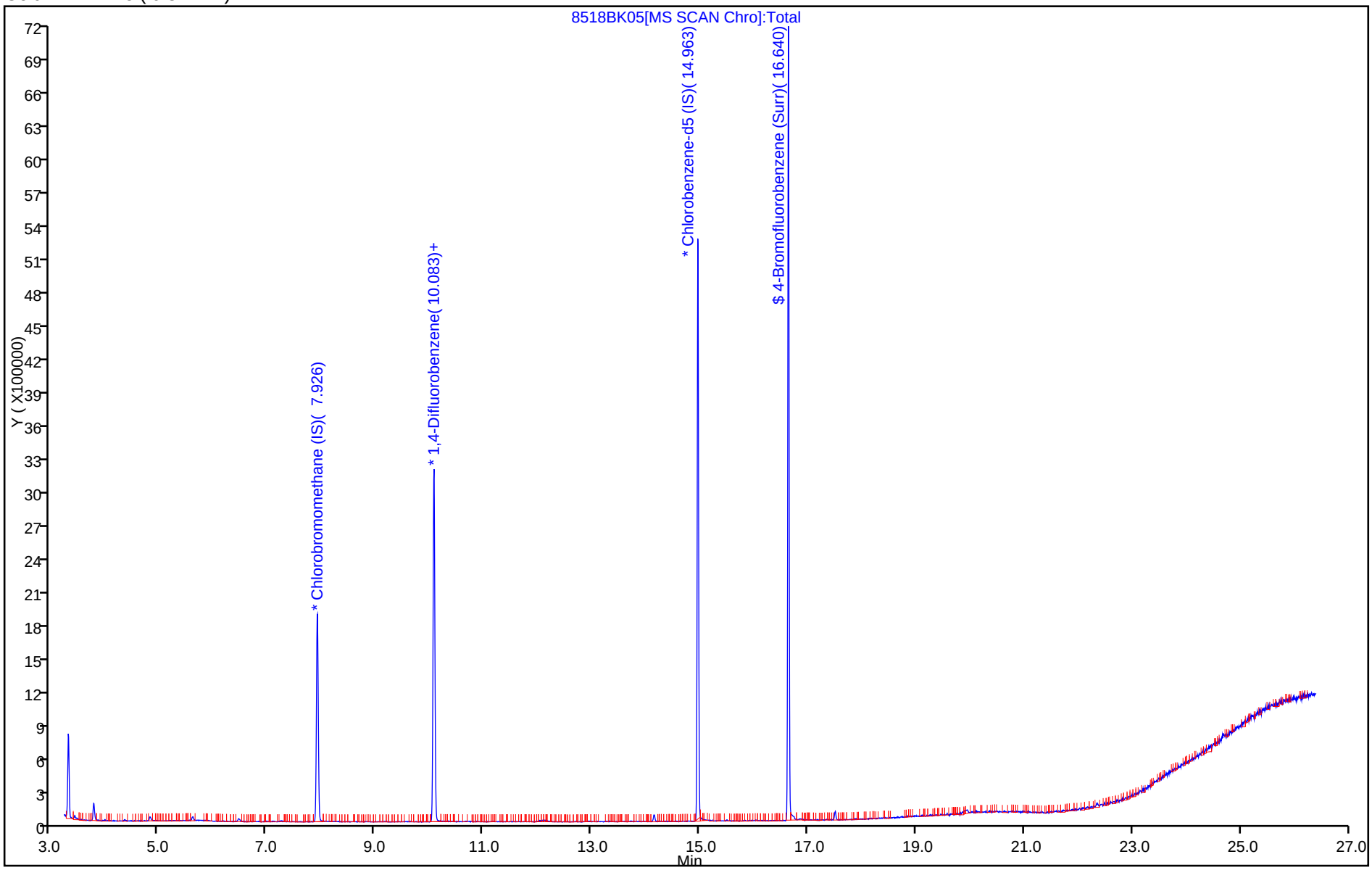
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 29-Jun-2017 11:03:41 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170624-5326.b\8518BK05.D				
Injection Date:	28-Jun-2017 12:24:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8518-A-5	Lab Sample ID:	140-8518-5	Worklist Smp#:	6
Client ID:	10501				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10342 | Lab Sample ID: 140-8518-8
Matrix: Air | Lab File ID: 8518BK08.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 22:38
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10342 | Lab Sample ID: 140-8518-8
Matrix: Air | Lab File ID: 8518BK08.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 22:38
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10342 | Lab Sample ID: 140-8518-8

Matrix: Air | Lab File ID: 8518BK08.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 22:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10342 Lab Sample ID: 140-8518-8

Matrix: Air Lab File ID: 8518BK08.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/30/2017 22:38

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK08.D
Lims ID: 140-8518-A-8
Client ID: 10342
Sample Type: Client
Inject. Date: 30-Jun-2017 22:38:30 ALS Bottle#: 2 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-016
Misc. Info.: 10342
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	616474	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	95	2965933	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.956	14.961	-0.005	91	2472970	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.660	16.659	0.001	87	2078193	4.17	
31 Methylene Chloride	84	5.611	5.616	-0.005	90	17022	0.0963	

Reagents:

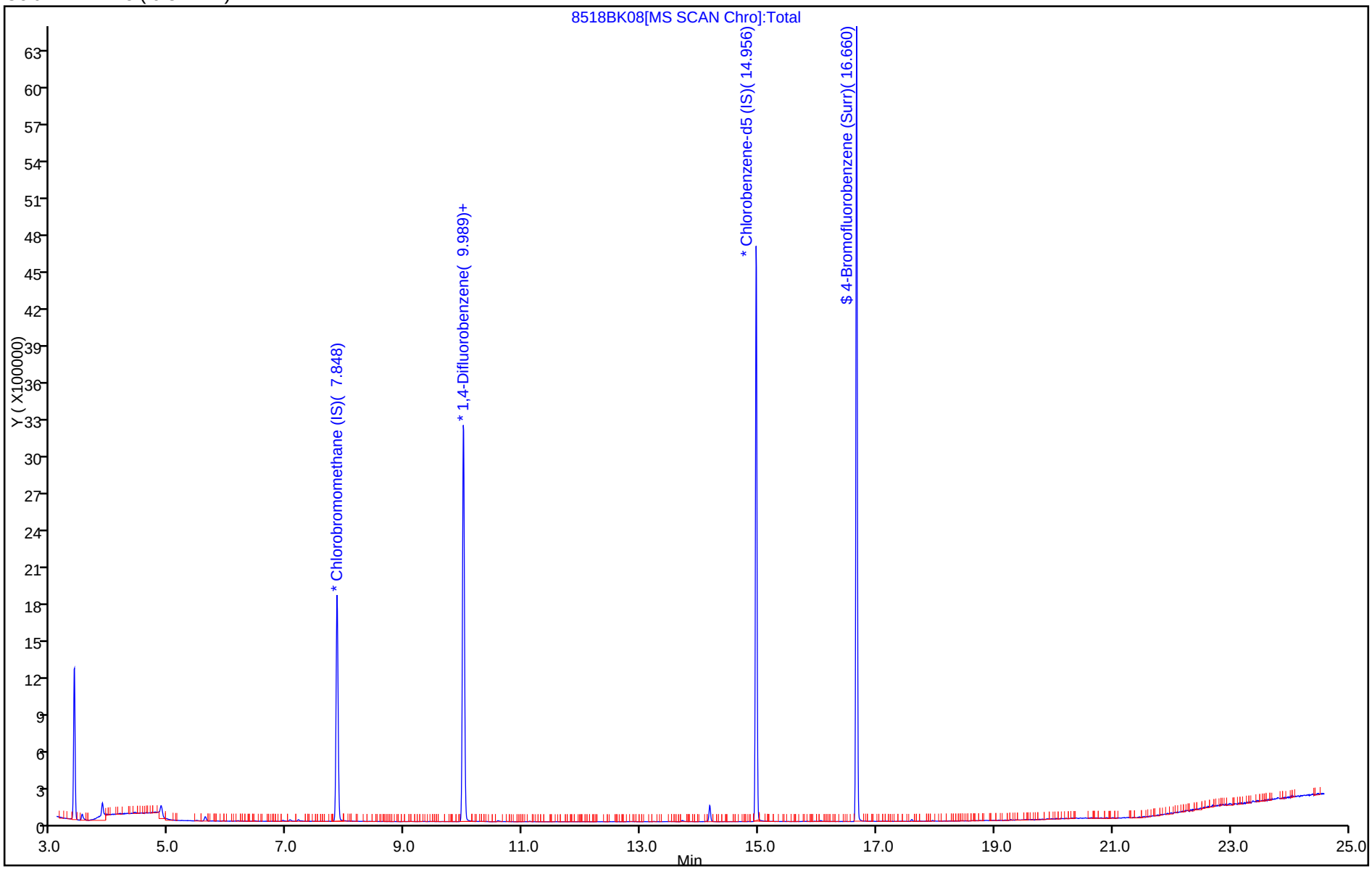
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:12 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK08.D				
Injection Date:	30-Jun-2017 22:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-8	Lab Sample ID:	140-8518-8	Worklist Smp#:	16
Client ID:	10342				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10942 | Lab Sample ID: 140-8518-9
Matrix: Air | Lab File ID: 8518BK09.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 23:26
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10942 | Lab Sample ID: 140-8518-9
Matrix: Air | Lab File ID: 8518BK09.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 23:26
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10942 | Lab Sample ID: 140-8518-9

Matrix: Air | Lab File ID: 8518BK09.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 06/30/2017 23:26

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10942 Lab Sample ID: 140-8518-9

Matrix: Air Lab File ID: 8518BK09.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 06/30/2017 23:26

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK09.D
Lims ID: 140-8518-A-9
Client ID: 10942
Sample Type: Client
Inject. Date: 30-Jun-2017 23:26:30 ALS Bottle#: 3 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-017
Misc. Info.: 10942
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	602304	4.00	
* 2 1,4-Difluorobenzene	114	9.994	9.995	-0.001	95	2874241	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2412686	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	2042607	4.20	
31 Methylene Chloride	84	5.616	5.616	0.000	92	15748	0.0912	

Reagents:

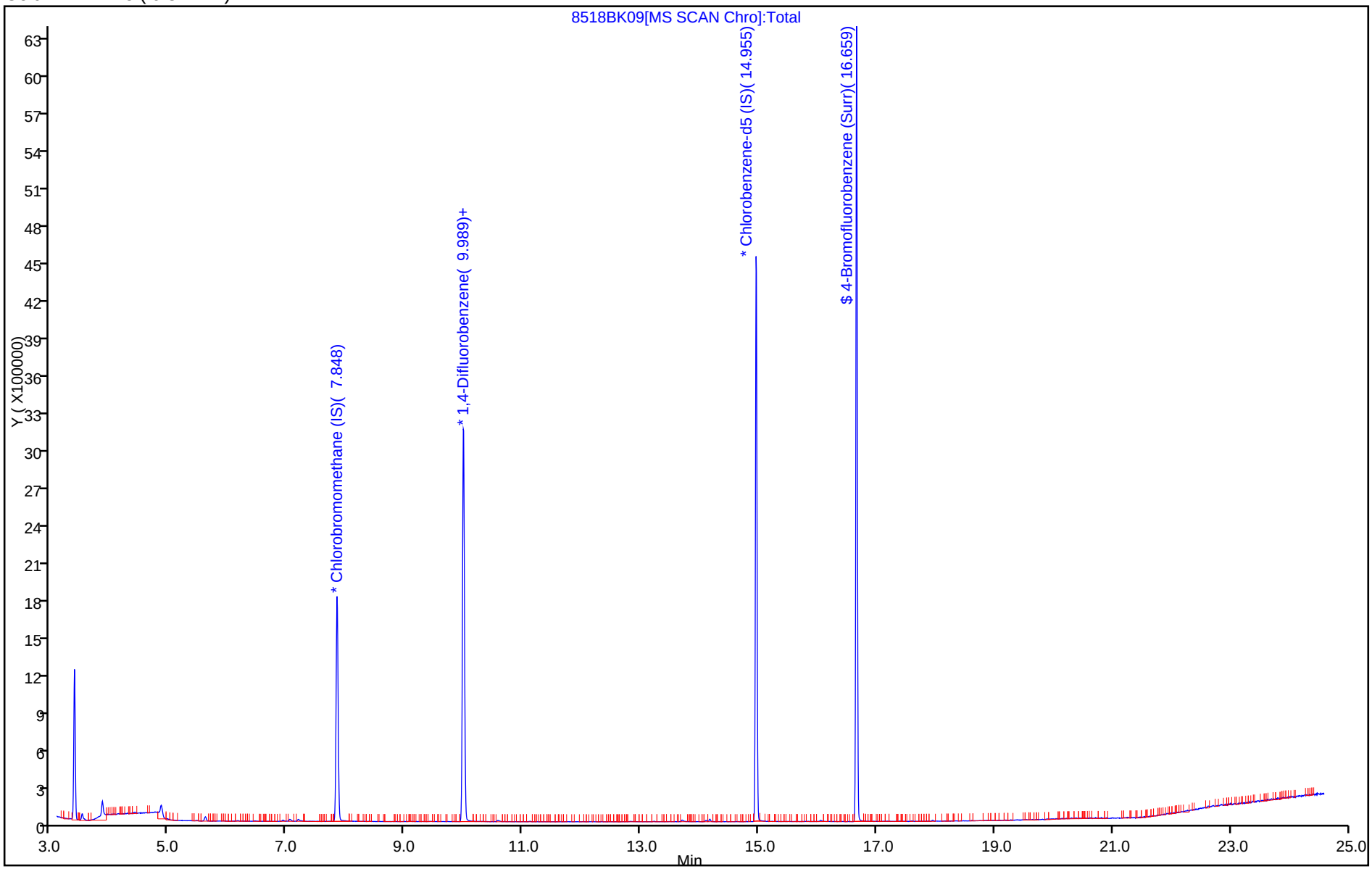
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:14 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK09.D				
Injection Date:	30-Jun-2017 23:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-9	Lab Sample ID:	140-8518-9	Worklist Smp#:	17
Client ID:	10942				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10758 | Lab Sample ID: 140-8518-10

Matrix: Air | Lab File ID: 8518BK10.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 00:14

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10758
Lab Sample ID: 140-8518-10
Matrix: Air
Lab File ID: 8518BK10.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 00:14
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10758
Lab Sample ID: 140-8518-10
Matrix: Air
Lab File ID: 8518BK10.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 00:14
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10758 Lab Sample ID: 140-8518-10

Matrix: Air Lab File ID: 8518BK10.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 00:14

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK10.D
Lims ID: 140-8518-A-10
Client ID: 10758
Sample Type: Client
Inject. Date: 01-Jul-2017 00:14:30 ALS Bottle#: 4 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-018
Misc. Info.: 10758
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	599441	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	95	2886716	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2457326	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	87	2060483	4.16	
31 Methylene Chloride	84	5.616	5.616	0.000	89	16066	0.0934	

Reagents:

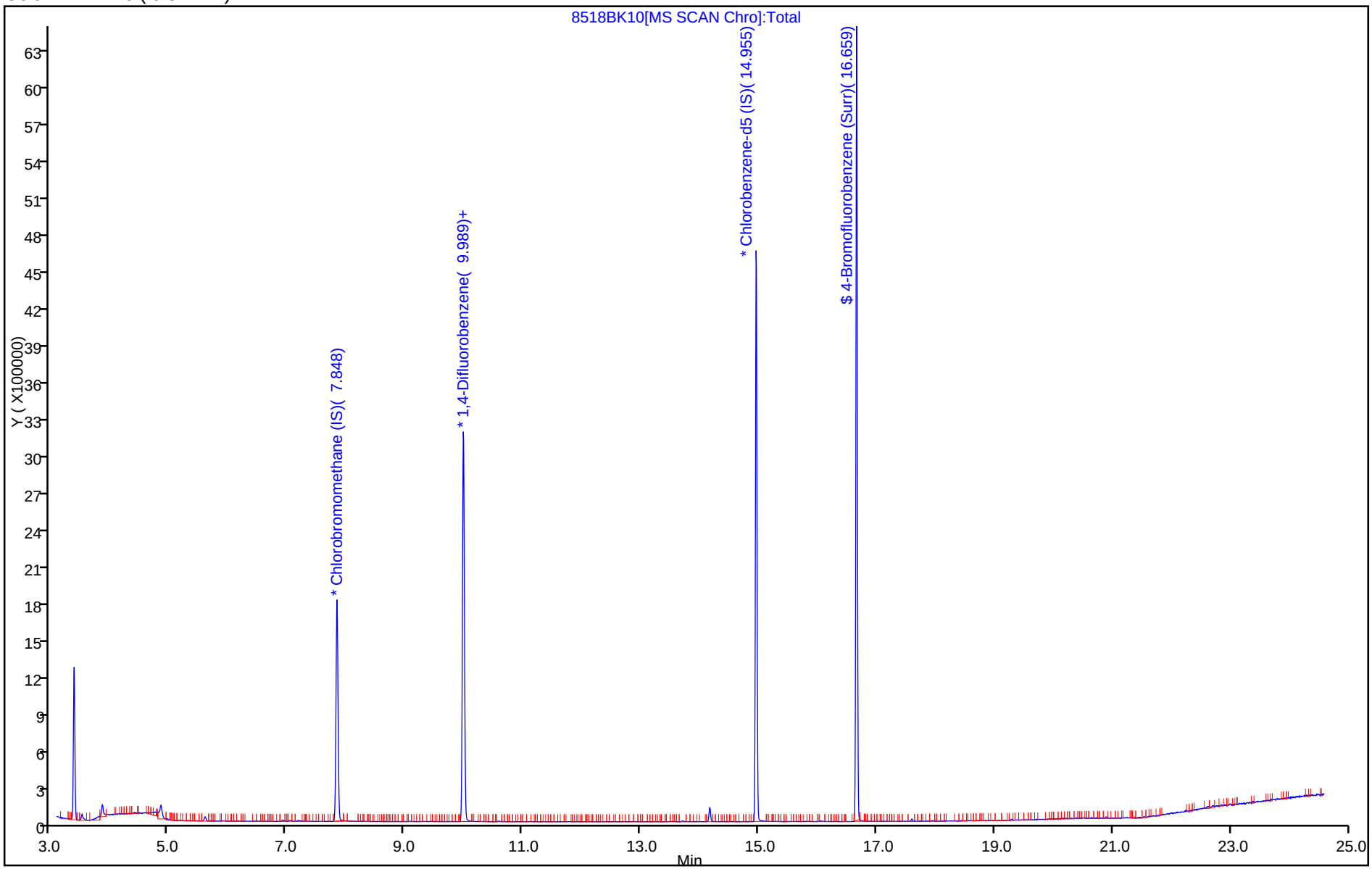
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:15 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK10.D				
Injection Date:	01-Jul-2017 00:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-10	Lab Sample ID:	140-8518-10	Worklist Smp#:	18
Client ID:	10758				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10605 | Lab Sample ID: 140-8518-11

Matrix: Air | Lab File ID: 8518BK11.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 01:01

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10605
Lab Sample ID: 140-8518-11
Matrix: Air
Lab File ID: 8518BK11.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 01:01
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10605 | Lab Sample ID: 140-8518-11

Matrix: Air | Lab File ID: 8518BK11.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 01:01

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10605 Lab Sample ID: 140-8518-11

Matrix: Air Lab File ID: 8518BK11.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 01:01

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D
Lims ID: 140-8518-A-11
Client ID: 10605
Sample Type: Client
Inject. Date: 01-Jul-2017 01:01:30 ALS Bottle#: 5 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-019
Misc. Info.: 10605
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	80	593427	4.00	
* 2 1,4-Difluorobenzene	114	9.995	9.995	0.000	95	2855049	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.956	14.961	-0.005	91	2447809	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	2033386	4.12	
31 Methylene Chloride	84	5.621	5.616	0.005	92	16518	0.0970	
120 2-Methylnaphthalene	142	21.734	21.728	0.006	99	32081	NC	
121 1-Methylnaphthalene	142	21.869	21.869	0.000	99	54646	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

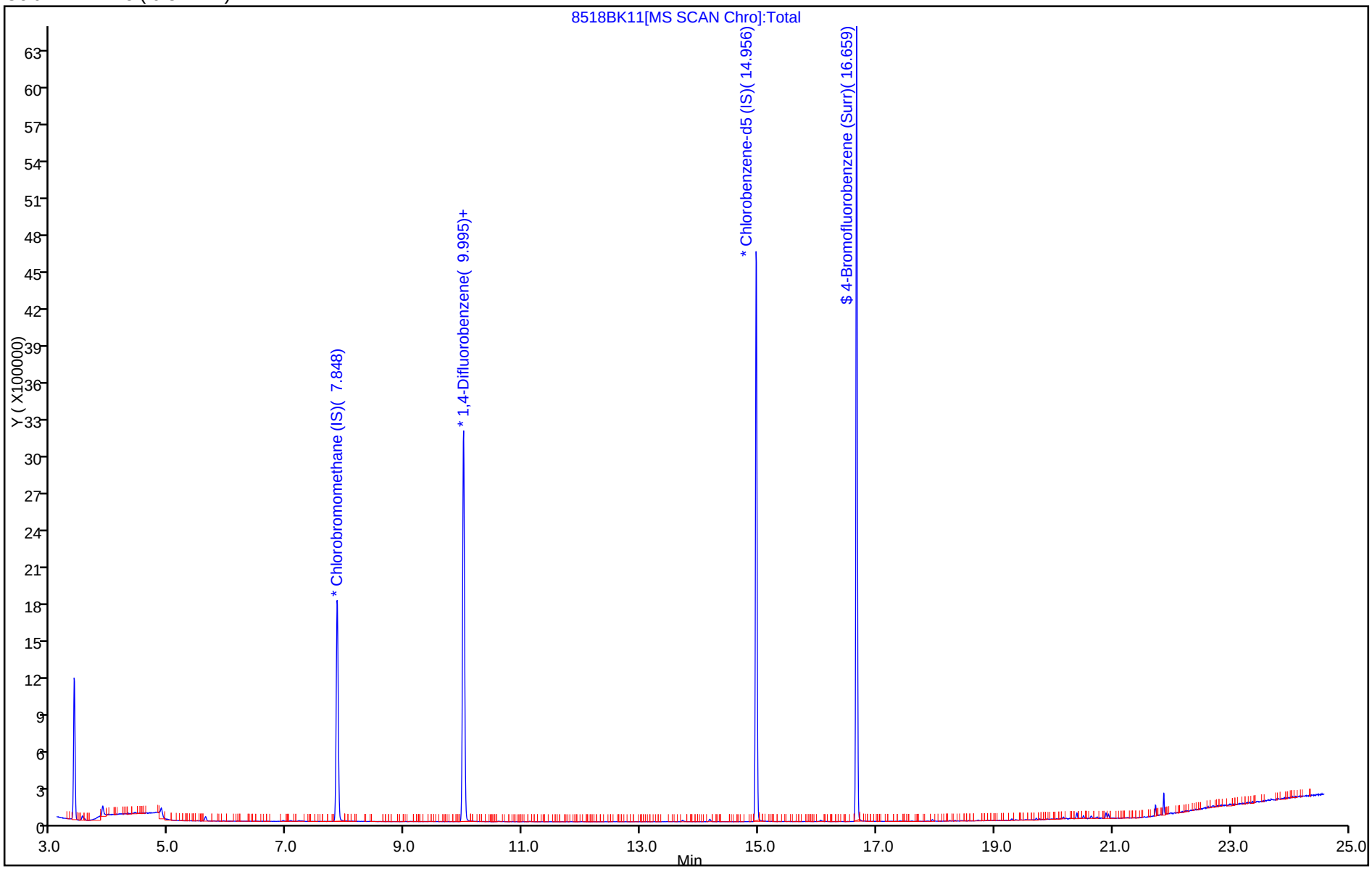
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D				
Injection Date:	01-Jul-2017 01:01:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-11	Lab Sample ID:	140-8518-11	Worklist Smp#:	19
Client ID:	10605				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

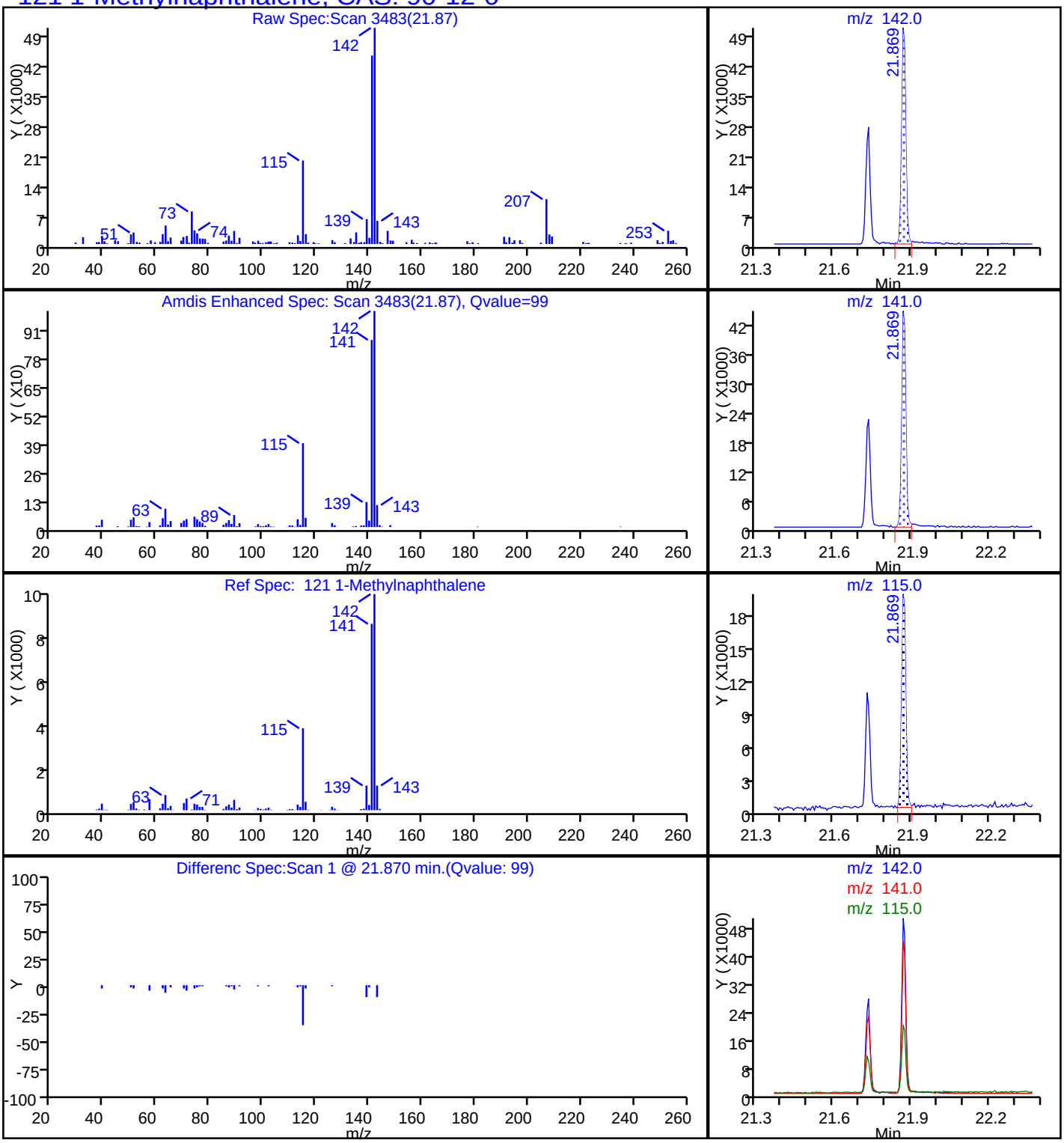


Report Date: 03-Jul-2017 14:13:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D				
Injection Date:	01-Jul-2017 01:01:30	Instrument ID:	MR		
Lims ID:	140-8518-A-11	Lab Sample ID:	140-8518-11		
Client ID:	10605				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

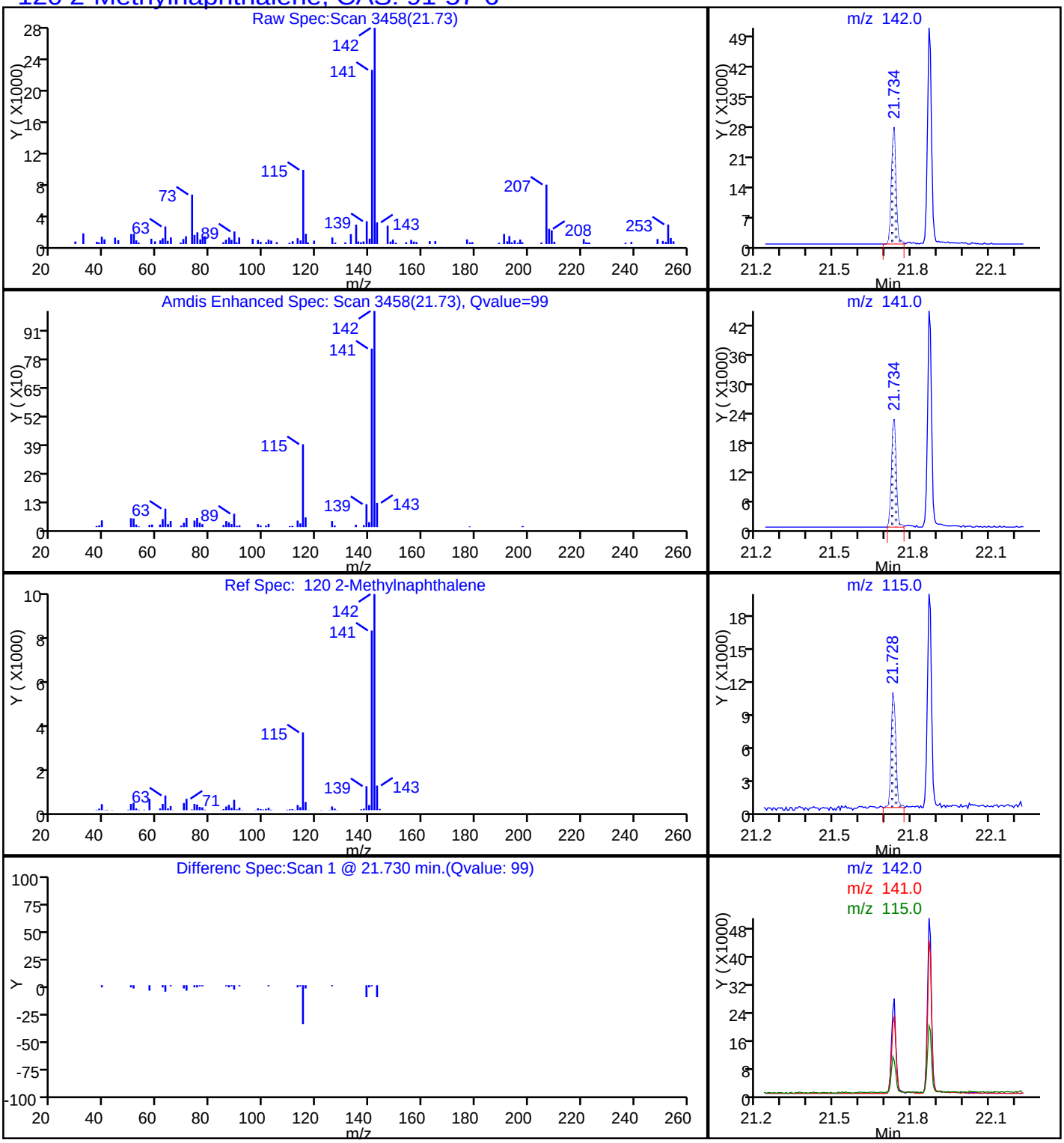


Report Date: 03-Jul-2017 14:13:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK11.D				
Injection Date:	01-Jul-2017 01:01:30	Instrument ID:	MR		
Lims ID:	140-8518-A-11	Lab Sample ID:	140-8518-11		
Client ID:	10605				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 | Lab Sample ID: 140-8518-12

Matrix: Air | Lab File ID: 8518BK12.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 | Lab Sample ID: 140-8518-12

Matrix: Air | Lab File ID: 8518BK12.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 | Lab Sample ID: 140-8518-12

Matrix: Air | Lab File ID: 8518BK12.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11557 Lab Sample ID: 140-8518-12

Matrix: Air Lab File ID: 8518BK12.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 02:37

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D
Lims ID: 140-8518-A-12
Client ID: 11557
Sample Type: Client
Inject. Date: 01-Jul-2017 02:37:30 ALS Bottle#: 7 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-021
Misc. Info.: 11557
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.843	7.854	-0.011	79	582436	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	96	2794600	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2407149	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1999466	4.12	
11 Acetaldehyde	44	3.847	3.858	-0.011	93	75443	1.49	
20 Acrolein	56	4.758	4.759	-0.001	91	2944	0.0535	7M
23 Acetone	58	4.861	4.850	0.011	98	45172	0.6517	
29 2-Methyl-2-propanol	59	5.459	5.438	0.021	96	6970	0.0195	
31 Methylene Chloride	84	5.605	5.616	-0.011	92	15311	0.0916	
39 2-Butanone (MEK)	72	7.185	7.164	0.021	92	5420	0.0802	
121 1-Methylnaphthalene	142	21.874	21.869	0.005	8	300	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated

Reagents:

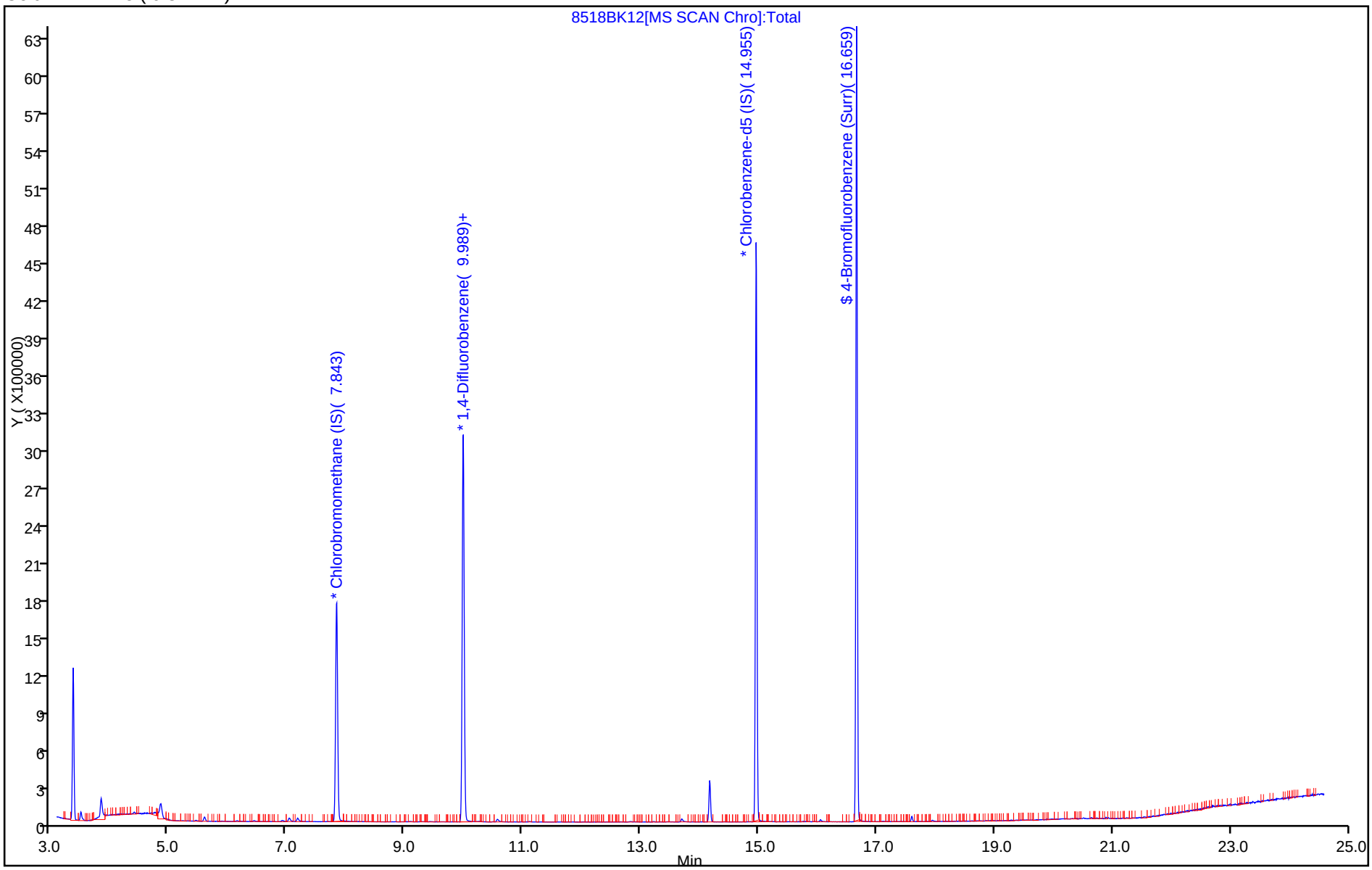
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D				
Injection Date:	01-Jul-2017 02:37:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-12	Lab Sample ID:	140-8518-12	Worklist Smp#:	21
Client ID:	11557				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

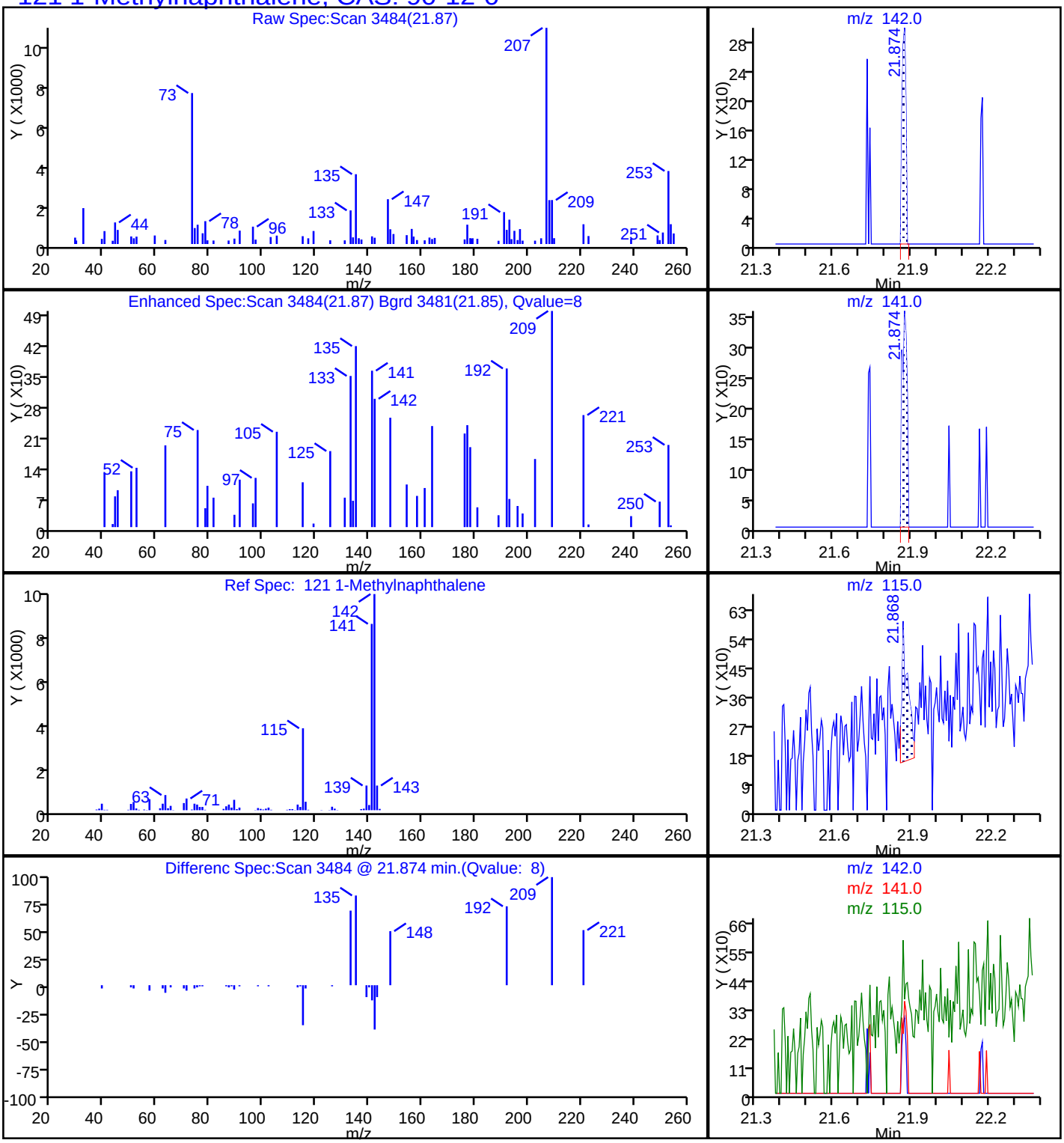


Report Date: 03-Jul-2017 14:13:21 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D				
Injection Date:	01-Jul-2017 02:37:30	Instrument ID:	MR		
Lims ID:	140-8518-A-12	Lab Sample ID:	140-8518-12		
Client ID:	11557				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

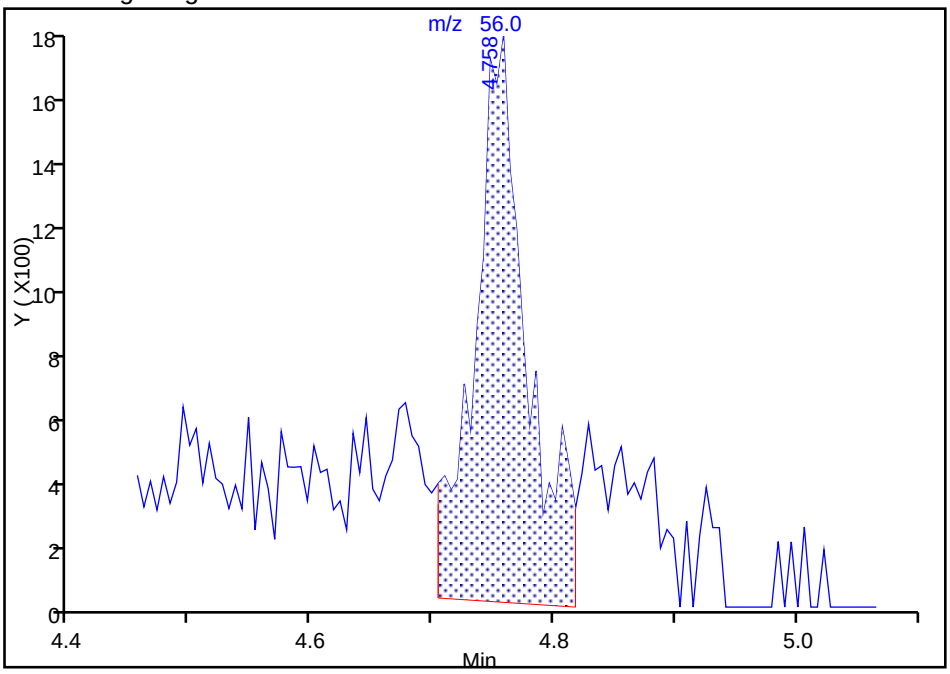
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK12.D				
Injection Date:	01-Jul-2017 02:37:30	Instrument ID:	MR		
Lims ID:	140-8518-A-12	Lab Sample ID:	140-8518-12		
Client ID:	11557				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

20 Acrolein, CAS: 107-02-8

Signal: 1

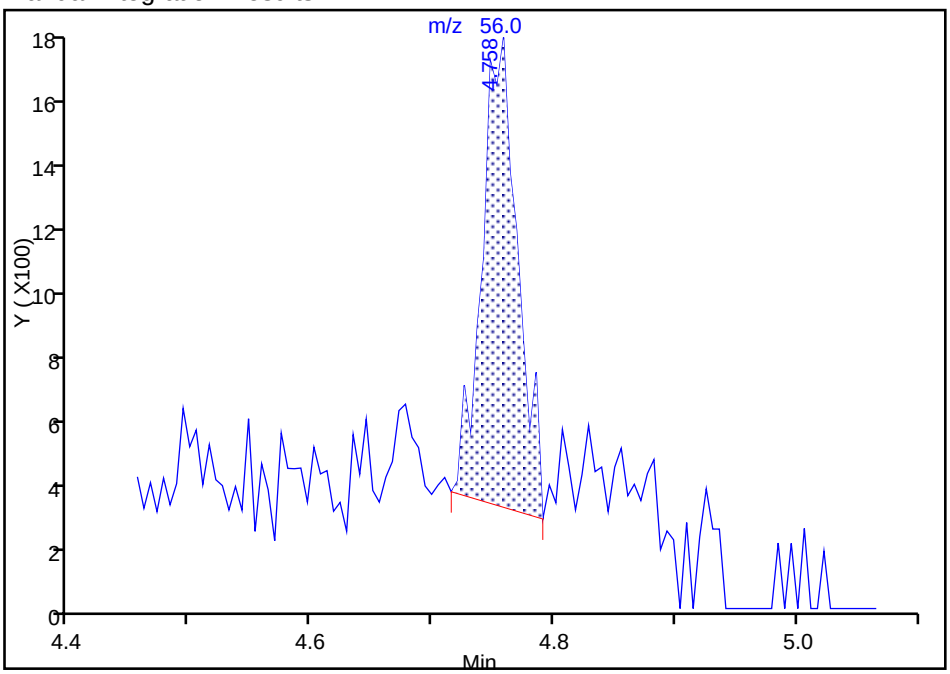
Processing Integration Results

RT: 4.76
Area: 5288
Amount: 0.096073
Amount Units: ppb v/v



Manual Integration Results

RT: 4.76
Area: 2944
Amount: 0.053487
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 03-Jul-2017 13:49:54

Audit Action: Manually Integrated Audit Reason: Baseline

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 | Lab Sample ID: 140-8518-13

Matrix: Air | Lab File ID: 8518BK13.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 | Lab Sample ID: 140-8518-13

Matrix: Air | Lab File ID: 8518BK13.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 | Lab Sample ID: 140-8518-13

Matrix: Air | Lab File ID: 8518BK13.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 11124 Lab Sample ID: 140-8518-13

Matrix: Air Lab File ID: 8518BK13.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 03:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK13.D
Lims ID: 140-8518-A-13
Client ID: 11124
Sample Type: Client
Inject. Date: 01-Jul-2017 03:25:30 ALS Bottle#: 8 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-022
Misc. Info.: 11124
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	582344	4.00	
* 2 1,4-Difluorobenzene	114	9.994	9.995	-0.001	96	2790908	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2392357	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1988803	4.13	
29 2-Methyl-2-propanol	59	5.470	5.438	0.032	94	6549	0.0183	
31 Methylene Chloride	84	5.616	5.616	0.000	91	15506	0.0928	

Reagents:

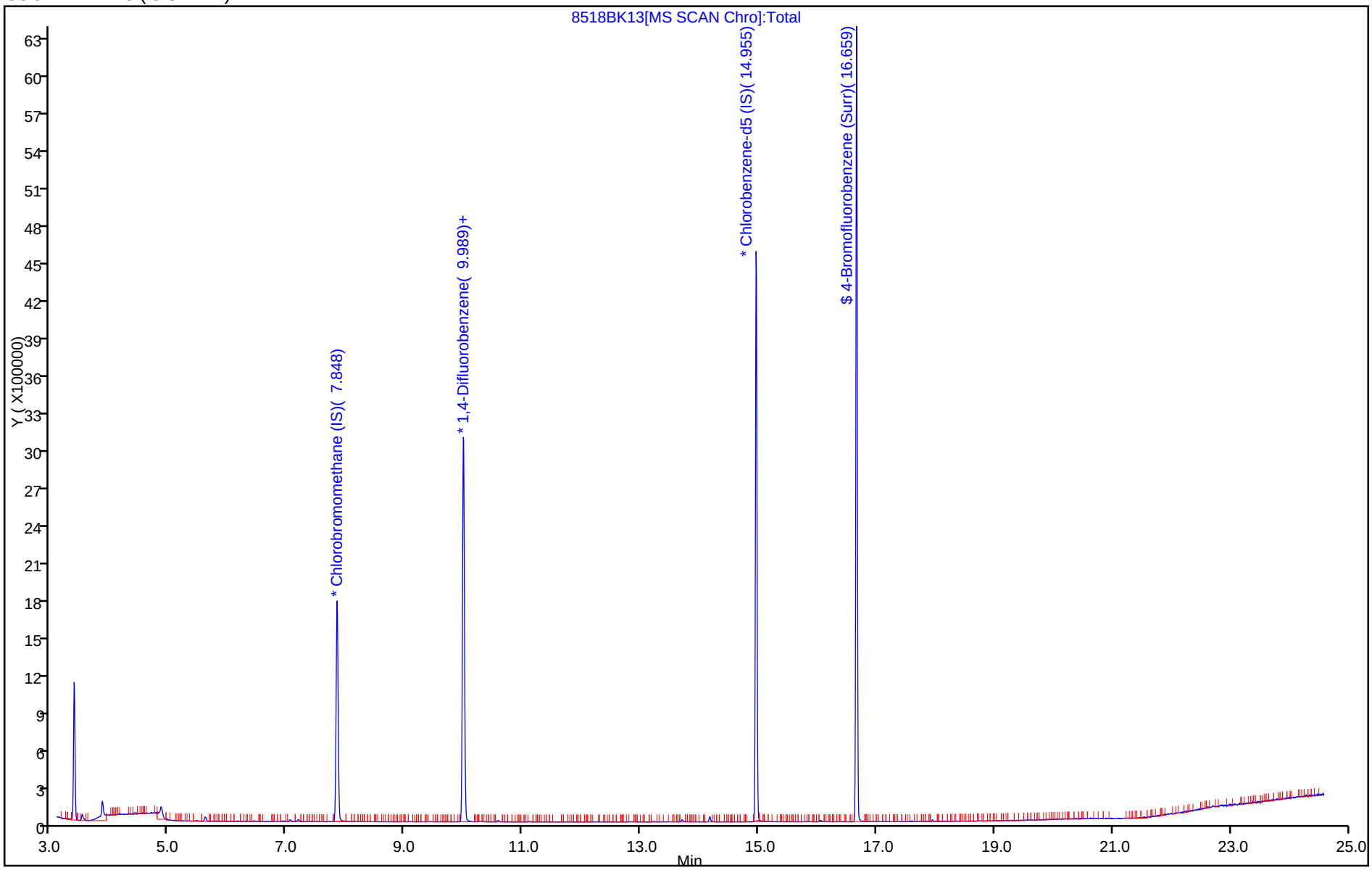
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:23 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK13.D				
Injection Date:	01-Jul-2017 03:25:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-13	Lab Sample ID:	140-8518-13	Worklist Smp#:	22
Client ID:	11124				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10973 | Lab Sample ID: 140-8518-14

Matrix: Air | Lab File ID: 8518BK14.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 04:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10973 | Lab Sample ID: 140-8518-14

Matrix: Air | Lab File ID: 8518BK14.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 04:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10973
Lab Sample ID: 140-8518-14
Matrix: Air
Lab File ID: 8518BK14.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 04:12
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10973 Lab Sample ID: 140-8518-14

Matrix: Air Lab File ID: 8518BK14.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 04:12

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK14.D
Lims ID: 140-8518-A-14
Client ID: 10973
Sample Type: Client
Inject. Date: 01-Jul-2017 04:12:30 ALS Bottle#: 9 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-023
Misc. Info.: 10973
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:53:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.837	7.854	-0.017	79	569398	4.00	
* 2 1,4-Difluorobenzene	114	9.989	9.995	-0.006	95	2745057	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2361182	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1965320	4.13	
11 Acetaldehyde	44	3.847	3.858	-0.011	91	64638	1.31	
20 Acrolein	56	4.758	4.759	-0.001	91	4398	0.0817	
23 Acetone	58	4.850	4.850	0.000	100	41180	0.6077	
31 Methylene Chloride	84	5.600	5.616	-0.016	94	15641	0.0958	
39 2-Butanone (MEK)	72	7.185	7.164	0.021	98	7020	0.1062	
76 Tetrachloroethene	129	14.103	14.109	-0.006	92	12779	0.0560	

Reagents:

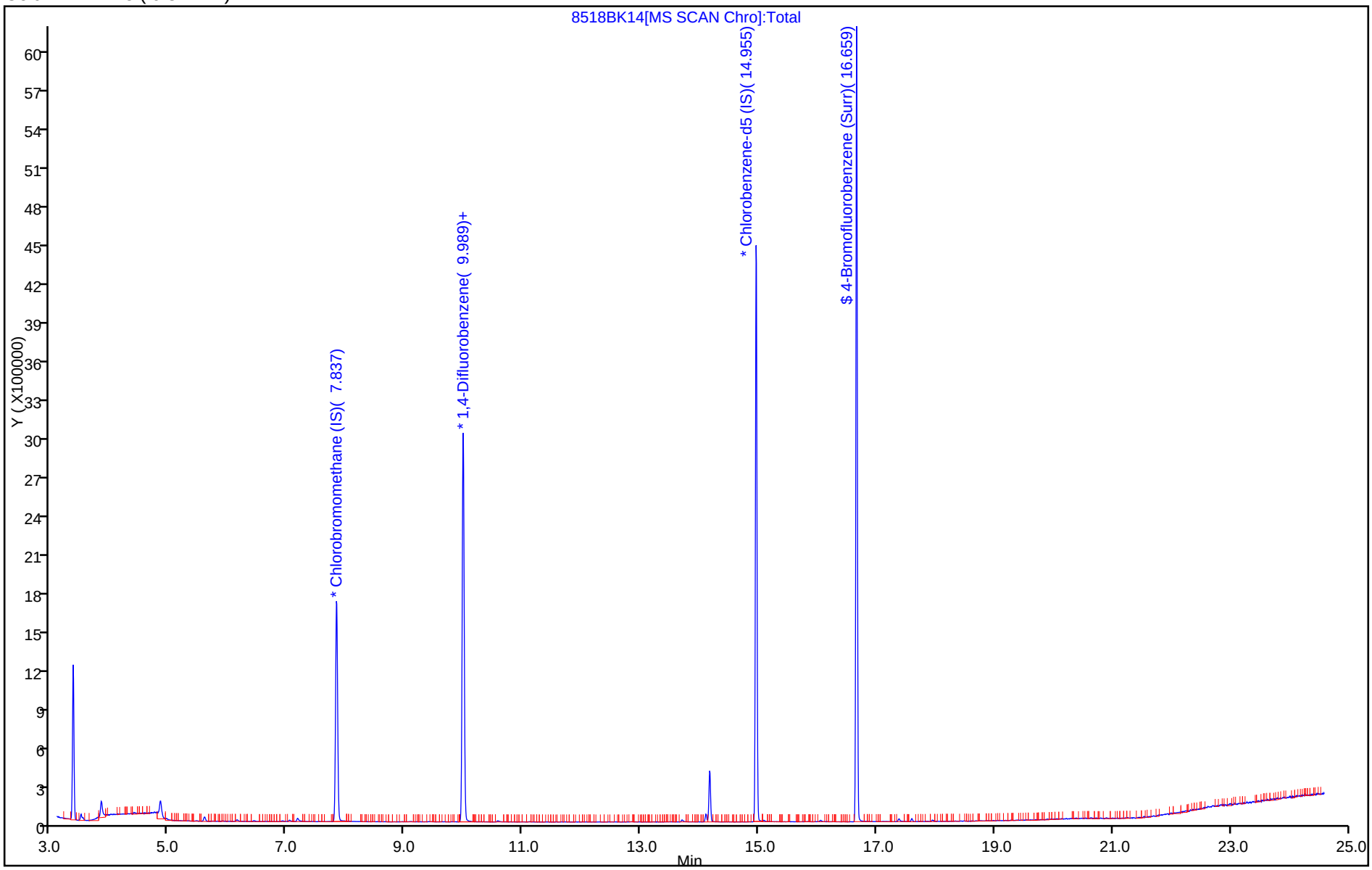
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:25 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK14.D				
Injection Date:	01-Jul-2017 04:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-14	Lab Sample ID:	140-8518-14	Worklist Smp#:	23
Client ID:	10973				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10918 | Lab Sample ID: 140-8518-16

Matrix: Air | Lab File ID: 8518BK16.D

Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 05:48

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10918 | Lab Sample ID: 140-8518-16
Matrix: Air | Lab File ID: 8518BK16.D
Analysis Method: TO-15 | Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/01/2017 05:48
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12488 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8518-1
SDG No.:
Client Sample ID: 10918
Lab Sample ID: 140-8518-16
Matrix: Air
Lab File ID: 8518BK16.D
Analysis Method: TO-15
Date Collected: 06/23/2017 13:00
Sample wt/vol: 200(mL)
Date Analyzed: 07/01/2017 05:48
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12488
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville Job No.: 140-8518-1

SDG No.:

Client Sample ID: 10918 Lab Sample ID: 140-8518-16

Matrix: Air Lab File ID: 8518BK16.D

Analysis Method: TO-15 Date Collected: 06/23/2017 13:00

Sample wt/vol: 200(mL) Date Analyzed: 07/01/2017 05:48

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12488 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK16.D
Lims ID: 140-8518-A-16
Client ID: 10918
Sample Type: Client
Inject. Date: 01-Jul-2017 05:48:30 ALS Bottle#: 11 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005382-025
Misc. Info.: 10918
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Jul-2017 13:52:18 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: barlozhetskayaa Date: 03-Jul-2017 13:54:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.848	7.854	-0.006	79	566222	4.00	
* 2 1,4-Difluorobenzene	114	9.994	9.995	-0.001	95	2715346	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.955	14.961	-0.006	91	2345490	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.659	16.659	0.000	86	1954947	4.14	
6 Chlorodifluoromethane	67	3.556	3.534	0.022	31	1251	0.0183	
11 Acetaldehyde	44	3.863	3.858	0.005	91	65684	1.34	
19 2-Methylbutane	43	4.613	4.591	0.022	43	2488	0.0162	
31 Methylene Chloride	84	5.610	5.616	-0.006	94	19914	0.1226	
33 Carbon disulfide	76	5.745	5.745	0.000	98	49433	0.1232	

Reagents:

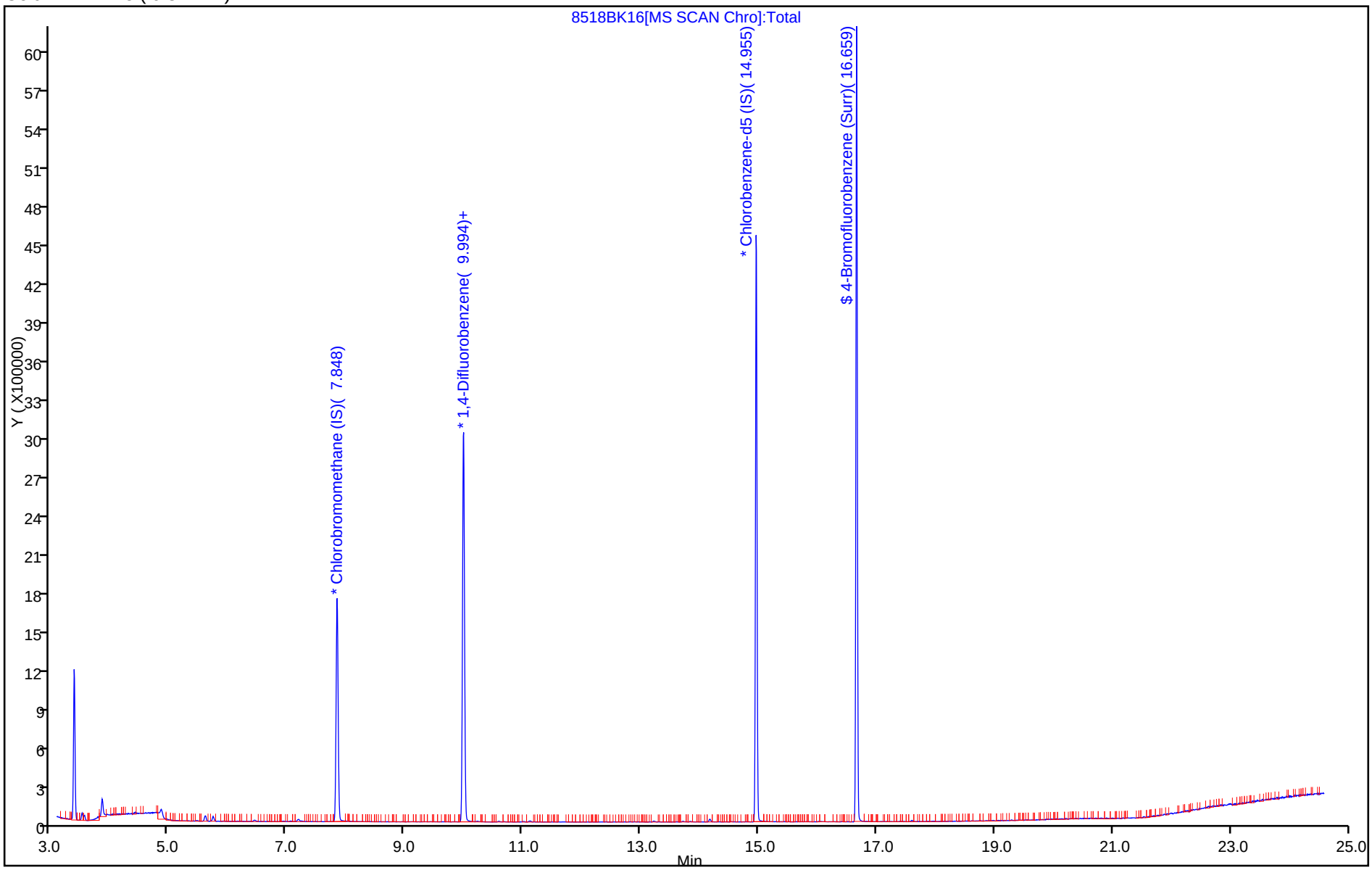
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 03-Jul-2017 14:13:29 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170630-5382.b\8518BK16.D				
Injection Date:	01-Jul-2017 05:48:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8518-A-16	Lab Sample ID:	140-8518-16	Worklist Smp#:	25
Client ID:	10918				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09636 | Lab Sample ID: 140-8532-2

Matrix: Air | Lab File ID: RG13BK8532-02.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09636
Lab Sample ID: 140-8532-2
Matrix: Air
Lab File ID: RG13BK8532-02.D
Analysis Method: TO-15
Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL)
Date Analyzed: 07/13/2017 14:04
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12698
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09636 | Lab Sample ID: 140-8532-2

Matrix: Air | Lab File ID: RG13BK8532-02.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09636 Lab Sample ID: 140-8532-2

Matrix: Air Lab File ID: RG13BK8532-02.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 14:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D
Lims ID: 140-8532-A-2
Client ID: 09636
Sample Type: Client
Inject. Date: 13-Jul-2017 14:04:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-005
Misc. Info.: 09636
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:01:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	80	419060	4.00	
* 2 1,4-Difluorobenzene	114	9.973	9.984	-0.011	96	2010958	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	96	1734824	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1496128	4.28	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	95	3315	0.0656	
31 Methylene Chloride	84	5.589	5.600	-0.011	92	13602	0.1132	
120 2-Methylnaphthalene	142	21.728	21.728	0.000	91	1229	NC	
121 1-Methylnaphthalene	142	21.868	21.868	0.000	95	1440	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

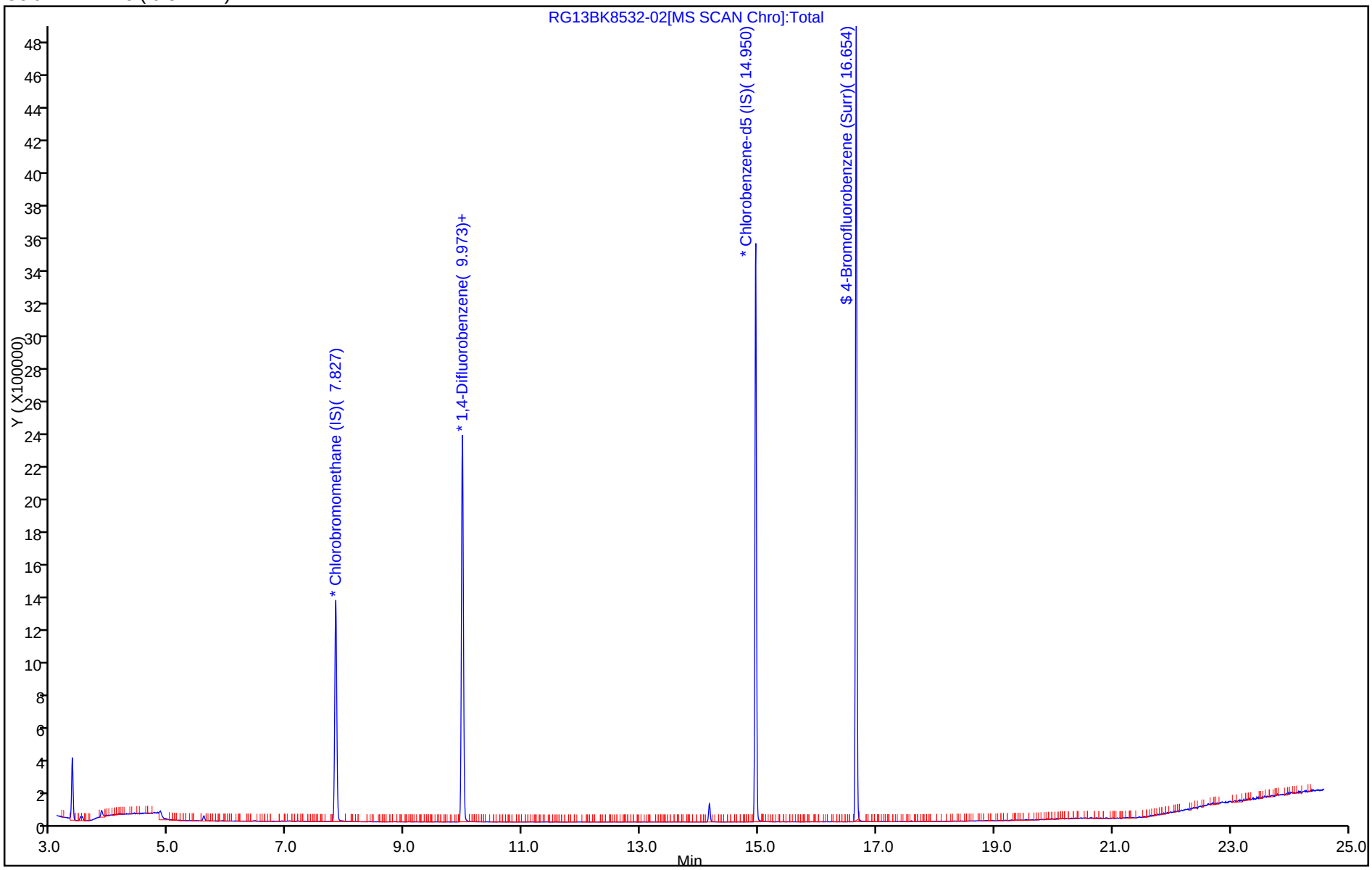
Report Date: 14-Jul-2017 09:09:59 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D

Injection Date:	13-Jul-2017 14:04:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-2	Lab Sample ID:	140-8532-2	Worklist Smp#:	5
Client ID:	09636				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

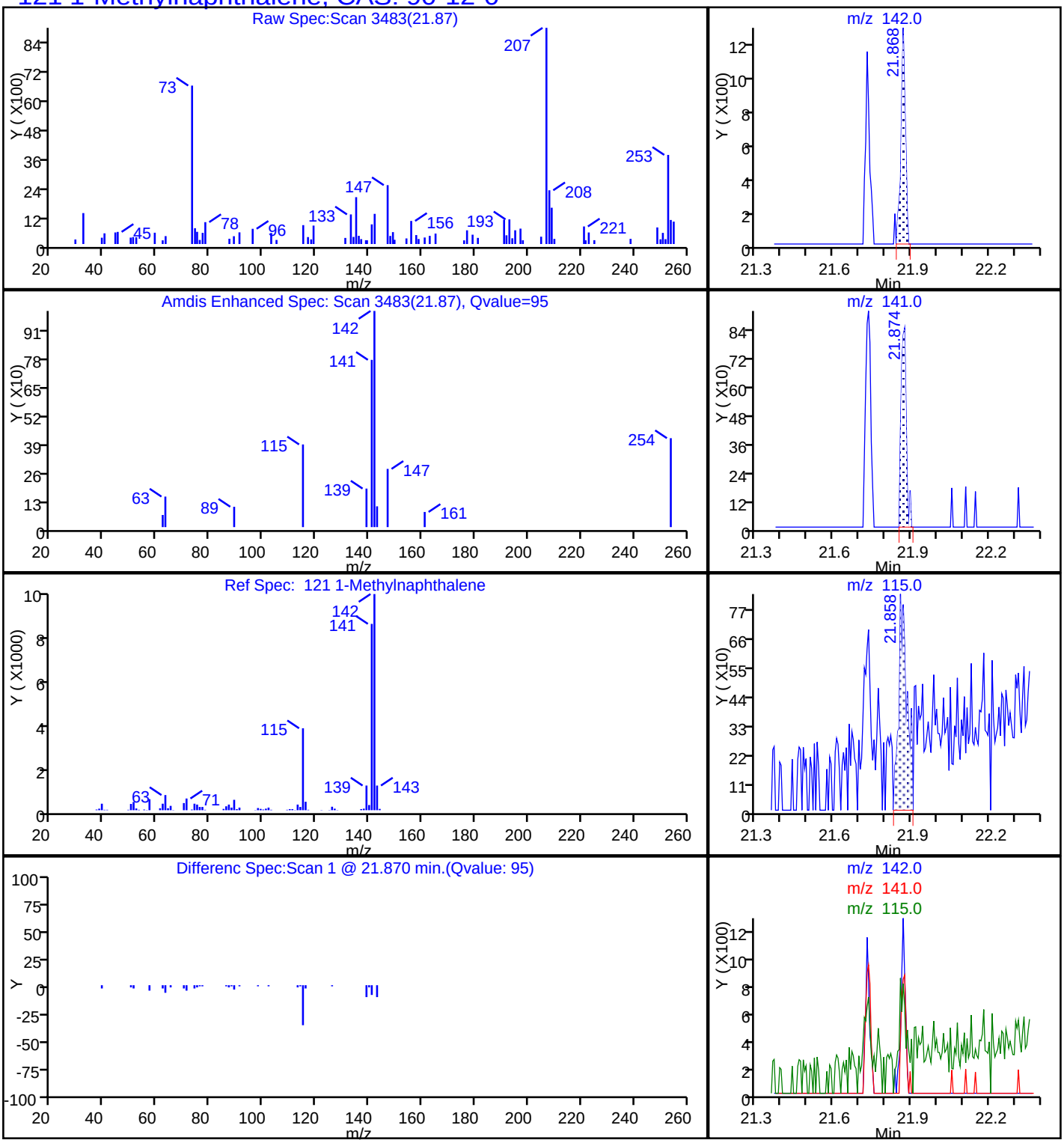


Report Date: 14-Jul-2017 09:09:59 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D				
Injection Date:	13-Jul-2017 14:04:30	Instrument ID:	MR		
Lims ID:	140-8532-A-2	Lab Sample ID:	140-8532-2		
Client ID:	09636				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

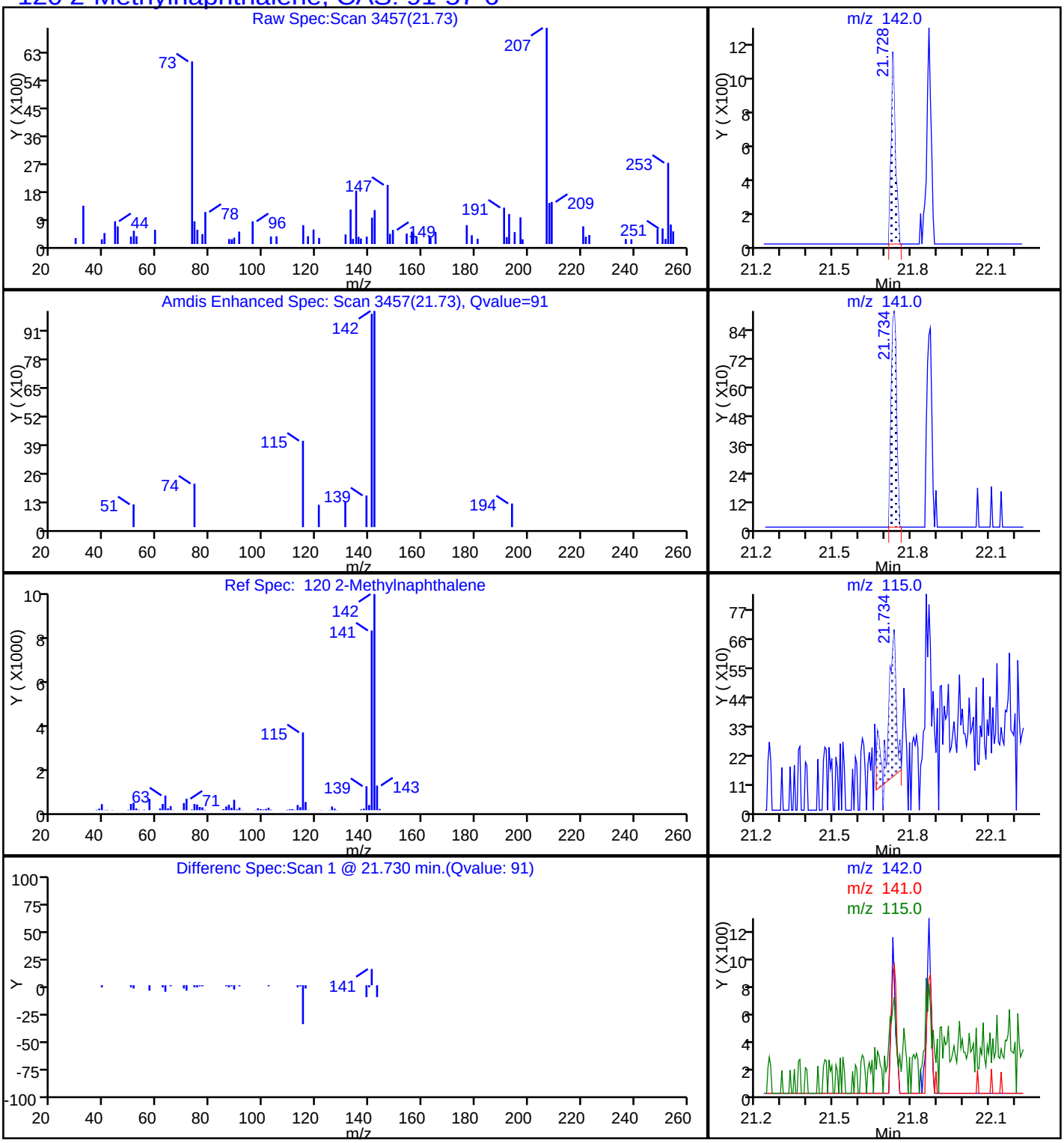


Report Date: 14-Jul-2017 09:09:59 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-02.D				
Injection Date:	13-Jul-2017 14:04:30	Instrument ID:	MR		
Lims ID:	140-8532-A-2	Lab Sample ID:	140-8532-2		
Client ID:	09636				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10941 | Lab Sample ID: 140-8532-3

Matrix: Air | Lab File ID: RG13BK8532-03.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10941 | Lab Sample ID: 140-8532-3
Matrix: Air | Lab File ID: RG13BK8532-03.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:54
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10941 | Lab Sample ID: 140-8532-3

Matrix: Air | Lab File ID: RG13BK8532-03.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 14:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10941 Lab Sample ID: 140-8532-3

Matrix: Air Lab File ID: RG13BK8532-03.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 14:54

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D
Lims ID: 140-8532-A-3
Client ID: 10941
Sample Type: Client
Inject. Date: 13-Jul-2017 14:54:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-006
Misc. Info.: 10941
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:01:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.832	7.837	-0.005	81	413779	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	2005209	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1767987	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1512078	4.24	
6 Chlorodifluoromethane	67	3.540	3.513	0.027	96	2973	0.0596	
31 Methylene Chloride	84	5.594	5.600	-0.006	94	12113	0.1021	
120 2-Methylnaphthalene	142	21.868	21.728	0.140	93	662	NC	
121 1-Methylnaphthalene	142	21.868	21.868	0.000	92	662	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

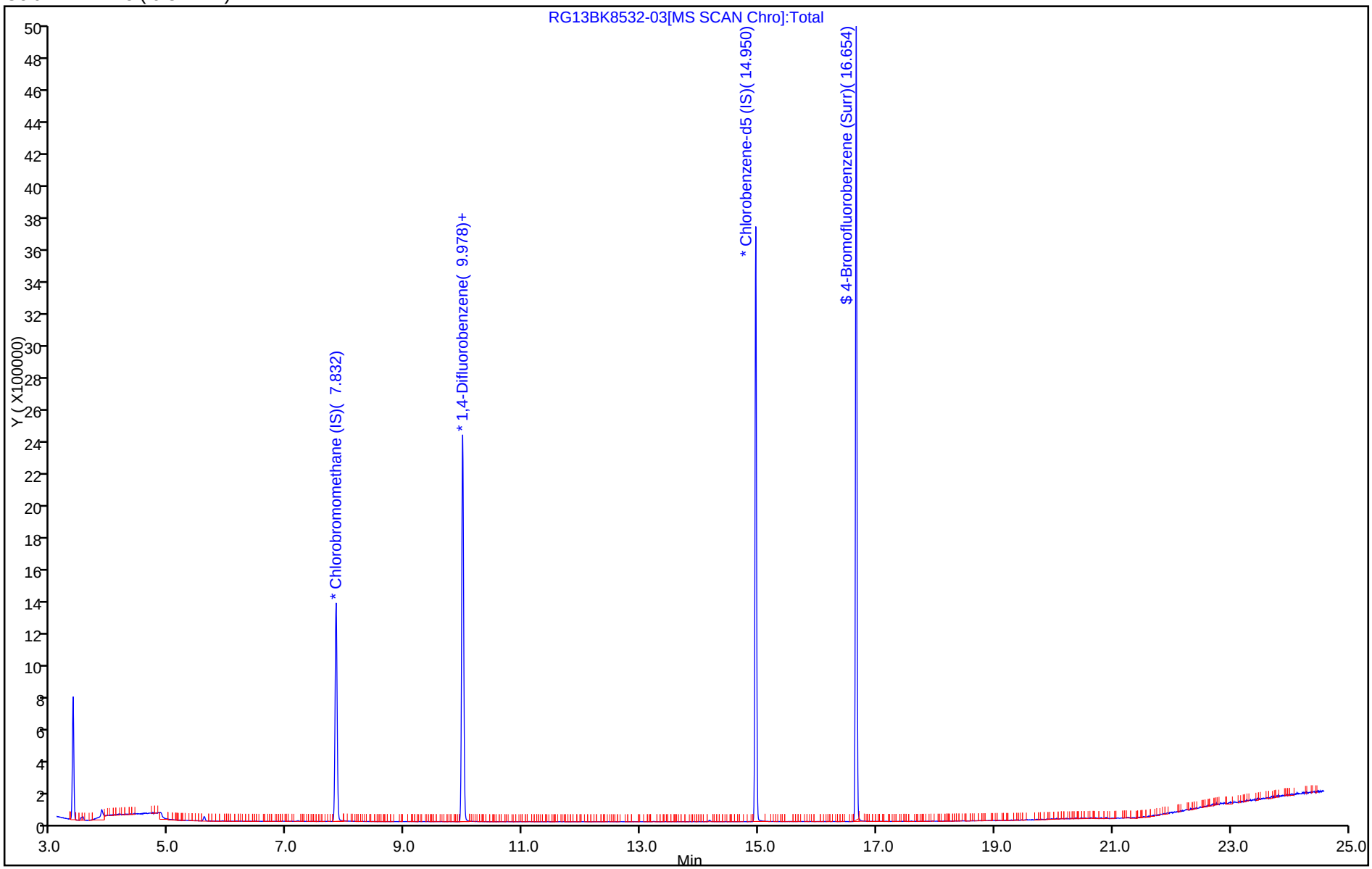
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:01 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D				
Injection Date:	13-Jul-2017 14:54:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-3	Lab Sample ID:	140-8532-3	Worklist Smp#:	6
Client ID:	10941				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

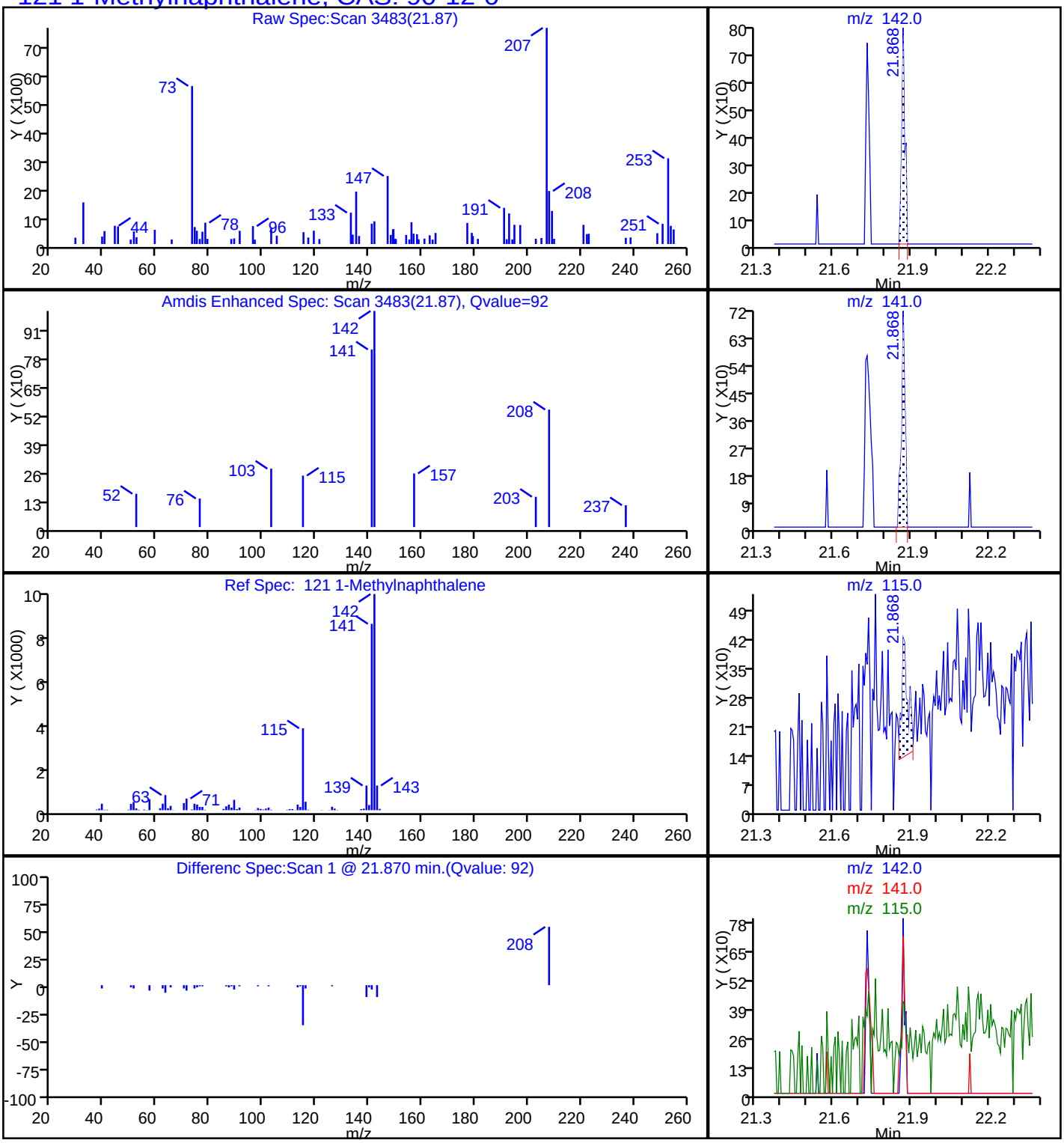


Report Date: 14-Jul-2017 09:10:01 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D				
Injection Date:	13-Jul-2017 14:54:30	Instrument ID:	MR		
Lims ID:	140-8532-A-3	Lab Sample ID:	140-8532-3		
Client ID:	10941				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

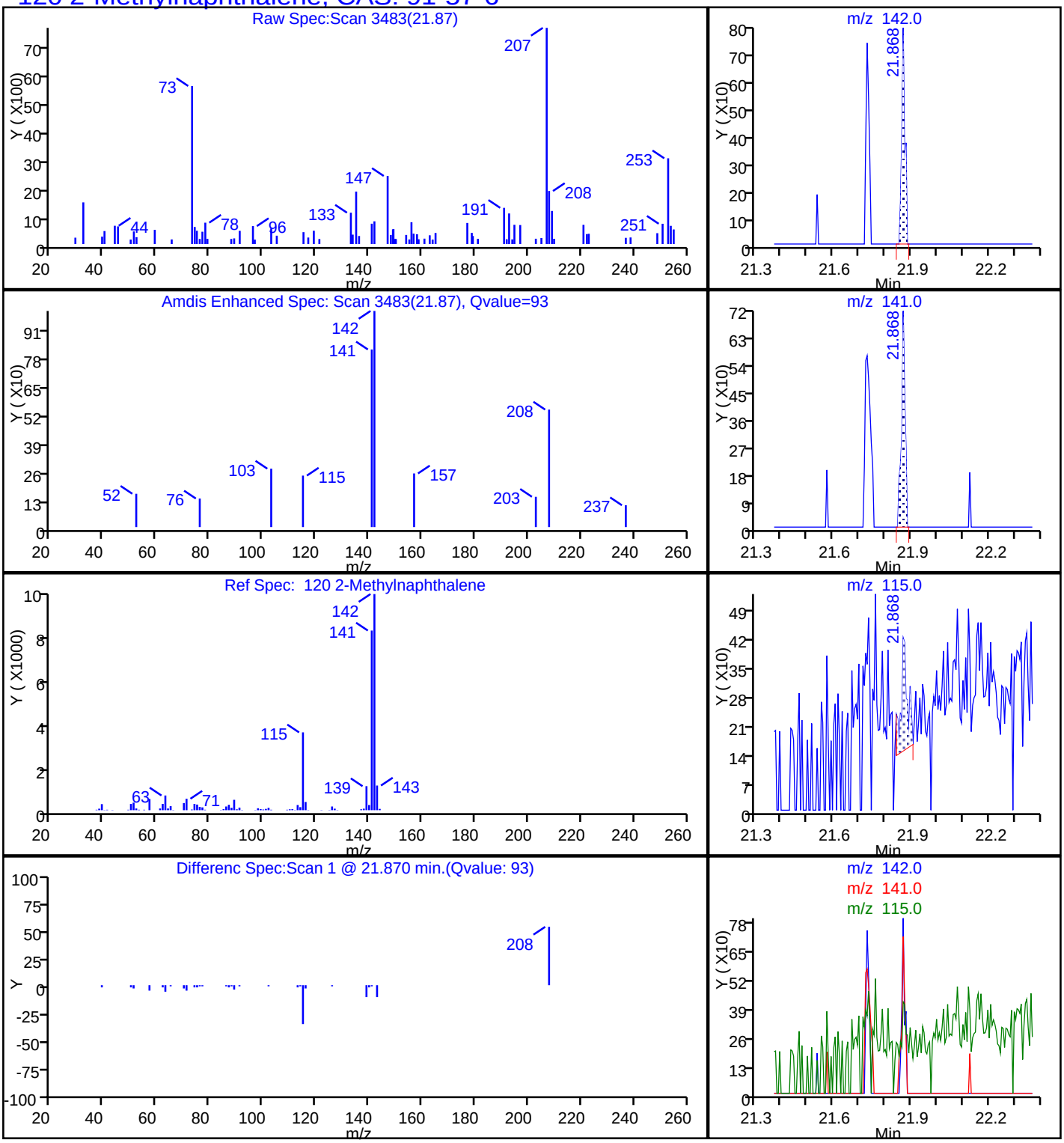


Report Date: 14-Jul-2017 09:10:01 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-03.D				
Injection Date:	13-Jul-2017 14:54:30	Instrument ID:	MR		
Lims ID:	140-8532-A-3	Lab Sample ID:	140-8532-3		
Client ID:	10941				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10795 | Lab Sample ID: 140-8532-4

Matrix: Air | Lab File ID: RG13BK8532-04.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 15:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	NC		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10795 | Lab Sample ID: 140-8532-4

Matrix: Air | Lab File ID: RG13BK8532-04.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 15:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10795
Lab Sample ID: 140-8532-4
Matrix: Air
Lab File ID: RG13BK8532-04.D
Analysis Method: TO-15
Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL)
Date Analyzed: 07/13/2017 15:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12698
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10795 Lab Sample ID: 140-8532-4

Matrix: Air Lab File ID: RG13BK8532-04.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 15:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D
Lims ID: 140-8532-A-4
Client ID: 10795
Sample Type: Client
Inject. Date: 13-Jul-2017 15:41:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-007
Misc. Info.: 10795
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:02:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	85	405061	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1952349	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1706152	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1467107	4.27	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	96	3374	0.0691	
31 Methylene Chloride	84	5.594	5.600	-0.006	95	11734	0.1010	
120 2-Methylnaphthalene	142	21.728	21.728	0.000	6	665	NC	
121 1-Methylnaphthalene	142	21.874	21.868	0.006	16	398	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

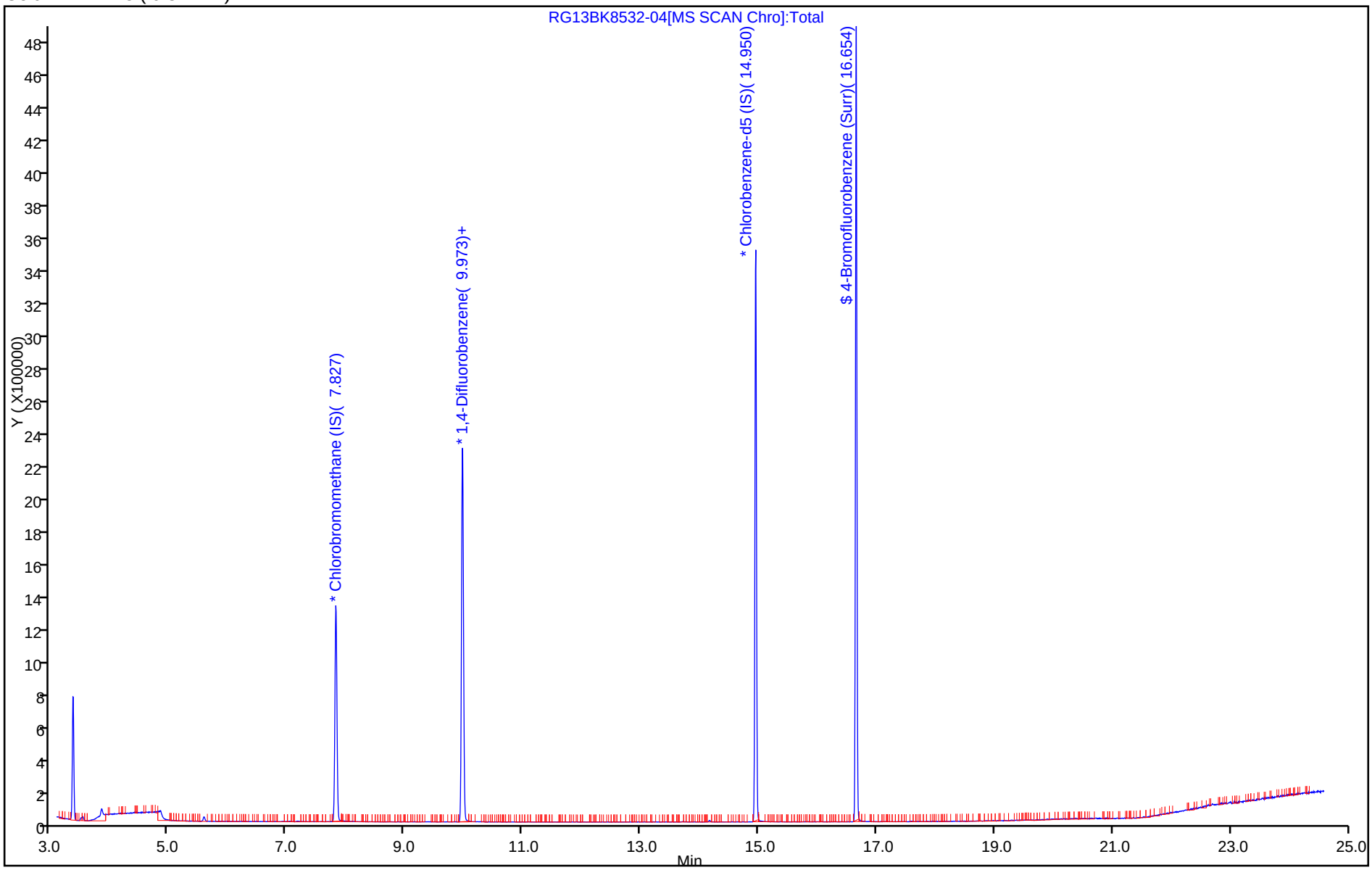
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:04 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D				
Injection Date:	13-Jul-2017 15:41:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-4	Lab Sample ID:	140-8532-4	Worklist Smp#:	7
Client ID:	10795				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

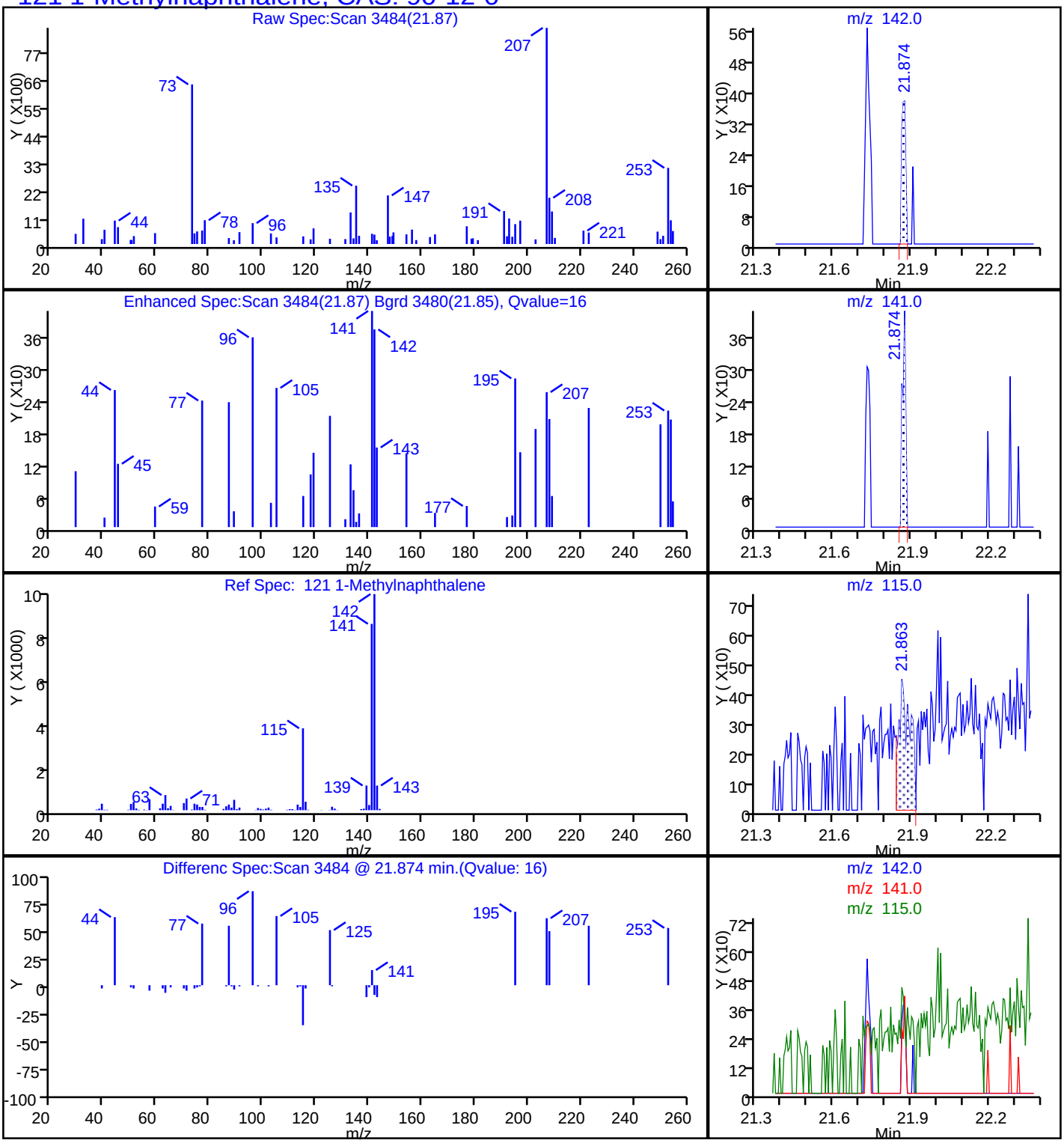


Report Date: 14-Jul-2017 09:10:04 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D				
Injection Date:	13-Jul-2017 15:41:30	Instrument ID:	MR		
Lims ID:	140-8532-A-4	Lab Sample ID:	140-8532-4		
Client ID:	10795				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0

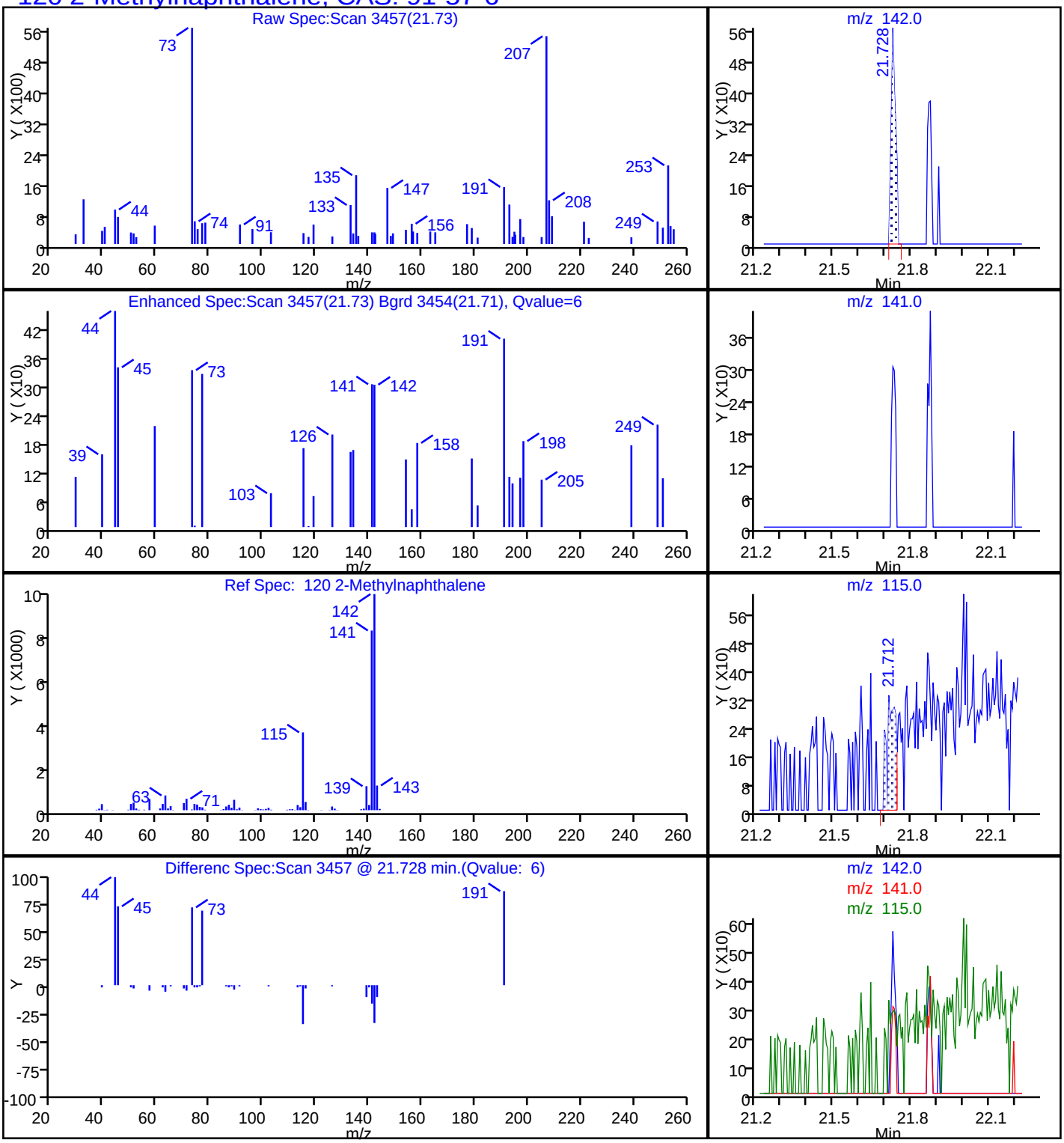


Report Date: 14-Jul-2017 09:10:04 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-04.D				
Injection Date:	13-Jul-2017 15:41:30	Instrument ID:	MR		
Lims ID:	140-8532-A-4	Lab Sample ID:	140-8532-4		
Client ID:	10795				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

120 2-Methylnaphthalene, CAS: 91-57-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11577 | Lab Sample ID: 140-8532-5

Matrix: Air | Lab File ID: RG13BK8532-05.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 16:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 11577 | Lab Sample ID: 140-8532-5
Matrix: Air | Lab File ID: RG13BK8532-05.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 16:29
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11577 | Lab Sample ID: 140-8532-5

Matrix: Air | Lab File ID: RG13BK8532-05.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 16:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11577 Lab Sample ID: 140-8532-5

Matrix: Air Lab File ID: RG13BK8532-05.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 16:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-05.D
Lims ID: 140-8532-A-5
Client ID: 11577
Sample Type: Client
Inject. Date: 13-Jul-2017 16:29:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-008
Misc. Info.: 11577
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:02:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.832	7.837	-0.005	81	399902	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1931738	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1688523	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1443808	4.24	
6 Chlorodifluoromethane	67	3.540	3.513	0.027	95	2545	0.0528	
31 Methylene Chloride	84	5.594	5.600	-0.006	93	11801	0.1029	
121 1-Methylnaphthalene	142	21.868	21.868	0.000	1	270	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

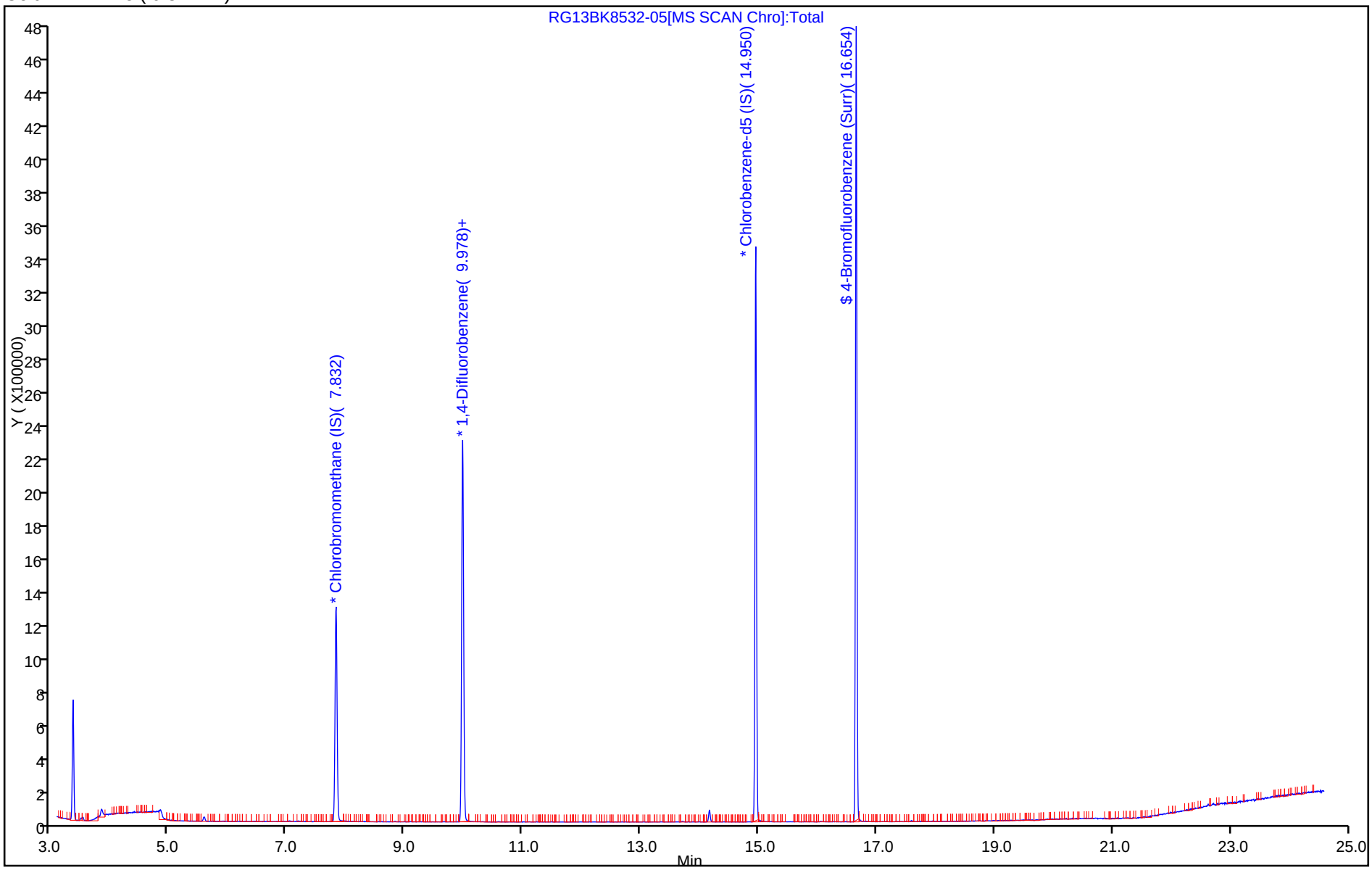
Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:06 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-05.D				
Injection Date:	13-Jul-2017 16:29:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-5	Lab Sample ID:	140-8532-5	Worklist Smp#:	8
Client ID:	11577				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					

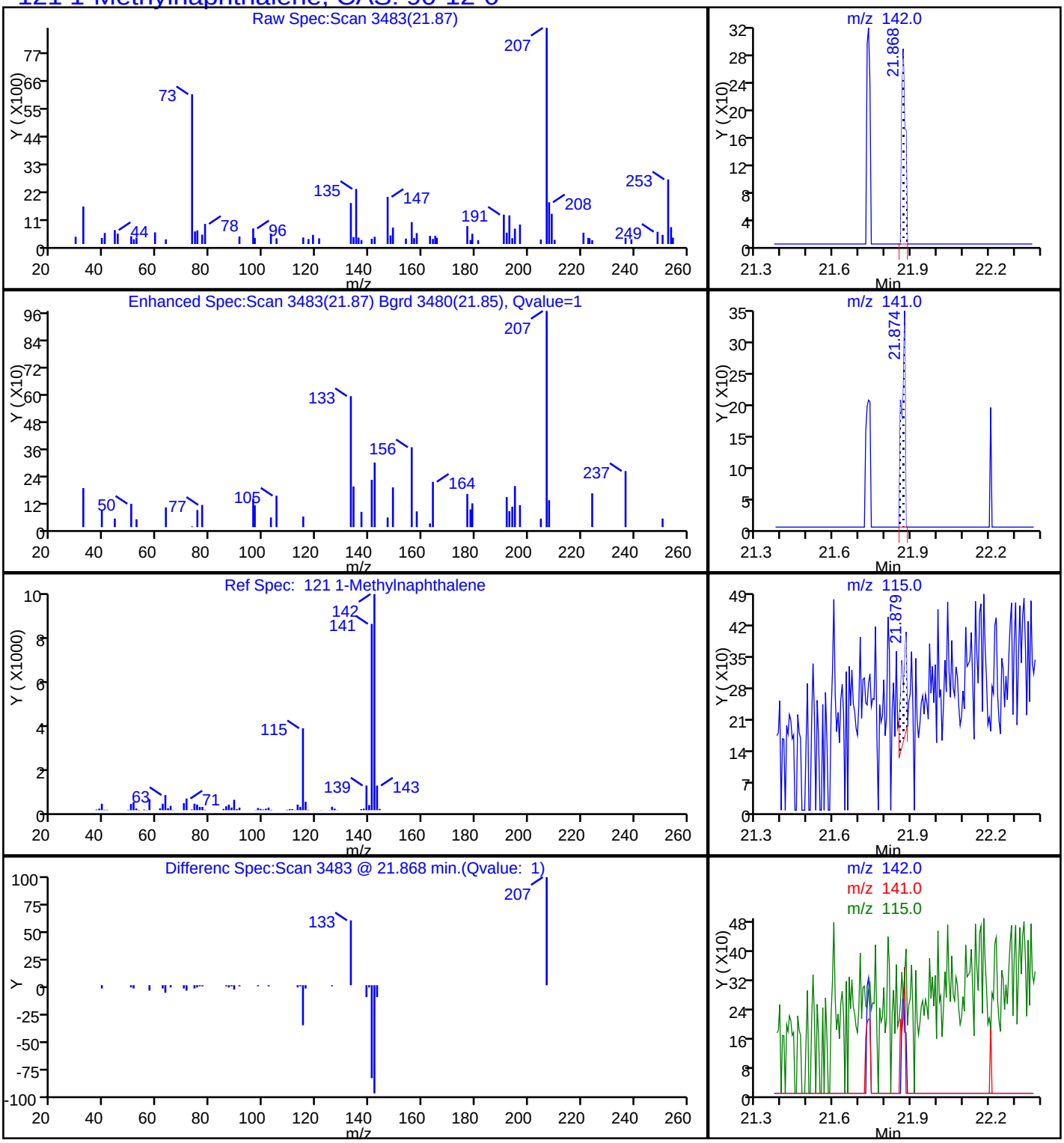


Report Date: 14-Jul-2017 09:10:06 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-05.D				
Injection Date:	13-Jul-2017 16:29:30	Instrument ID:	MR		
Lims ID:	140-8532-A-5	Lab Sample ID:	140-8532-5		
Client ID:	11577				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10964 | Lab Sample ID: 140-8532-6
Matrix: Air | Lab File ID: RG13BK8532-06.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 17:17
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	NC		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8532-1
SDG No.:
Client Sample ID: 10964
Lab Sample ID: 140-8532-6
Matrix: Air
Lab File ID: RG13BK8532-06.D
Analysis Method: TO-15
Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL)
Date Analyzed: 07/13/2017 17:17
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12698
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10964 | Lab Sample ID: 140-8532-6

Matrix: Air | Lab File ID: RG13BK8532-06.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 17:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 10964 Lab Sample ID: 140-8532-6

Matrix: Air Lab File ID: RG13BK8532-06.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 17:17

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-06.D
Lims ID: 140-8532-A-6
Client ID: 10964
Sample Type: Client
Inject. Date: 13-Jul-2017 17:17:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-009
Misc. Info.: 10964
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:02:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	402413	4.00	
* 2 1,4-Difluorobenzene	114	9.973	9.984	-0.011	96	1933647	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1702472	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1456263	4.24	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	94	2550	0.0526	
31 Methylene Chloride	84	5.584	5.600	-0.016	94	11565	0.1002	
121 1-Methylnaphthalene	142	21.734	21.868	-0.134	1	215	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

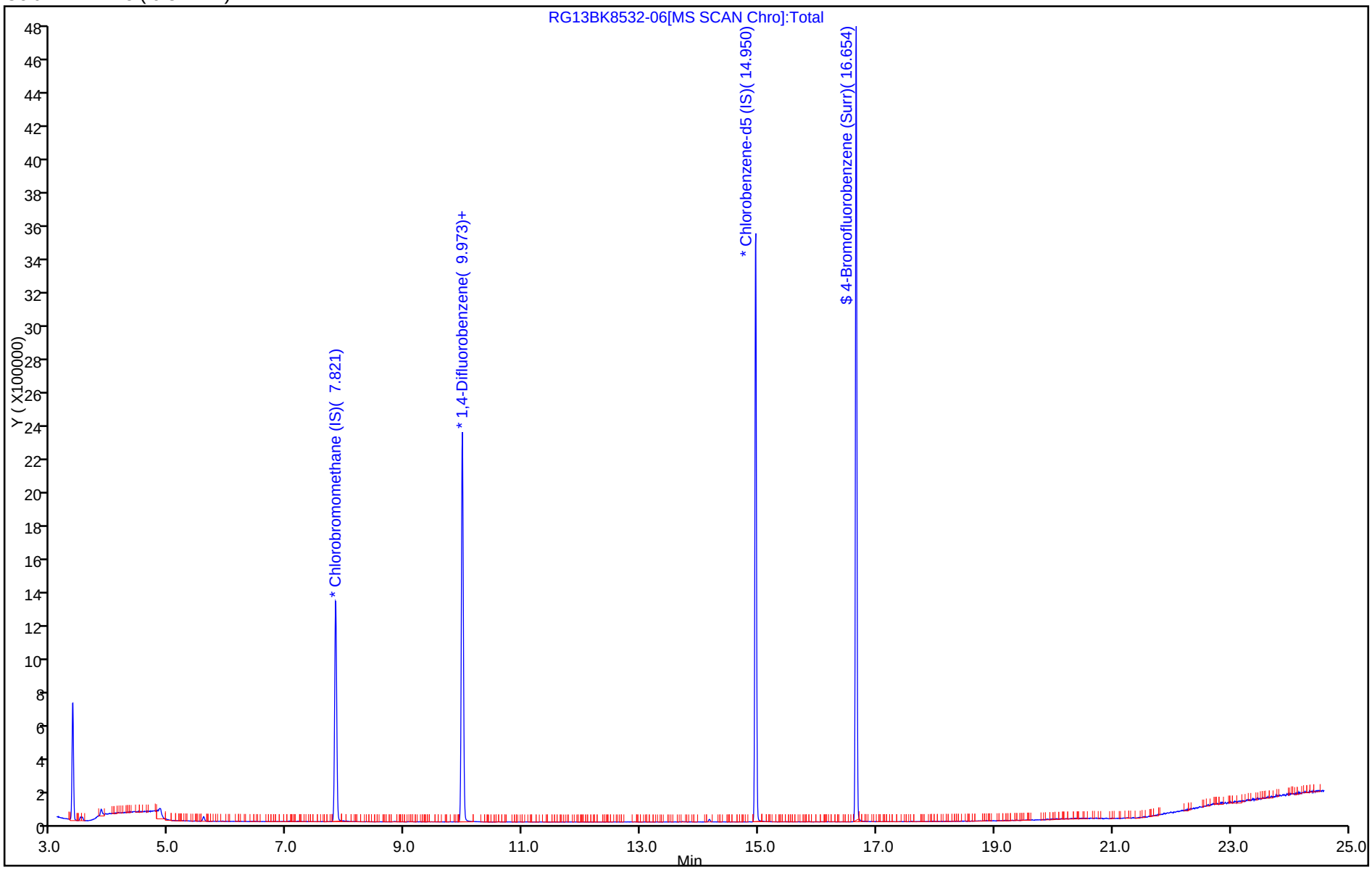
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:07 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-06.D				
Injection Date:	13-Jul-2017 17:17:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-6	Lab Sample ID:	140-8532-6	Worklist Smp#:	9
Client ID:	10964				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

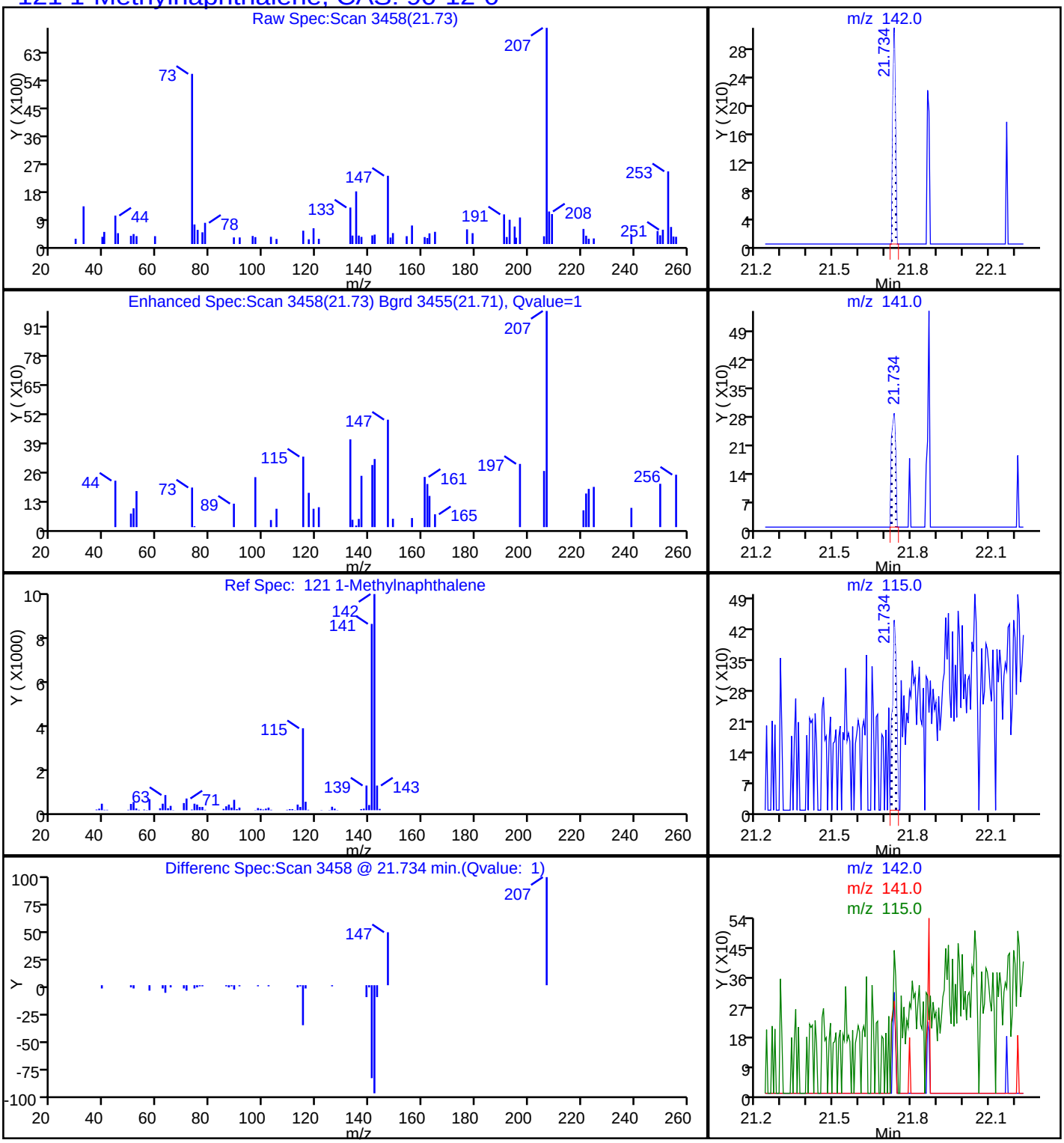


Report Date: 14-Jul-2017 09:10:07 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-06.D				
Injection Date:	13-Jul-2017 17:17:30	Instrument ID:	MR		
Lims ID:	140-8532-A-6	Lab Sample ID:	140-8532-6		
Client ID:	10964				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

121 1-Methylnaphthalene, CAS: 90-12-0



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 | Lab Sample ID: 140-8532-7

Matrix: Air | Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 | Lab Sample ID: 140-8532-7

Matrix: Air | Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 | Lab Sample ID: 140-8532-7

Matrix: Air | Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11554 Lab Sample ID: 140-8532-7

Matrix: Air Lab File ID: RG13BK8532-07.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 18:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-07.D
Lims ID: 140-8532-A-7
Client ID: 11554
Sample Type: Client
Inject. Date: 13-Jul-2017 18:04:30 ALS Bottle#: 7 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-010
Misc. Info.: 11554
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:03:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	395945	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1899545	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1664866	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1429396	4.26	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	92	3281	0.0688	
31 Methylene Chloride	84	5.584	5.600	-0.016	94	11256	0.0991	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

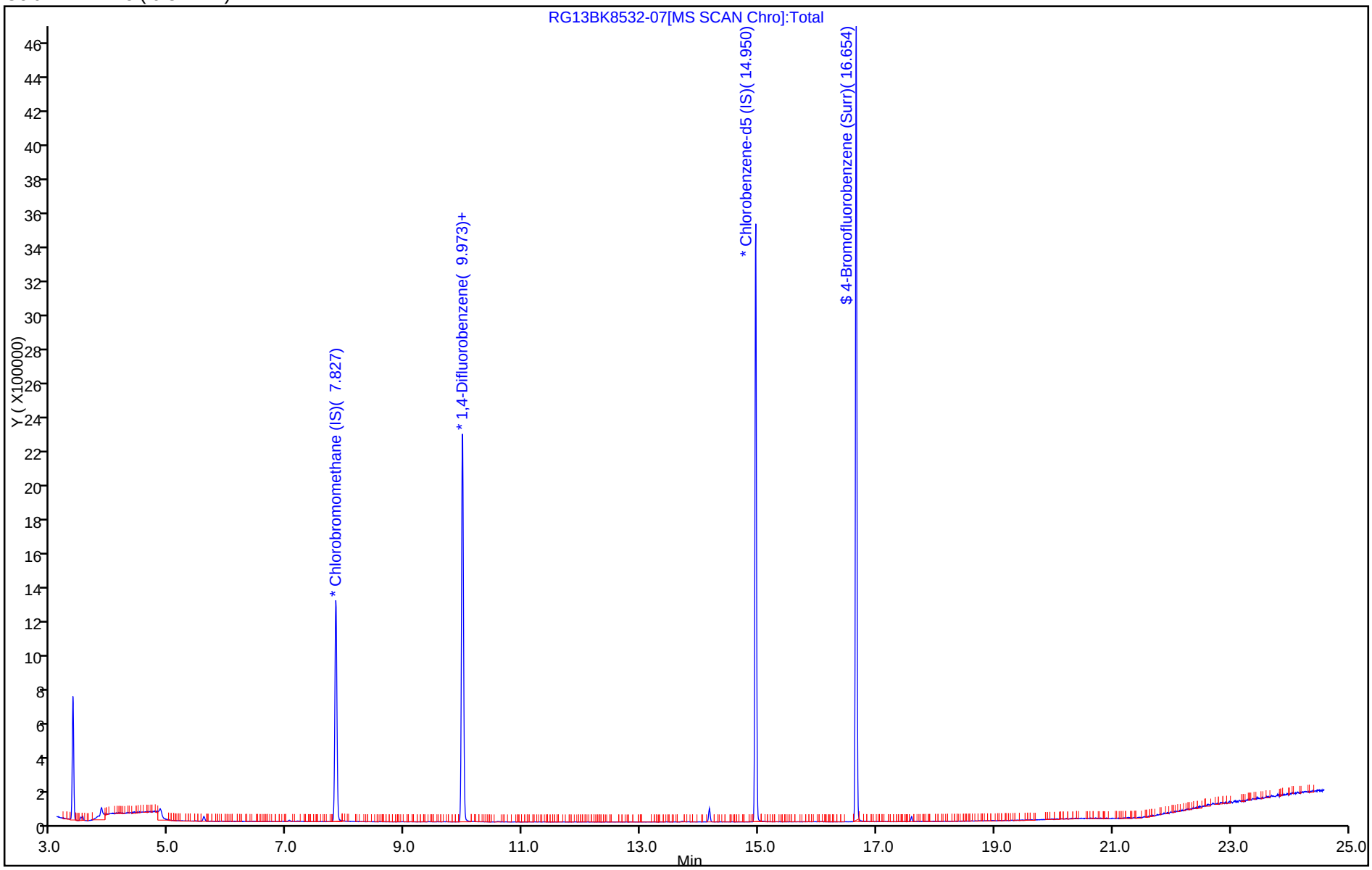
Report Date: 14-Jul-2017 09:10:09 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-07.D

Injection Date:	13-Jul-2017 18:04:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-7	Lab Sample ID:	140-8532-7	Worklist Smp#:	10
Client ID:	11554				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09750 | Lab Sample ID: 140-8532-8

Matrix: Air | Lab File ID: RG13BK8532-08.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:52

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09750
Lab Sample ID: 140-8532-8
Matrix: Air
Lab File ID: RG13BK8532-08.D
Analysis Method: TO-15
Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL)
Date Analyzed: 07/13/2017 18:52
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12698
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09750 | Lab Sample ID: 140-8532-8

Matrix: Air | Lab File ID: RG13BK8532-08.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 18:52

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09750 Lab Sample ID: 140-8532-8

Matrix: Air Lab File ID: RG13BK8532-08.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 18:52

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-08.D
Lims ID: 140-8532-A-8
Client ID: 09750
Sample Type: Client
Inject. Date: 13-Jul-2017 18:52:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-011
Misc. Info.: 09750
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:03:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	391163	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1897106	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1663844	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	83	1422393	4.24	
6 Chlorodifluoromethane	67	3.534	3.513	0.021	95	2825	0.0599	
31 Methylene Chloride	84	5.594	5.600	-0.006	95	11669	0.1040	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

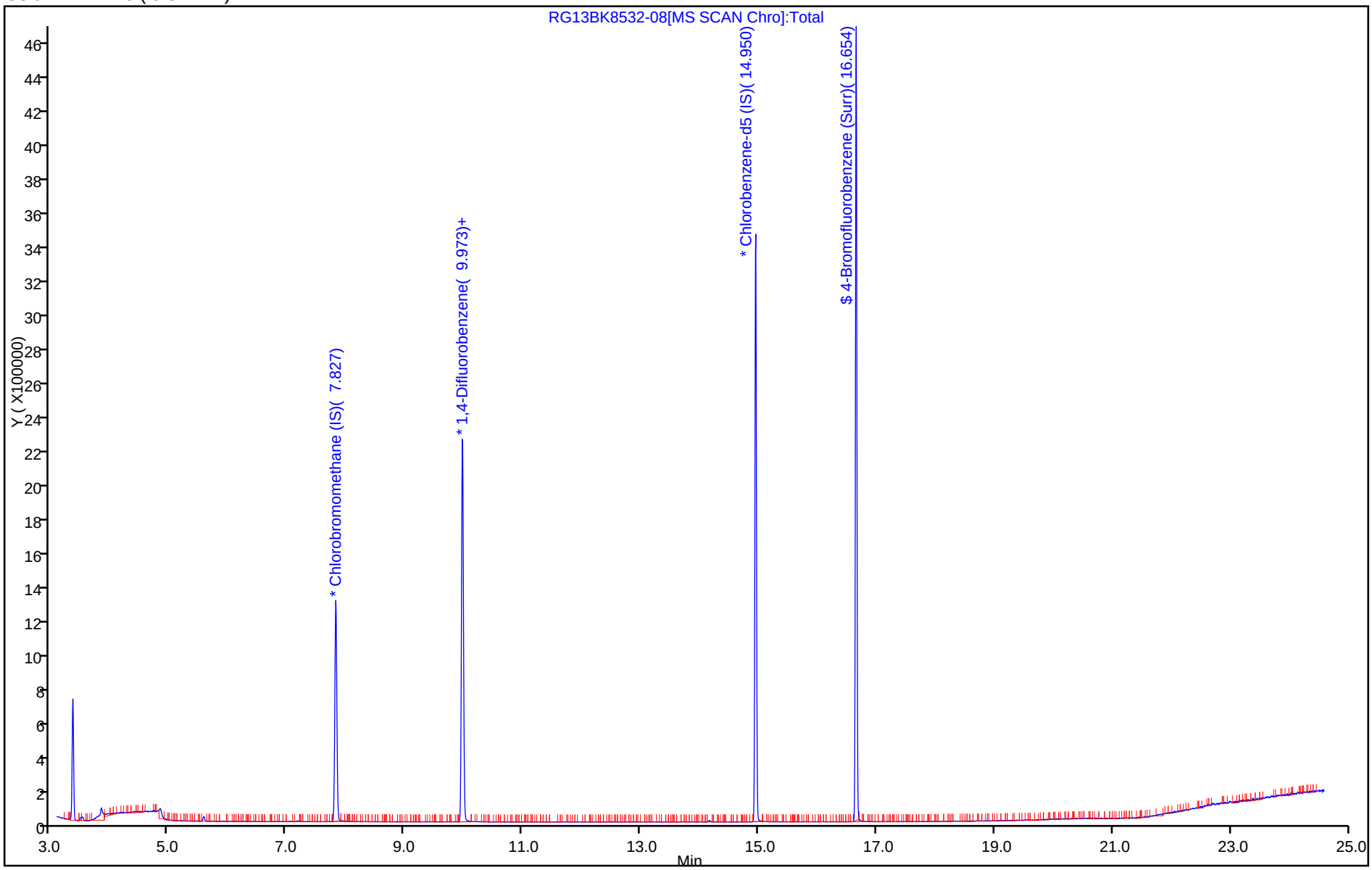
Report Date: 14-Jul-2017 09:10:10 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-08.D

Injection Date:	13-Jul-2017 18:52:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-8	Lab Sample ID:	140-8532-8	Worklist Smp#:	11
Client ID:	09750				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09642 | Lab Sample ID: 140-8532-12
Matrix: Air | Lab File ID: RG13BK8532-12.D
Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:03
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8532-1
SDG No.:
Client Sample ID: 09642
Lab Sample ID: 140-8532-12
Matrix: Air
Lab File ID: RG13BK8532-12.D
Analysis Method: TO-15
Date Collected: 06/27/2017 11:45
Sample wt/vol: 200(mL)
Date Analyzed: 07/13/2017 22:03
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12698
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09642 | Lab Sample ID: 140-8532-12

Matrix: Air | Lab File ID: RG13BK8532-12.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 09642 Lab Sample ID: 140-8532-12

Matrix: Air Lab File ID: RG13BK8532-12.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 22:03

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-12.D
Lims ID: 140-8532-A-12
Client ID: 09642
Sample Type: Client
Inject. Date: 13-Jul-2017 22:03:30 ALS Bottle#: 12 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-015
Misc. Info.: 09642
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:05:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.838	7.837	0.001	81	387434	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1864812	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1636612	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	84	1413367	4.29	
6 Chlorodifluoromethane	67	3.551	3.513	0.038	97	3609	0.0773	
11 Acetaldehyde	44	3.853	3.842	0.011	87	53107	1.58	
31 Methylene Chloride	84	5.605	5.600	0.005	95	12248	0.1102	

Reagents:

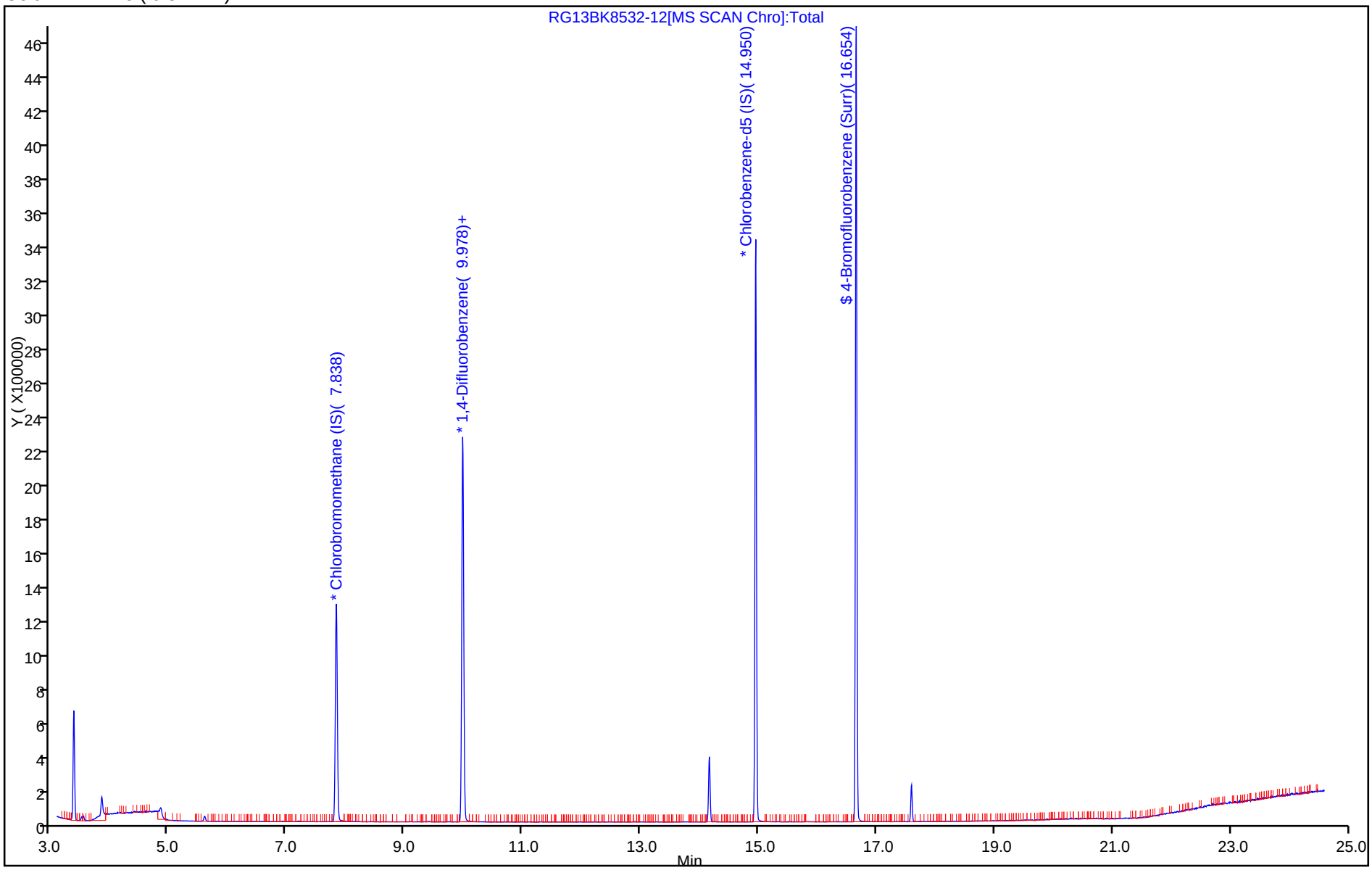
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:16 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-12.D				
Injection Date:	13-Jul-2017 22:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-12	Lab Sample ID:	140-8532-12	Worklist Smp#:	15
Client ID:	09642				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 | Lab Sample ID: 140-8532-13

Matrix: Air | Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 | Lab Sample ID: 140-8532-13

Matrix: Air | Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 | Lab Sample ID: 140-8532-13

Matrix: Air | Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11492 Lab Sample ID: 140-8532-13

Matrix: Air Lab File ID: RG13BK8532-13.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 22:51

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-13.D
Lims ID: 140-8532-A-13
Client ID: 11492
Sample Type: Client
Inject. Date: 13-Jul-2017 22:51:30 ALS Bottle#: 13 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-016
Misc. Info.: 11492
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:05:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.827	7.837	-0.010	81	389985	4.00	
* 2 1,4-Difluorobenzene	114	9.973	9.984	-0.011	96	1879645	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1632337	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	83	1407362	4.28	
6 Chlorodifluoromethane	67	3.529	3.513	0.016	95	3111	0.0662	
31 Methylene Chloride	84	5.589	5.600	-0.011	96	11284	0.1009	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

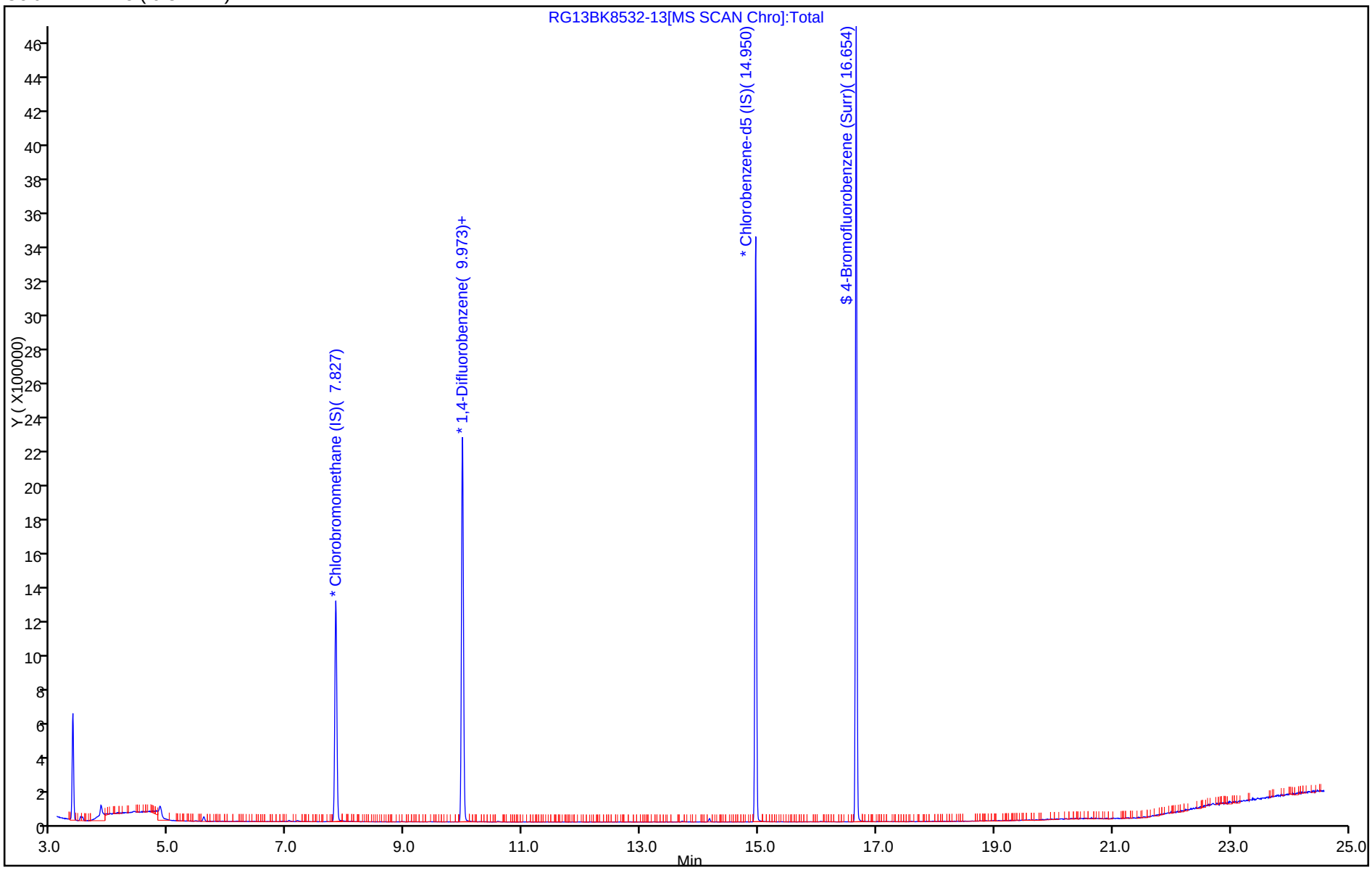
Report Date: 14-Jul-2017 09:10:17 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-13.D

Injection Date:	13-Jul-2017 22:51:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-13	Lab Sample ID:	140-8532-13	Worklist Smp#:	16
Client ID:	11492				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-8532-14

Matrix: Air | Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-8532-14

Matrix: Air | Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-8532-14

Matrix: Air | Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 | Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) | Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12698 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8532-1

SDG No.:

Client Sample ID: 11572 Lab Sample ID: 140-8532-14

Matrix: Air Lab File ID: RG13BK8532-14.D

Analysis Method: TO-15 Date Collected: 06/27/2017 11:45

Sample wt/vol: 200(mL) Date Analyzed: 07/13/2017 23:39

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12698 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-14.D
Lims ID: 140-8532-A-14
Client ID: 11572
Sample Type: Client
Inject. Date: 13-Jul-2017 23:39:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005449-017
Misc. Info.: 11572
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 09:09:56 Calib Date: 28-Jun-2017 21:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170628-5370.b\RF28ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 09:05:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.832	7.837	-0.005	81	388215	4.00	
* 2 1,4-Difluorobenzene	114	9.978	9.984	-0.006	96	1850356	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.950	14.950	0.000	94	1610892	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.654	16.654	0.000	83	1411174	4.35	
6 Chlorodifluoromethane	67	3.550	3.513	0.037	96	2159	0.0461	
31 Methylene Chloride	84	5.600	5.600	0.000	95	10374	0.0932	

Reagents:

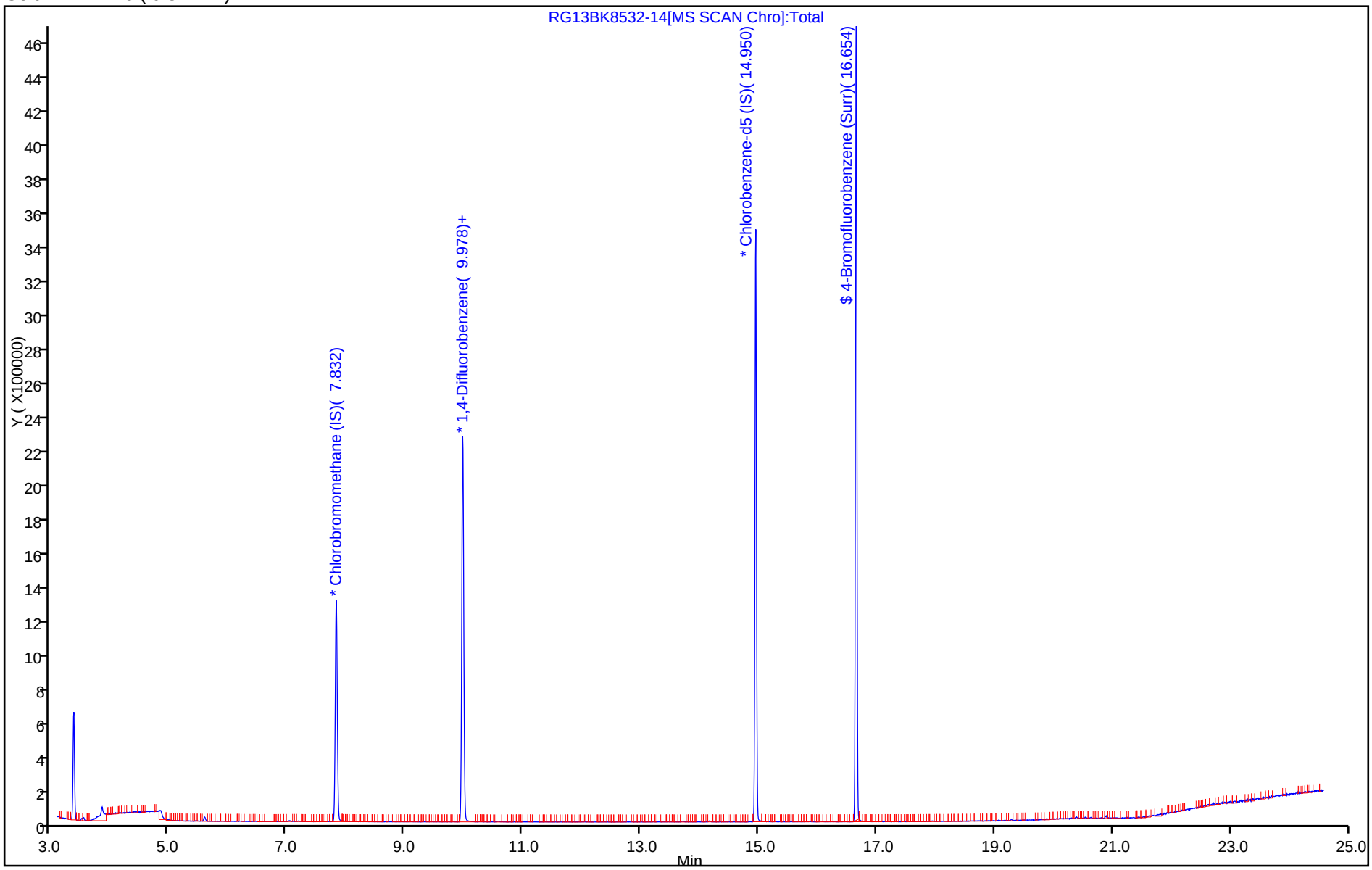
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 09:10:18 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170712-5449.b\RG13BK8532-14.D				
Injection Date:	13-Jul-2017 23:39:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-8532-A-14	Lab Sample ID:	140-8532-14	Worklist Smp#:	17
Client ID:	11572				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8596-1
SDG No.:
Client Sample ID: 11545 | Lab Sample ID: 140-8596-1
Matrix: Air | Lab File ID: GG05lot8596.D
Analysis Method: TO-15 | Date Collected: 07/03/2017 18:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2017 05:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12501 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND	*	2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND	*	0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8596-1
SDG No.:
Client Sample ID: 11545 | Lab Sample ID: 140-8596-1
Matrix: Air | Lab File ID: GG05lot8596.D
Analysis Method: TO-15 | Date Collected: 07/03/2017 18:00
Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2017 05:25
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12501 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	*	0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8596-1

SDG No.:

Client Sample ID: 11545 | Lab Sample ID: 140-8596-1

Matrix: Air | Lab File ID: GG05lot8596.D

Analysis Method: TO-15 | Date Collected: 07/03/2017 18:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2017 05:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12501 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND	*	1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND	*	1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8596-1

SDG No.:

Client Sample ID: 11545 Lab Sample ID: 140-8596-1

Matrix: Air Lab File ID: GG05lot8596.D

Analysis Method: TO-15 Date Collected: 07/03/2017 18:00

Sample wt/vol: 200(mL) Date Analyzed: 07/06/2017 05:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12501 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170703-5384.b\GG05lot8596.D				
Lims ID:	140-8596-A-1				
Client ID:	11545				
Sample Type:	Client				
Inject. Date:	06-Jul-2017 05:25:30	ALS Bottle#:	5	Worklist Smp#:	27
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005384-027				
Misc. Info.:	11545				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170703-5384.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	06-Jul-2017 10:29:28	Calib Date:	21-Jun-2017 22:43:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK034				

First Level Reviewer: tajh Date: 06-Jul-2017 10:29:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.926	7.942	-0.016	85	691145	4.00	
* 2 1,4-Difluorobenzene	114	10.083	10.094	-0.011	95	3364615	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.963	14.968	-0.005	89	3243310	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.635	16.646	-0.011	89	2520956	3.87	
31 Methylene Chloride	84	5.634	5.629	0.005	93	19344	0.1191	

Reagents:

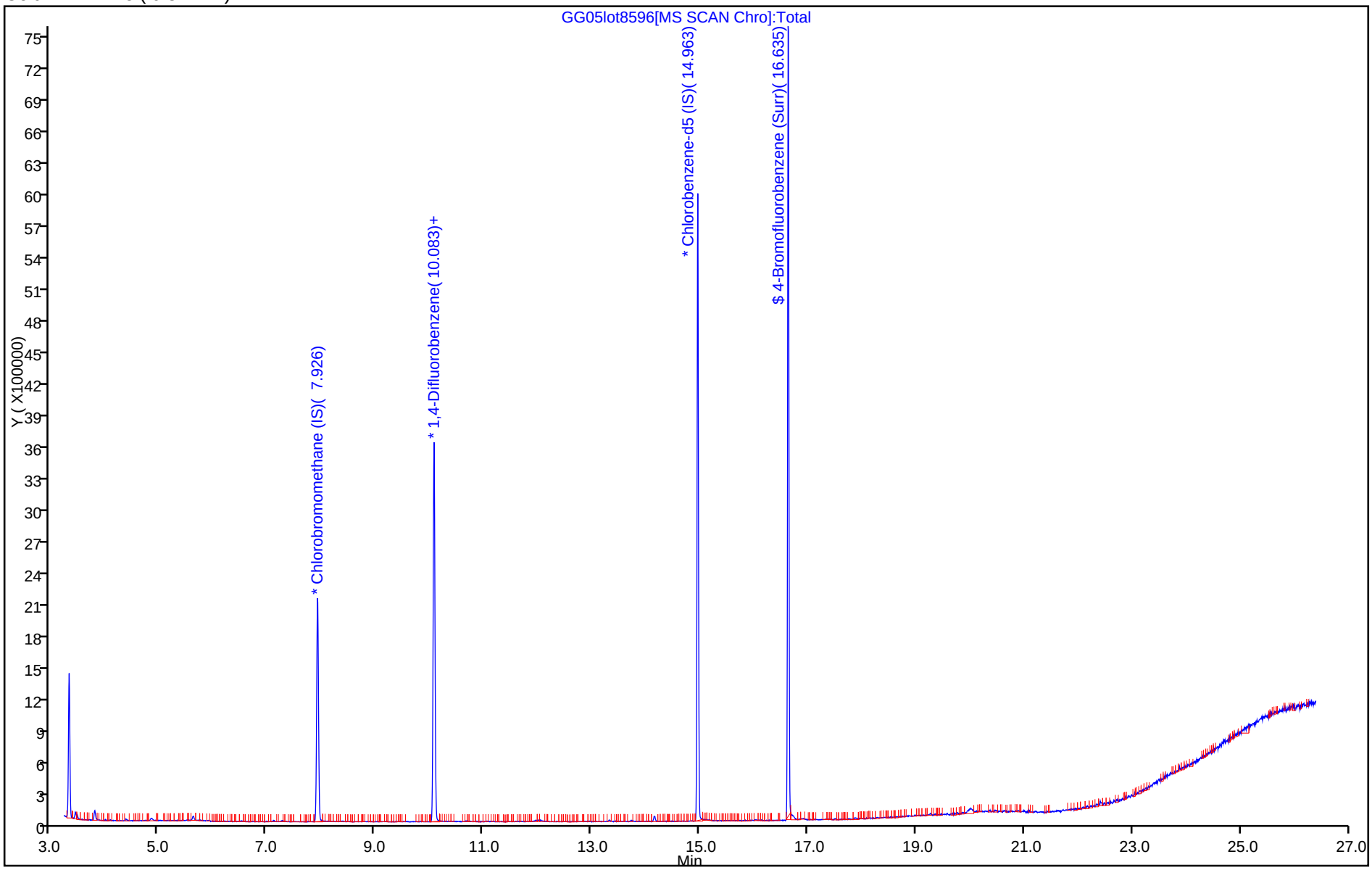
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 06-Jul-2017 10:40:16 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170703-5384.b\GG05lot8596.D				
Injection Date:	06-Jul-2017 05:25:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-8596-A-1	Lab Sample ID:	140-8596-1	Worklist Smp#:	27
Client ID:	11545				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132 | Lab Sample ID: 140-8660-2
Matrix: Air | Lab File ID: GG13lot8660.D
Analysis Method: TO-15 | Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL) | Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12614 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132
Lab Sample ID: 140-8660-2
Matrix: Air
Lab File ID: GG13lot8660.D
Analysis Method: TO-15
Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL)
Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12614
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	0.91		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132
Lab Sample ID: 140-8660-2
Matrix: Air
Lab File ID: GG13lot8660.D
Analysis Method: TO-15
Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL)
Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12614
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I TO-15

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8660-1
SDG No.:
Client Sample ID: 11132
Lab Sample ID: 140-8660-2
Matrix: Air
Lab File ID: GG13lot8660.D
Analysis Method: TO-15
Date Collected: 07/12/2017 12:05
Sample wt/vol: 200(mL)
Date Analyzed: 07/14/2017 04:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12614
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\GG13lot8660.D
Lims ID: 140-8660-A-2
Client ID: 11132
Sample Type: Client
Inject. Date: 14-Jul-2017 04:27:30 ALS Bottle#: 1 Worklist Smp#: 26
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005428-026
Misc. Info.: 11132
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Jul-2017 11:43:04 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 14-Jul-2017 11:42:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.915	7.926	-0.011	87	559188	4.00	
* 2 1,4-Difluorobenzene	114	10.072	10.083	-0.011	95	2707006	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.958	14.963	-0.005	90	2579111	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.629	16.635	-0.006	86	2049700	3.96	
6 Chlorodifluoromethane	67	3.467	3.467	0.000	96	30575	0.3648	
31 Methylene Chloride	84	5.618	5.624	-0.006	95	21215	0.1614	

Reagents:

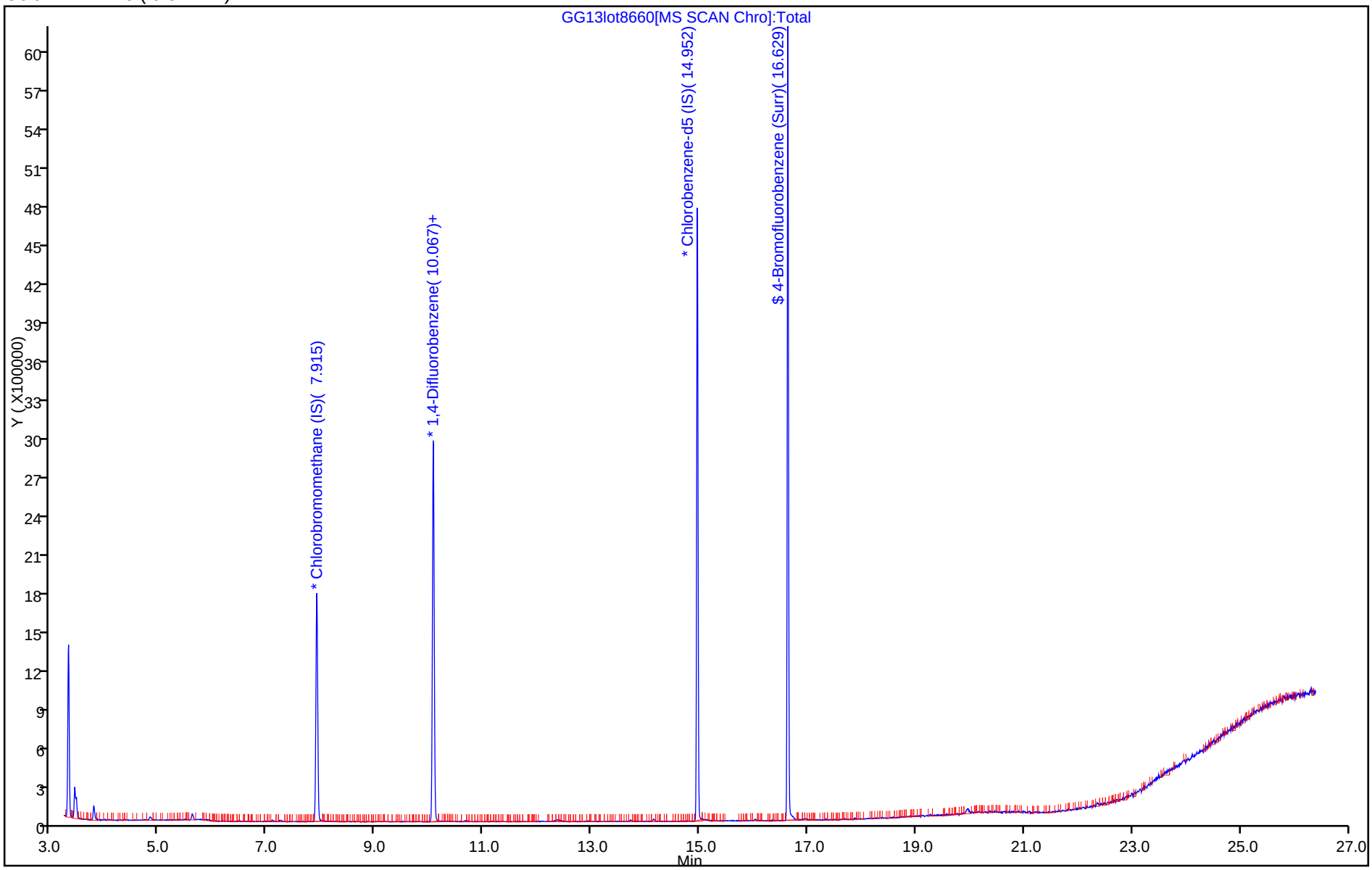
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 14-Jul-2017 11:43:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\GG13lot8660.D				
Injection Date:	14-Jul-2017 04:27:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-8660-A-2	Lab Sample ID:	140-8660-2	Worklist Smp#:	26
Client ID:	11132				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

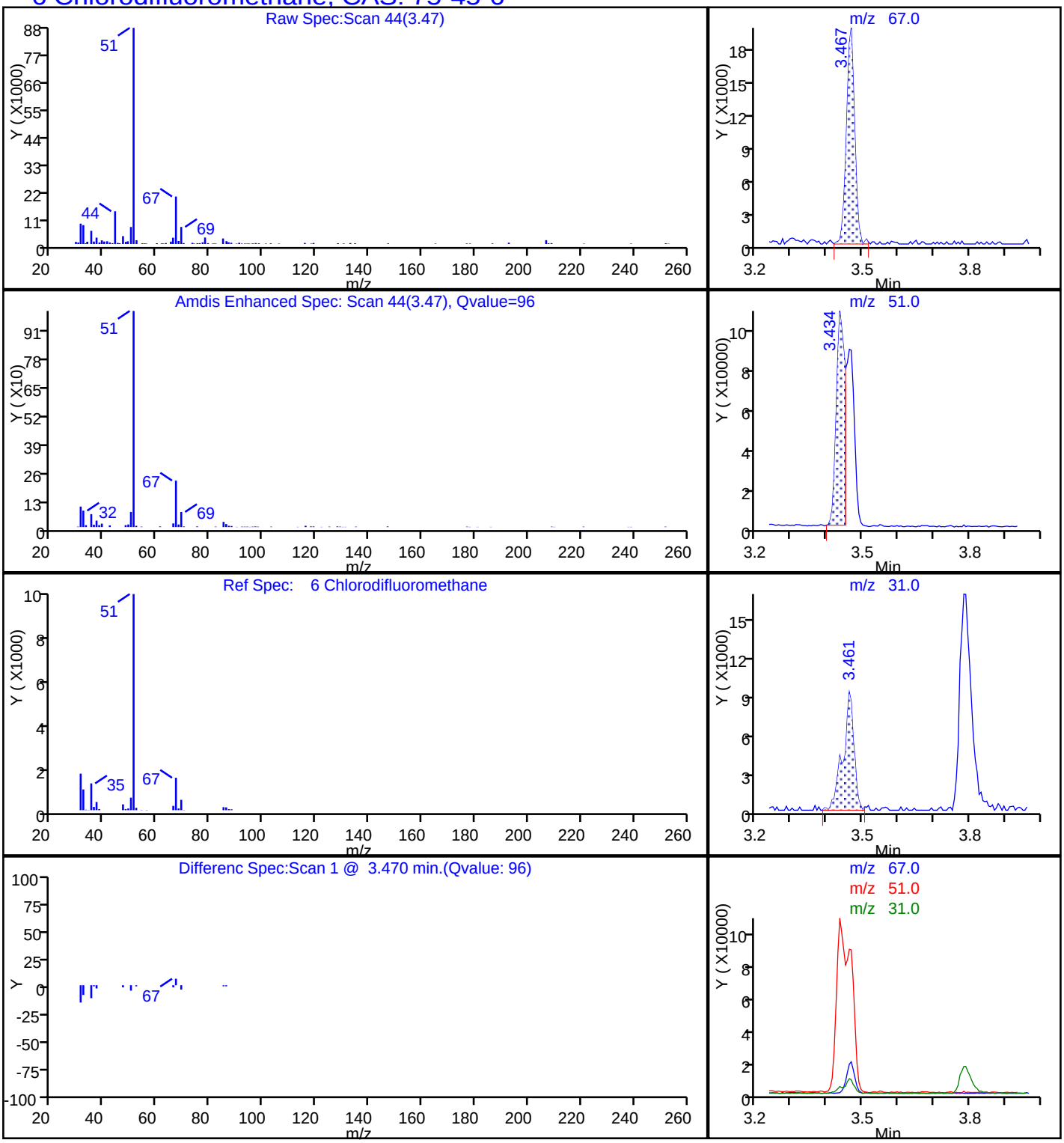


Report Date: 14-Jul-2017 11:43:51 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170710-5428.b\GG13lot8660.D				
Injection Date:	14-Jul-2017 04:27:30	Instrument ID:	MG		
Lims ID:	140-8660-A-2	Lab Sample ID:	140-8660-2		
Client ID:	11132				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8681-1
SDG No.:
Client Sample ID: 10882 | Lab Sample ID: 140-8681-16
Matrix: Air | Lab File ID: G14L8681.D
Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:05
Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 13:44
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 12730 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8681-1
SDG No.:
Client Sample ID: 10882
Lab Sample ID: 140-8681-16
Matrix: Air
Lab File ID: G14L8681.D
Analysis Method: TO 15 LL
Date Collected: 07/13/2017 15:05
Sample wt/vol: 500(mL)
Date Analyzed: 07/14/2017 13:44
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12730
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8681-1

SDG No.:

Client Sample ID: 10882 | Lab Sample ID: 140-8681-16

Matrix: Air | Lab File ID: G14L8681.D

Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:05

Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 13:44

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12730 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.080	
90-12-0	1-Methylnaphthalene	ND	*	1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND	*	1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND	*	0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND	*	0.20	
107-83-5	2-Methylpentane	ND	*	0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	

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

Lab Name: TestAmerica Knoxville Job No.: 140-8681-1

SDG No.:

Client Sample ID: 10882 Lab Sample ID: 140-8681-16

Matrix: Air Lab File ID: G14L8681.D

Analysis Method: TO 15 LL Date Collected: 07/13/2017 15:05

Sample wt/vol: 500(mL) Date Analyzed: 07/14/2017 13:44

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12730 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170713-5458.b\G14L8681.D
Lims ID: 140-8681-A-16
Client ID: 10882
Sample Type: Client
Inject. Date: 14-Jul-2017 13:44:30 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005458-006
Misc. Info.: 10882
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170713-5458.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 11:23:02 Calib Date: 21-Jun-2017 22:43:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170621-5297.b\GF21IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 14-Jul-2017 14:38:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.915	7.921	-0.006	89	564030	4.00	
* 2 1,4-Difluorobenzene	114	10.072	10.077	-0.005	95	2498535	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.958	14.958	0.000	90	2414752	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.629	16.635	-0.006	86	1826404	3.77	
6 Chlorodifluoromethane	67	3.467	3.466	0.001	93	6688	0.0791	
31 Methylene Chloride	84	5.618	5.618	0.000	94	15389	0.1161	

Reagents:

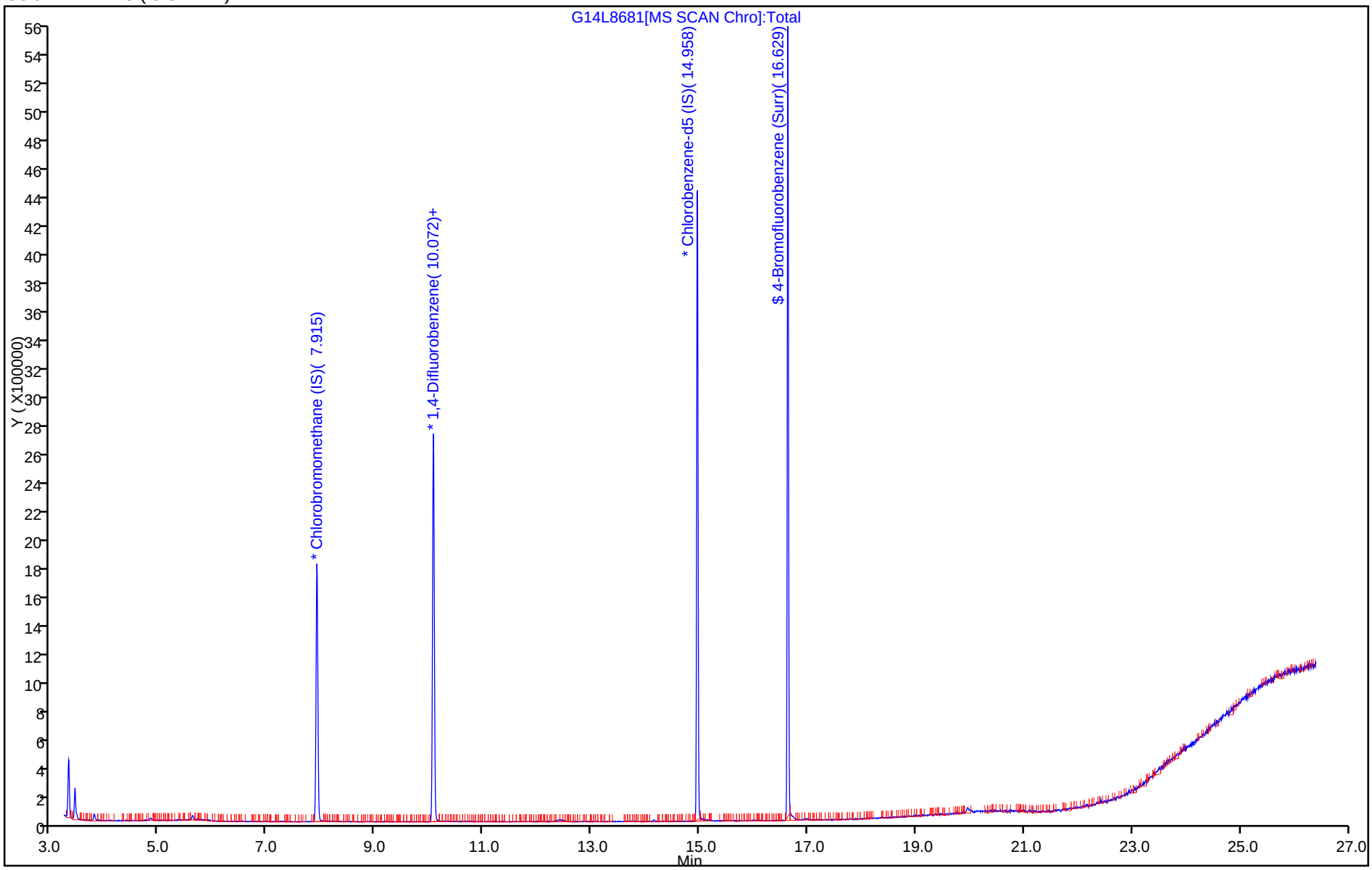
40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 11:23:12 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170713-5458.b\G14L8681.D				
Injection Date:	14-Jul-2017 13:44:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-8681-A-16	Lab Sample ID:	140-8681-16	Worklist Smp#:	6
Client ID:	10882				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 | Lab Sample ID: 140-8682-4

Matrix: Air | Lab File ID: G14L8682.D

Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND	*	0.16	
74-83-9	Bromomethane	ND		0.080	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
67-66-3	Chloroform	ND		0.080	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
74-87-3	Chloromethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
75-71-8	Dichlorodifluoromethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
78-93-3	2-Butanone	ND		0.32	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
95-49-8	2-Chlorotoluene	ND		0.16	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
591-78-6	2-Hexanone	ND		0.20	
107-05-1	3-Chloroprene	ND		0.080	
100-41-4	Ethylbenzene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
75-69-4	Trichlorofluoromethane	ND		0.080	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		0.080	
67-64-1	Acetone	ND		2.0	
75-09-2	Methylene Chloride	ND		0.20	
75-05-8	Acetonitrile	ND		0.40	
100-42-5	Styrene	ND		0.080	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-8682-1
SDG No.:
Client Sample ID: 10363
Lab Sample ID: 140-8682-4
Matrix: Air
Lab File ID: G14L8682.D
Analysis Method: TO 15 LL
Date Collected: 07/13/2017 15:20
Sample wt/vol: 500(mL)
Date Analyzed: 07/14/2017 14:31
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 12695
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
107-02-8	Acrolein	ND		0.16	
107-13-1	Acrylonitrile	ND		0.80	
127-18-4	Tetrachloroethene	ND		0.040	
98-83-9	Alpha Methyl Styrene	ND		0.16	
108-88-3	Toluene	ND		0.12	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
75-27-4	Bromodichloromethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-97-8	Butane	ND		0.16	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
75-15-0	Carbon disulfide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.040	
95-47-6	o-Xylene	ND		0.080	
75-45-6	Chlorodifluoromethane	0.27		0.080	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
110-82-7	Cyclohexane	ND		0.20	
124-18-5	n-Decane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
112-40-3	n-Dodecane	ND		0.40	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
142-82-5	n-Heptane	ND		0.20	
110-54-3	Hexane	ND		0.20	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
91-20-3	Naphthalene	ND		0.20	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville | Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 | Lab Sample ID: 140-8682-4

Matrix: Air | Lab File ID: G14L8682.D

Analysis Method: TO 15 LL | Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) | Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 12695 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
104-51-8	n-Butylbenzene	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
111-65-9	n-Octane	ND		0.16	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
98-06-6	tert-Butylbenzene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		0.40	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.080	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.080	
90-12-0	1-Methylnaphthalene	ND		1.0	
3074-71-3	2,3-Dimethylheptane	ND		0.080	
872-55-9	2-Ethylthiophene	ND		0.080	
554-14-3	2-Methylthiophene	ND		0.080	
91-57-6	2-Methylnaphthalene	ND		1.0	
616-44-4	3-Methylthiophene	ND		0.080	
95-15-8	Benzo(b)thiophene	ND		0.16	
110-02-1	Thiophene	ND		0.080	
1678-93-9	Butylcyclohexane	ND		0.080	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-78-4	2-Methylbutane	ND		0.20	
107-83-5	2-Methylpentane	ND		0.080	
75-07-0	Acetaldehyde	ND		4.0	
98-82-8	Cumene	ND		0.16	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND	*	0.16	

FORM I TO 15 LL

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

Lab Name: TestAmerica Knoxville Job No.: 140-8682-1

SDG No.:

Client Sample ID: 10363 Lab Sample ID: 140-8682-4

Matrix: Air Lab File ID: G14L8682.D

Analysis Method: TO 15 LL Date Collected: 07/13/2017 15:20

Sample wt/vol: 500(mL) Date Analyzed: 07/14/2017 14:31

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 12695 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-87-6	p-Cymene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
108-87-2	Methylcyclohexane	ND		0.080	
111-84-2	n-Nonane	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\G14L8682.D
Lims ID: 140-8682-A-4
Client ID: 10363
Sample Type: Client
Inject. Date: 14-Jul-2017 14:31:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0005447-007
Misc. Info.: 10363
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jul-2017 09:59:27 Calib Date: 29-May-2017 00:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20170528-5078.b\JE28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: tajh Date: 14-Jul-2017 15:42:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.729	9.737	-0.008	80	623873	4.00	
* 2 1,4-Difluorobenzene	114	11.854	11.857	-0.003	94	3091583	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.480	16.483	-0.003	84	2754111	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.078	18.081	-0.003	95	1599752	3.84	
6 Chlorodifluoromethane	67	4.107	4.110	-0.003	93	13976	0.2713	
20 Trichlorofluoromethane	101	5.882	5.886	-0.004	95	7070	0.0126	
31 Methylene Chloride	84	7.039	7.048	-0.009	90	18300	0.1059	
47 1,1,1-Trichloroethane	97	10.778	10.781	-0.003	88	12483	0.0272	

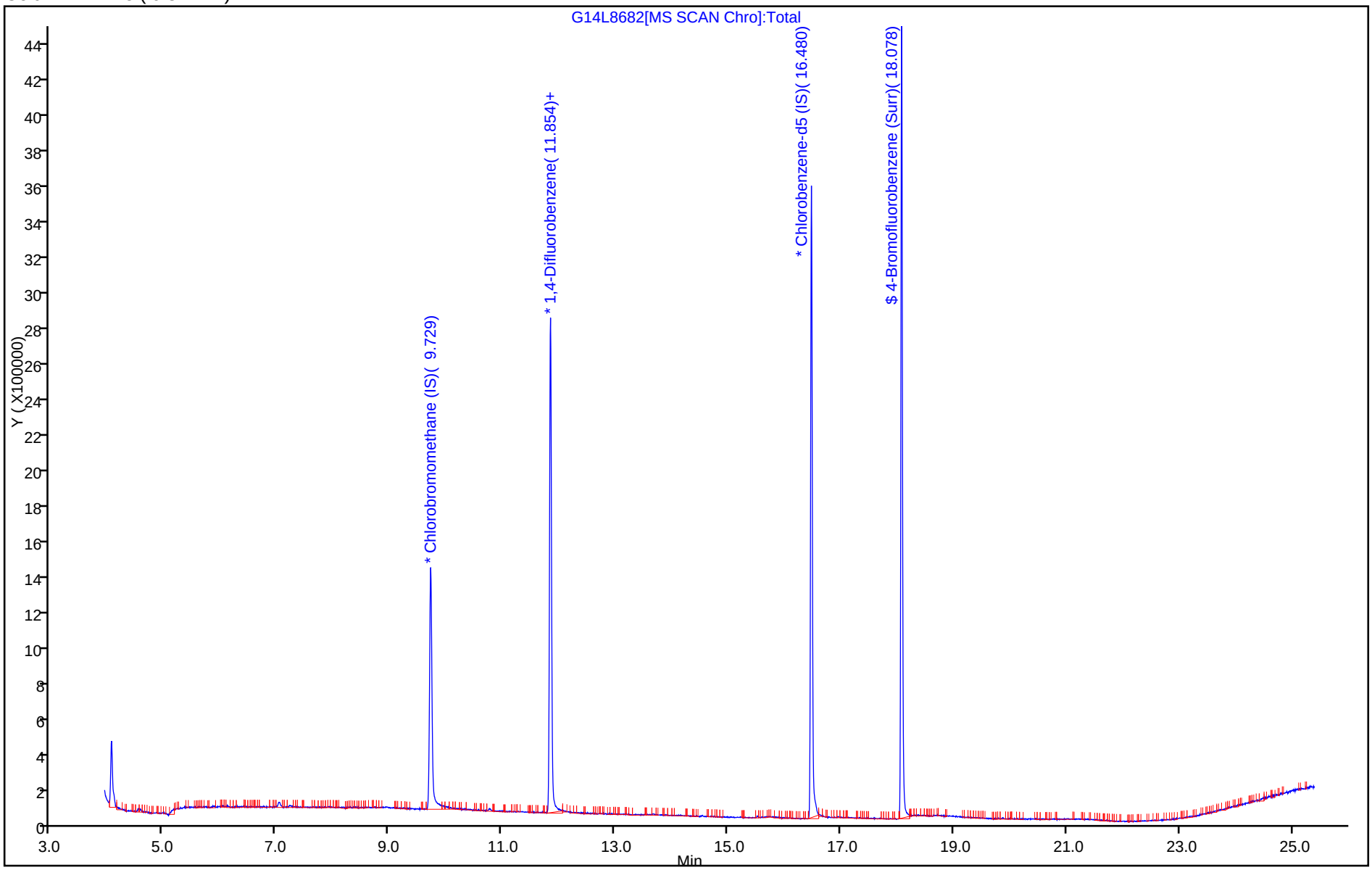
Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Jul-2017 09:59:38 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\G14L8682.D				
Injection Date:	14-Jul-2017 14:31:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-8682-A-4	Lab Sample ID:	140-8682-4	Worklist Smp#:	7
Client ID:	10363				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					

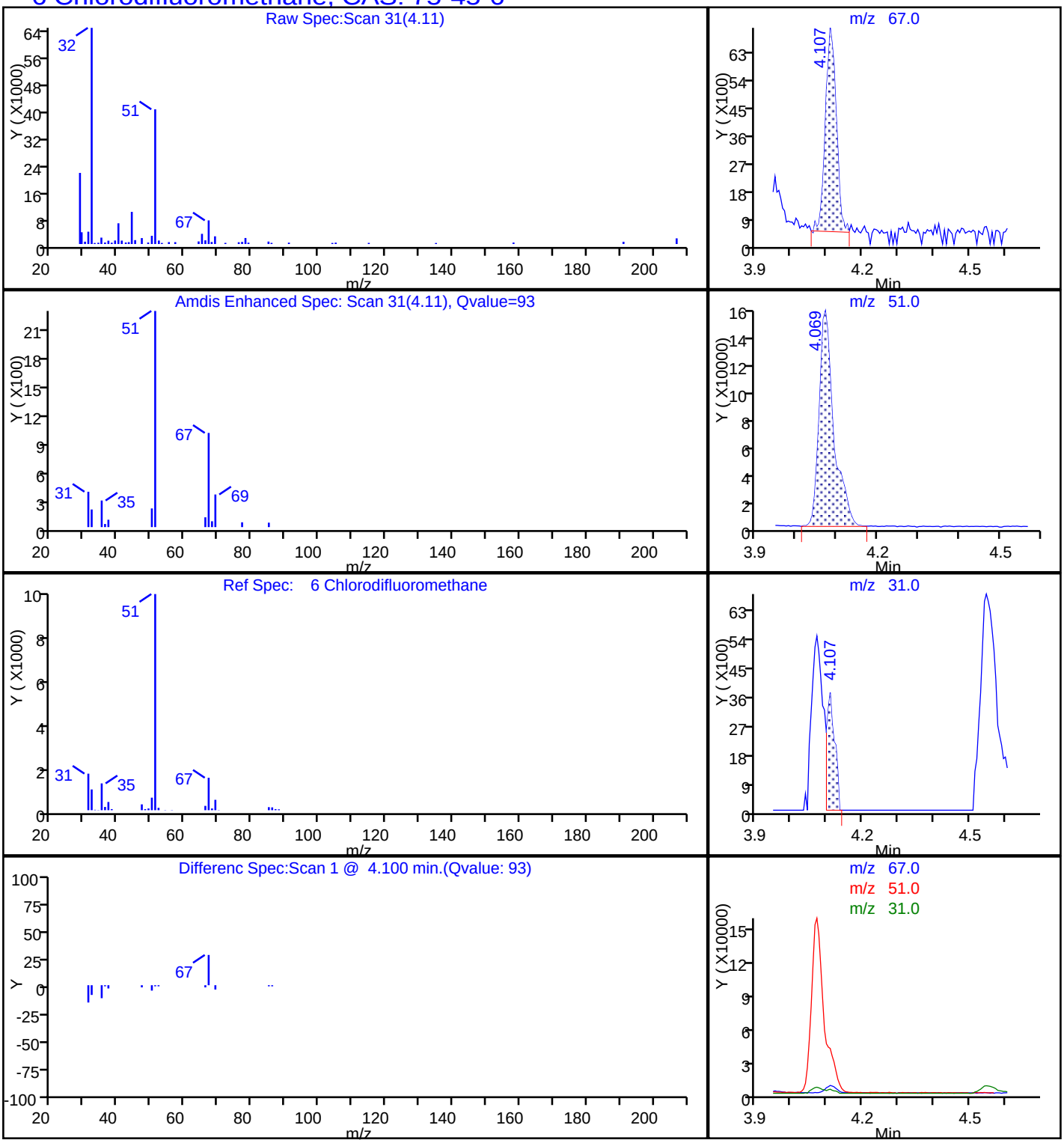


Report Date: 17-Jul-2017 09:59:38 Chrom Revision: 2.2 26-Jun-2017 08:09:44

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170712-5447.b\G14L8682.D				
Injection Date:	14-Jul-2017 14:31:30	Instrument ID:	MJ		
Lims ID:	140-8682-A-4	Lab Sample ID:	140-8682-4		
Client ID:	10363				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



Memorandum

July 31, 2018

To:	Chuck Ahrens, GHD	Ref. No.:	003978
From:	Grant Anderson/sb/16	Tel:	(651) 639-0913

Subject: **Analytical Results and Reduced Data Validation**
Air Sampling Event
Wausau Superfund – Wausau, Wisconsin
March 2018

1. Introduction

The following document details a reduced validation of analytical results for air samples collected in support of the air monitoring program at the Wausau Superfund Site in Wausau, Wisconsin in March 2018. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) located in Knoxville, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services, Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS) samples, and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) "National Functional Guidelines for Organic Superfund Methods Data Review," EPA-540-R-2017-002, January 2017

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding times.

All air samples were collected in summa canisters and delivered at room temperature.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. The LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Field QA/QC Samples

There were no field QA/QC samples associated with this sampling event.

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March 2018

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters
SS-180327-RA-01	1917 N 2nd St	air	03/27/18	13:54	Select VOCs
SS-180327-RA-02	2108 N 3rd St	air	03/27/18	15:03	Select VOCs
SS-180327-RA-03	1909 N 2nd St	air	03/27/18	16:28	Select VOCs
SS-180327-RA-04	1915 N 2nd St	air	03/27/18	17:07	Select VOCs
SS-180328-RA-05	1905 N 2nd St	air	03/28/18	13:35	Select VOCs
SS-180328-RA-06	1901 N 2nd St	air	03/28/18	18:25	Select VOCs
IA-180327-RA-01	1917 N 2nd St - Basement	air	03/27/18	14:18	Select VOCs
IA-180327-RA-02	1917 N 2nd St - Main Level	air	03/27/18	14:22	Select VOCs
IA-180327-RA-03	2108 N 3rd St	air	03/27/18	14:45	Select VOCs
IA-180327-RA-04	1909 N 2nd St	air	03/27/18	16:48	Select VOCs
IA-180327-RA-05	1915 N 2nd St	air	03/27/18	17:24	Select VOCs
IA-180327-RA-06	1901 N 2nd St	air	03/27/18	20:05	Select VOCs
IA-180328-RA-07	1905 N 2nd St	air	03/28/18	13:50	Select VOCs
OA-180328-RA-01	1905 N 2nd St	air	03/28/18	13:50	Select VOCs

Notes:

VOC - Volatile Organic Compounds
Select VOCs - tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, vinyl chloride

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March 2018

Location ID:		**1917 N 2nd St - Basement**	**1917 N 2nd St - Main Level**	**2108 N 3rd St**	**1909 N 2nd St**	**1915 N 2nd St**
Sample Name:		**IA-180327-RA-01**	**IA-180327-RA-02**	**IA-180327-RA-03**	**IA-180327-RA-04**	**IA-180327-RA-05**
Sample Date:		**03/27/2018**	**03/27/2018**	**03/27/2018**	**03/27/2018**	**03/27/2018**
Parameters	**Unit**					
Volatile Organic Compounds						
cis-1,2-Dichloroethene	ppbv	0.19	0.10	0.041 J	0.080 U	0.025 J
Tetrachloroethene	ppbv	0.15	0.095	0.31	0.046 J	0.096
Trichloroethene	ppbv	0.30	0.16	0.15	0.037 J	0.097
Vinyl chloride	ppbv	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
cis-1,2-Dichloroethene	µg/m3	0.75	0.40	0.16 J	0.32 U	0.099 J
Tetrachloroethene	µg/m3	0.99	0.65	2.1	0.31 J	0.65
Trichloroethene	µg/m3	1.6	0.86	0.83	0.20 J	0.52
Vinyl chloride	µg/m3	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March 2018

Location ID:		**1901 N 2nd St**	**1917 N 2nd St**	**2108 N 3rd St**	**1909 N 2nd St**	**1915 N 2nd St**	**1905 N 2nd St**
Sample Name:		**IA-180327-RA-06**	**SS-180327-RA-01**	**SS-180327-RA-02**	**SS-180327-RA-03**	**SS-180327-RA-04**	**IA-180328-RA-07**
Sample Date:		**03/27/2018**	**03/27/2018**	**03/27/2018**	**03/27/2018**	**03/27/2018**	**03/28/2018**
Parameters	**Unit**						
Volatile Organic Compounds							
cis-1,2-Dichloroethene	ppbv	0.080 U	0.70 J	10	0.80 U	0.80 U	0.080 U
Tetrachloroethene	ppbv	0.056 J	11	55	15	9.6	0.016 J
Trichloroethene	ppbv	0.028 J	30	22	1.6	7.8	0.040 U
Vinyl chloride	ppbv	0.040 U	0.40 U	0.40 U	0.40 U	0.40 U	0.040 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	2.8 J	42	3.2 U	3.2 U	0.32 U
Tetrachloroethene	µg/m3	0.38 J	76	370	100	65	0.11 J
Trichloroethene	µg/m3	0.15 J	160	120	8.6	42	0.21 U
Vinyl chloride	µg/m3	0.10 U	1.0 U	1.0 U	1.0 U	1.0 U	0.10 U

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March 2018

Location ID:		**1905 N 2nd St**	**1905 N 2nd St**	**1901 N 2nd St**
Sample Name:		**OA-180328-RA-01**	**SS-180328-RA-05**	**SS-180328-RA-06**
Sample Date:		**03/28/2018**	**03/28/2018**	**03/28/2018**
Parameters	**Unit**			
Volatile Organic Compounds				
cis-1,2-Dichloroethene	ppbv	0.080 U	0.80	17
Tetrachloroethene	ppbv	0.080 U	33	21
Trichloroethene	ppbv	0.040 U	16	10
Vinyl chloride	ppbv	0.040 U	0.40 U	0.40 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	3.2	68
Tetrachloroethene	µg/m3	0.54 U	220	140
Trichloroethene	µg/m3	0.21 U	84	56
Vinyl chloride	µg/m3	0.10 U	1.0 U	1.0 U

Note:

U - Not detected at the associated reporting limit
J - Estimated concentration

Table 3

Analytical Method and Holding Time Criteria
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
March 2018

			Holding Time	
Parameter	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Volatile Organic Compounds (VOC)	TO-15	Air	-	30

Notes:

Method References:

TO-15 - "Compendium of Methods for the Determination of Toxic Organic Compounds in Air", EPA-625/R-96/010b, January 1999.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-11144-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Diane Lange

Authorized for release by:
4/11/2018 2:44:09 PM
Diana Lange, Project Management Assistant II
diane.lange@testamericainc.com

Designee for

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

LINKS

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-11144-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-11144-1

Comments
No additional comments.

Receipt
The samples were received on 4/2/2018 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: SS-180327-RA-01 — Lab Sample ID: 140-11144-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.70	J	0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	11		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	30		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.8	J	3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	76		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	160		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-180327-RA-02 — Lab Sample ID: 140-11144-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	10		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	55		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	22		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	42		3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	370		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	120		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-180327-RA-03 — Lab Sample ID: 140-11144-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	15		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.6		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	100		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	8.6		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-180327-RA-04 — Lab Sample ID: 140-11144-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	9.6		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	7.8		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	65		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	42		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-180328-RA-05 — Lab Sample ID: 140-11144-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.80		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	33		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	16		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.2		3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	220		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	84		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: SS-180328-RA-06 — Lab Sample ID: 140-11144-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	17		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	21		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	10		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	68		3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	140		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	56		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-180327-RA-01 — Lab Sample ID: 140-11144-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.19		0.080	0.024	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.15		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.30		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.75		0.32	0.095	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.99		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.6		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-180327-RA-02 — Lab Sample ID: 140-11144-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.10		0.080	0.024	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.095		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.16		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.40		0.32	0.095	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.65		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.86		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-180327-RA-03 — Lab Sample ID: 140-11144-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.041	J	0.080	0.024	ppb v/v	1.54		TO 15 LL	Total/NA
Tetrachloroethene	0.31		0.080	0.016	ppb v/v	1.54		TO 15 LL	Total/NA
Trichloroethene	0.15		0.040	0.014	ppb v/v	1.54		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.16	J	0.32	0.095	ug/m3	1.54		TO 15 LL	Total/NA
Tetrachloroethene	2.1		0.54	0.11	ug/m3	1.54		TO 15 LL	Total/NA
Trichloroethene	0.83		0.21	0.075	ug/m3	1.54		TO 15 LL	Total/NA

Client Sample ID: IA-180327-RA-04 — Lab Sample ID: 140-11144-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.046	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.037	J	0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.31	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.20	J	0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: IA-180327-RA-05 — Lab Sample ID: 140-11144-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.025	J	0.080	0.024	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.096		0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.097		0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.099	J	0.32	0.095	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.65		0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.52		0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-180327-RA-06 — Lab Sample ID: 140-11144-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.056	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.028	J	0.040	0.014	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.38	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.15	J	0.21	0.075	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-180328-RA-07 — Lab Sample ID: 140-11144-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.016	J	0.080	0.016	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.11	J	0.54	0.11	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: OA-180328-RA-01 — Lab Sample ID: 140-11144-14

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: SS-180327-RA-01

Lab Sample ID: 140-11144-1
Matrix: Air

Date Collected: 03/27/18 14:05
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.70	J	0.80	0.24	ppb v/v			04/05/18 04:38	1
Tetrachloroethene	11		0.80	0.16	ppb v/v			04/05/18 04:38	1
Trichloroethene	30		0.40	0.14	ppb v/v			04/05/18 04:38	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			04/05/18 04:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	2.8	J	3.2	0.95	ug/m3			04/05/18 04:38	1
Tetrachloroethene	76		5.4	1.1	ug/m3			04/05/18 04:38	1
Trichloroethene	160		2.1	0.75	ug/m3			04/05/18 04:38	1
Vinyl chloride	ND		1.0	0.74	ug/m3			04/05/18 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*04/05/18 04:38*	*1*

Client Sample ID: SS-180327-RA-02

Lab Sample ID: 140-11144-2
Matrix: Air

Date Collected: 03/27/18 15:12
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	10		0.80	0.24	ppb v/v			04/05/18 17:22	1
Tetrachloroethene	55		0.80	0.16	ppb v/v			04/05/18 17:22	1
Trichloroethene	22		0.40	0.14	ppb v/v			04/05/18 17:22	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			04/05/18 17:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	42		3.2	0.95	ug/m3			04/05/18 17:22	1
Tetrachloroethene	370		5.4	1.1	ug/m3			04/05/18 17:22	1
Trichloroethene	120		2.1	0.75	ug/m3			04/05/18 17:22	1
Vinyl chloride	ND		1.0	0.74	ug/m3			04/05/18 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/05/18 17:22*	*1*

Client Sample ID: SS-180327-RA-03

Lab Sample ID: 140-11144-3
Matrix: Air

Date Collected: 03/27/18 16:39
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			04/05/18 18:48	1
Tetrachloroethene	15		0.80	0.16	ppb v/v			04/05/18 18:48	1
Trichloroethene	1.6		0.40	0.14	ppb v/v			04/05/18 18:48	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			04/05/18 18:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			04/05/18 18:48	1
Tetrachloroethene	100		5.4	1.1	ug/m3			04/05/18 18:48	1
Trichloroethene	8.6		2.1	0.75	ug/m3			04/05/18 18:48	1

Client Sample ID: SS-180327-RA-03 — Lab Sample ID: 140-11144-3

Date Collected: 03/27/18 16:39 — **Matrix: Air**
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.74	ug/m3			04/05/18 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*04/05/18 18:48*	*1*

Client Sample ID: SS-180327-RA-04 — Lab Sample ID: 140-11144-4

Date Collected: 03/27/18 17:17 — **Matrix: Air**
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			04/05/18 19:32	1
Tetrachloroethene	**9.6**		0.80	0.16	ppb v/v			04/05/18 19:32	1
Trichloroethene	**7.8**		0.40	0.14	ppb v/v			04/05/18 19:32	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			04/05/18 19:32	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			04/05/18 19:32	1
Tetrachloroethene	**65**		5.4	1.1	ug/m3			04/05/18 19:32	1
Trichloroethene	**42**		2.1	0.75	ug/m3			04/05/18 19:32	1
Vinyl chloride	ND		1.0	0.74	ug/m3			04/05/18 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*04/05/18 19:32*	*1*

Client Sample ID: SS-180328-RA-05 — Lab Sample ID: 140-11144-5

Date Collected: 03/28/18 13:45 — **Matrix: Air**
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.80**		0.80	0.24	ppb v/v			04/05/18 20:16	1
Tetrachloroethene	**33**		0.80	0.16	ppb v/v			04/05/18 20:16	1
Trichloroethene	**16**		0.40	0.14	ppb v/v			04/05/18 20:16	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			04/05/18 20:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3.2**		3.2	0.95	ug/m3			04/05/18 20:16	1
Tetrachloroethene	**220**		5.4	1.1	ug/m3			04/05/18 20:16	1
Trichloroethene	**84**		2.1	0.75	ug/m3			04/05/18 20:16	1
Vinyl chloride	ND		1.0	0.74	ug/m3			04/05/18 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*04/05/18 20:16*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: SS-180328-RA-06

Lab Sample ID: 140-11144-6
Matrix: Air
Date Collected: 03/28/18 18:36
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	17		0.80	0.24	ppb v/v			04/05/18 20:58	1
Tetrachloroethene	21		0.80	0.16	ppb v/v			04/05/18 20:58	1
Trichloroethene	10		0.40	0.14	ppb v/v			04/05/18 20:58	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			04/05/18 20:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	68		3.2	0.95	ug/m3			04/05/18 20:58	1
Tetrachloroethene	140		5.4	1.1	ug/m3			04/05/18 20:58	1
Trichloroethene	56		2.1	0.75	ug/m3			04/05/18 20:58	1
Vinyl chloride	ND		1.0	0.74	ug/m3			04/05/18 20:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/05/18 20:58*	*1*

Client Sample ID: IA-180327-RA-01

Lab Sample ID: 140-11144-7
Matrix: Air
Date Collected: 03/27/18 09:35
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.19		0.080	0.024	ppb v/v			04/04/18 21:44	1
Tetrachloroethene	0.15		0.080	0.016	ppb v/v			04/04/18 21:44	1
Trichloroethene	0.30		0.040	0.014	ppb v/v			04/04/18 21:44	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/04/18 21:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.75		0.32	0.095	ug/m3			04/04/18 21:44	1
Tetrachloroethene	0.99		0.54	0.11	ug/m3			04/04/18 21:44	1
Trichloroethene	1.6		0.21	0.075	ug/m3			04/04/18 21:44	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/04/18 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*04/04/18 21:44*	*1*

Client Sample ID: IA-180327-RA-02

Lab Sample ID: 140-11144-8
Matrix: Air
Date Collected: 03/27/18 09:35
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.10		0.080	0.024	ppb v/v			04/04/18 23:17	1
Tetrachloroethene	0.095		0.080	0.016	ppb v/v			04/04/18 23:17	1
Trichloroethene	0.16		0.040	0.014	ppb v/v			04/04/18 23:17	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/04/18 23:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.40		0.32	0.095	ug/m3			04/04/18 23:17	1
Tetrachloroethene	0.65		0.54	0.11	ug/m3			04/04/18 23:17	1
Trichloroethene	0.86		0.21	0.075	ug/m3			04/04/18 23:17	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/04/18 23:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		04/04/18 23:17	1

Client Sample ID: IA-180327-RA-03 — Lab Sample ID: 140-11144-9

Date Collected: 03/27/18 09:30 — **Matrix: Air**
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.041	J	0.080	0.024	ppb v/v			04/05/18 00:07	1.54
Tetrachloroethene	0.31		0.080	0.016	ppb v/v			04/05/18 00:07	1.54
Trichloroethene	0.15		0.040	0.014	ppb v/v			04/05/18 00:07	1.54
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 00:07	1.54

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.16	J	0.32	0.095	ug/m3			04/05/18 00:07	1.54
Tetrachloroethene	2.1		0.54	0.11	ug/m3			04/05/18 00:07	1.54
Trichloroethene	0.83		0.21	0.075	ug/m3			04/05/18 00:07	1.54
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 00:07	1.54

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140		04/05/18 00:07	1.54

Client Sample ID: IA-180327-RA-04 — Lab Sample ID: 140-11144-10

Date Collected: 03/27/18 15:45 — **Matrix: Air**
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/05/18 00:53	1
Tetrachloroethene	0.046	J	0.080	0.016	ppb v/v			04/05/18 00:53	1
Trichloroethene	0.037	J	0.040	0.014	ppb v/v			04/05/18 00:53	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 00:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/05/18 00:53	1
Tetrachloroethene	0.31	J	0.54	0.11	ug/m3			04/05/18 00:53	1
Trichloroethene	0.20	J	0.21	0.075	ug/m3			04/05/18 00:53	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 00:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		04/05/18 00:53	1

Client Sample ID: IA-180327-RA-05 — Lab Sample ID: 140-11144-11

Date Collected: 03/27/18 13:55 — **Matrix: Air**
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.025	J	0.080	0.024	ppb v/v			04/05/18 01:37	1
Tetrachloroethene	0.096		0.080	0.016	ppb v/v			04/05/18 01:37	1
Trichloroethene	0.097		0.040	0.014	ppb v/v			04/05/18 01:37	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 01:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.099	J	0.32	0.095	ug/m3			04/05/18 01:37	1

Client Sample ID: IA-180327-RA-05

Lab Sample ID: 140-11144-11
Matrix: Air
Date Collected: 03/27/18 13:55
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.65		0.54	0.11	ug/m3			04/05/18 01:37	1
Trichloroethene	0.52		0.21	0.075	ug/m3			04/05/18 01:37	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*04/05/18 01:37*	*1*

Client Sample ID: IA-180327-RA-06

Lab Sample ID: 140-11144-12
Matrix: Air
Date Collected: 03/27/18 18:25
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/05/18 02:23	1
Tetrachloroethene	0.056	J	0.080	0.016	ppb v/v			04/05/18 02:23	1
Trichloroethene	0.028	J	0.040	0.014	ppb v/v			04/05/18 02:23	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 02:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/05/18 02:23	1
Tetrachloroethene	0.38	J	0.54	0.11	ug/m3			04/05/18 02:23	1
Trichloroethene	0.15	J	0.21	0.075	ug/m3			04/05/18 02:23	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*04/05/18 02:23*	*1*

Client Sample ID: IA-180328-RA-07

Lab Sample ID: 140-11144-13
Matrix: Air
Date Collected: 03/28/18 12:06
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/05/18 03:08	1
Tetrachloroethene	0.016	J	0.080	0.016	ppb v/v			04/05/18 03:08	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/05/18 03:08	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 03:08	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/05/18 03:08	1
Tetrachloroethene	0.11	J	0.54	0.11	ug/m3			04/05/18 03:08	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/05/18 03:08	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/05/18 03:08*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: OA-180328-RA-01

Lab Sample ID: 140-11144-14

Date Collected: 03/28/18 12:07
Date Received: 04/02/18 09:15
Sample Container: Summa Canister 6L

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/05/18 03:54	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			04/05/18 03:54	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/05/18 03:54	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 03:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/05/18 03:54	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			04/05/18 03:54	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/05/18 03:54	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*04/05/18 03:54*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**						
140-11144-1	SS-180327-RA-01	103						
140-11144-2	SS-180327-RA-02	104						
140-11144-3	SS-180327-RA-03	101						
140-11144-4	SS-180327-RA-04	103						
140-11144-5	SS-180328-RA-05	102						
140-11144-6	SS-180328-RA-06	104						
140-11144-7	IA-180327-RA-01	100						
140-11144-8	IA-180327-RA-02	101						
140-11144-9	IA-180327-RA-03	98						
140-11144-10	IA-180327-RA-04	101						
140-11144-11	IA-180327-RA-05	102						
140-11144-12	IA-180327-RA-06	101						
140-11144-13	IA-180328-RA-07	104						
140-11144-14	OA-180328-RA-01	101						
LCS 140-19243/1002	Lab Control Sample	108						
LCS 140-19244/1002	Lab Control Sample	105						
MB 140-19243/6	Method Blank	104						
MB 140-19244/4	Method Blank	104						

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-19243/6
Matrix: Air
Analysis Batch: 19243

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/04/18 12:05	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			04/04/18 12:05	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/04/18 12:05	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/04/18 12:05	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/04/18 12:05	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			04/04/18 12:05	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/04/18 12:05	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/04/18 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/04/18 12:05*	*1*

Lab Sample ID: LCS 140-19243/1002
Matrix: Air
Analysis Batch: 19243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.19		ppb v/v		110	70 - 130
Tetrachloroethene	2.00	1.97		ppb v/v		98	70 - 130
Trichloroethene	2.00	1.95		ppb v/v		98	70 - 130
Vinyl chloride	2.00	2.28		ppb v/v		114	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	8.69		ug/m3		110	70 - 130
Tetrachloroethene	14	13.3		ug/m3		98	70 - 130
Trichloroethene	11	10.5		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.83		ug/m3		114	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*60 - 140*

Lab Sample ID: MB 140-19244/4
Matrix: Air
Analysis Batch: 19244

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/05/18 12:31	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			04/05/18 12:31	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/05/18 12:31	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/05/18 12:31	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/05/18 12:31	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			04/05/18 12:31	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/05/18 12:31	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-19244/4
Matrix: Air
Analysis Batch: 19244

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10	0.074	ug/m3			04/05/18 12:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/05/18 12:31*	*1*

Lab Sample ID: LCS 140-19244/1002
Matrix: Air
Analysis Batch: 19244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Tetrachloroethene	2.00	1.89		ppb v/v		95	70 - 130
Trichloroethene	2.00	1.81		ppb v/v		91	70 - 130
Vinyl chloride	2.00	2.25		ppb v/v		112	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	8.48		ug/m3		107	70 - 130
Tetrachloroethene	14	12.8		ug/m3		95	70 - 130
Trichloroethene	11	9.75		ug/m3		91	70 - 130
Vinyl chloride	5.1	5.75		ug/m3		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Air - GC/MS VOA

Analysis Batch: 19243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-11144-1	SS-180327-RA-01	Total/NA	Air	TO 15 LL	
140-11144-7	IA-180327-RA-01	Total/NA	Air	TO 15 LL	
140-11144-8	IA-180327-RA-02	Total/NA	Air	TO 15 LL	
140-11144-9	IA-180327-RA-03	Total/NA	Air	TO 15 LL	
140-11144-10	IA-180327-RA-04	Total/NA	Air	TO 15 LL	
140-11144-11	IA-180327-RA-05	Total/NA	Air	TO 15 LL	
140-11144-12	IA-180327-RA-06	Total/NA	Air	TO 15 LL	
140-11144-13	IA-180328-RA-07	Total/NA	Air	TO 15 LL	
140-11144-14	OA-180328-RA-01	Total/NA	Air	TO 15 LL	
MB 140-19243/6	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-19243/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 19244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-11144-2	SS-180327-RA-02	Total/NA	Air	TO 15 LL	
140-11144-3	SS-180327-RA-03	Total/NA	Air	TO 15 LL	
140-11144-4	SS-180327-RA-04	Total/NA	Air	TO 15 LL	
140-11144-5	SS-180328-RA-05	Total/NA	Air	TO 15 LL	
140-11144-6	SS-180328-RA-06	Total/NA	Air	TO 15 LL	
MB 140-19244/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-19244/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: SS-180327-RA-01 — Lab Sample ID: 140-11144-1

Date Collected: 03/27/18 14:05 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	19243	04/05/18 04:38	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-180327-RA-02 — Lab Sample ID: 140-11144-2

Date Collected: 03/27/18 15:12 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	19244	04/05/18 17:22	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-180327-RA-03 — Lab Sample ID: 140-11144-3

Date Collected: 03/27/18 16:39 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	19244	04/05/18 18:48	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-180327-RA-04 — Lab Sample ID: 140-11144-4

Date Collected: 03/27/18 17:17 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	19244	04/05/18 19:32	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-180328-RA-05 — Lab Sample ID: 140-11144-5

Date Collected: 03/28/18 13:45 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	19244	04/05/18 20:16	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: SS-180328-RA-06 — Lab Sample ID: 140-11144-6

Date Collected: 03/28/18 18:36 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	19244	04/05/18 20:58	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: IA-180327-RA-01 — Lab Sample ID: 140-11144-7

Date Collected: 03/27/18 09:35 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/04/18 21:44	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-180327-RA-02 — Lab Sample ID: 140-11144-8

Date Collected: 03/27/18 09:35 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/04/18 23:17	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-180327-RA-03 — Lab Sample ID: 140-11144-9

Date Collected: 03/27/18 09:30 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.54	770 mL	500 mL	19243	04/05/18 00:07	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-180327-RA-04 — Lab Sample ID: 140-11144-10

Date Collected: 03/27/18 15:45 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/05/18 00:53	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-180327-RA-05 — Lab Sample ID: 140-11144-11

Date Collected: 03/27/18 13:55 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/05/18 01:37	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: IA-180327-RA-06 — Lab Sample ID: 140-11144-12

Date Collected: 03/27/18 18:25 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/05/18 02:23	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Client Sample ID: IA-180328-RA-07 — Lab Sample ID: 140-11144-13

Date Collected: 03/28/18 12:06 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/05/18 03:08	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: OA-180328-RA-01 — Lab Sample ID: 140-11144-14

Date Collected: 03/28/18 12:07 — **Matrix: Air**
Date Received: 04/02/18 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/05/18 03:54	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-19243/6

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/04/18 12:05	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-19244/4

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19244	04/05/18 12:31	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-19243/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19243	04/04/18 10:29	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-19244/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19244	04/05/18 10:55	HMT	TAL KNX
	Instrument ID: MG									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Laboratory: TestAmerica Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

TestAmerica Job ID: 140-11144-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-11144-1	SS-180327-RA-01	Air	03/27/18 14:05	04/02/18 09:15
140-11144-2	SS-180327-RA-02	Air	03/27/18 15:12	04/02/18 09:15
140-11144-3	SS-180327-RA-03	Air	03/27/18 16:39	04/02/18 09:15
140-11144-4	SS-180327-RA-04	Air	03/27/18 17:17	04/02/18 09:15
140-11144-5	SS-180328-RA-05	Air	03/28/18 13:45	04/02/18 09:15
140-11144-6	SS-180328-RA-06	Air	03/28/18 18:36	04/02/18 09:15
140-11144-7	IA-180327-RA-01	Air	03/27/18 09:35	04/02/18 09:15
140-11144-8	IA-180327-RA-02	Air	03/27/18 09:35	04/02/18 09:15
140-11144-9	IA-180327-RA-03	Air	03/27/18 09:30	04/02/18 09:15
140-11144-10	IA-180327-RA-04	Air	03/27/18 15:45	04/02/18 09:15
140-11144-11	IA-180327-RA-05	Air	03/27/18 13:55	04/02/18 09:15
140-11144-12	IA-180327-RA-06	Air	03/27/18 18:25	04/02/18 09:15
140-11144-13	IA-180328-RA-07	Air	03/28/18 12:06	04/02/18 09:15
140-11144-14	OA-180328-RA-01	Air	03/28/18 12:07	04/02/18 09:15

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW
City/State/Zip St. Paul MN 55112
Phone: 651-639-0913
FAX:
Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Chuck Ahrens
Phone:
Site Contact: Grant Anderson
TAL Contact:

Sampled By: RAamot

1 of 3 COCs

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SS-180327-RA-01	3/27/18	1354	1405	-30	-5	11095	10781	X									X		
SS-180327-RA-02	↓	1503	1512	-27	-5	10955	039831	X									X		
SS-180327-RA-03	↓	1628	1639	-30	-5	11788	11541	X									X		
SS-180327-RA-04	↓	1702	1717	-22	-5	11102	11674	X									X		
SS-180328-RA-05	3/28/18	1335	1345	-29	-5	10074	09579	X									X		
SS-180328-RA-06	↓	1825	1836	-27	-5	11785	9807	X									X		

Sampled by: RA

Temperature (Fahrenheit)

	Interior	Ambient
Start	70	50

Pressure (inches of Hg)

	Interior	Ambient
Start		

140-11144 Chain of Custody

3-Boxes NO Custody SEALS
RH 4/2/18
RECEIVED @ Ambient Temp
3-Boxes FED Ex 771872705416 MST 2-DAY
2-Boxes
771873885283-1 bx 2-DAY
9-CANS, 9-Flow, 7-Flow(R), 2-CC
RH 4/2/18

Special Instructions/QC Requirements & Comments:
Only analyze for PCE, TCE, 12DCE, VC

Canisters Shipped by: [signature]	Date/Time: 3/29/18 1600	Canisters Received by: Rita Hancock 4/2/18 09:15 TA Knox
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Chuck Ahrens	Sampled By: RAgmot	2 of 3 COCs
Company: GHD	Phone:		
Address: 1801 Old Highway 8 NW	Site Contact: G. Anderson		
City/State/Zip St. Paul Mn 55112	TAL Contact:		
Phone: 651-639-0913			
FAX:			
Project Name: Wausau	Analysis Turnaround Time		
Site/location: 3978	Standard (Specify) X		
PO #	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-180327-RA-01	3/27/18	1418	935	-30	-10	8827	10326	X							X				
RA-02		1422	935	-30	-5	7027	10720	X							X				
RA-03		1445	930	-30	-10	7390	11207	X							X				
RA-04		1648	1545	-30	-1	7414	10580	X							X				
RA-05		1724	1355	-30	0	7274	10258	X							X				
IA-180327-RA-06		2005	1825	-30	-6	7052	09734	X							X				

Sampled by : RA

Temperature (Fahrenheit)	Interior	Ambient
Start	70	50
Stop	70	

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Special Instructions/QC Requirements & Comments:
Only analyze for PCE, TCE, 12DCE, VC

Canisters Shipped by:	Date/Time: 3/29/18 1600	Canisters Received by: Rita Hancock 4/2/18 09:15 TA KNOX
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: GHD
Address: 1801 Old Highway 8 NW
City/State/Zip: St Paul MN 55112
Phone: 651-639-0913
FAX:

Project Name: Wausau
Site/location: 3978
PO #

Project Manager: Chuck Ahrens
Phone:
Site Contact: Grant Anderson
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: RAsmat

3 of 3 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-180328-RA-07	3/28/18	1350	1206	-30	0	7416	3708	X							X				
OA-180328-RA-01	3/28/18	1350	1207	-28	-5	8741	9937	X							X				

Sampled by : RA

Temperature (Fahrenheit)	Interior	Ambient
Start	50	70
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

11148
09787

Special Instructions/QC Requirements & Comments:
only analyze for PCE, TCE, 12DCE, VC

Canisters Shipped by:	Date/Time: 3/29/18 1600	Canisters Received by: Rita Hancock 4/2/18 09:15 TA KNOX
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

Loc: 140
11144

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓	✓		☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

#7 CAN ID SAYS 09831
COC SAY 039831
CAN 55180327-RA-02

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 14D0377 PM Instructions: _____

Sample Receiving Associate: Rita Hancock Date: 4/2/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 4/3/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-11144-a-1	10781	10840	B	1	-4.0	1415	
AFB	140-11144-a-2	09831	10840	B	1	-5.3	1416	
AFB	140-11144-a-3	11541	10840	B	1	-5.1	1417	
AFB	140-11144-a-4	11674	10840	B	1	-5.2	1418	
AFB	140-11144-a-5	09579	10840	B	1	-5.0	1419	
AFB	140-11144-a-6	09807	10840	B	1	-5.4	1420	
AFB	140-11144-a-7	10326	10994	IND	6	0	1425	
AFB	140-11144-a-8	10720	10994	IND	6	-4.7	1426	
AFB	140-11144-a-9	11207	10978	IND	6	-9.4	1427	0.8
AFB	140-11144-a-10	10580	10978	IND	6	0	1428	
AFB	140-11144-a-11	10258	10998	IND	6	0	1429	
AFB	140-11144-a-12	09734	10994	IND	6	-4.2	1430	
AFB	140-11144-a-13	3708	10956	IND	6	-2.2	1431	
AFB	140-11144-a-14	09937	10985	IND	6	-4.3	1432	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09807
Lab Sample ID: 140-10840-1
Matrix: Air
Lab File ID: J10840B01.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 20:57
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09807
Lab Sample ID: 140-10840-1
Matrix: Air
Lab File ID: J10840B01.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 20:57
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09807
Lab Sample ID: 140-10840-1
Matrix: Air
Lab File ID: J10840B01.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 20:57
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B01.D
Lims ID: 140-10840-A-1
Client ID: 09807
Sample Type: Client
Inject. Date: 06-Mar-2018 20:57:30 ALS Bottle#: 6 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-016
Misc. Info.: 09807
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:00:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.684	-0.006	92	204636	4.00	
* 2 1,4-Difluorobenzene	114	11.776	11.788	-0.012	95	1156898	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.381	16.387	-0.006	88	1034025	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	95	744215	3.98	
56 Isooctane	57	11.991	11.980	-0.001	95	7350	0.0223	

Reagents:

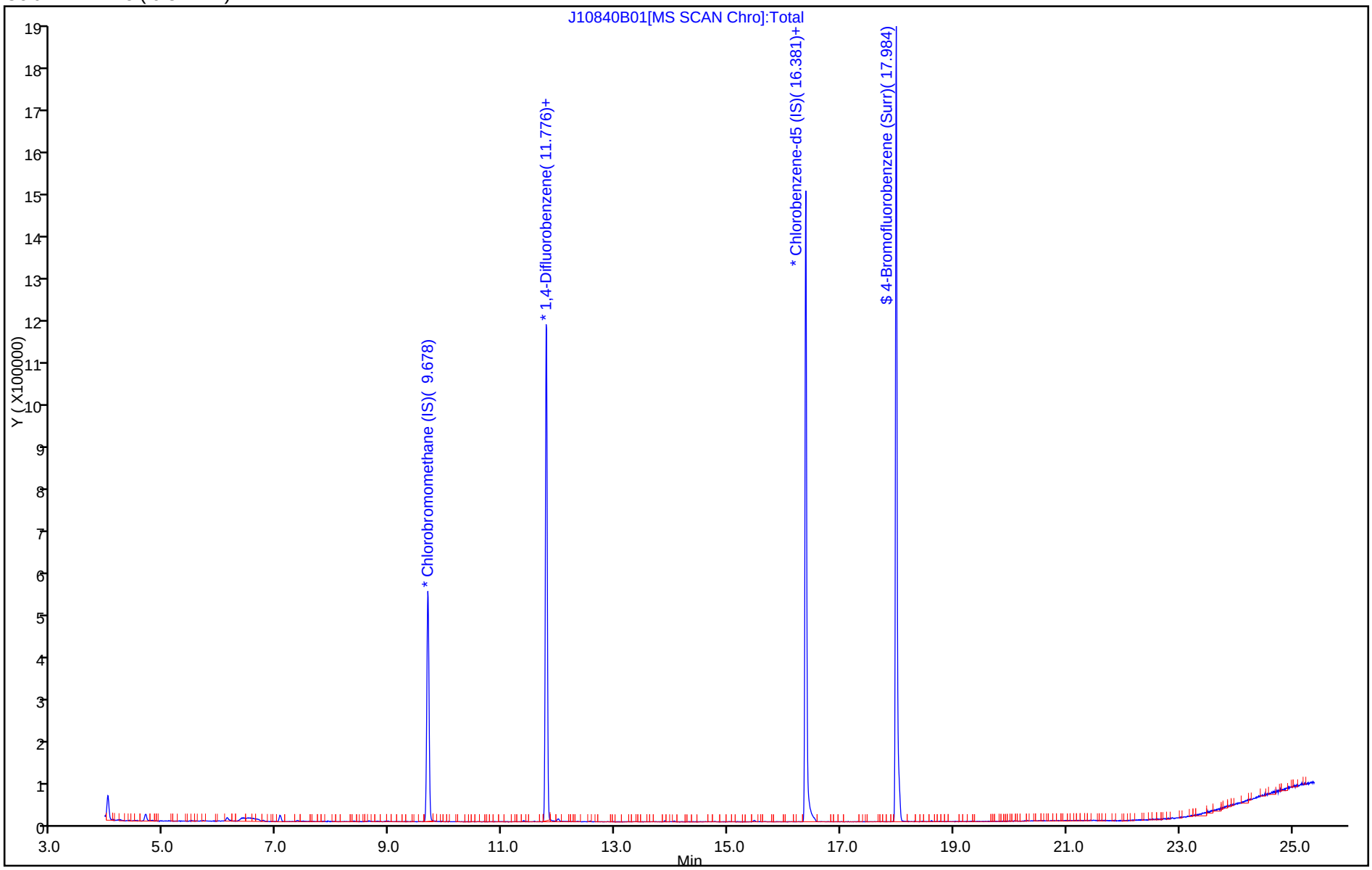
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:31 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B01.D				
Injection Date:	06-Mar-2018 20:57:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-1	Lab Sample ID:	140-10840-1	Worklist Smp#:	16
Client ID:	09807				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



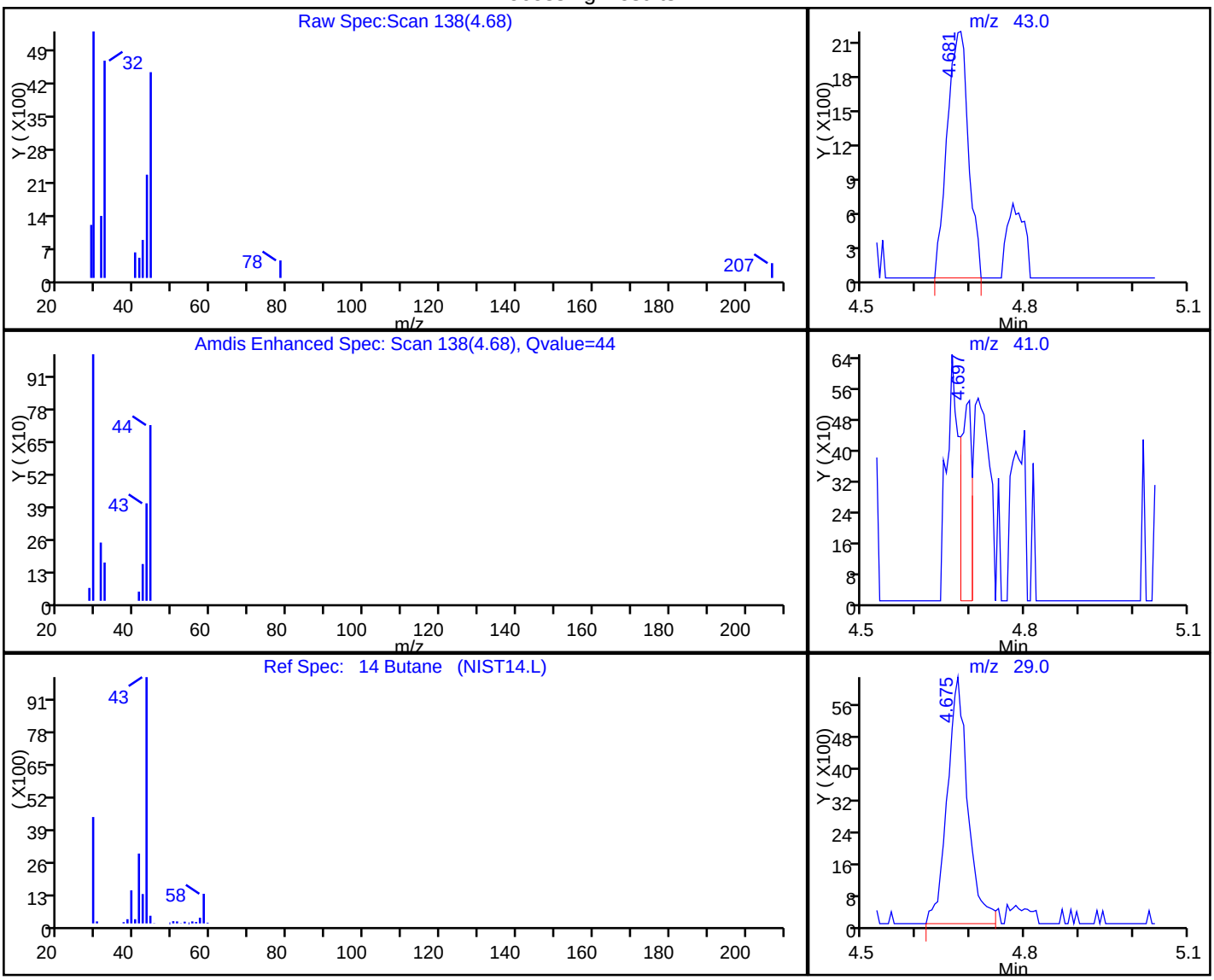
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B01.D				
Injection Date:	06-Mar-2018 20:57:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-1	Lab Sample ID:	140-10840-1		
Client ID:	09807				
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	5984	0.058359
4.70	41.00	719	
4.68	29.00	16504	

Reviewer: tajh, 07-Mar-2018 10:00:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1
SDG No.:
Client Sample ID: 10781 | Lab Sample ID: 140-10840-2
Matrix: Air | Lab File ID: J10840B02.D
Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL) | Date Analyzed: 03/06/2018 21:42
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 10781
Lab Sample ID: 140-10840-2
Matrix: Air
Lab File ID: J10840B02.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 21:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 10781
Lab Sample ID: 140-10840-2
Matrix: Air
Lab File ID: J10840B02.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 21:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B02.D				
Lims ID:	140-10840-A-2				
Client ID:	10781				
Sample Type:	Client				
Inject. Date:	06-Mar-2018 21:42:30	ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007559-017				
Misc. Info.:	10781				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Mar-2018 10:09:08	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.684	9.684	0.000	92	204925	4.00	
*	2 1,4-Difluorobenzene	114	11.782	11.788	-0.006	95	1158379	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.381	16.387	-0.006	88	1030482	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	95	744629	4.00	

Reagents:

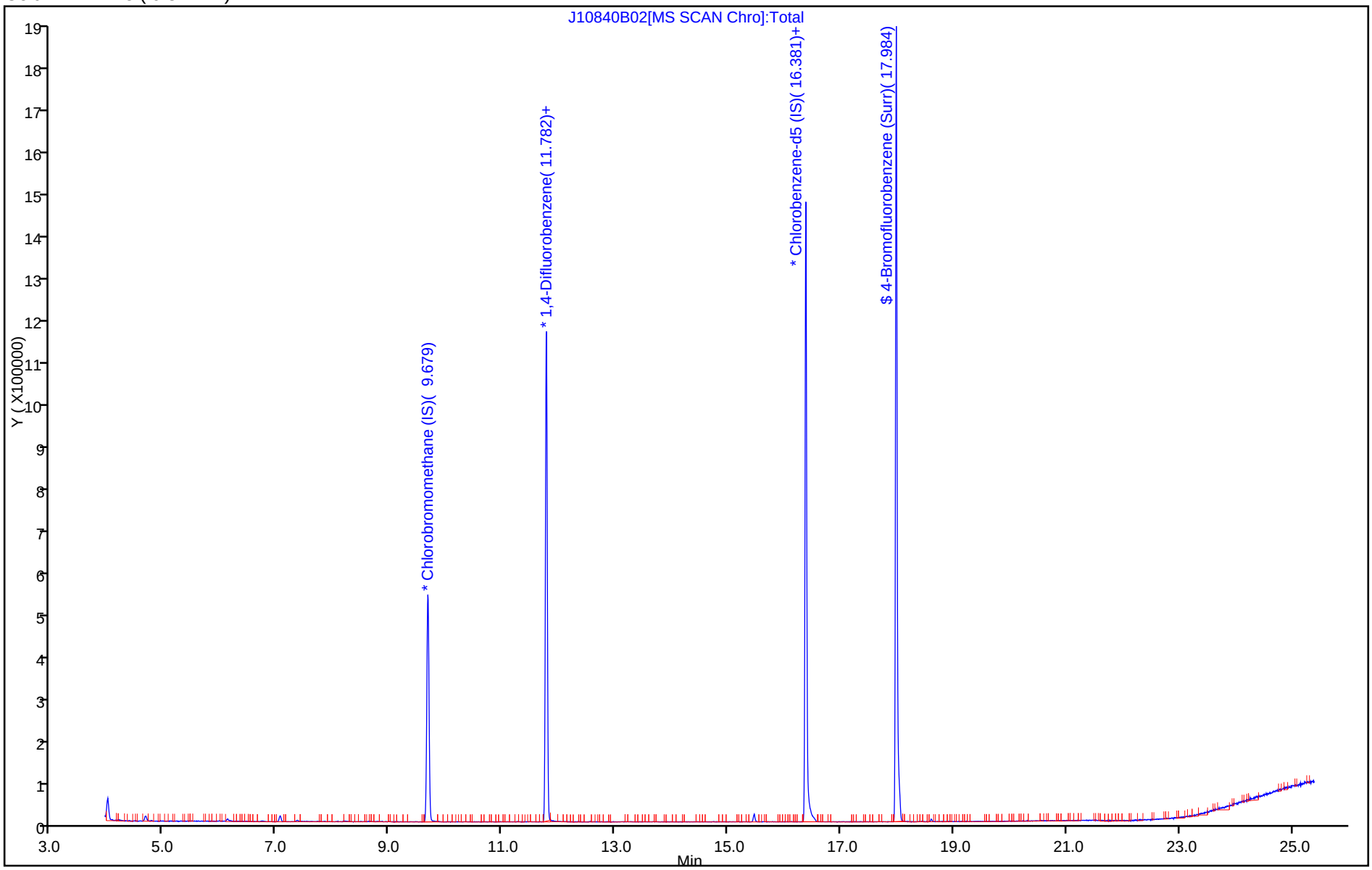
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:32 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B02.D				
Injection Date:	06-Mar-2018 21:42:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-2	Lab Sample ID:	140-10840-2	Worklist Smp#:	17
Client ID:	10781				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11617 | Lab Sample ID: 140-10840-4
Matrix: Air | Lab File ID: J10840B04.D
Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL) | Date Analyzed: 03/06/2018 23:13
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11617
Lab Sample ID: 140-10840-4
Matrix: Air
Lab File ID: J10840B04.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 23:13
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11617
Lab Sample ID: 140-10840-4
Matrix: Air
Lab File ID: J10840B04.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 23:13
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B04.D
Lims ID: 140-10840-A-4
Client ID: 11617
Sample Type: Client
Inject. Date: 06-Mar-2018 23:13:30 ALS Bottle#: 9 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-019
Misc. Info.: 11617
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:01:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.686	9.684	0.002	92	197399	4.00	
* 2 1,4-Difluorobenzene	114	11.779	11.788	-0.010	95	1073198	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.378	16.387	-0.009	88	968399	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.981	17.978	-0.004	95	684575	3.91	

Reagents:

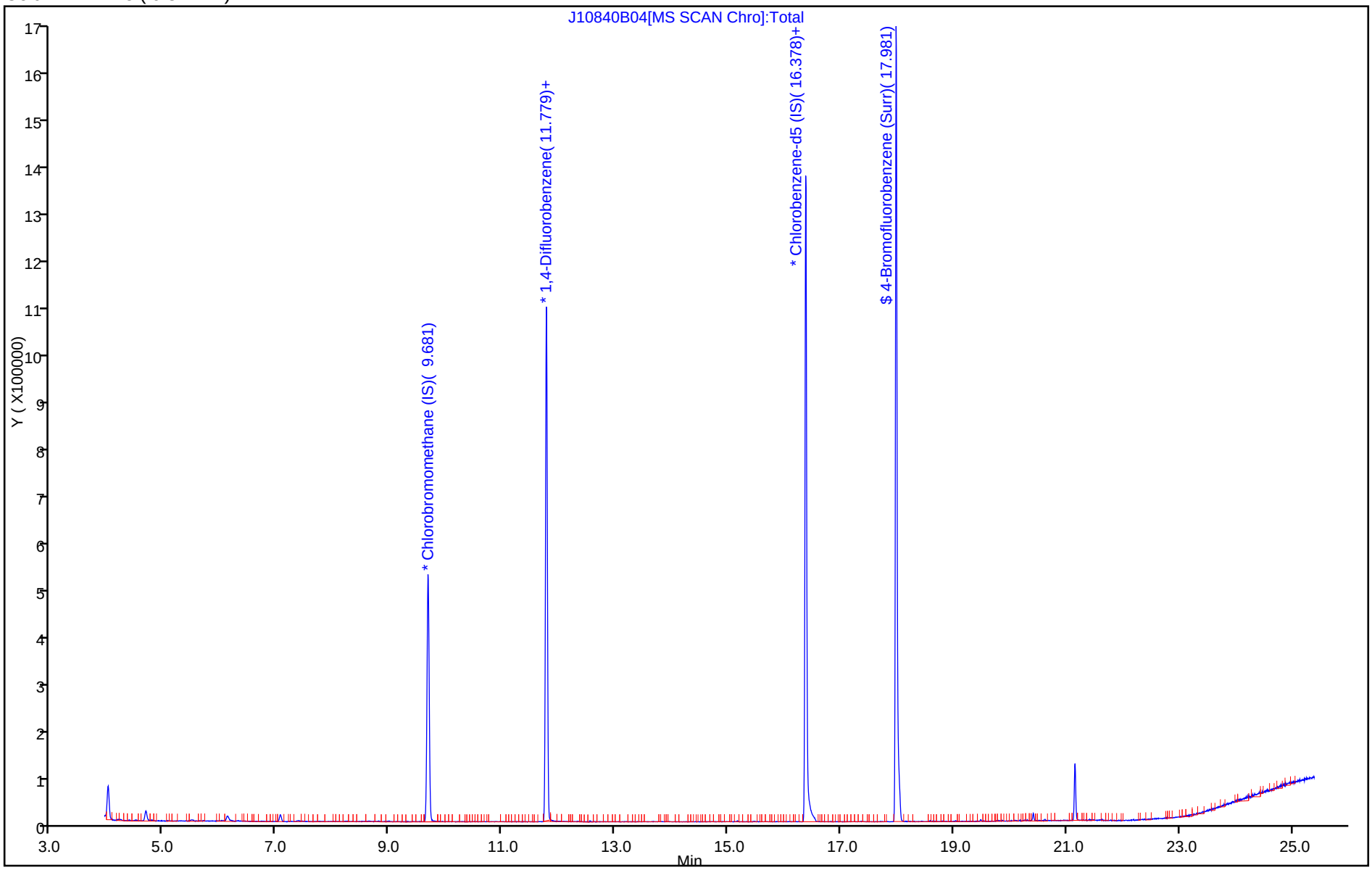
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:36 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B04.D				
Injection Date:	06-Mar-2018 23:13:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-4	Lab Sample ID:	140-10840-4	Worklist Smp#:	19
Client ID:	11617				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



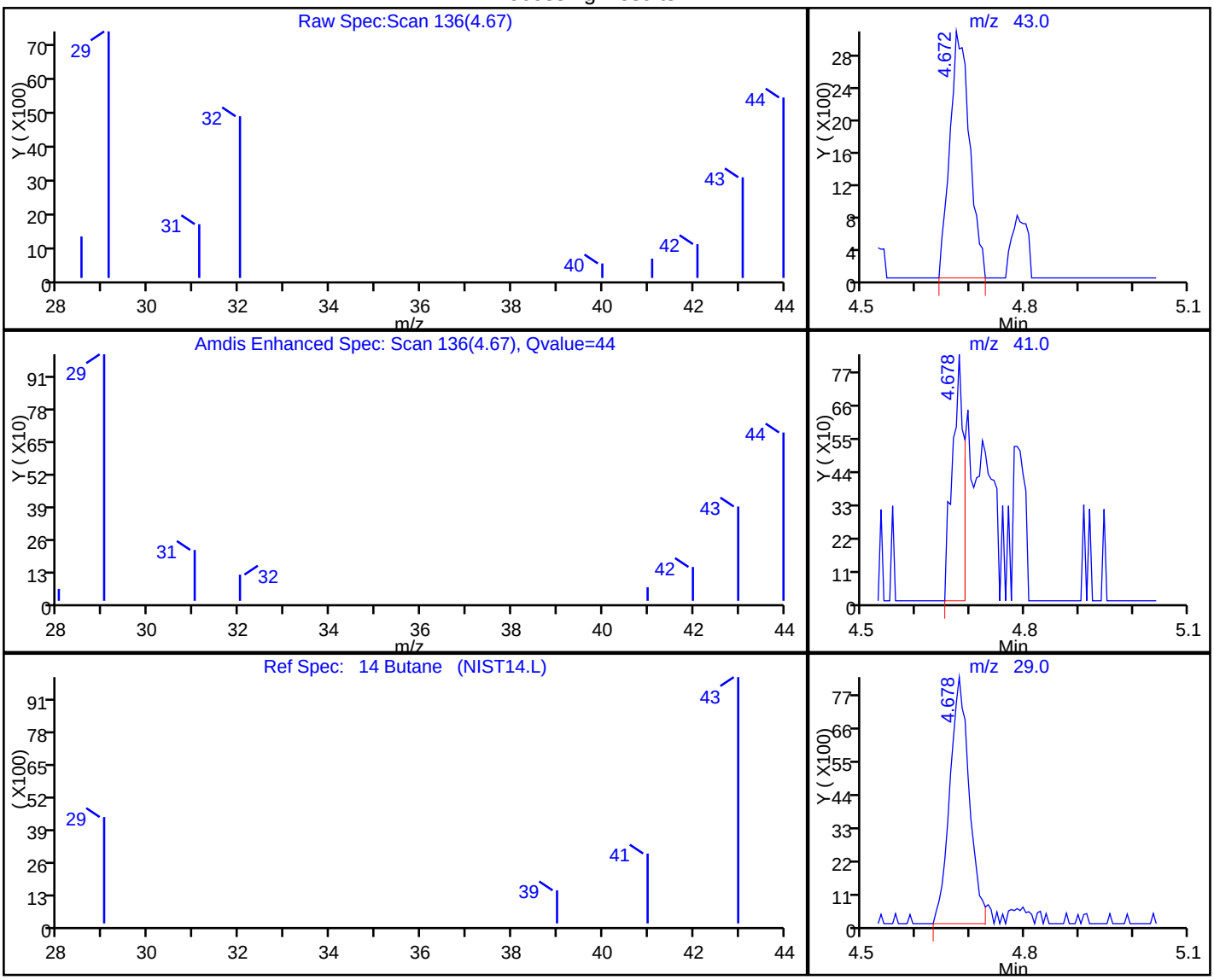
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B04.D				
Injection Date:	06-Mar-2018 23:13:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-4	Lab Sample ID:	140-10840-4		
Client ID:	11617				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	7655	0.077392
4.68	41.00	1195	
4.68	29.00	20648	

Reviewer: tajh, 07-Mar-2018 10:01:56

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1
SDG No.:
Client Sample ID: 10346 | Lab Sample ID: 140-10840-5
Matrix: Air | Lab File ID: J10840B05.D
Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL) | Date Analyzed: 03/06/2018 23:58
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 10346
Lab Sample ID: 140-10840-5
Matrix: Air
Lab File ID: J10840B05.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 23:58
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 10346
Lab Sample ID: 140-10840-5
Matrix: Air
Lab File ID: J10840B05.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/06/2018 23:58
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B05.D
Lims ID: 140-10840-A-5
Client ID: 10346
Sample Type: Client
Inject. Date: 06-Mar-2018 23:58:30 ALS Bottle#: 10 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-020
Misc. Info.: 10346
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:02:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.684	-0.006	92	203513	4.00	
* 2 1,4-Difluorobenzene	114	11.781	11.788	-0.007	95	1125888	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.380	16.387	-0.007	88	1005813	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	95	706337	3.88	
33 Carbon disulfide	76	7.241	7.237	-0.001	98	13792	0.0706	

Reagents:

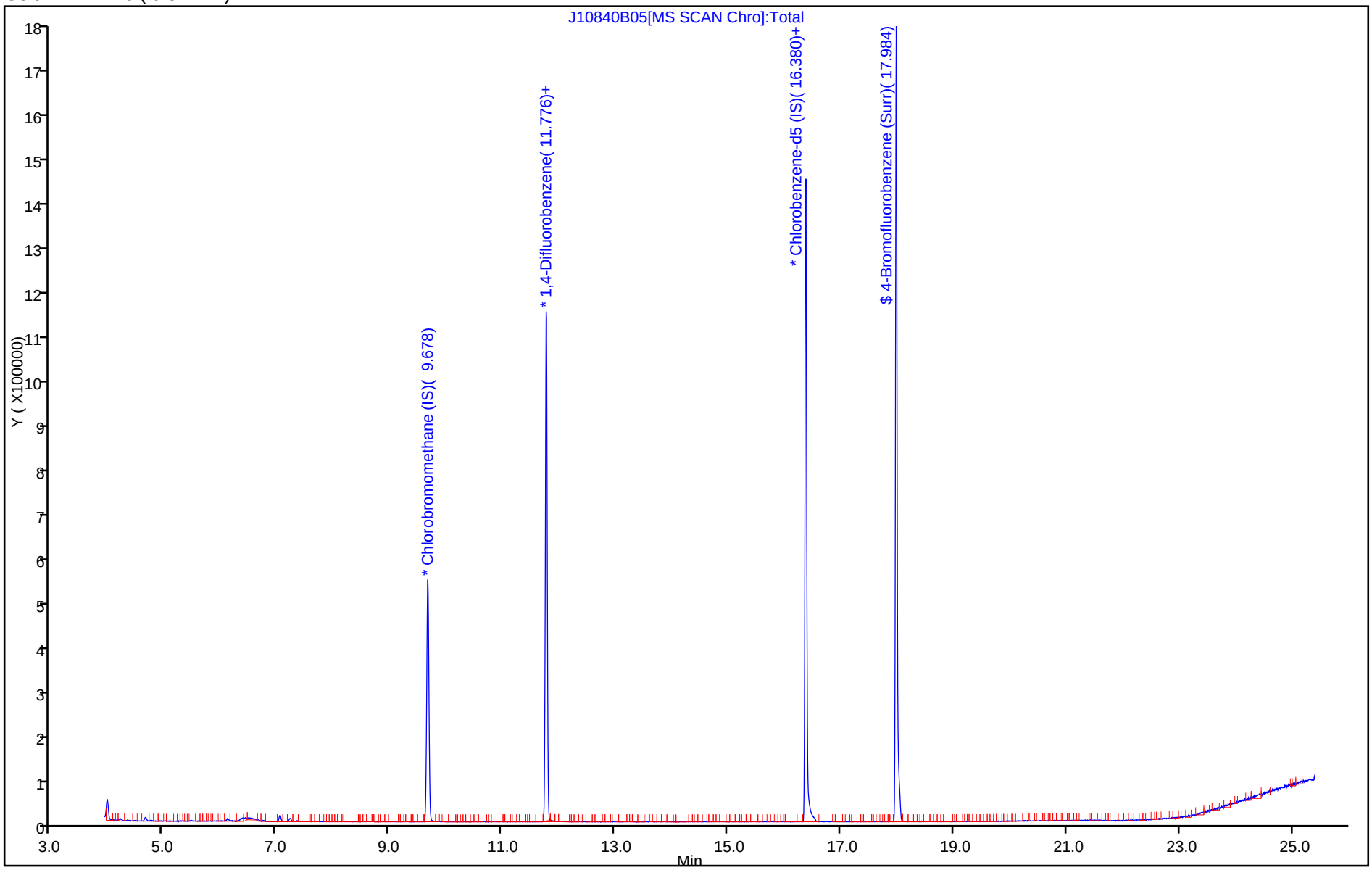
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:38 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B05.D				
Injection Date:	06-Mar-2018 23:58:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-5	Lab Sample ID:	140-10840-5	Worklist Smp#:	20
Client ID:	10346				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



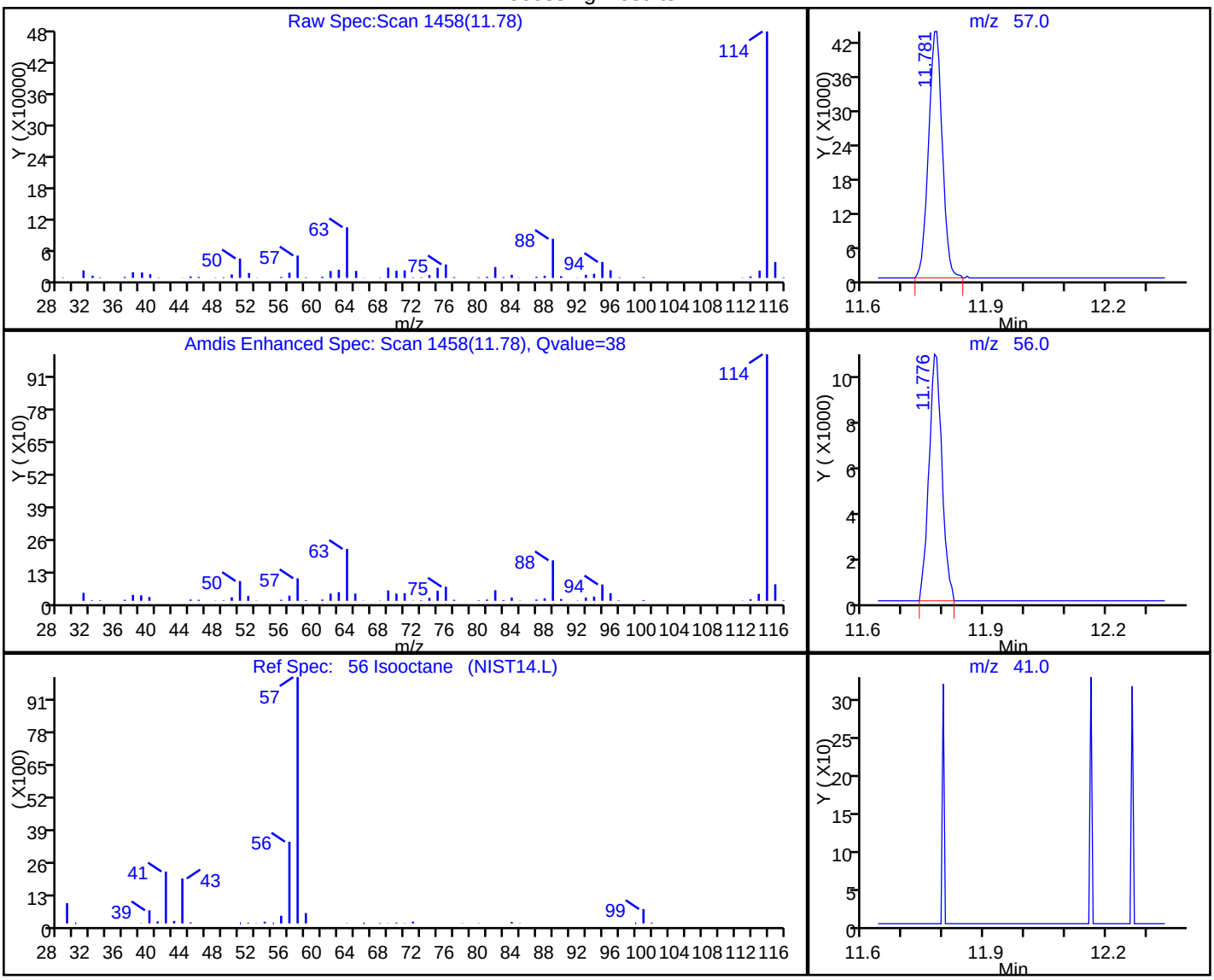
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B05.D				
Injection Date:	06-Mar-2018 23:58:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-5	Lab Sample ID:	140-10840-5		
Client ID:	10346				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Isooctane, CAS: 540-84-1

Processing Results



RT	Mass	Response	Amount
11.78	57.00	102381	0.319516
11.78	56.00	22716	
11.99	41.00	0	

Reviewer: tajh, 07-Mar-2018 10:02:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 09811 | Lab Sample ID: 140-10840-7

Matrix: Air | Lab File ID: J10840B07.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 01:31

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09811
Lab Sample ID: 140-10840-7
Matrix: Air
Lab File ID: J10840B07.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 01:31
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09811
Lab Sample ID: 140-10840-7
Matrix: Air
Lab File ID: J10840B07.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 01:31
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B07.D
Lims ID: 140-10840-A-7
Client ID: 09811
Sample Type: Client
Inject. Date: 07-Mar-2018 01:31:30 ALS Bottle#: 12 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-022
Misc. Info.: 09811
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:03:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.684	-0.011	92	199046	4.00	
* 2 1,4-Difluorobenzene	114	11.776	11.788	-0.012	95	1124519	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.381	16.387	-0.006	88	989271	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.978	-0.007	95	717486	4.01	

Reagents:

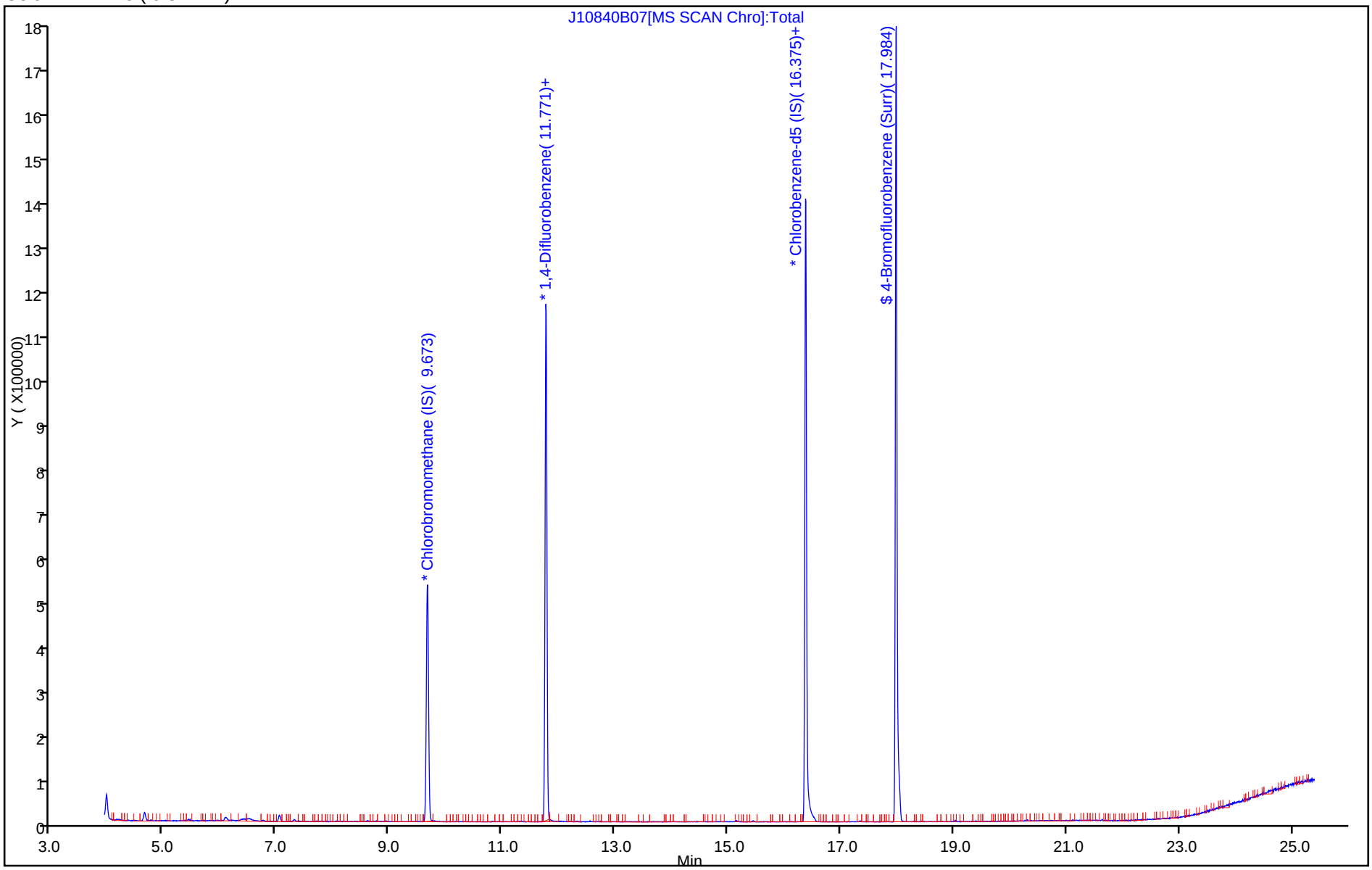
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:41 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B07.D				
Injection Date:	07-Mar-2018 01:31:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-7	Lab Sample ID:	140-10840-7	Worklist Smp#:	22
Client ID:	09811				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



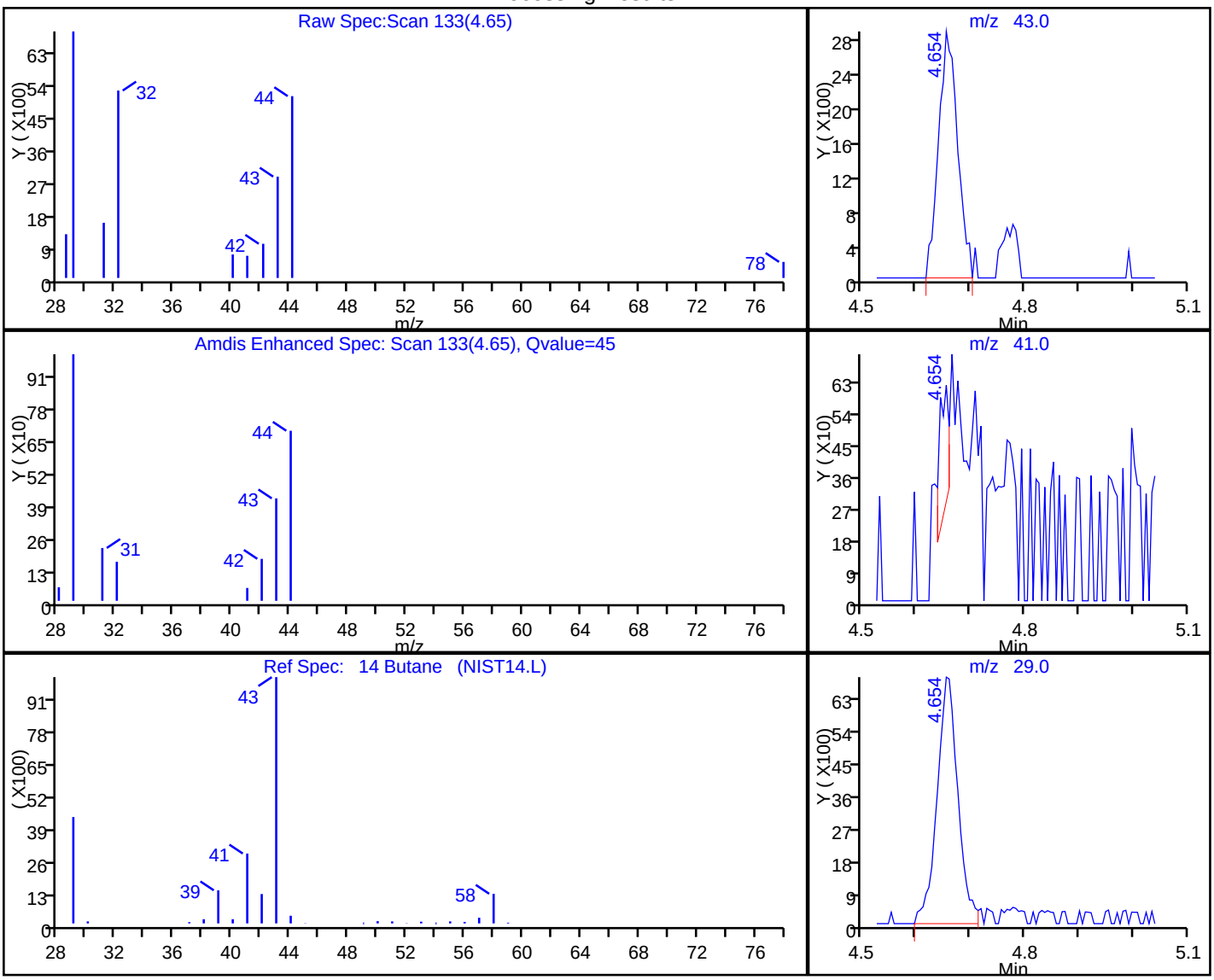
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B07.D				
Injection Date:	07-Mar-2018 01:31:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-7	Lab Sample ID:	140-10840-7		
Client ID:	09811				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.65	43.00	6914	0.069322
4.65	41.00	428	
4.65	29.00	18512	

Reviewer: tajh, 07-Mar-2018 10:03:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 09831 | Lab Sample ID: 140-10840-9

Matrix: Air | Lab File ID: J10840B09.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 03:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09831
Lab Sample ID: 140-10840-9
Matrix: Air
Lab File ID: J10840B09.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 03:03
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09831
Lab Sample ID: 140-10840-9
Matrix: Air
Lab File ID: J10840B09.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 03:03
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B09.D
Lims ID: 140-10840-A-9
Client ID: 09831
Sample Type: Client
Inject. Date: 07-Mar-2018 03:03:30 ALS Bottle#: 14 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-024
Misc. Info.: 09831
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:04:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.684	9.684	0.000	92	197546	4.00	
* 2 1,4-Difluorobenzene	114	11.782	11.788	-0.006	95	1114833	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.381	16.387	-0.006	88	981336	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	95	720177	4.06	

Reagents:

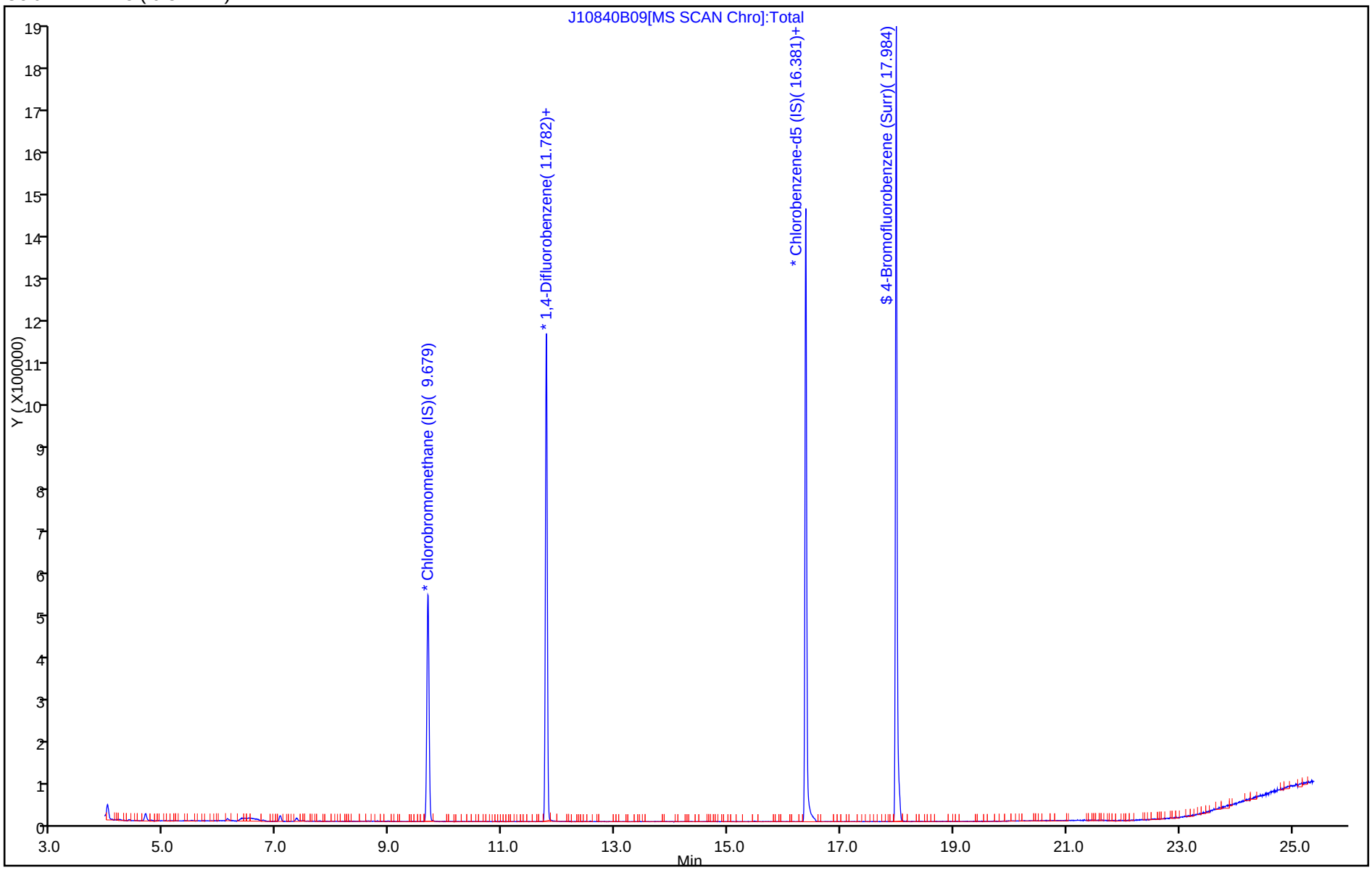
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:43 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B09.D				
Injection Date:	07-Mar-2018 03:03:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-9	Lab Sample ID:	140-10840-9	Worklist Smp#:	24
Client ID:	09831				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



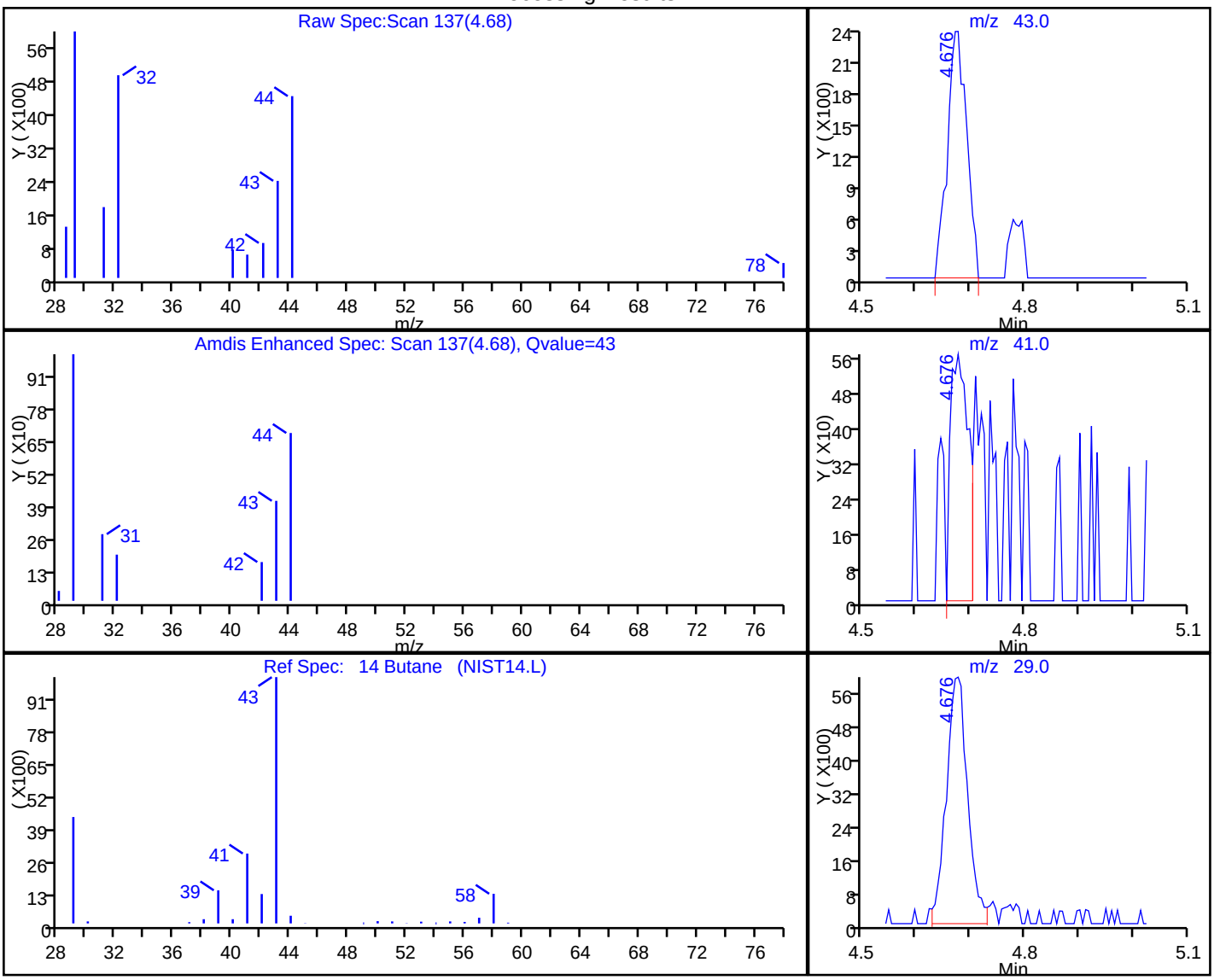
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B09.D				
Injection Date:	07-Mar-2018 03:03:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-9	Lab Sample ID:	140-10840-9		
Client ID:	09831				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	5836	0.058958
4.68	41.00	1316	
4.68	29.00	16436	

Reviewer: tajh, 07-Mar-2018 10:04:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 09787 | Lab Sample ID: 140-10840-10

Matrix: Air | Lab File ID: J10840B10.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 03:47

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09787
Lab Sample ID: 140-10840-10
Matrix: Air
Lab File ID: J10840B10.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 03:47
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09787
Lab Sample ID: 140-10840-10
Matrix: Air
Lab File ID: J10840B10.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 03:47
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B10.D
Lims ID: 140-10840-A-10
Client ID: 09787
Sample Type: Client
Inject. Date: 07-Mar-2018 03:47:30 ALS Bottle#: 15 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-025
Misc. Info.: 09787
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:04:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.686	9.684	0.002	92	199243	4.00	
* 2 1,4-Difluorobenzene	114	11.784	11.788	-0.004	95	1119118	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.384	16.387	-0.003	88	974973	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.981	17.978	-0.004	95	700131	3.97	
33 Carbon disulfide	76	7.244	7.237	0.002	95	3509	0.0183	

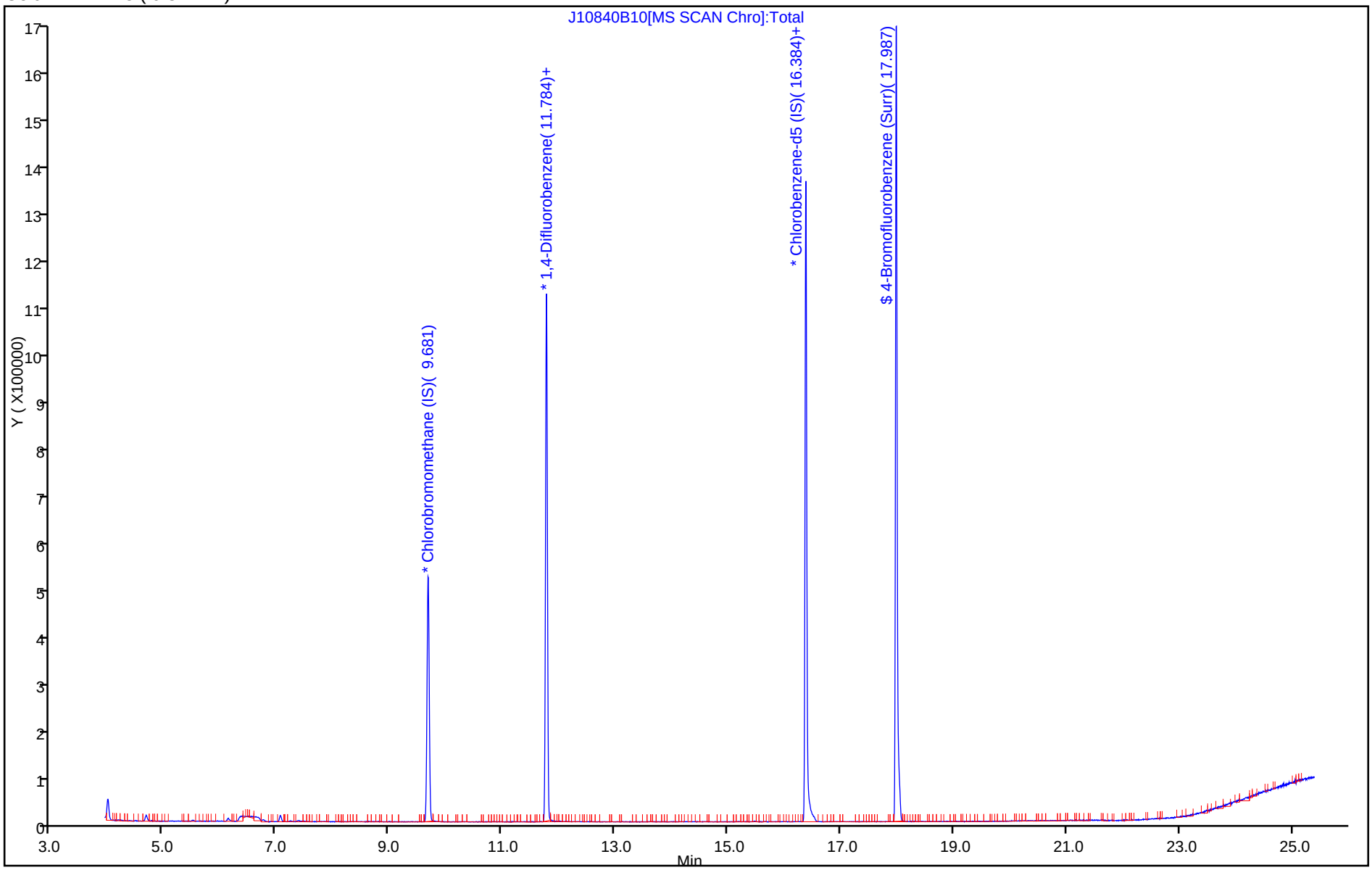
Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:44 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B10.D				
Injection Date:	07-Mar-2018 03:47:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-10	Lab Sample ID:	140-10840-10	Worklist Smp#:	25
Client ID:	09787				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



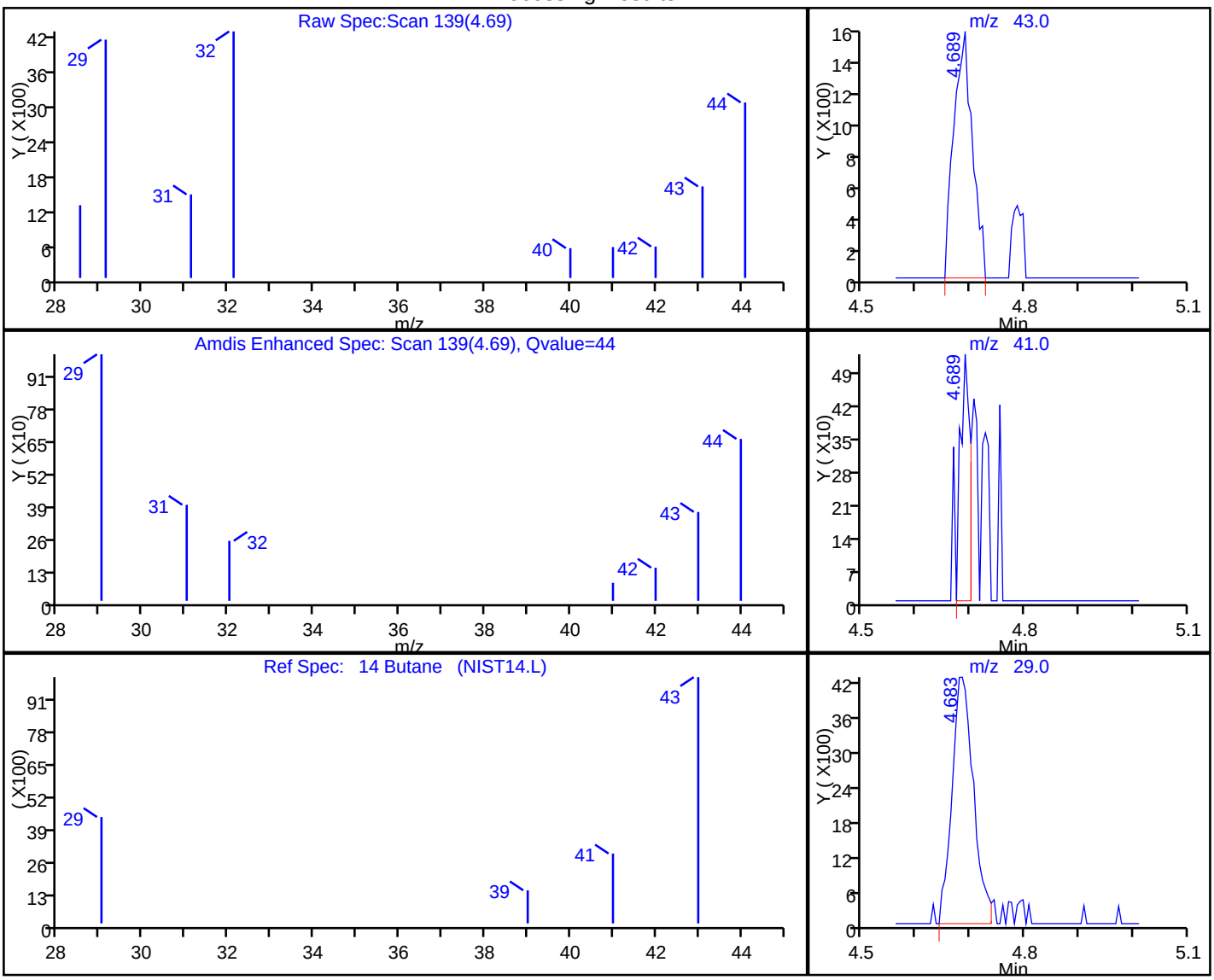
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B10.D				
Injection Date:	07-Mar-2018 03:47:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-10	Lab Sample ID:	140-10840-10		
Client ID:	09787				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.69	43.00	3738	0.037441
4.69	41.00	642	
4.68	29.00	11892	

Reviewer: tajh, 07-Mar-2018 10:04:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 09832 | Lab Sample ID: 140-10840-11

Matrix: Air | Lab File ID: J10840B11.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 04:32

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09832
Lab Sample ID: 140-10840-11
Matrix: Air
Lab File ID: J10840B11.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 04:32
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09832
Lab Sample ID: 140-10840-11
Matrix: Air
Lab File ID: J10840B11.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 04:32
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B11.D
Lims ID: 140-10840-A-11
Client ID: 09832
Sample Type: Client
Inject. Date: 07-Mar-2018 04:32:30 ALS Bottle#: 16 Worklist Smp#: 26
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-026
Misc. Info.: 09832
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:05:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.679	9.684	-0.005	92	198304	4.00	
* 2 1,4-Difluorobenzene	114	11.777	11.788	-0.011	95	1128450	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.382	16.387	-0.005	88	978093	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.980	17.978	-0.005	95	724930	4.10	

Reagents:

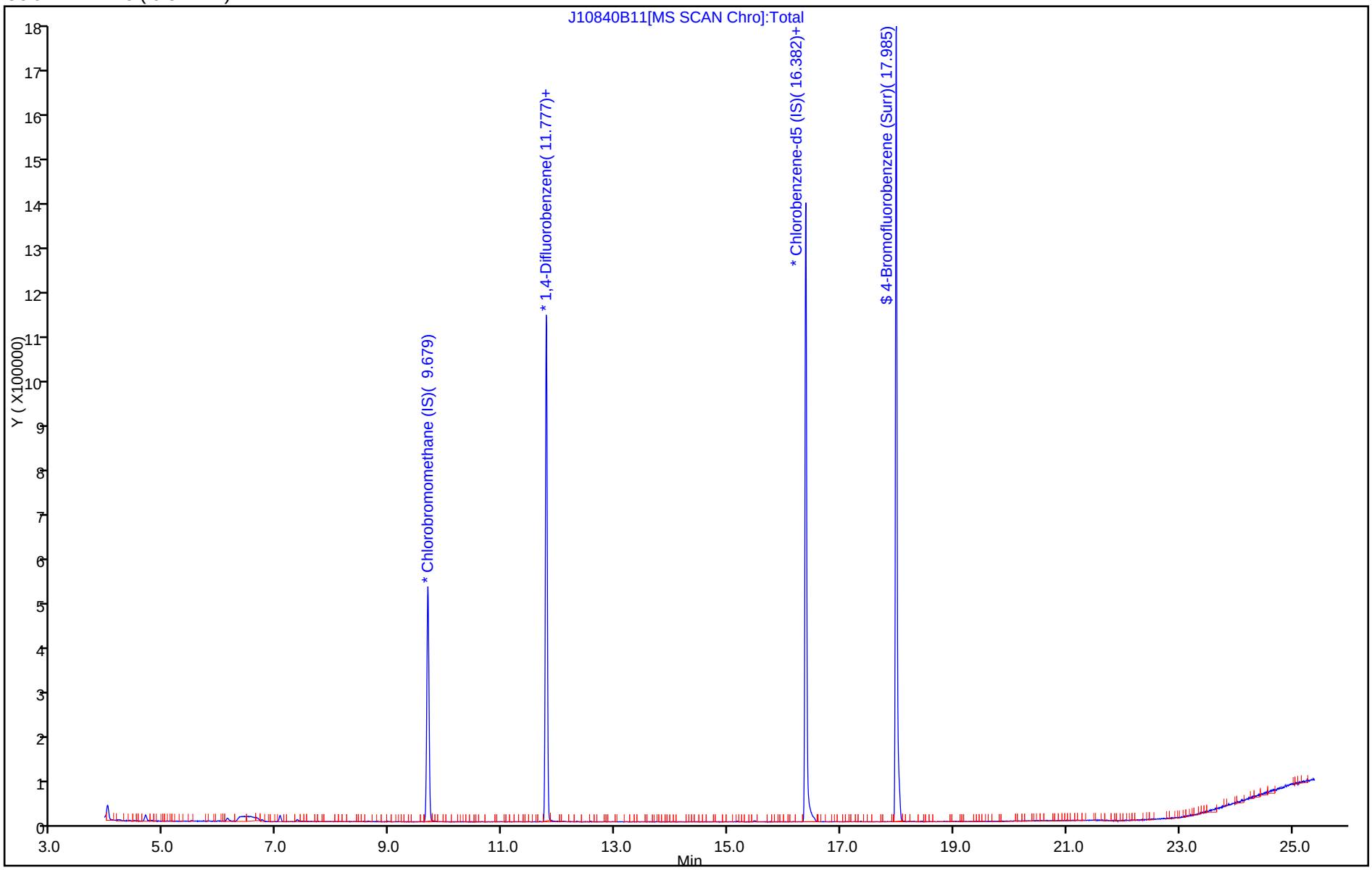
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:46 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B11.D				
Injection Date:	07-Mar-2018 04:32:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-11	Lab Sample ID:	140-10840-11	Worklist Smp#:	26
Client ID:	09832				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



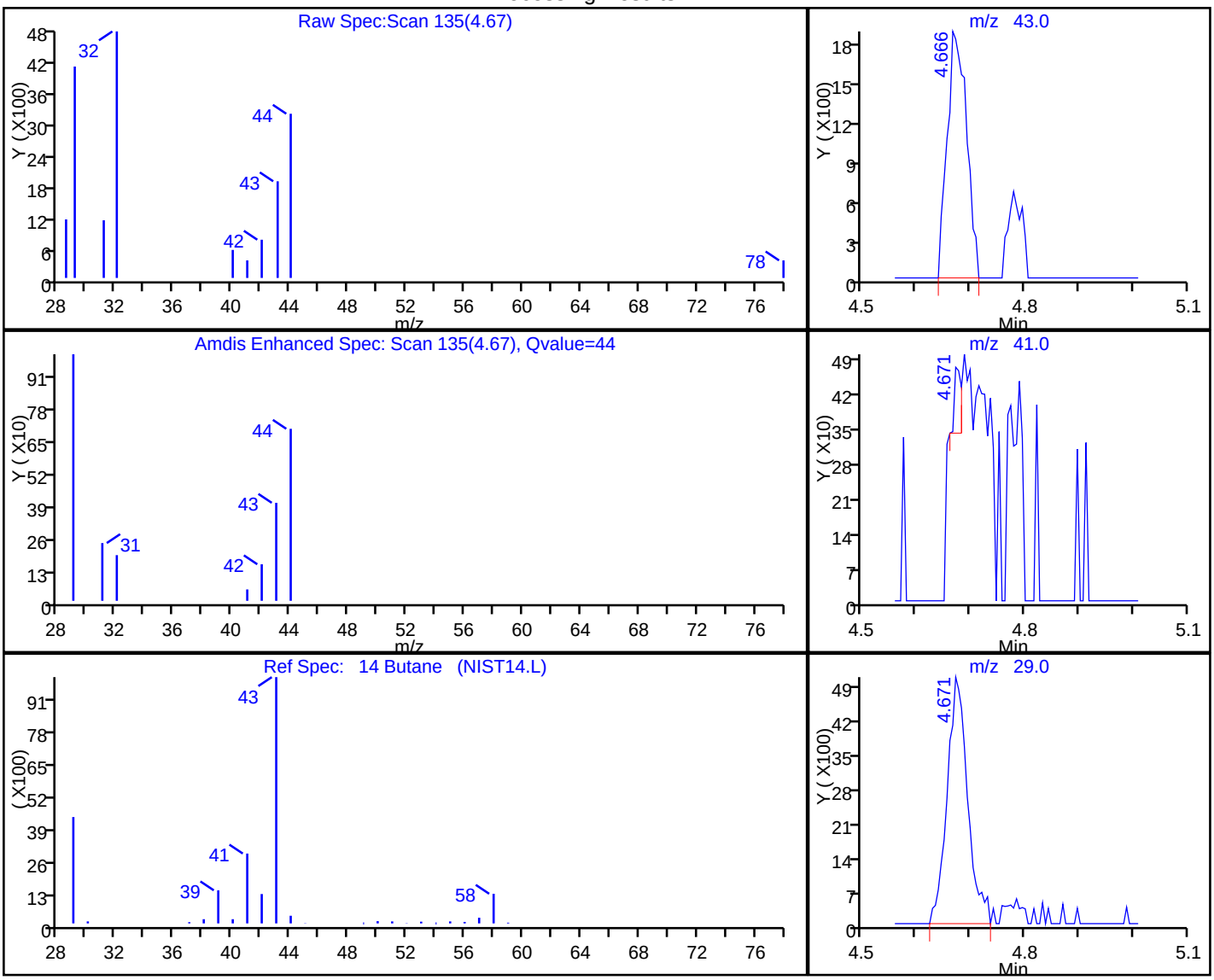
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B11.D				
Injection Date:	07-Mar-2018 04:32:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-11	Lab Sample ID:	140-10840-11		
Client ID:	09832				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	4668	0.046978
4.67	41.00	114	
4.67	29.00	13425	

Reviewer: tajh, 07-Mar-2018 10:05:18

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 11541 | Lab Sample ID: 140-10840-14

Matrix: Air | Lab File ID: J10840B14.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 06:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11541
Lab Sample ID: 140-10840-14
Matrix: Air
Lab File ID: J10840B14.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 06:50
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11541
Lab Sample ID: 140-10840-14
Matrix: Air
Lab File ID: J10840B14.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 06:50
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B14.D
Lims ID: 140-10840-A-14
Client ID: 11541
Sample Type: Client
Inject. Date: 07-Mar-2018 06:50:30 ALS Bottle#: 3 Worklist Smp#: 29
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-029
Misc. Info.: 11541
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:08:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.684	-0.006	91	199572	4.00	
* 2 1,4-Difluorobenzene	114	11.782	11.788	-0.006	95	1141064	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.381	16.387	-0.006	88	1015309	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	96	722317	3.94	

Reagents:

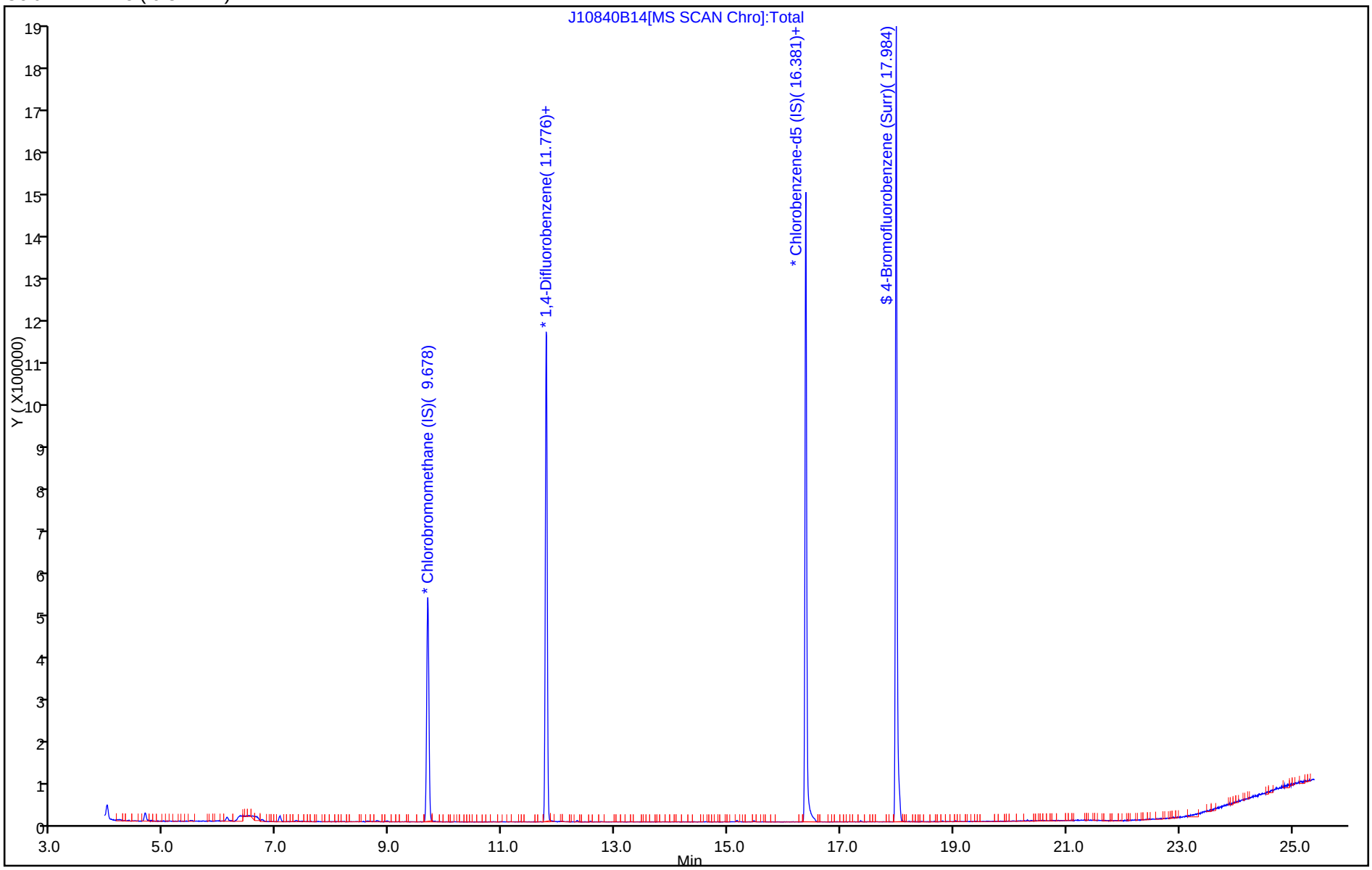
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B14.D				
Injection Date:	07-Mar-2018 06:50:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-14	Lab Sample ID:	140-10840-14	Worklist Smp#:	29
Client ID:	11541				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



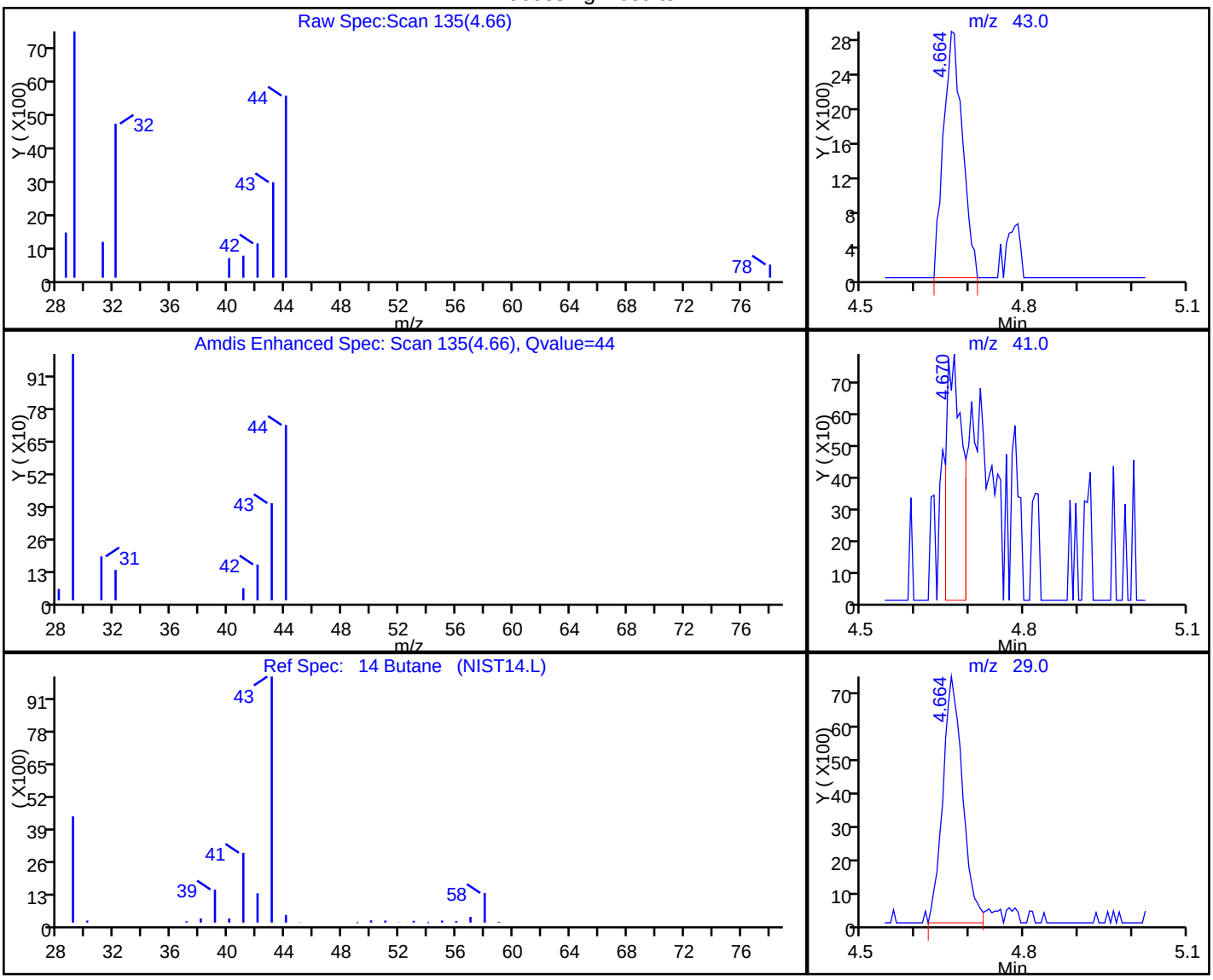
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B14.D				
Injection Date:	07-Mar-2018 06:50:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-14	Lab Sample ID:	140-10840-14		
Client ID:	11541				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	7002	0.070019
4.67	41.00	1533	
4.66	29.00	18934	

Reviewer: tajh, 07-Mar-2018 10:08:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 09579 | Lab Sample ID: 140-10840-15

Matrix: Air | Lab File ID: J10840B15.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 07:36

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09579
Lab Sample ID: 140-10840-15
Matrix: Air
Lab File ID: J10840B15.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 07:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 09579
Lab Sample ID: 140-10840-15
Matrix: Air
Lab File ID: J10840B15.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 07:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B15.D				
Lims ID:	140-10840-A-15				
Client ID:	09579				
Sample Type:	Client				
Inject. Date:	07-Mar-2018 07:36:30	ALS Bottle#:	4	Worklist Smp#:	30
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007559-030				
Misc. Info.:	09579				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Mar-2018 10:09:08	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 07-Mar-2018 10:08:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.684	-0.011	92	203649	4.00	
* 2 1,4-Difluorobenzene	114	11.781	11.788	-0.007	95	1146982	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.381	16.387	-0.006	88	1017235	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	96	739173	4.02	

Reagents:

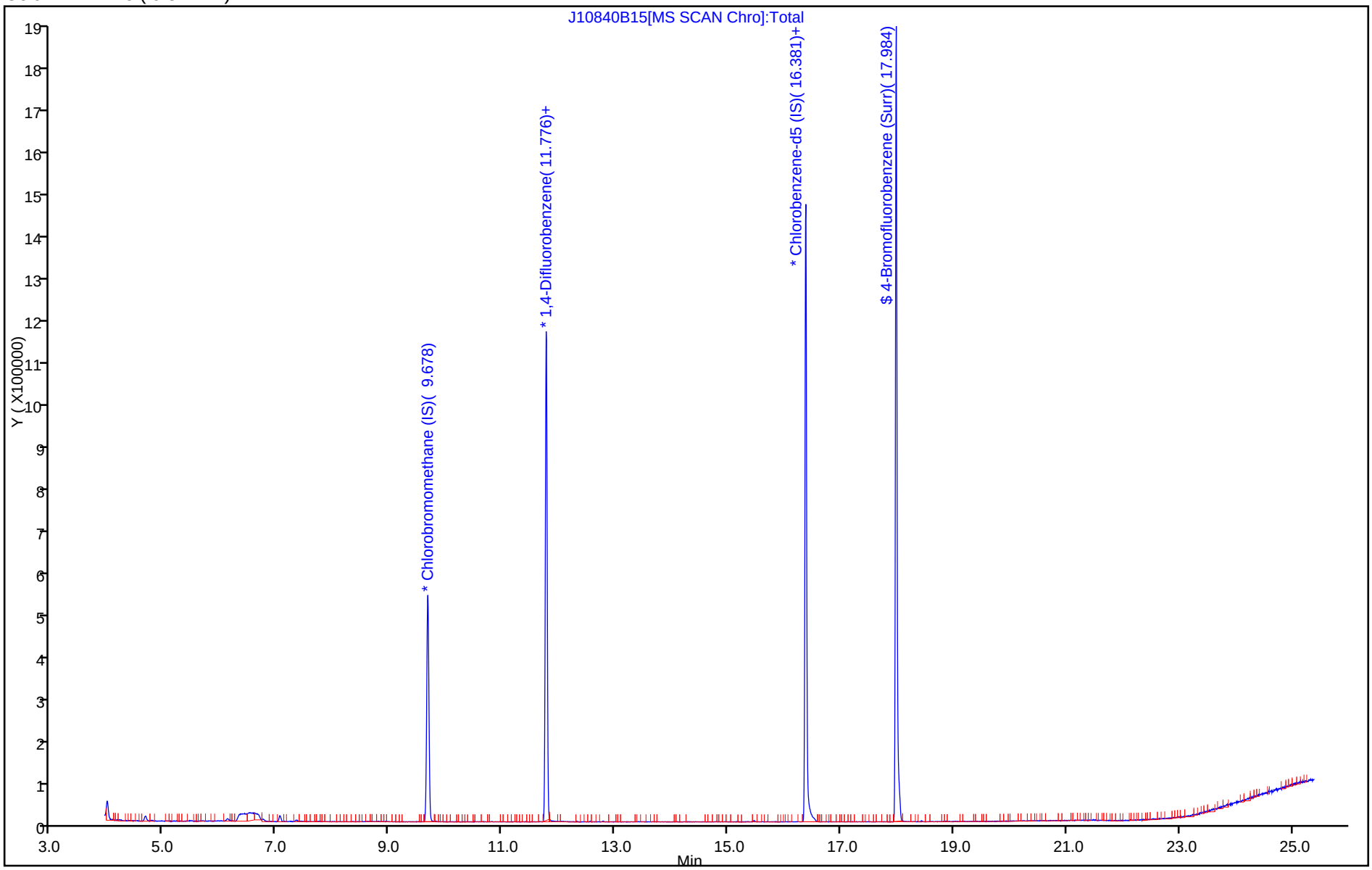
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:51 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B15.D				
Injection Date:	07-Mar-2018 07:36:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-15	Lab Sample ID:	140-10840-15	Worklist Smp#:	30
Client ID:	09579				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



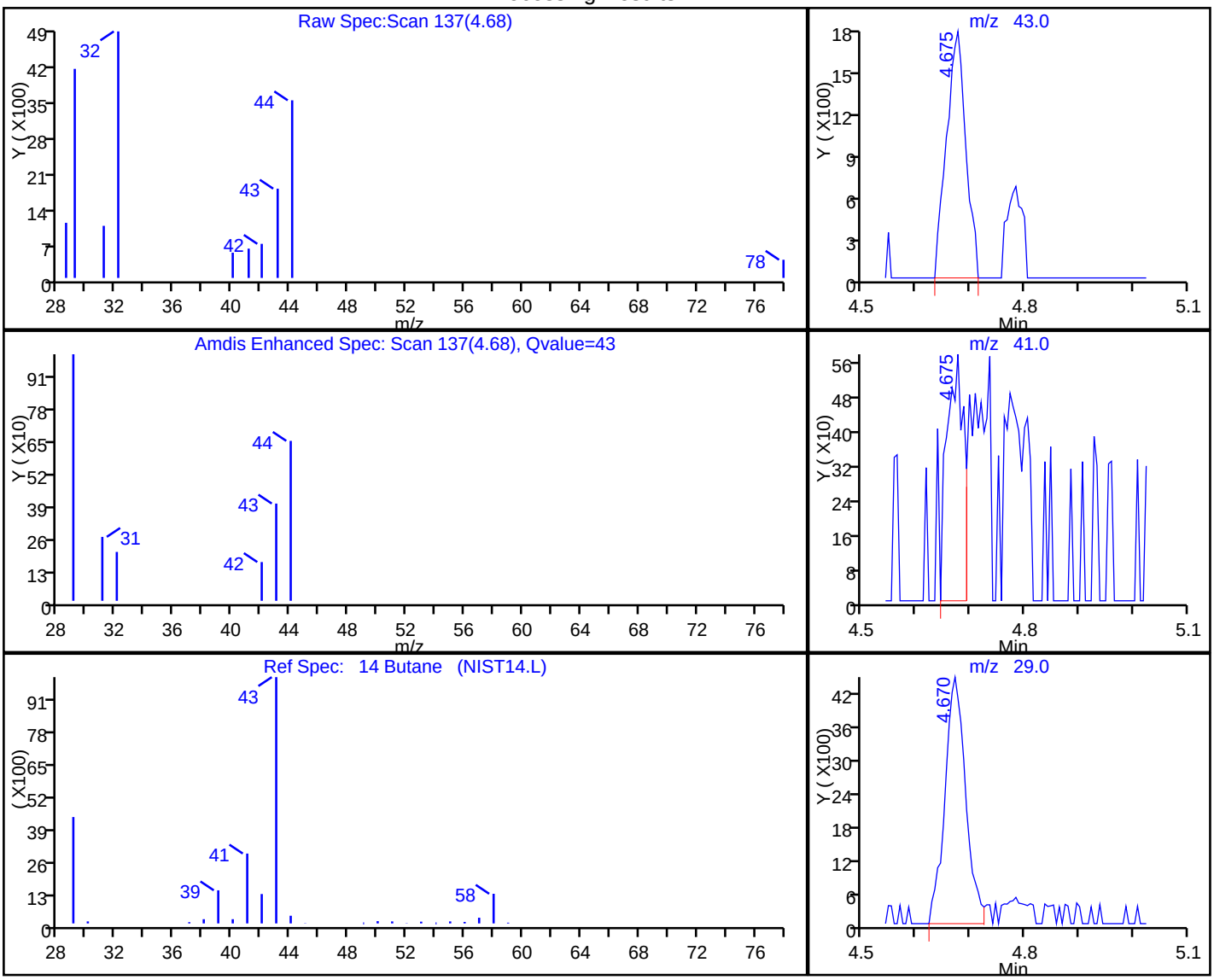
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B15.D				
Injection Date:	07-Mar-2018 07:36:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-15	Lab Sample ID:	140-10840-15		
Client ID:	09579				
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	30
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	4345	0.042580
4.68	41.00	1241	
4.67	29.00	12018	

Reviewer: tajh, 07-Mar-2018 10:08:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville | Job No.: 140-10840-1

SDG No.:

Client Sample ID: 11674 | Lab Sample ID: 140-10840-16

Matrix: Air | Lab File ID: J10840B16.D

Analysis Method: TO-15 | Date Collected: 03/01/2018 13:30

Sample wt/vol: 200(mL) | Date Analyzed: 03/07/2018 08:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 18584 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11674
Lab Sample ID: 140-10840-16
Matrix: Air
Lab File ID: J10840B16.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 08:22
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10840-1
SDG No.:
Client Sample ID: 11674
Lab Sample ID: 140-10840-16
Matrix: Air
Lab File ID: J10840B16.D
Analysis Method: TO-15
Date Collected: 03/01/2018 13:30
Sample wt/vol: 200(mL)
Date Analyzed: 03/07/2018 08:22
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18584
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B16.D
Lims ID: 140-10840-A-16
Client ID: 11674
Sample Type: Client
Inject. Date: 07-Mar-2018 08:22:30 ALS Bottle#: 5 Worklist Smp#: 31
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007559-031
Misc. Info.: 11674
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Mar-2018 10:09:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 07-Mar-2018 10:09:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.684	-0.006	92	209534	4.00	
* 2 1,4-Difluorobenzene	114	11.781	11.788	-0.007	95	1174309	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.380	16.387	-0.007	88	1030858	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.984	17.978	-0.001	97	730806	3.92	

Reagents:

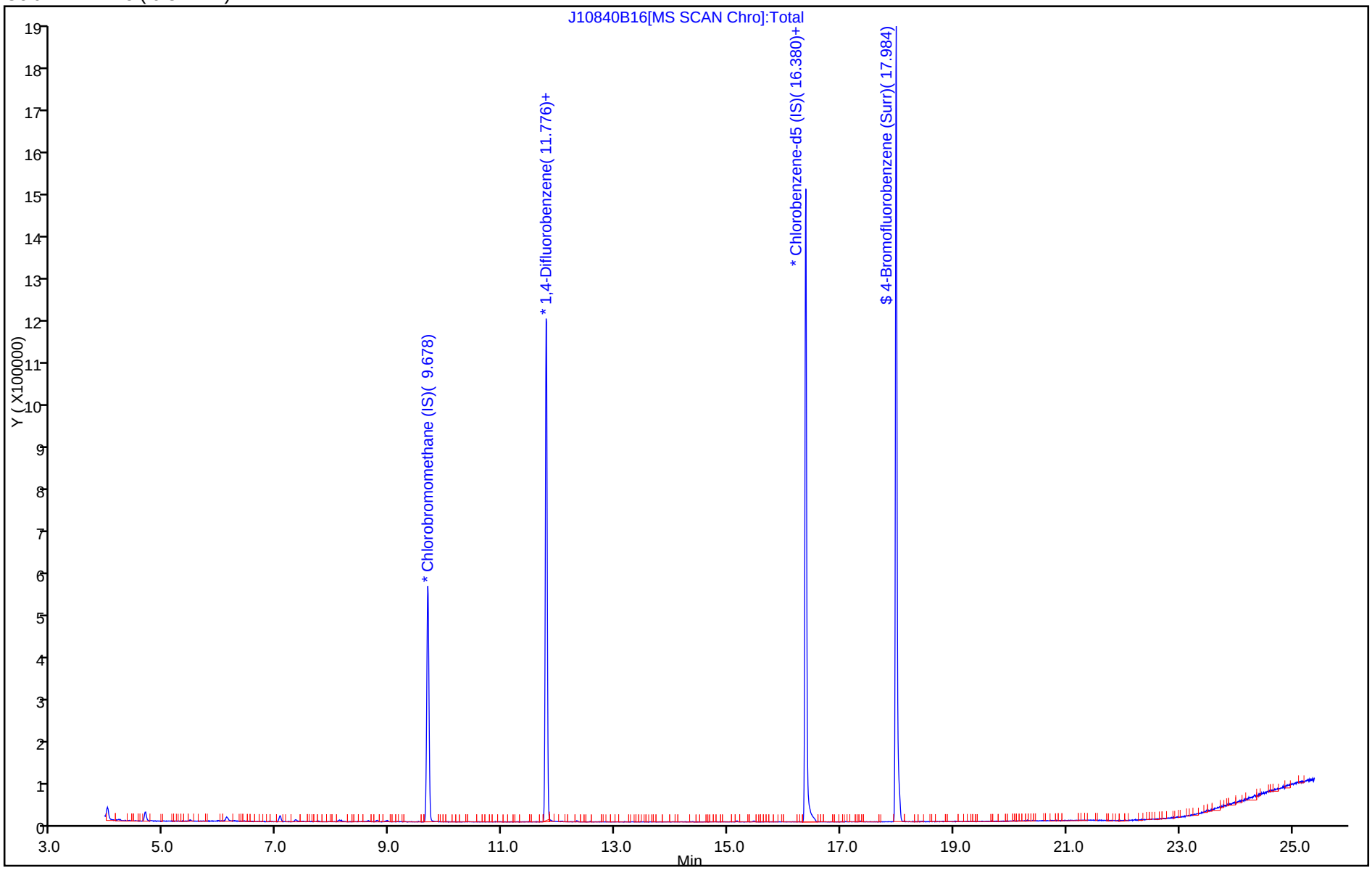
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 07-Mar-2018 10:09:53 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B16.D				
Injection Date:	07-Mar-2018 08:22:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10840-A-16	Lab Sample ID:	140-10840-16	Worklist Smp#:	31
Client ID:	11674				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



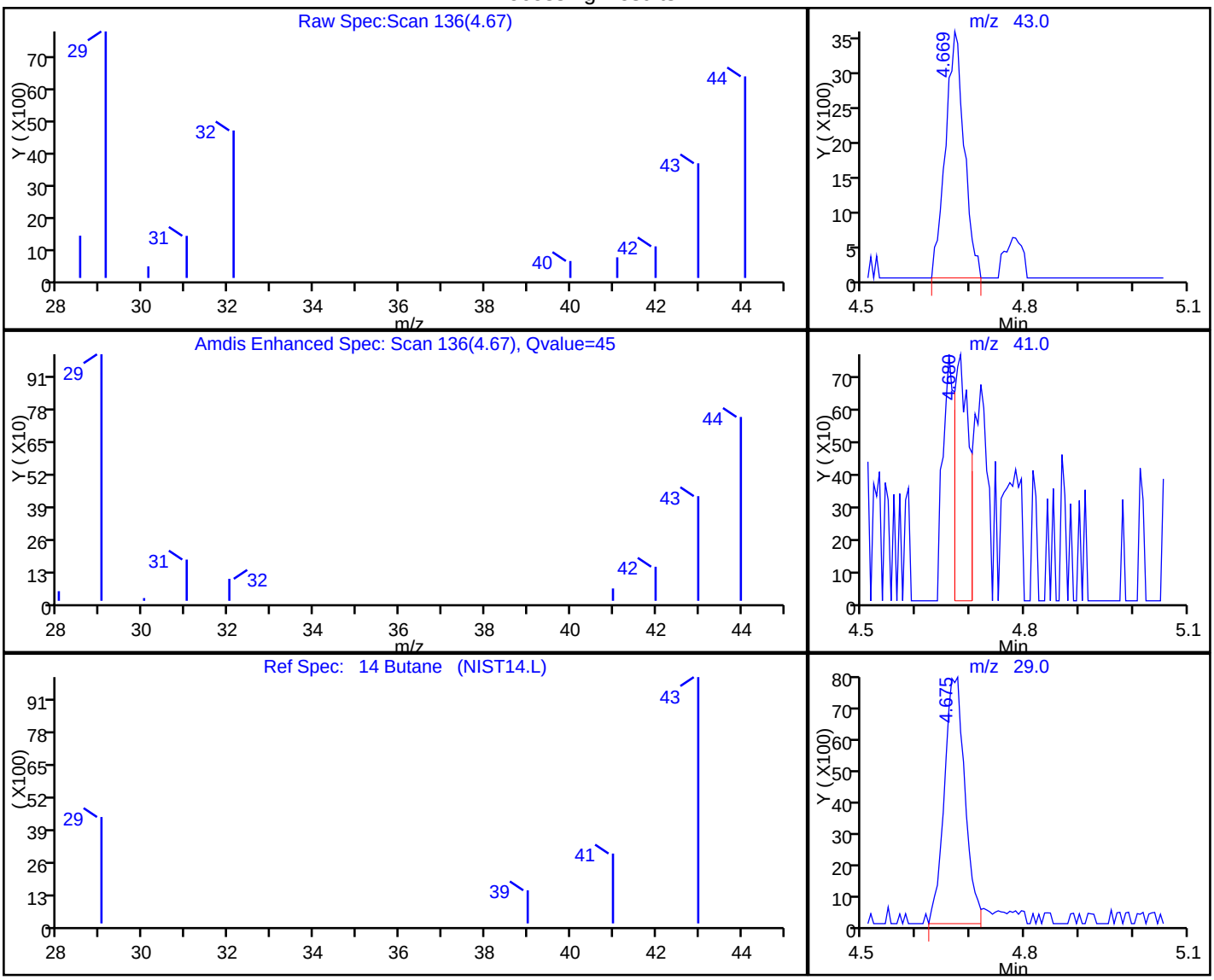
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180305-7559.b\J10840B16.D				
Injection Date:	07-Mar-2018 08:22:30	Instrument ID:	MJ		
Lims ID:	140-10840-A-16	Lab Sample ID:	140-10840-16		
Client ID:	11674				
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	31
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	8658	0.082463
4.68	41.00	1389	
4.67	29.00	21038	

Reviewer: tajh, 07-Mar-2018 10:09:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

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

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6031
Lab Sample ID: 140-10956-1
Matrix: Air
Lab File ID: JC16BK10956-01.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 00:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6031
Lab Sample ID: 140-10956-1
Matrix: Air
Lab File ID: JC16BK10956-01.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 00:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6031
Lab Sample ID: 140-10956-1
Matrix: Air
Lab File ID: JC16BK10956-01.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 00:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6031 Lab Sample ID: 140-10956-1
Matrix: Air Lab File ID: JC16BK10956-01.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 00:18
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18786 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-01.D
Lims ID: 140-10956-A-1
Client ID: 6031
Sample Type: Client
Inject. Date: 17-Mar-2018 00:18:30 ALS Bottle#: 15 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007638-017
Misc. Info.: 6031
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:38:15 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:35:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.668	9.664	0.004	90	206797	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.767	0.004	95	1142989	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.372	-0.001	88	1016665	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.974	17.974	-0.001	96	731873	3.98	
53 n-Butanol	31	11.373	11.223	0.149	79	755	0.0382	

Reagents:

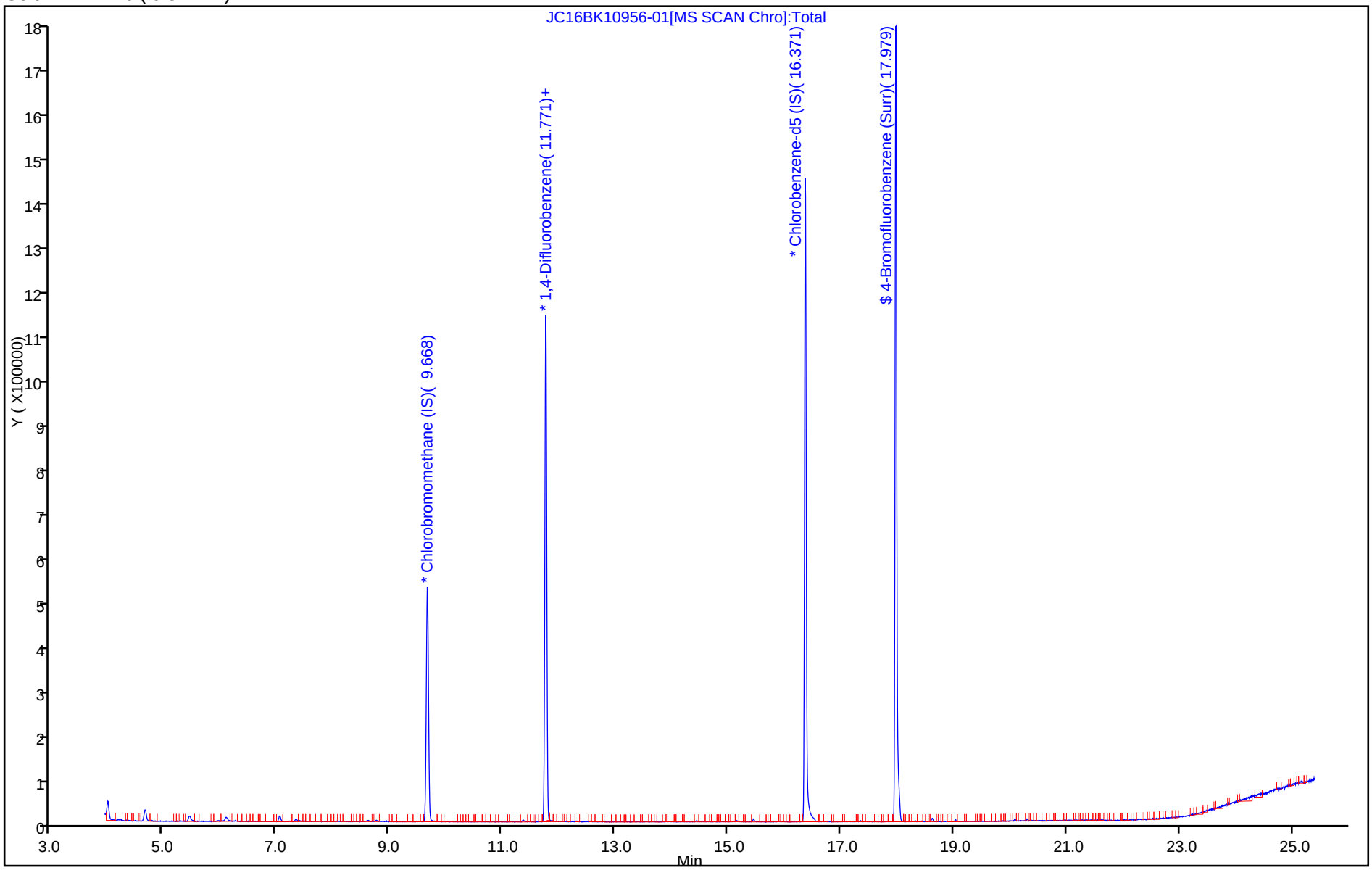
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Mar-2018 12:38:15 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-01.D				
Injection Date:	17-Mar-2018 00:18:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-1	Lab Sample ID:	140-10956-1	Worklist Smp#:	17
Client ID:	6031				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



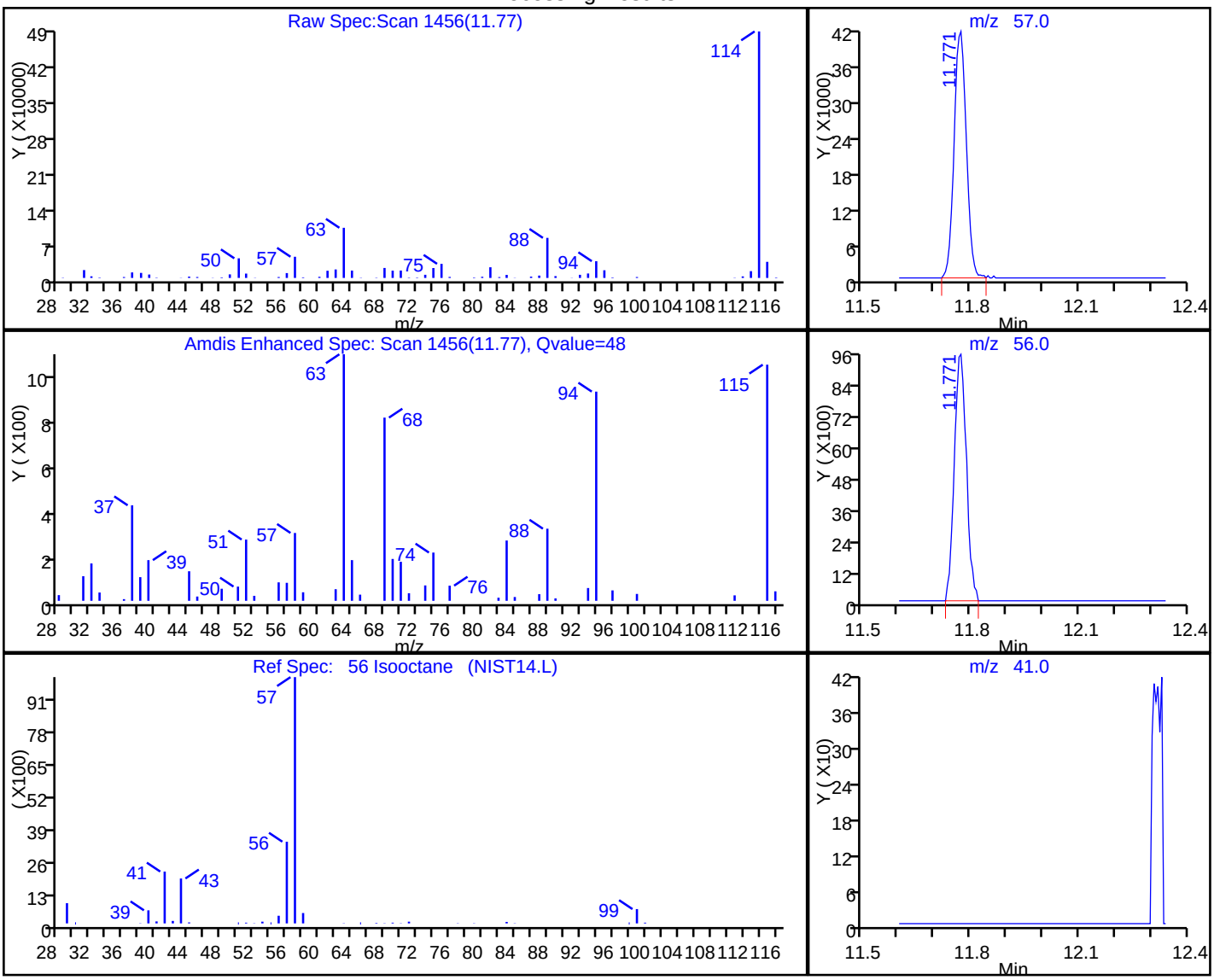
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-01.D				
Injection Date:	17-Mar-2018 00:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-1	Lab Sample ID:	140-10956-1		
Client ID:	6031				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Isooctane, CAS: 540-84-1

Processing Results



RT	Mass	Response	Amount
11.77	57.00	99687	0.306453
11.77	56.00	22421	
11.97	41.00	0	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:35:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

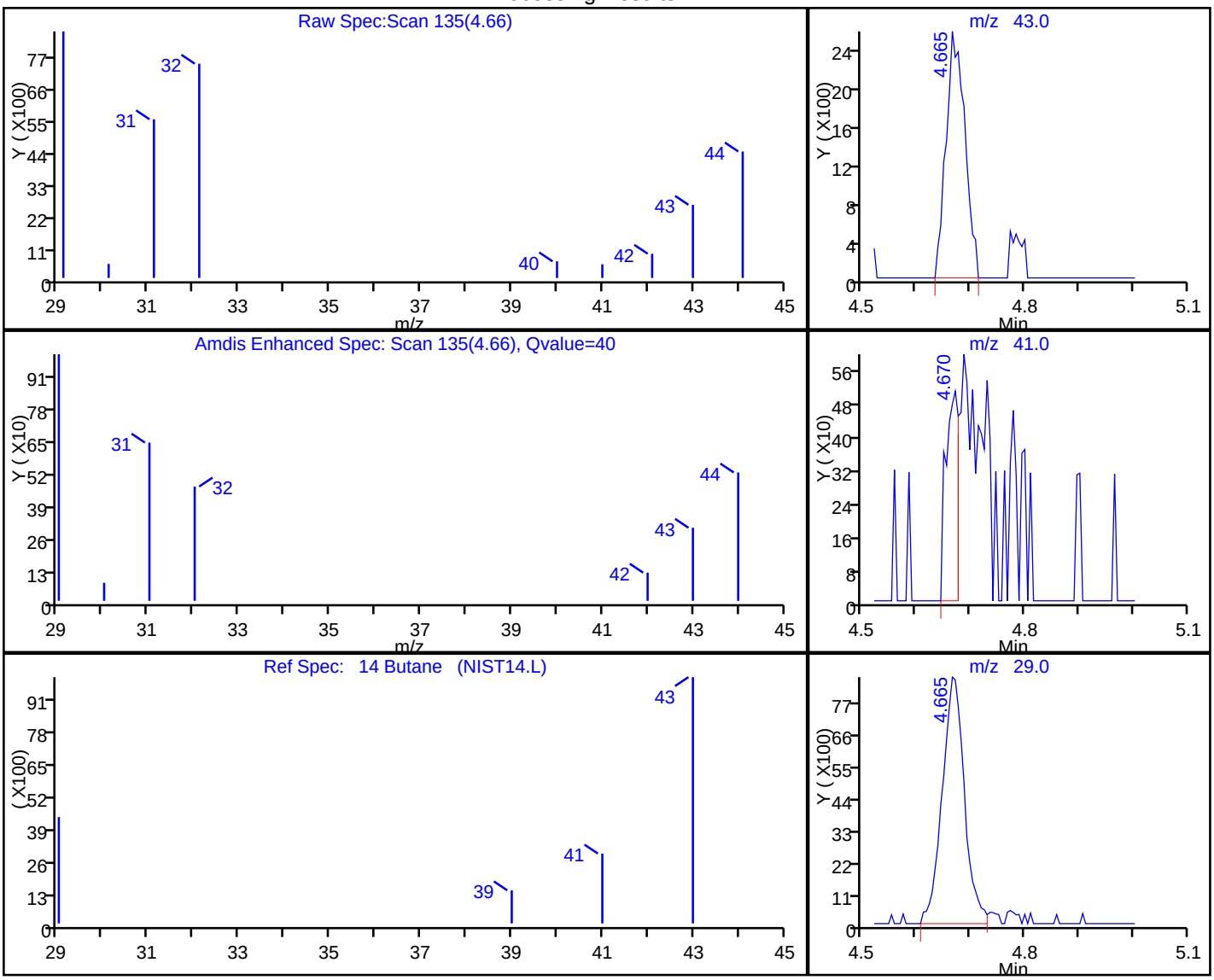
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-01.D				
Injection Date:	17-Mar-2018 00:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-1	Lab Sample ID:	140-10956-1		
Client ID:	6031				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	6144	0.059293
4.67	41.00	819	
4.66	29.00	24550	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:35:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

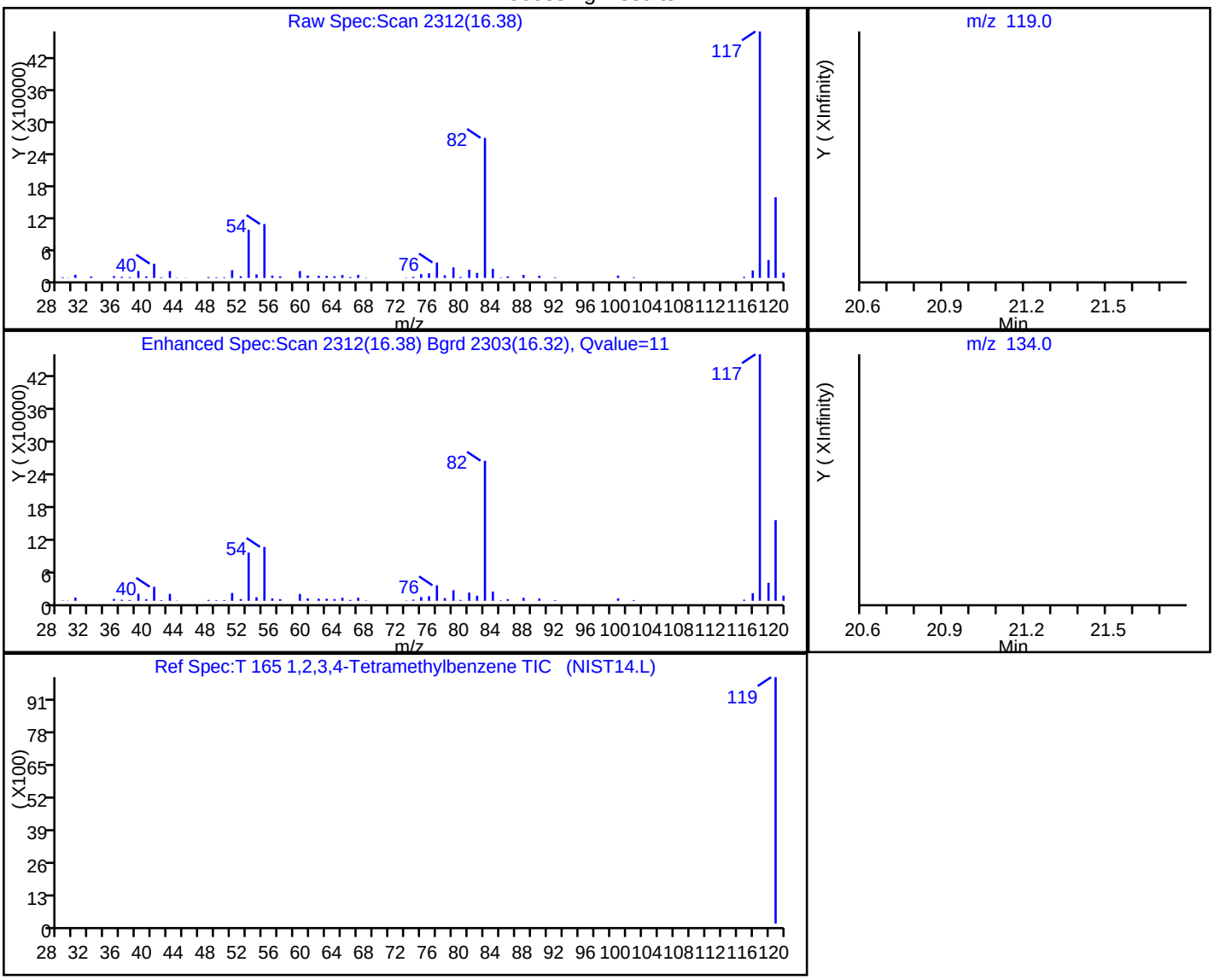
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-01.D				
Injection Date:	17-Mar-2018 00:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-1	Lab Sample ID:	140-10956-1		
Client ID:	6031				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	330669	1.300995
24.07	134.00	227	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:35:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

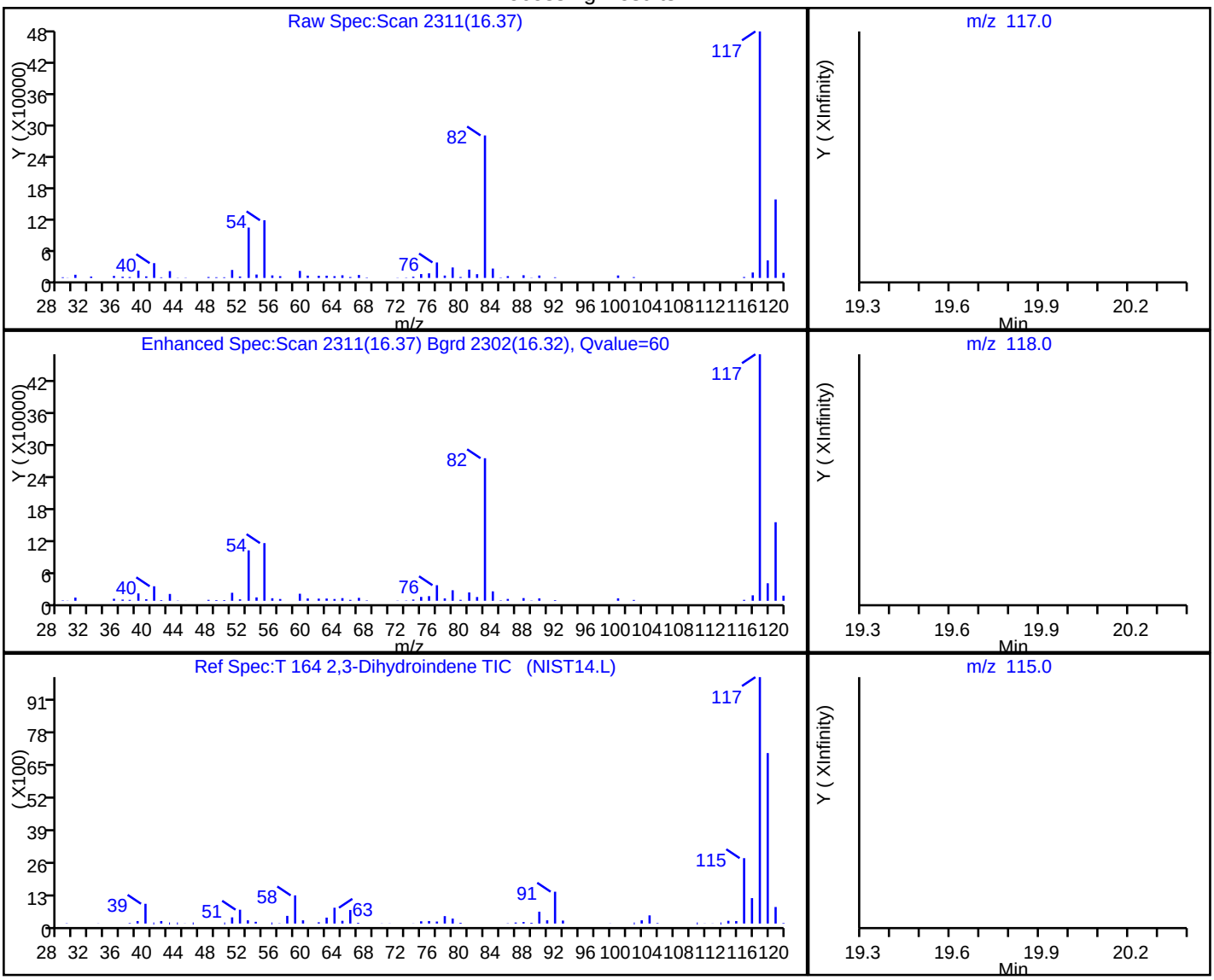
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-01.D				
Injection Date:	17-Mar-2018 00:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-1	Lab Sample ID:	140-10956-1		
Client ID:	6031				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	1016665	4.000000
16.38	118.00	75942	
16.38	115.00	3603	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:35:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4872
Lab Sample ID: 140-10956-3
Matrix: Air
Lab File ID: JC16BK10956-03.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 01:06
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4872
Lab Sample ID: 140-10956-3
Matrix: Air
Lab File ID: JC16BK10956-03.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 01:06
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4872
Lab Sample ID: 140-10956-3
Matrix: Air
Lab File ID: JC16BK10956-03.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 01:06
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4872 Lab Sample ID: 140-10956-3
Matrix: Air Lab File ID: JC16BK10956-03.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 01:06
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18786 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-03.D
Lims ID: 140-10956-A-3
Client ID: 4872
Sample Type: Client
Inject. Date: 17-Mar-2018 01:06:30 ALS Bottle#: 16 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007638-018
Misc. Info.: 4872
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:38:39 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:38:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.668	9.664	0.004	89	197315	4.00	
* 2 1,4-Difluorobenzene	114	11.772	11.767	0.005	95	1106601	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.372	-0.001	88	991338	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.974	17.974	-0.001	96	732100	4.08	
33 Carbon disulfide	76	7.237	7.223	0.021	91	3493	0.0184	

Reagents:

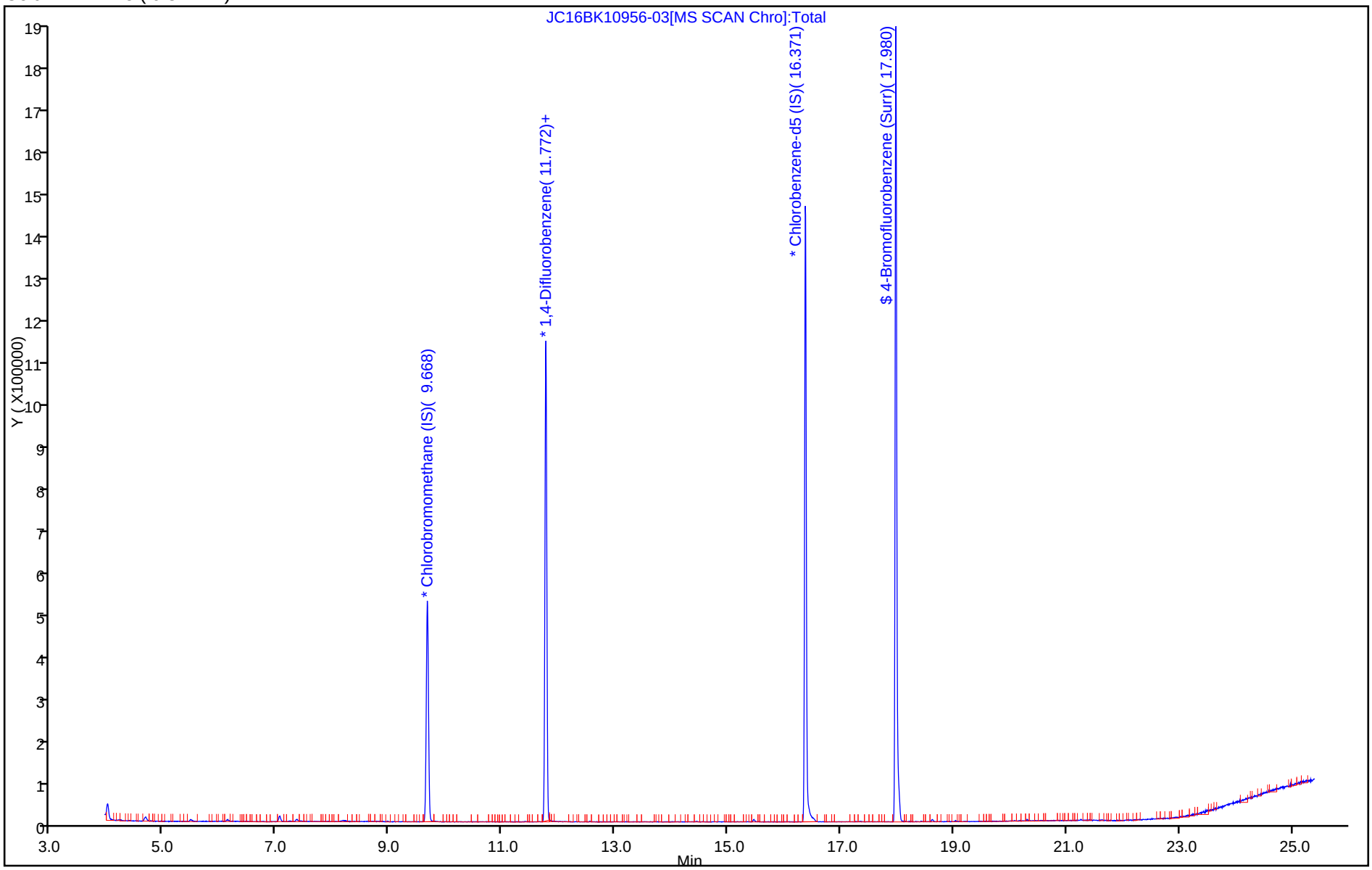
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Mar-2018 12:38:40 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-03.D				
Injection Date:	17-Mar-2018 01:06:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-3	Lab Sample ID:	140-10956-3	Worklist Smp#:	18
Client ID:	4872				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



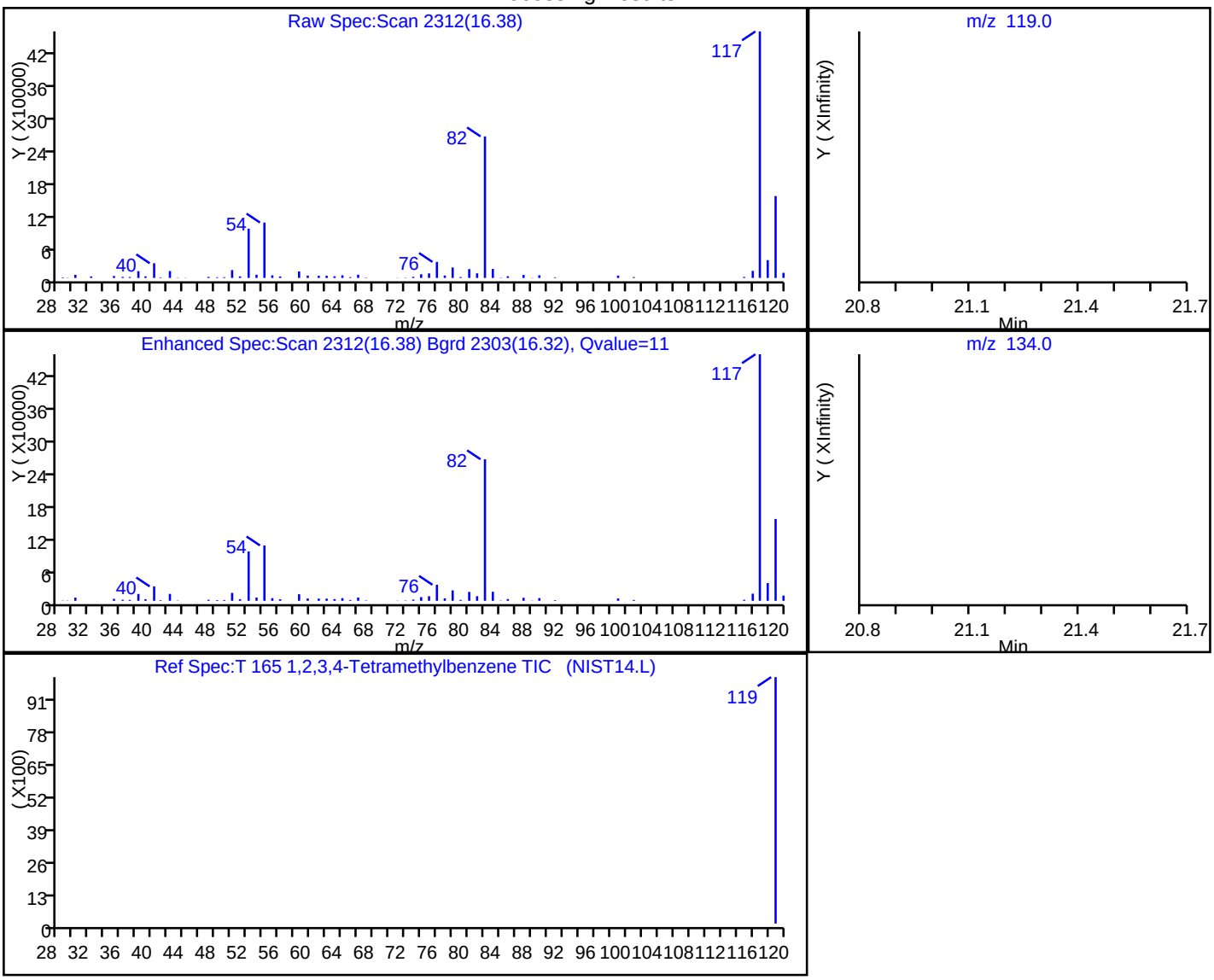
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-03.D				
Injection Date:	17-Mar-2018 01:06:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-3	Lab Sample ID:	140-10956-3		
Client ID:	4872				
Operator ID:	403648	ALS Bottle#:	16	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	319169	1.287831
24.00	134.00	98	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:37:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

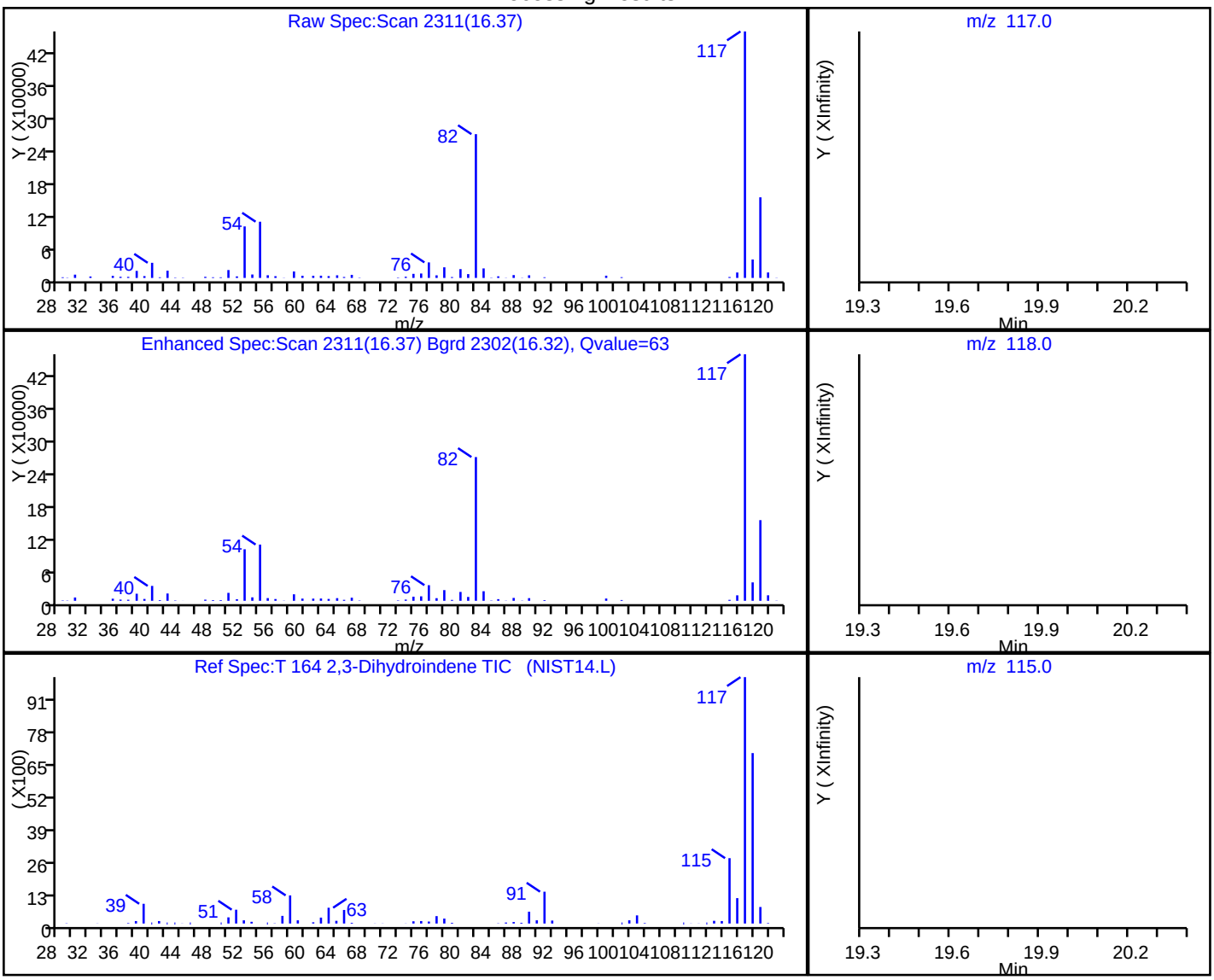
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-03.D				
Injection Date:	17-Mar-2018 01:06:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-3	Lab Sample ID:	140-10956-3		
Client ID:	4872				
Operator ID:	403648	ALS Bottle#:	16	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	991338	4.000000
16.37	118.00	72769	
16.38	115.00	3618	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:37:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5629
Lab Sample ID: 140-10956-4
Matrix: Air
Lab File ID: JC16BK10956-04.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 01:54
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5629
Lab Sample ID: 140-10956-4
Matrix: Air
Lab File ID: JC16BK10956-04.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 01:54
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5629
Lab Sample ID: 140-10956-4
Matrix: Air
Lab File ID: JC16BK10956-04.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 01:54
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5629 Lab Sample ID: 140-10956-4
Matrix: Air Lab File ID: JC16BK10956-04.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 01:54
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18786 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-04.D
Lims ID: 140-10956-A-4
Client ID: 5629
Sample Type: Client
Inject. Date: 17-Mar-2018 01:54:30 ALS Bottle#: 1 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007638-019
Misc. Info.: 5629
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:39:24 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:39:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.664	0.009	89	197378	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.767	0.004	95	1109293	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.372	0.004	88	1003649	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.974	0.004	96	709407	3.91	
17 Ethanol	31	5.445	5.400	0.047	96	15744	0.6584	
22 Acetone	58	6.085	6.048	0.036	98	12552	0.5586	
25 Isopropyl alcohol	45	6.219	6.151	0.073	94	8341	0.1295	
33 Carbon disulfide	76	7.236	7.223	0.020	98	9403	0.0496	
35 2-Methylpentane	43	8.011	7.893	0.117	77	3836	0.0255	
40 2-Butanone (MEK)	72	8.931	8.883	0.047	98	3089	0.1224	
53 n-Butanol	31	11.324	11.223	0.100	84	4963	0.2587	

Reagents:

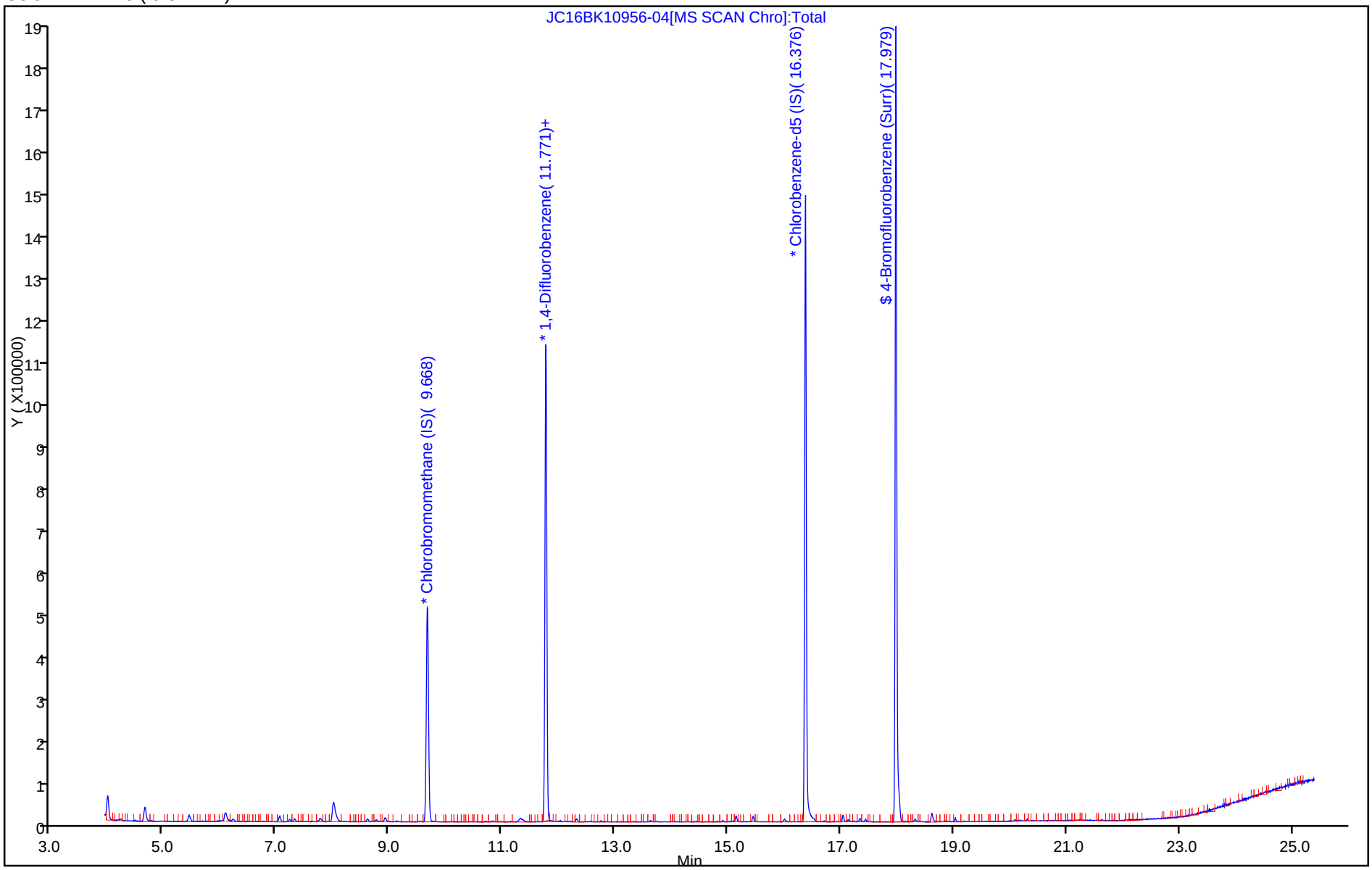
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Mar-2018 12:39:25 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-04.D				
Injection Date:	17-Mar-2018 01:54:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-4	Lab Sample ID:	140-10956-4	Worklist Smp#:	19
Client ID:	5629				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



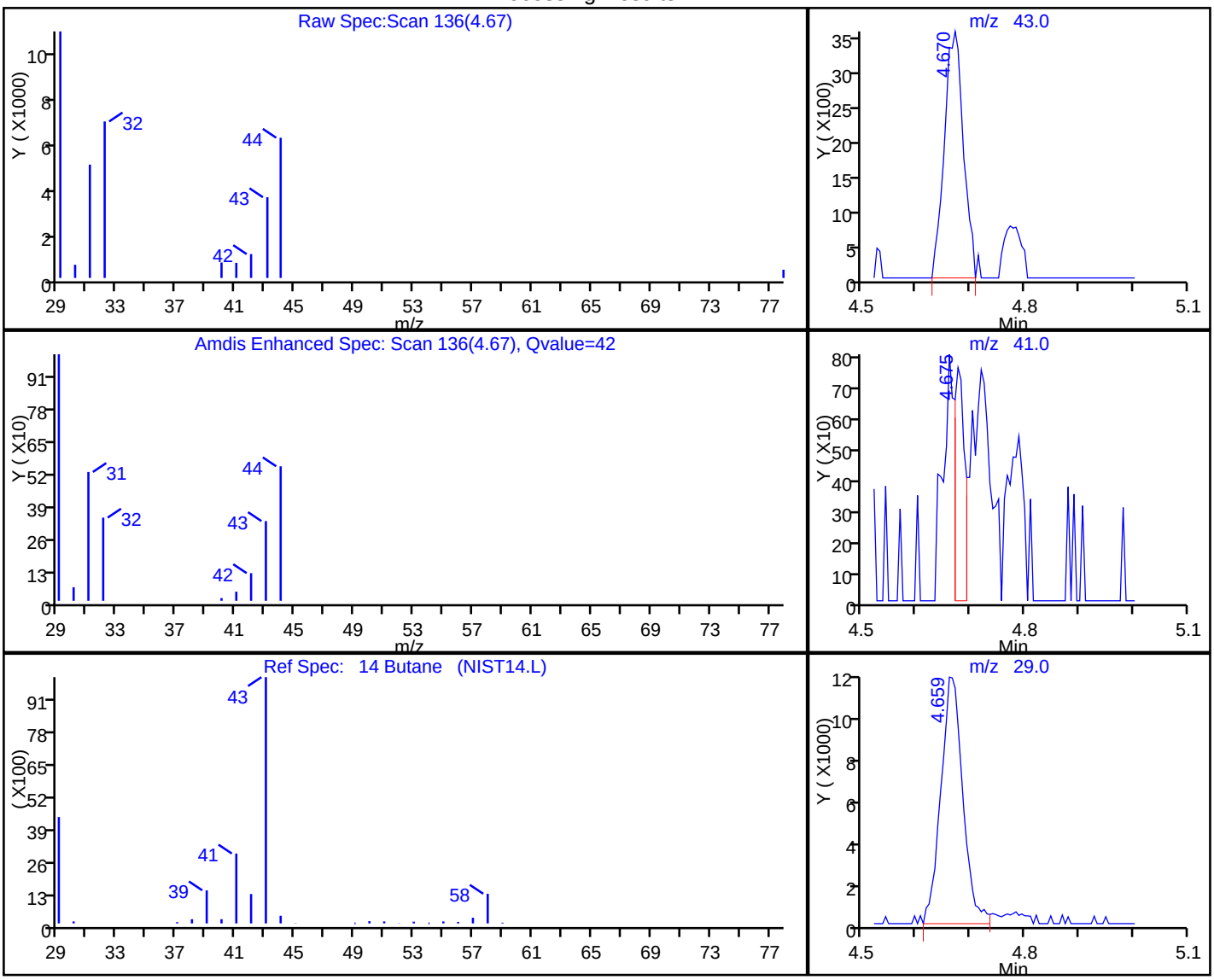
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-04.D				
Injection Date:	17-Mar-2018 01:54:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-4	Lab Sample ID:	140-10956-4		
Client ID:	5629				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	8623	0.087188
4.68	41.00	986	
4.66	29.00	32082	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:39:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

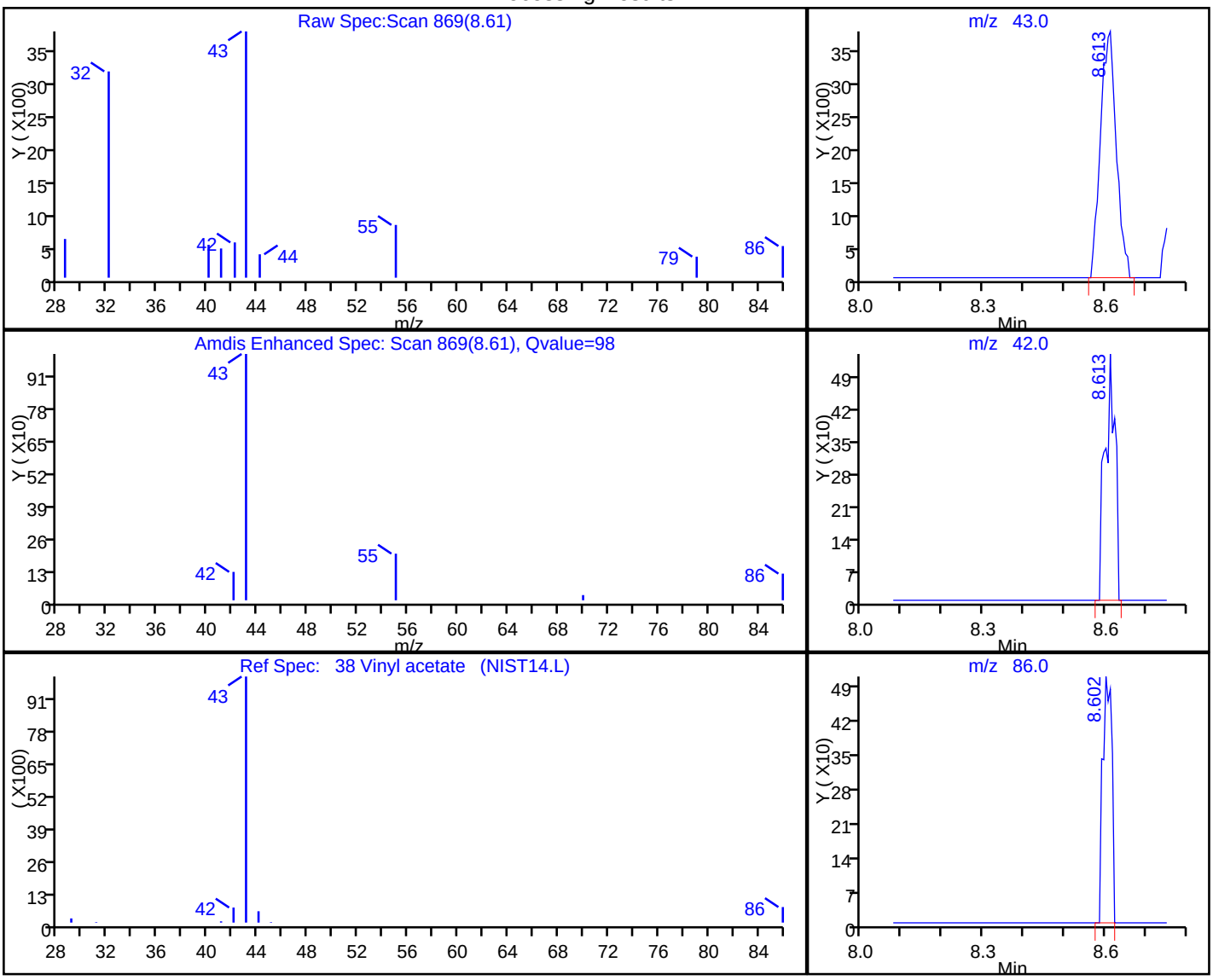
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-04.D				
Injection Date:	17-Mar-2018 01:54:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-4	Lab Sample ID:	140-10956-4		
Client ID:	5629				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.61	43.00	10251	0.073213
8.61	42.00	934	
8.60	86.00	799	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:39:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

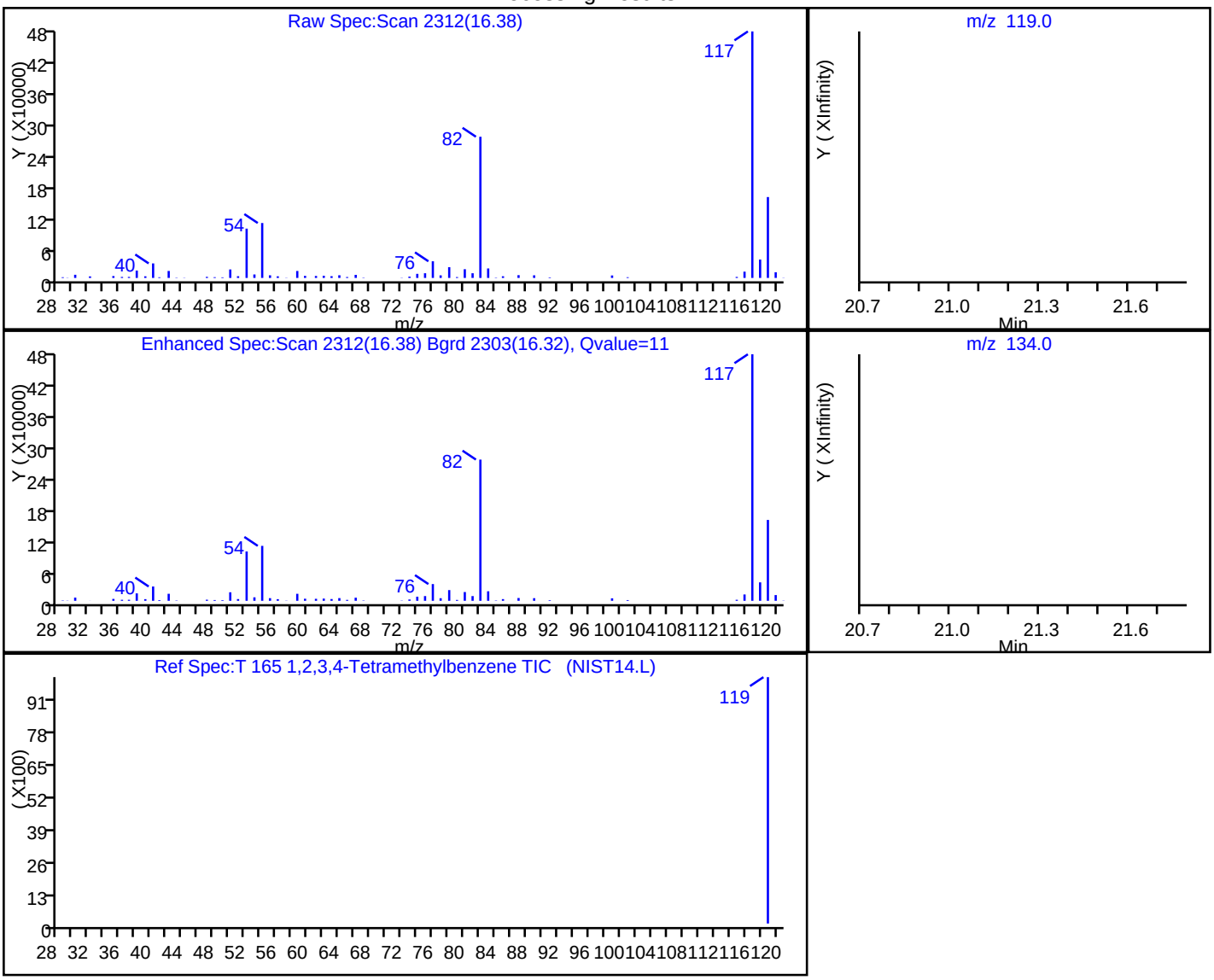
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-04.D				
Injection Date:	17-Mar-2018 01:54:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-4	Lab Sample ID:	140-10956-4		
Client ID:	5629				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	325829	1.298577
23.90	134.00	119	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:39:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

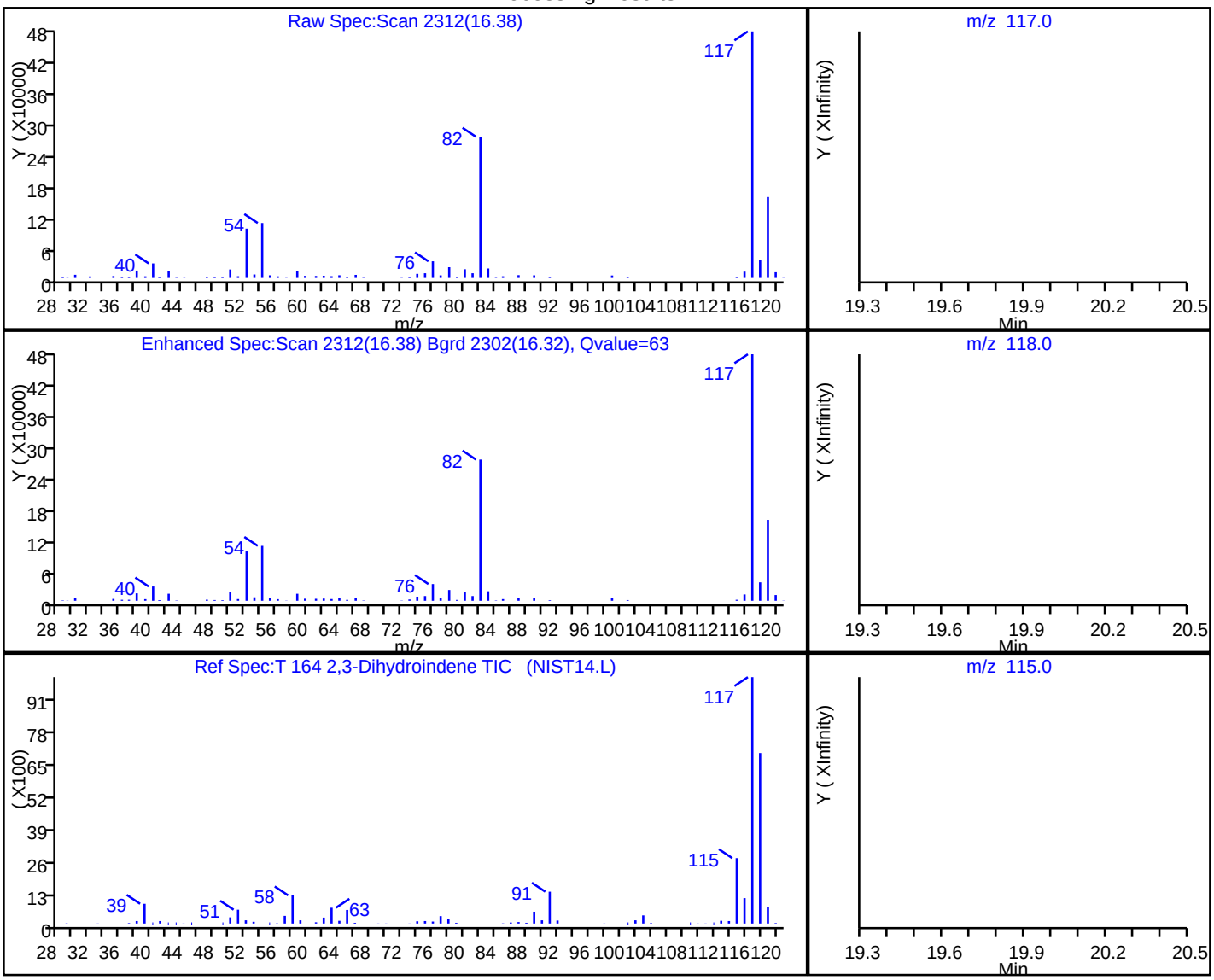
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-04.D				
Injection Date:	17-Mar-2018 01:54:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-4	Lab Sample ID:	140-10956-4		
Client ID:	5629				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	1003649	4.000000
16.38	118.00	76554	
16.37	115.00	3754	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:39:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 3366 | Lab Sample ID: 140-10956-5

Matrix: Air | Lab File ID: JC16BK10956-05.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/17/2018 02:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18786 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3366
Lab Sample ID: 140-10956-5
Matrix: Air
Lab File ID: JC16BK10956-05.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 02:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3366
Lab Sample ID: 140-10956-5
Matrix: Air
Lab File ID: JC16BK10956-05.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 02:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3366 Lab Sample ID: 140-10956-5
Matrix: Air Lab File ID: JC16BK10956-05.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 02:41
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18786 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-05.D
Lims ID: 140-10956-A-5
Client ID: 3366
Sample Type: Client
Inject. Date: 17-Mar-2018 02:41:30 ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007638-020
Misc. Info.: 3366
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:40:08 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:40:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.674	9.664	0.010	89	205626	4.00	
* 2 1,4-Difluorobenzene	114	11.772	11.767	0.005	95	1129600	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.372	-0.001	88	1004748	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.980	17.974	0.005	97	740162	4.07	
25 Isopropyl alcohol	45	6.236	6.151	0.090	96	13171	0.1963	
43 Ethyl acetate	43	9.539	9.496	0.042	97	14499	0.1247	
53 n-Butanol	31	11.331	11.223	0.107	90	3588	0.1837	
82 n-Nonane	57	17.243	17.237	0.005	92	3696	0.0258	

Reagents:

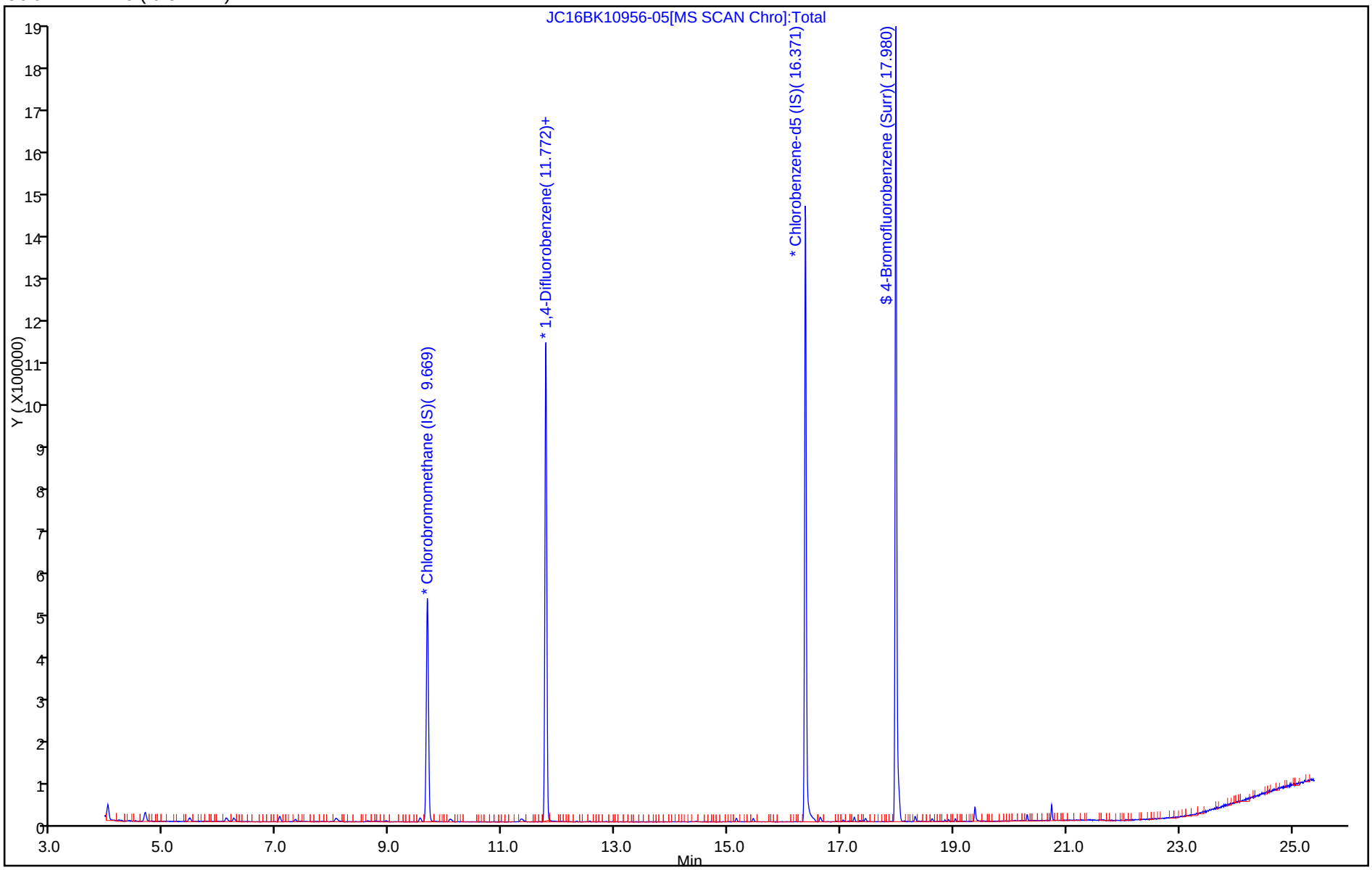
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Mar-2018 12:40:09 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-05.D				
Injection Date:	17-Mar-2018 02:41:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-5	Lab Sample ID:	140-10956-5	Worklist Smp#:	20
Client ID:	3366				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



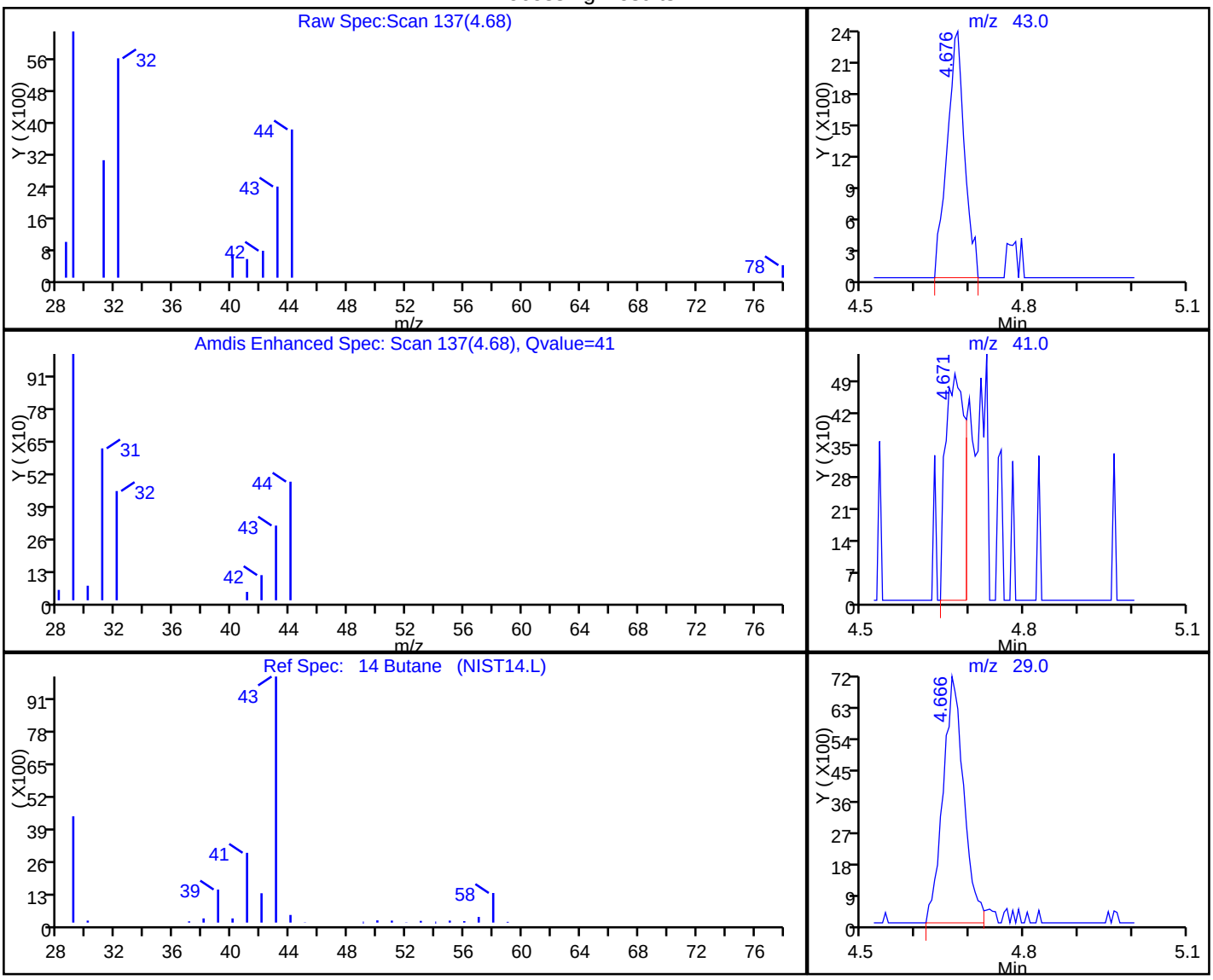
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-05.D				
Injection Date:	17-Mar-2018 02:41:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-5	Lab Sample ID:	140-10956-5		
Client ID:	3366				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	5150	0.049983
4.67	41.00	1242	
4.67	29.00	19207	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

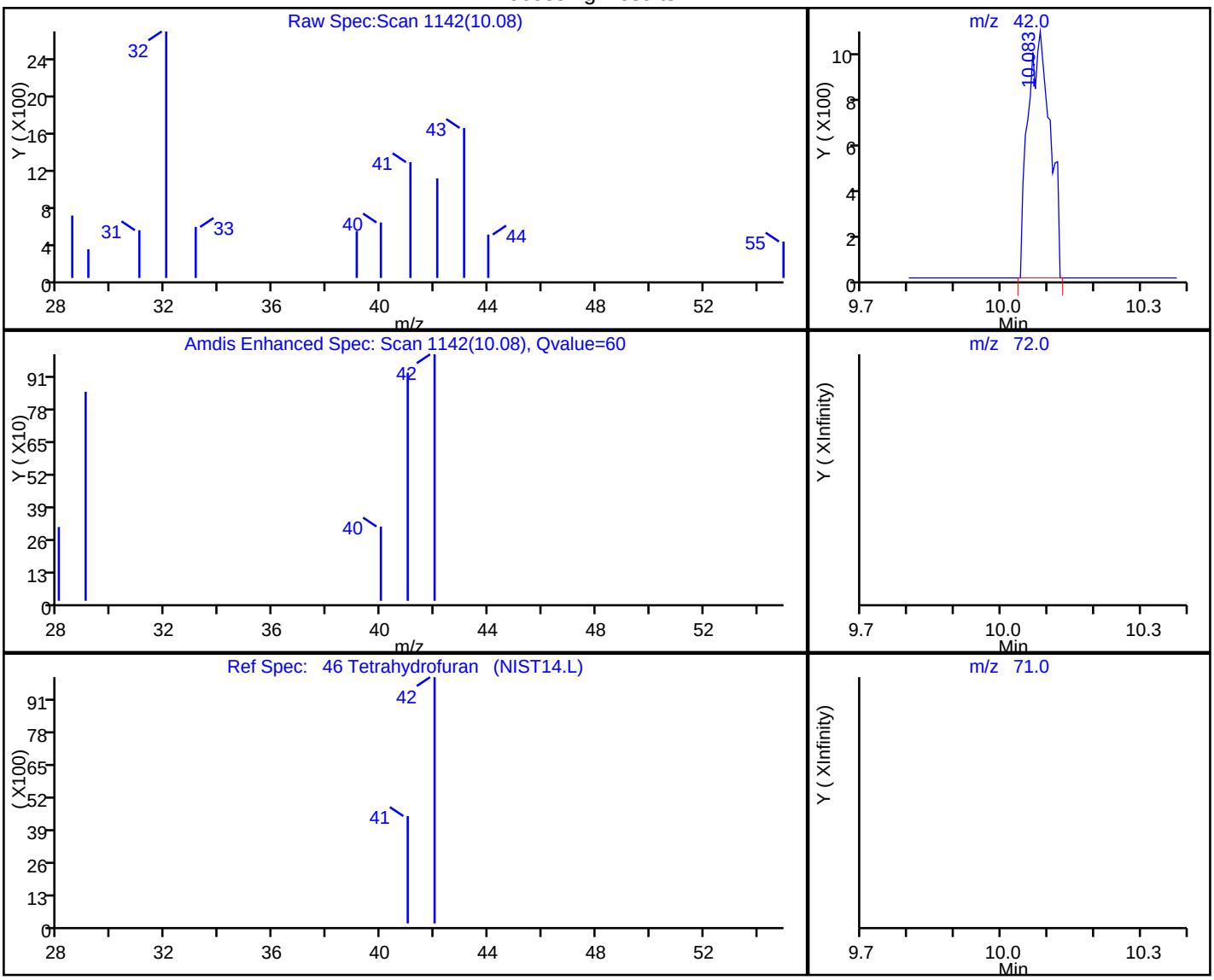
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-05.D				
Injection Date:	17-Mar-2018 02:41:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-5	Lab Sample ID:	140-10956-5		
Client ID:	3366				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 Tetrahydrofuran, CAS: 109-99-9

Processing Results



RT	Mass	Response	Amount
10.08	42.00	3474	0.055730
10.09	72.00	0	
10.09	71.00	0	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

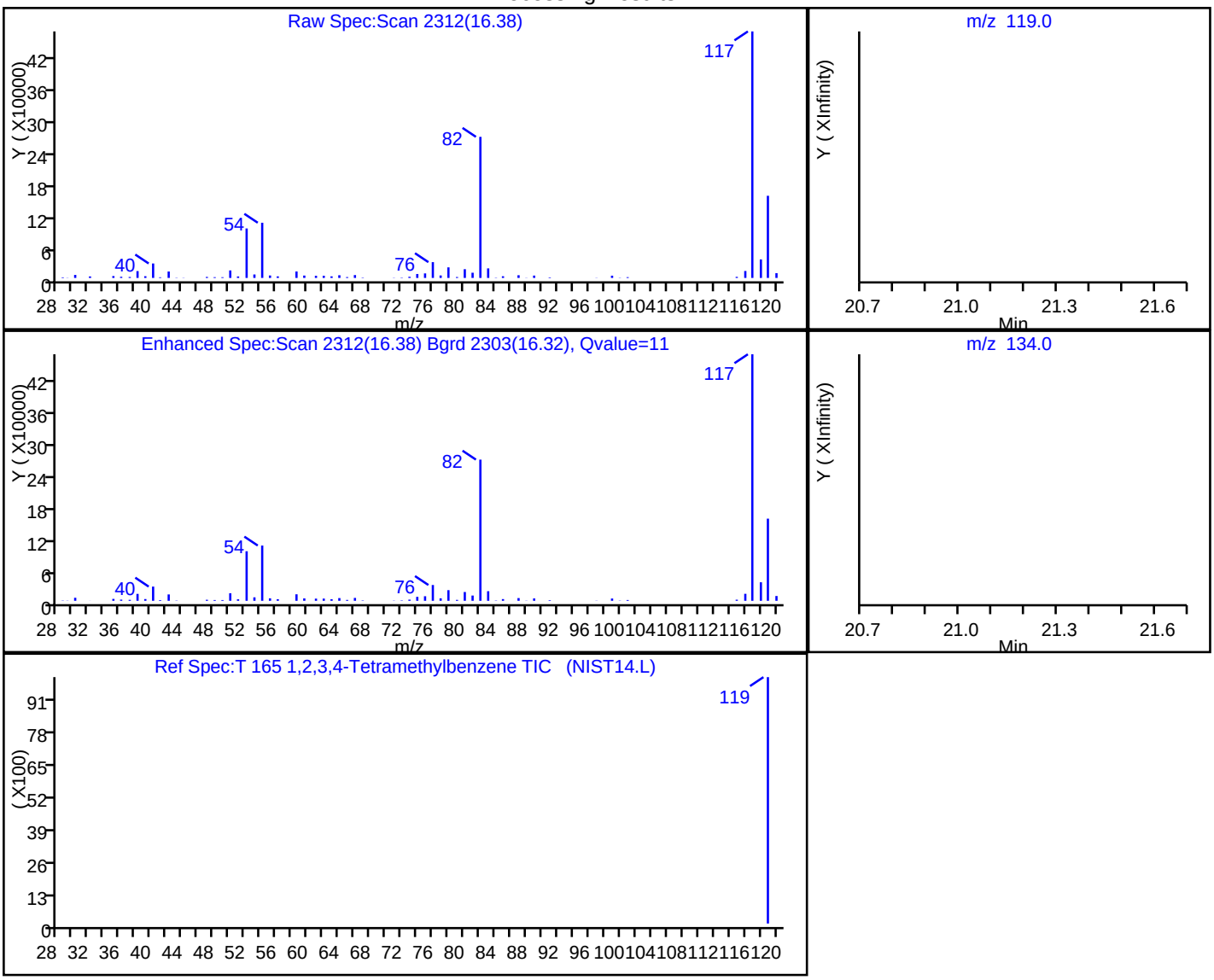
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-05.D				
Injection Date:	17-Mar-2018 02:41:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-5	Lab Sample ID:	140-10956-5		
Client ID:	3366				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	327052	1.302026
23.91	134.00	120	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

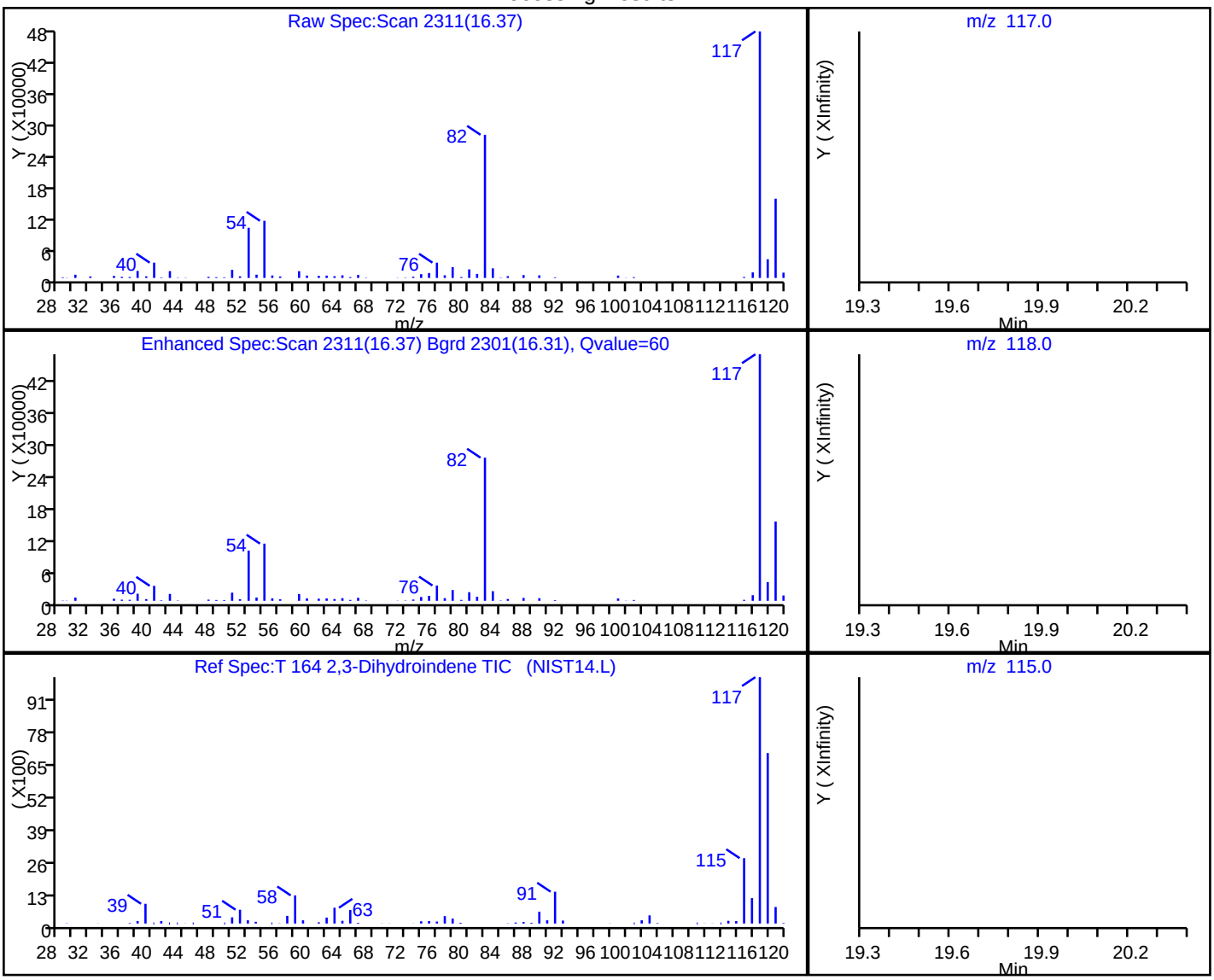
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-05.D				
Injection Date:	17-Mar-2018 02:41:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-5	Lab Sample ID:	140-10956-5		
Client ID:	3366				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	1004748	4.000000
16.37	118.00	75082	
16.38	115.00	3859	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 5721 | Lab Sample ID: 140-10956-6

Matrix: Air | Lab File ID: JC16BK10956-06.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/17/2018 03:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18786 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 5721 | Lab Sample ID: 140-10956-6

Matrix: Air | Lab File ID: JC16BK10956-06.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/17/2018 03:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18786 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5721
Lab Sample ID: 140-10956-6
Matrix: Air
Lab File ID: JC16BK10956-06.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 03:29
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5721 Lab Sample ID: 140-10956-6
Matrix: Air Lab File ID: JC16BK10956-06.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 03:29
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18786 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D
Lims ID: 140-10956-A-6
Client ID: 5721
Sample Type: Client
Inject. Date: 17-Mar-2018 03:29:30 ALS Bottle#: 3 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007638-021
Misc. Info.: 5721
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:40:50 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:40:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.668	9.664	0.004	89	197190	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.767	0.004	95	1114042	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.372	-0.001	88	999322	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.974	17.974	-0.001	96	740985	4.10	
17 Ethanol	31	5.445	5.400	0.047	95	29260	1.22	
25 Isopropyl alcohol	45	6.247	6.151	0.101	90	5452	0.0847	
33 Carbon disulfide	76	7.236	7.223	0.020	91	3027	0.0160	
40 2-Butanone (MEK)	72	8.926	8.883	0.042	98	2374	0.0942	
53 n-Butanol	31	11.325	11.223	0.101	90	3648	0.1893	
72 2-Hexanone	58	14.902	14.876	0.026	90	1583	0.0319	

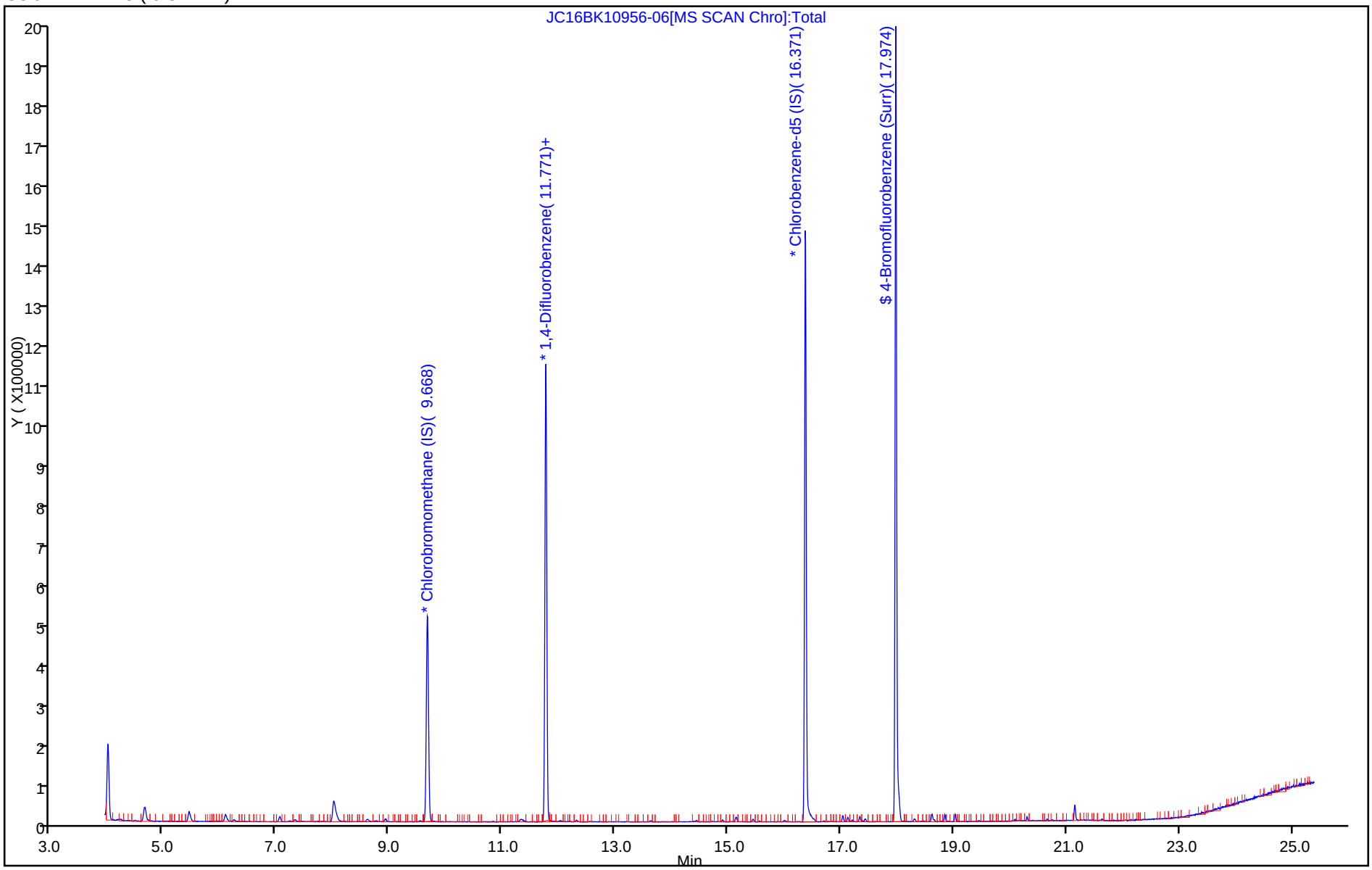
Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Mar-2018 12:40:51 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6	Worklist Smp#:	21
Client ID:	5721				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



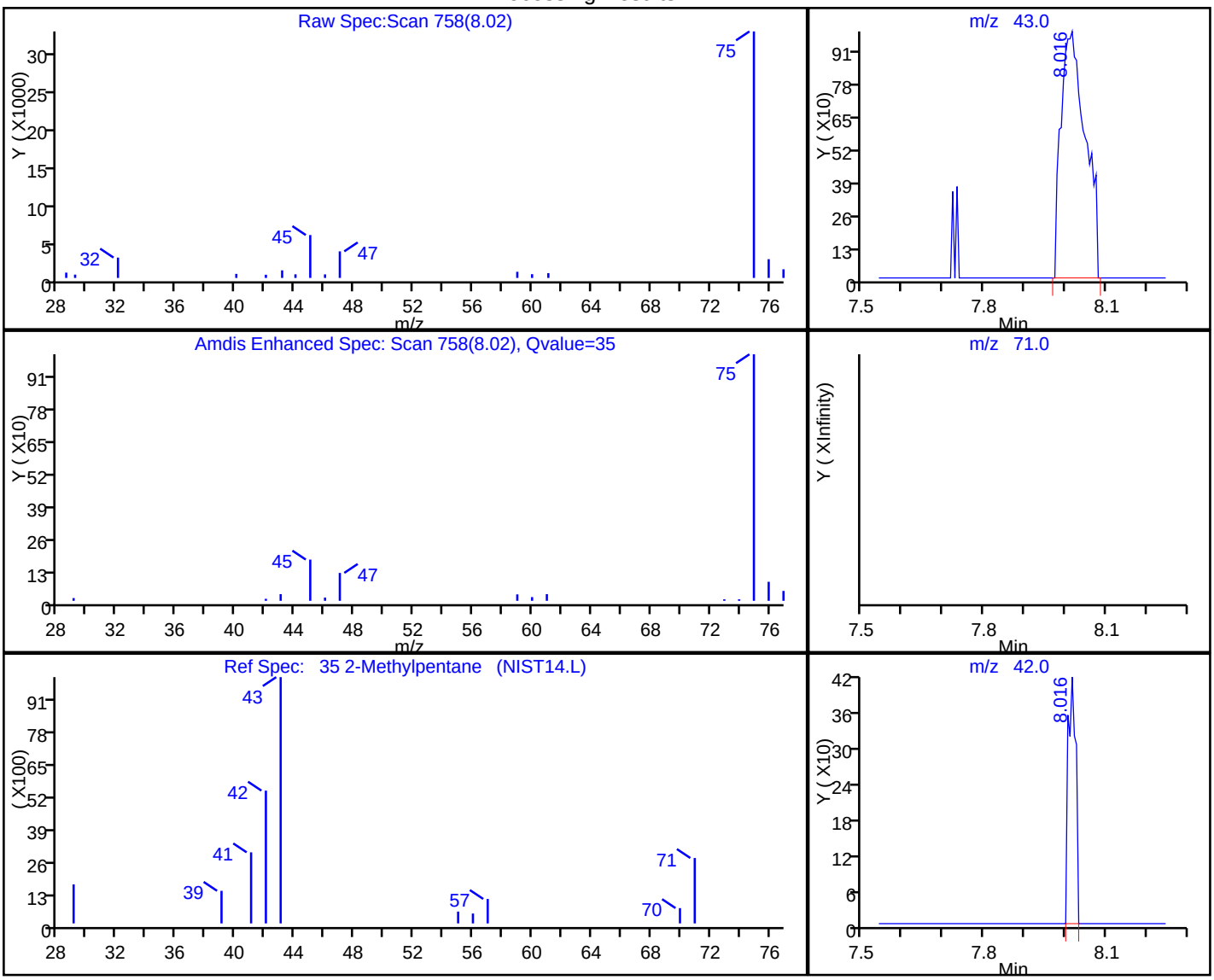
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6		
Client ID:	5721				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

Processing Results



RT	Mass	Response	Amount
8.02	43.00	4127	0.027436
7.89	71.00	0	
8.02	42.00	550	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

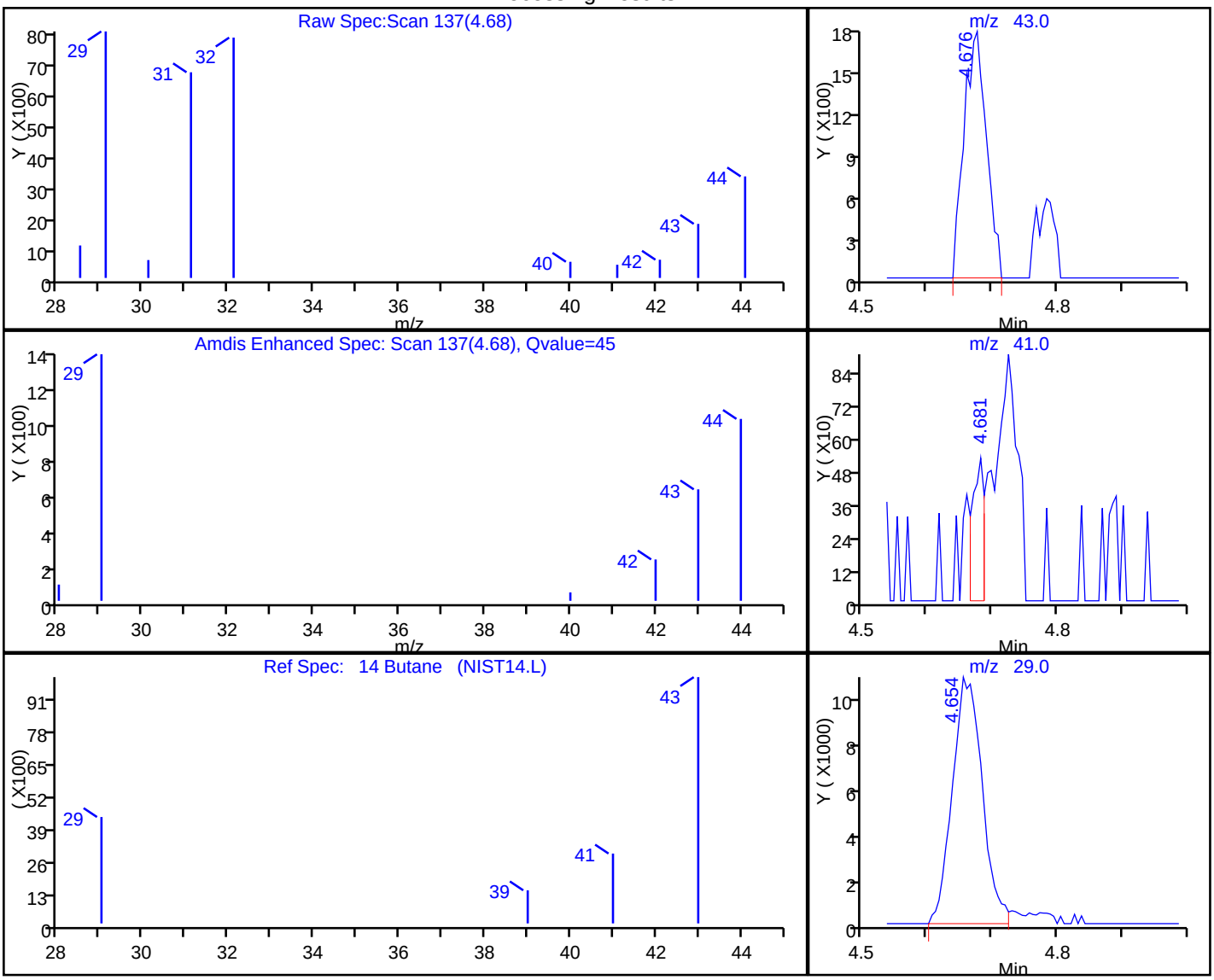
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6		
Client ID:	5721				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	4237	0.042881
4.68	41.00	659	
4.65	29.00	33373	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

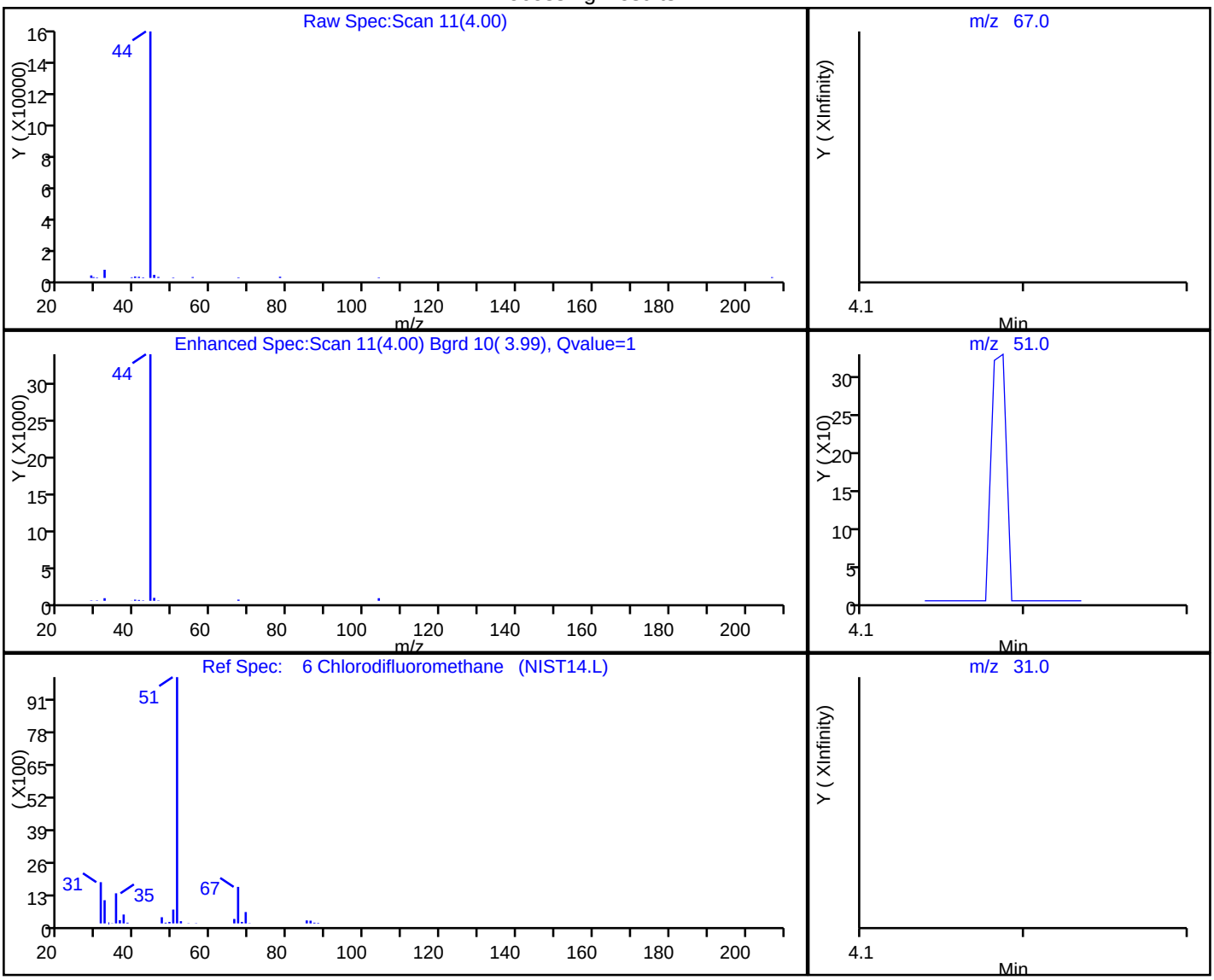
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6		
Client ID:	5721				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

Processing Results



RT	Mass	Response	Amount
4.00	67.00	338	0.016044
4.19	51.00	0	
4.19	31.00	0	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

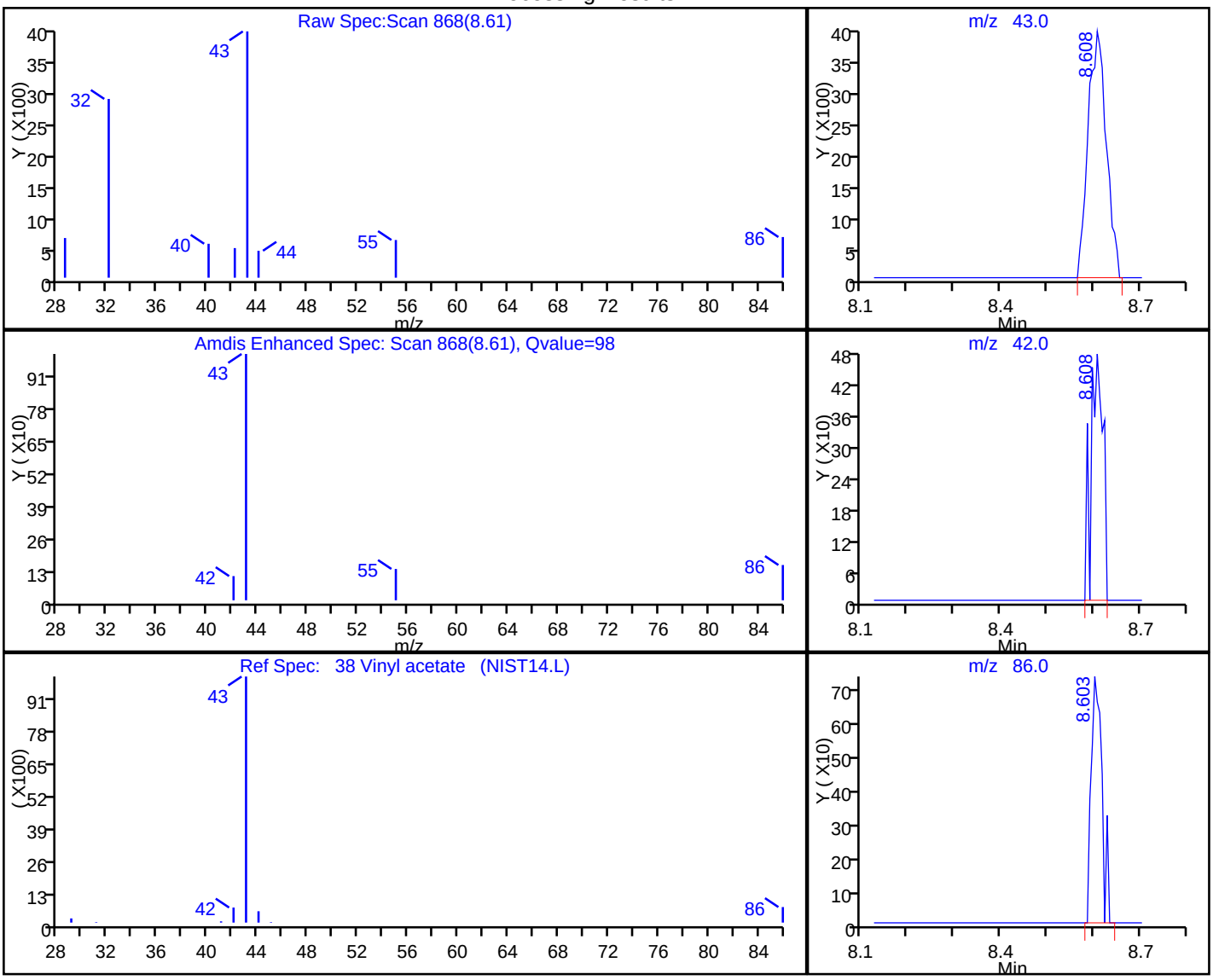
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6		
Client ID:	5721				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.61	43.00	10923	0.078086
8.61	42.00	874	
8.60	86.00	1186	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

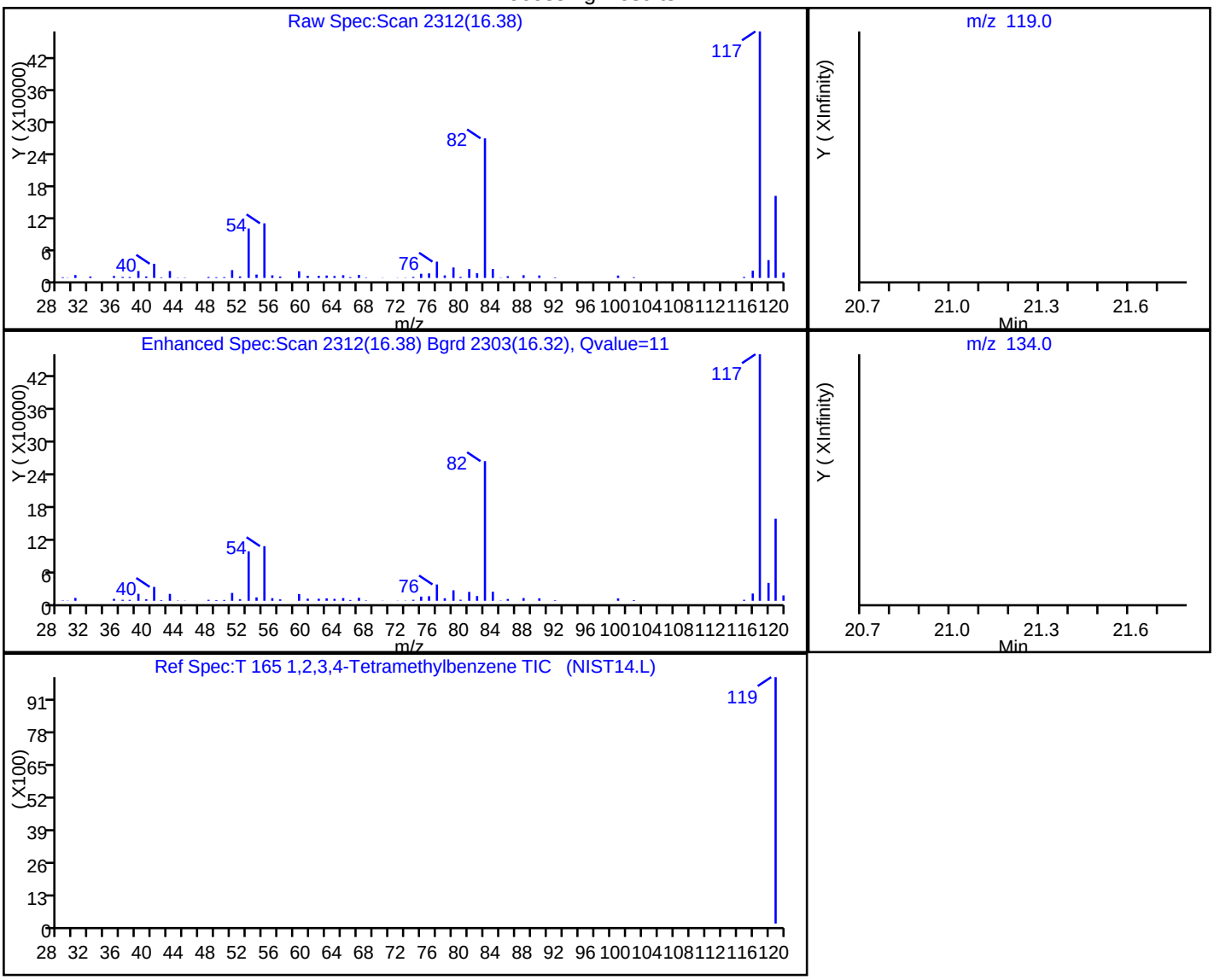
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6		
Client ID:	5721				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	326657	1.307514
23.92	134.00	218	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

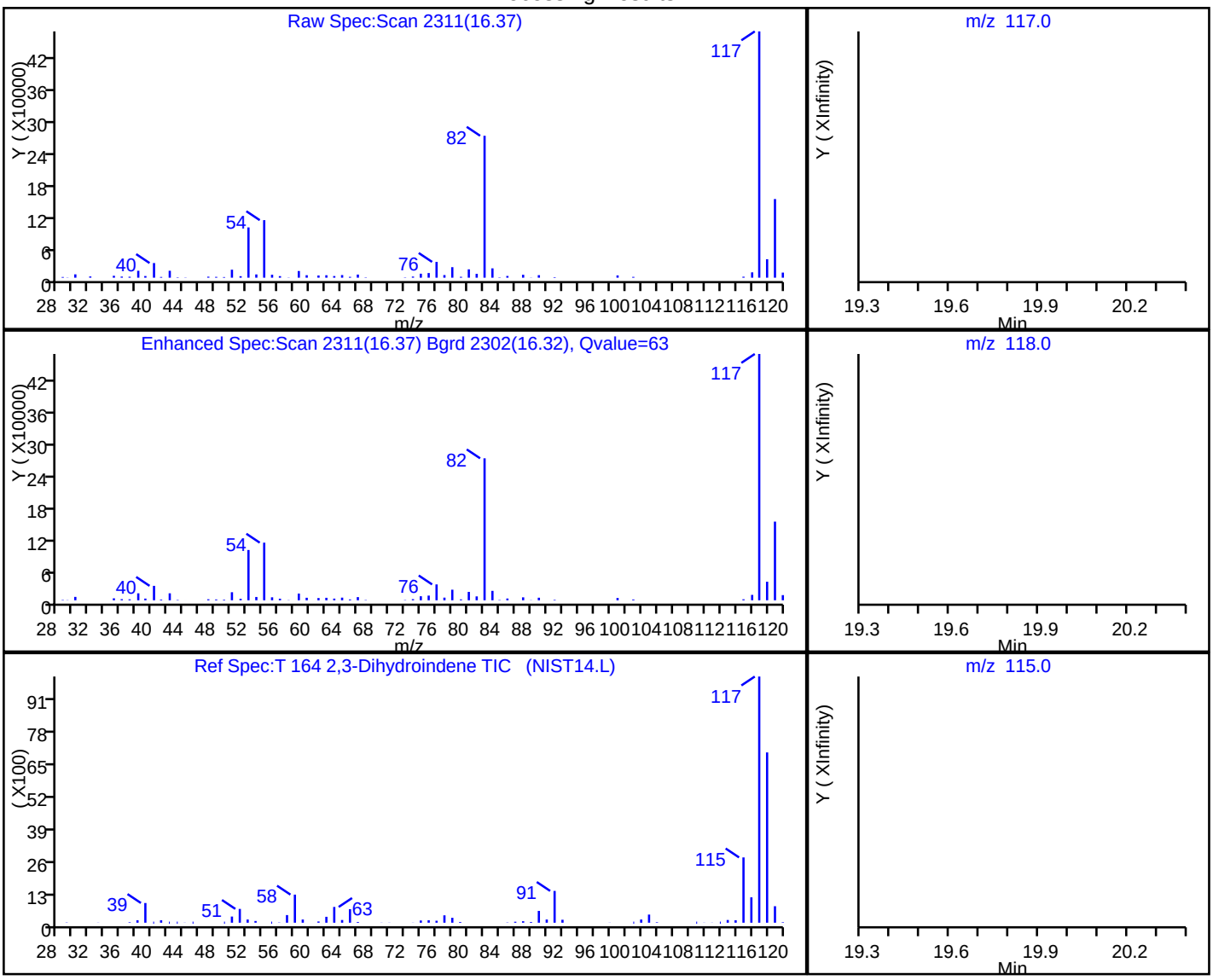
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-06.D				
Injection Date:	17-Mar-2018 03:29:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-6	Lab Sample ID:	140-10956-6		
Client ID:	5721				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	999322	4.000000
16.37	118.00	74100	
16.37	115.00	3798	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:40:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 6019 | Lab Sample ID: 140-10956-7

Matrix: Air | Lab File ID: JC16BK10956-07.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/17/2018 04:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18786 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6019
Lab Sample ID: 140-10956-7
Matrix: Air
Lab File ID: JC16BK10956-07.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 04:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6019
Lab Sample ID: 140-10956-7
Matrix: Air
Lab File ID: JC16BK10956-07.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 04:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18786
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1

SDG No.:

Client Sample ID: 6019 Lab Sample ID: 140-10956-7

Matrix: Air Lab File ID: JC16BK10956-07.D

Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 04:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18786 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-07.D
Lims ID: 140-10956-A-7
Client ID: 6019
Sample Type: Client
Inject. Date: 17-Mar-2018 04:18:30 ALS Bottle#: 4 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007638-022
Misc. Info.: 6019
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:41:32 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:41:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.663	9.664	-0.001	89	195095	4.00	
* 2 1,4-Difluorobenzene	114	11.766	11.767	-0.001	95	1107181	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.372	-0.001	88	997443	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.974	17.974	-0.001	96	737313	4.09	
33 Carbon disulfide	76	7.221	7.223	0.004	97	4060	0.0217	
47 1,1,1-Trichloroethane	97	10.701	10.696	0.004	87	3711	0.0255	
116 Naphthalene	128	21.632	21.632	-0.001	98	9001	0.0465	

Reagents:

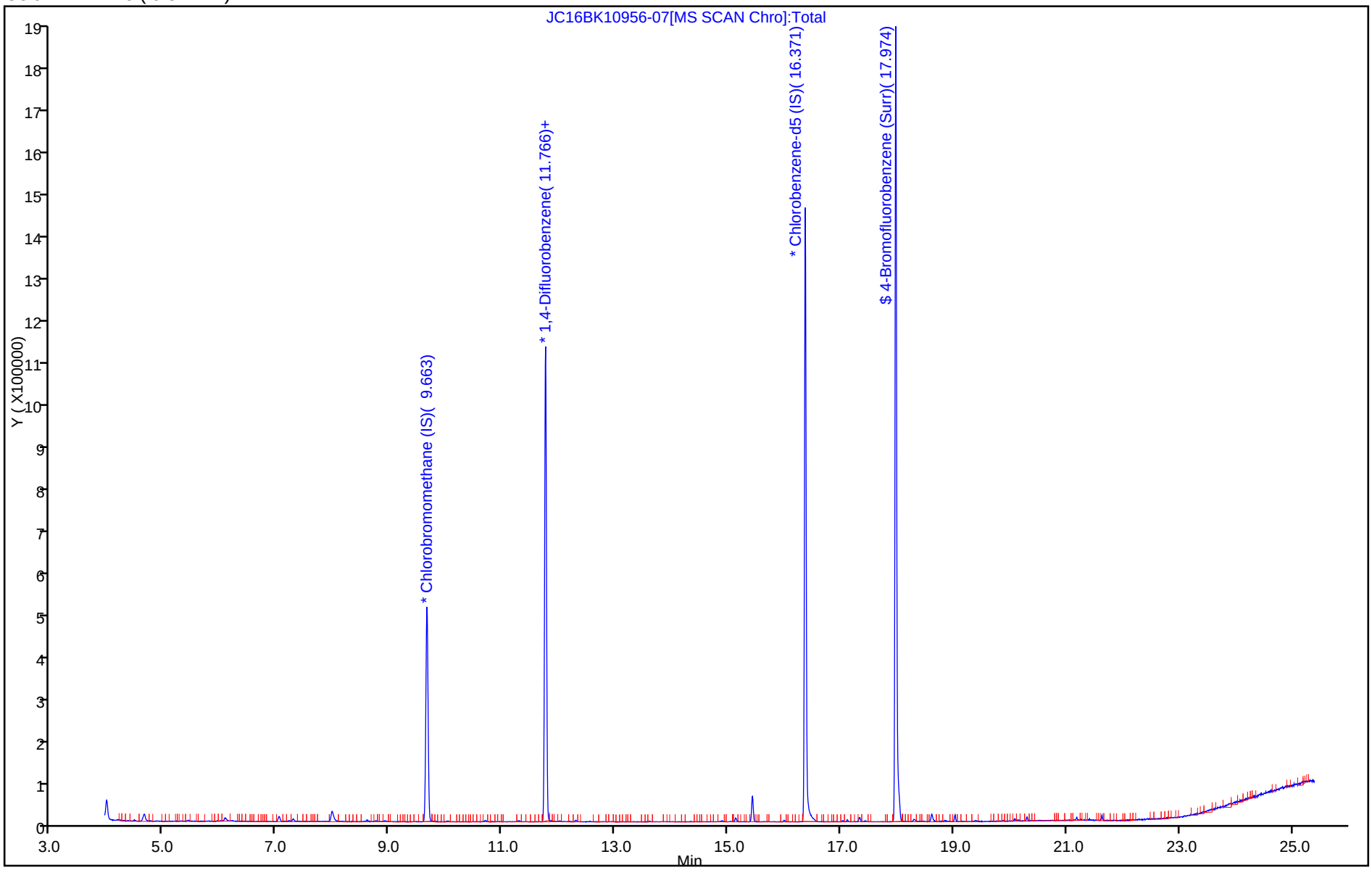
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 17-Mar-2018 12:41:33 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-07.D				
Injection Date:	17-Mar-2018 04:18:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-7	Lab Sample ID:	140-10956-7	Worklist Smp#:	22
Client ID:	6019				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



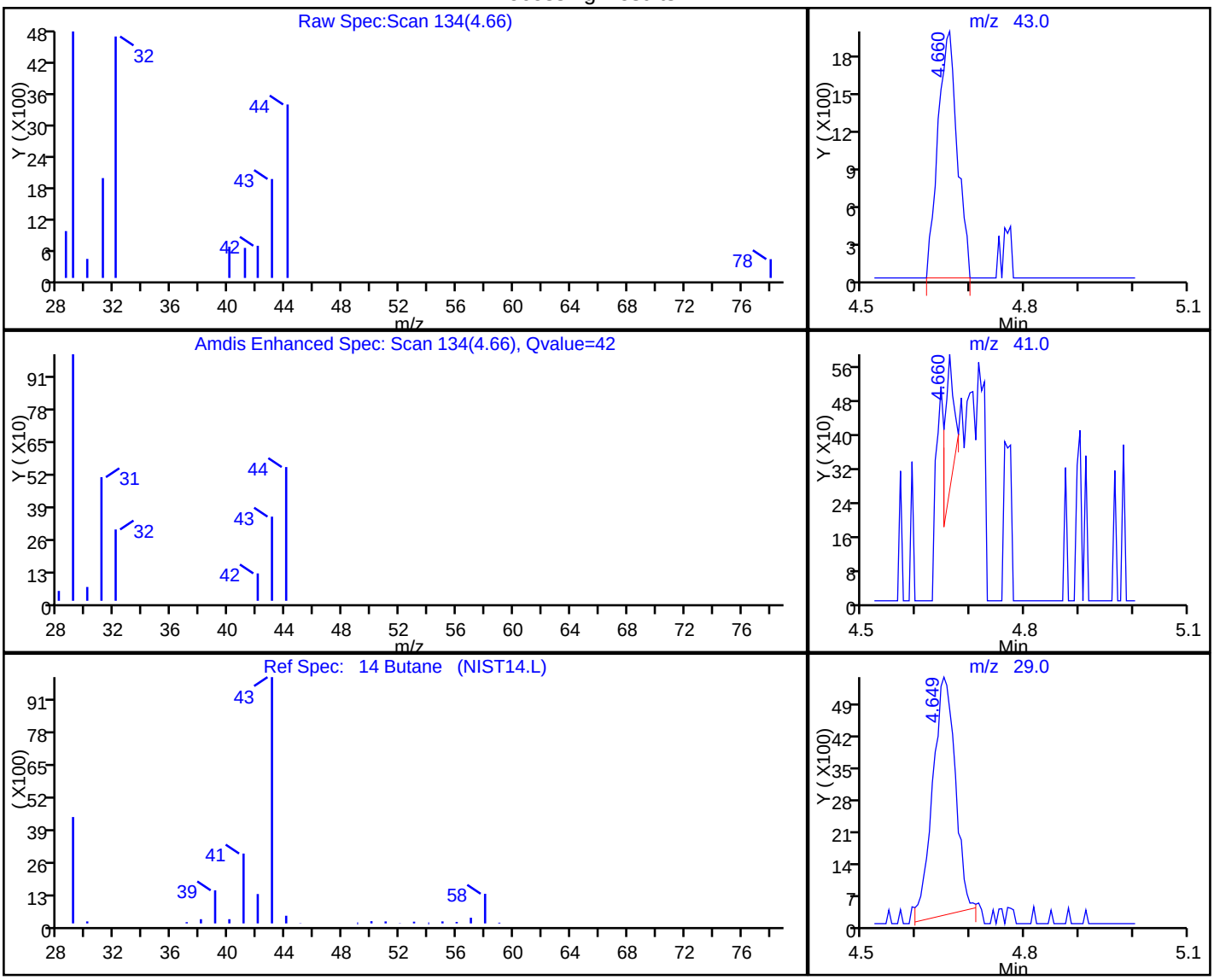
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-07.D				
Injection Date:	17-Mar-2018 04:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-7	Lab Sample ID:	140-10956-7		
Client ID:	6019				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	4744	0.048528
4.66	41.00	346	
4.65	29.00	15494	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:41:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

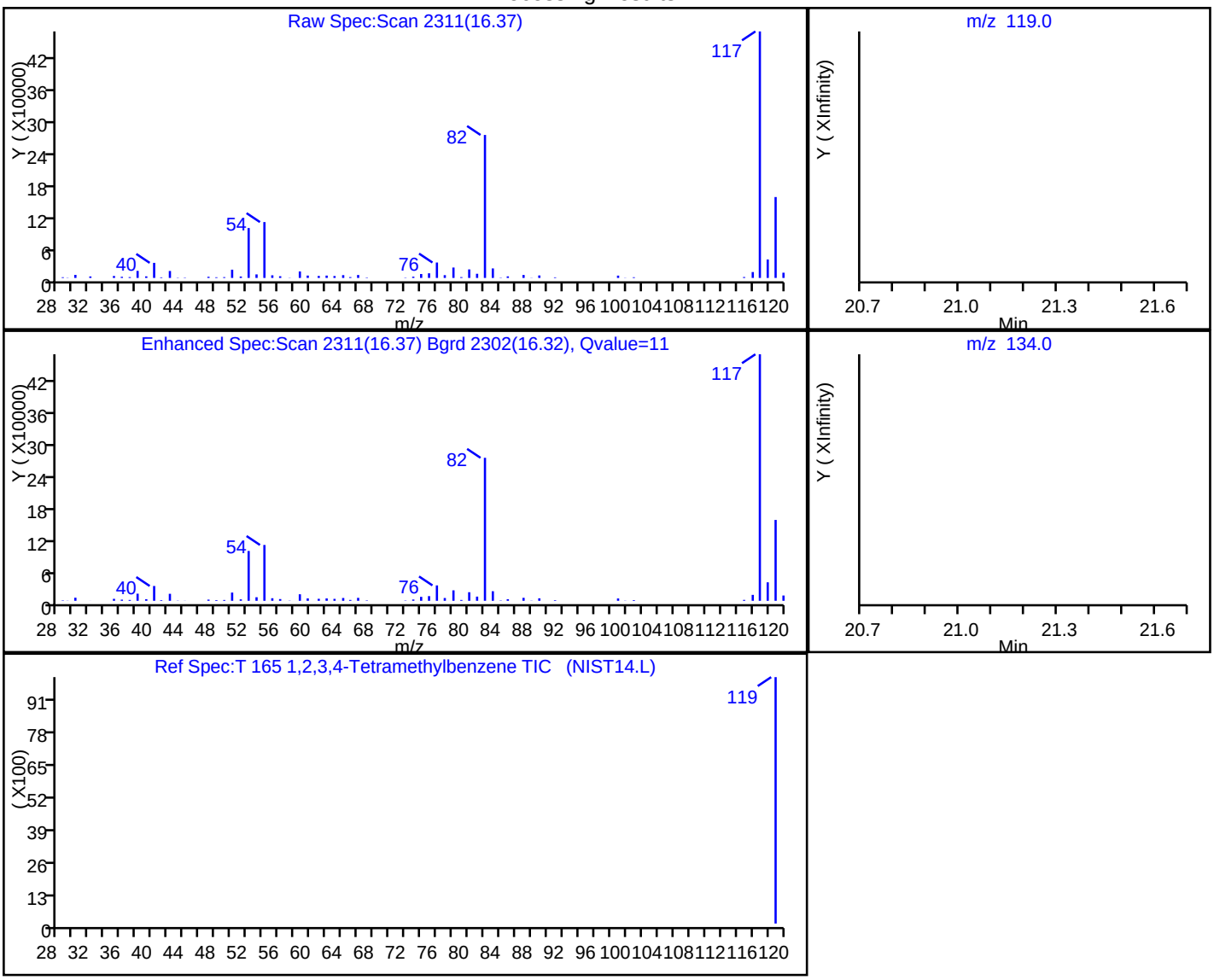
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-07.D				
Injection Date:	17-Mar-2018 04:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-7	Lab Sample ID:	140-10956-7		
Client ID:	6019				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	321752	1.290307
15.44	134.00	107	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:41:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

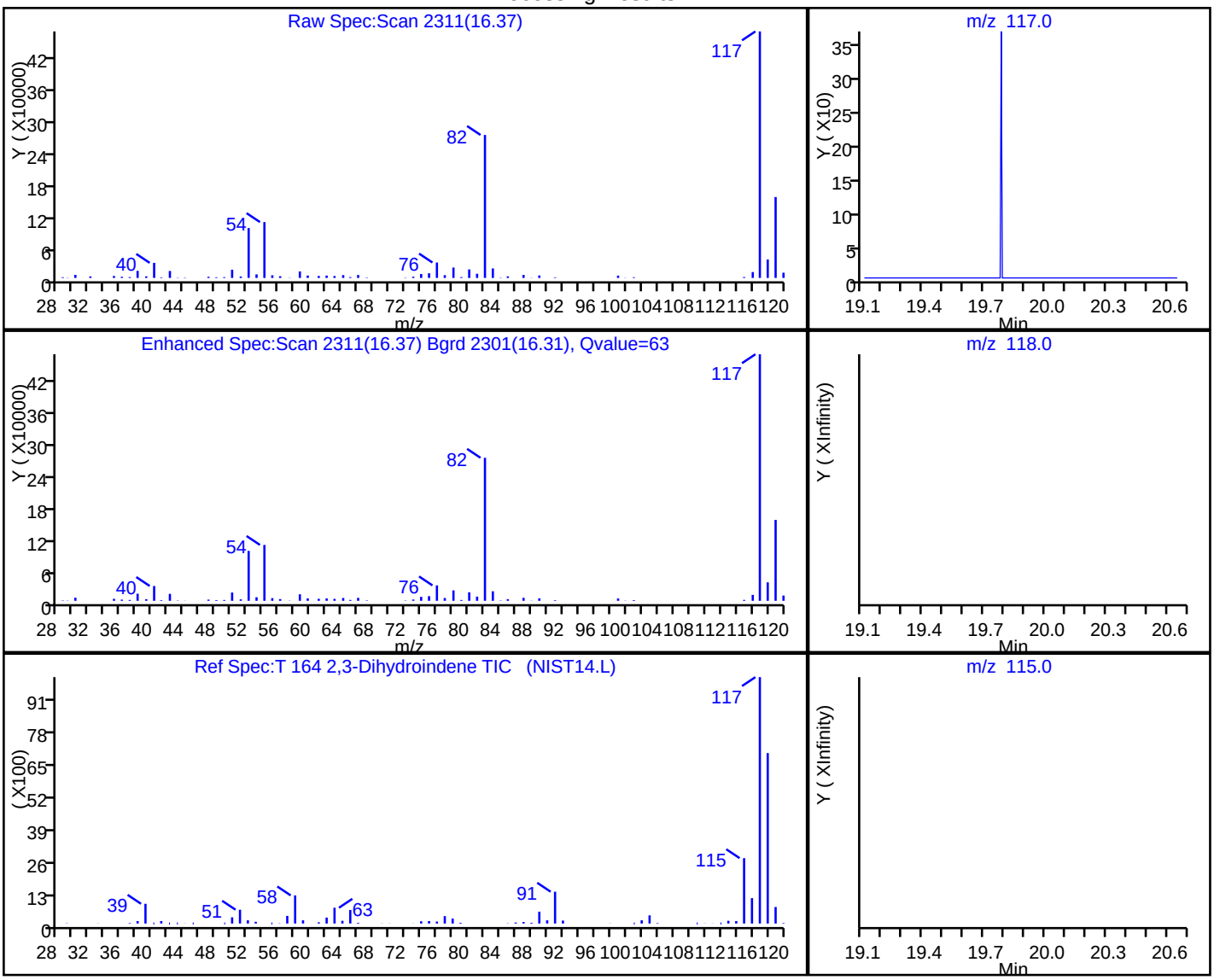
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180313-7638.b\JC16BK10956-07.D				
Injection Date:	17-Mar-2018 04:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-7	Lab Sample ID:	140-10956-7		
Client ID:	6019				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	997443	4.000000
16.37	118.00	72981	
16.37	115.00	3657	

Reviewer: barlozhetskayaa, 17-Mar-2018 12:41:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5644
Lab Sample ID: 140-10956-8
Matrix: Air
Lab File ID: JC17bk10956-08.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/18/2018 02:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18837
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5644
Lab Sample ID: 140-10956-8
Matrix: Air
Lab File ID: JC17bk10956-08.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/18/2018 02:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18837
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5644
Lab Sample ID: 140-10956-8
Matrix: Air
Lab File ID: JC17bk10956-08.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/18/2018 02:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18837
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 5644 Lab Sample ID: 140-10956-8
Matrix: Air Lab File ID: JC17bk10956-08.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/18/2018 02:41
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18837 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-08.D
Lims ID: 140-10956-A-8
Client ID: 5644
Sample Type: Client
Inject. Date: 18-Mar-2018 02:41:30 ALS Bottle#: 15 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007658-018
Misc. Info.: 5644
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Mar-2018 10:10:53 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: tajh Date: 19-Mar-2018 10:10:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.674	9.678	-0.004	91	176002	4.00	
* 2 1,4-Difluorobenzene	114	11.772	11.776	-0.004	95	986290	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.372	16.381	-0.009	88	882196	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.975	17.978	-0.003	95	648777	4.07	
17 Ethanol	31	5.446	5.428	0.018	96	19651	0.9216	
25 Isopropyl alcohol	45	6.264	6.181	0.083	89	3056	0.0532	
33 Carbon disulfide	76	7.237	7.235	0.002	95	3258	0.0193	

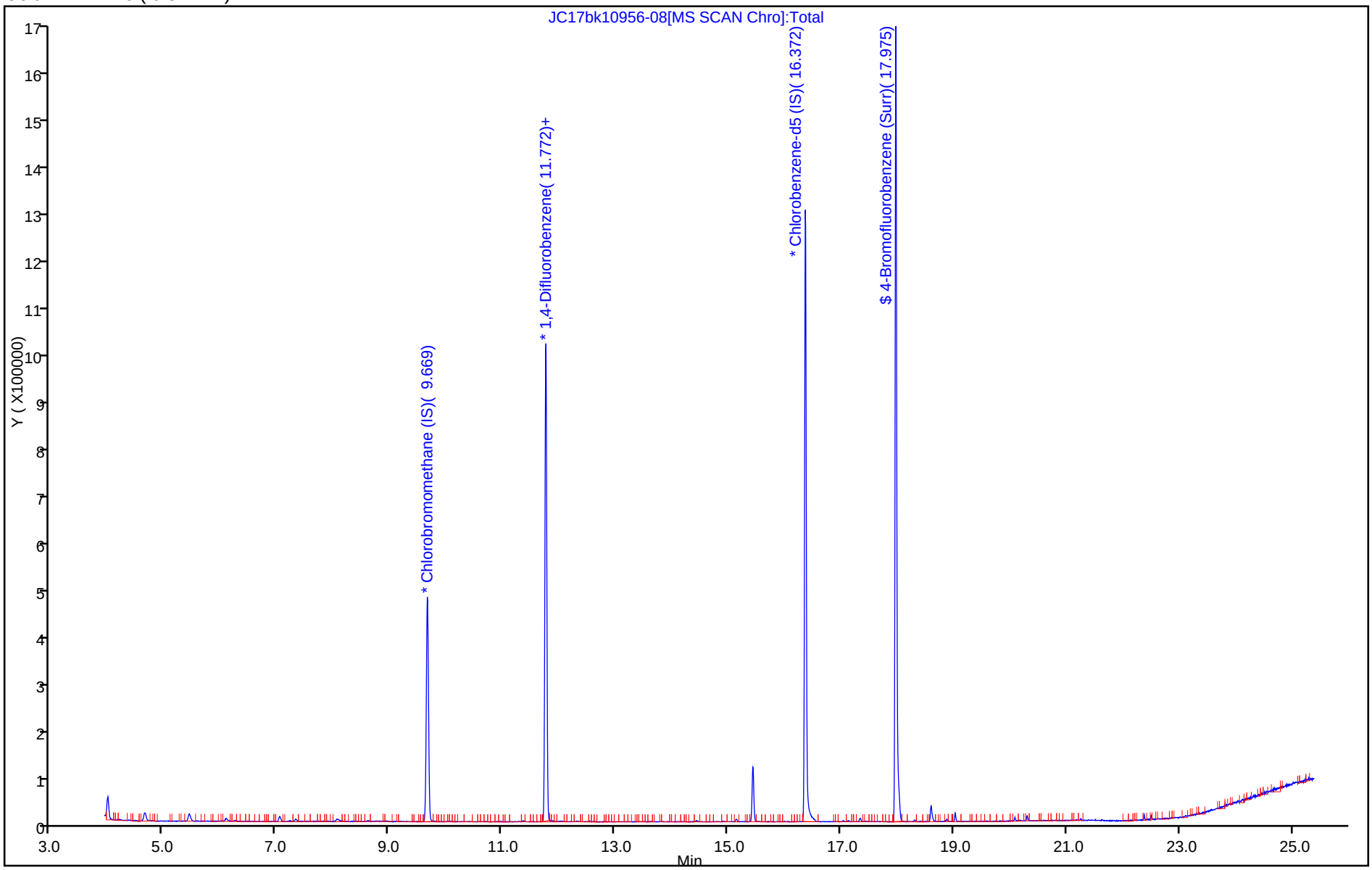
Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Mar-2018 10:11:20 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-08.D				
Injection Date:	18-Mar-2018 02:41:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-8	Lab Sample ID:	140-10956-8	Worklist Smp#:	18
Client ID:	5644				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



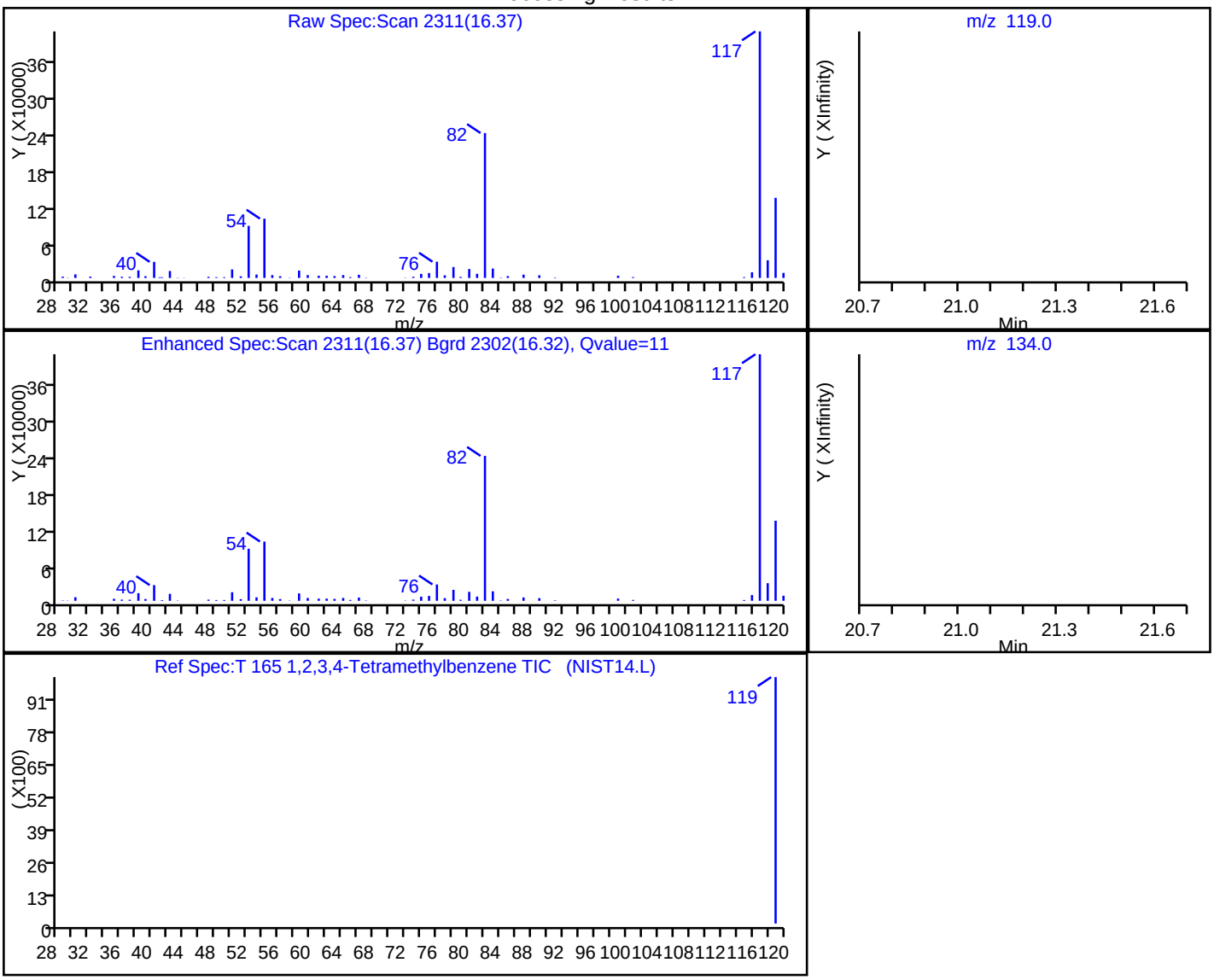
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-08.D				
Injection Date:	18-Mar-2018 02:41:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-8	Lab Sample ID:	140-10956-8		
Client ID:	5644				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	282937	1.282876
15.43	134.00	827	

Reviewer: tajh, 19-Mar-2018 10:10:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

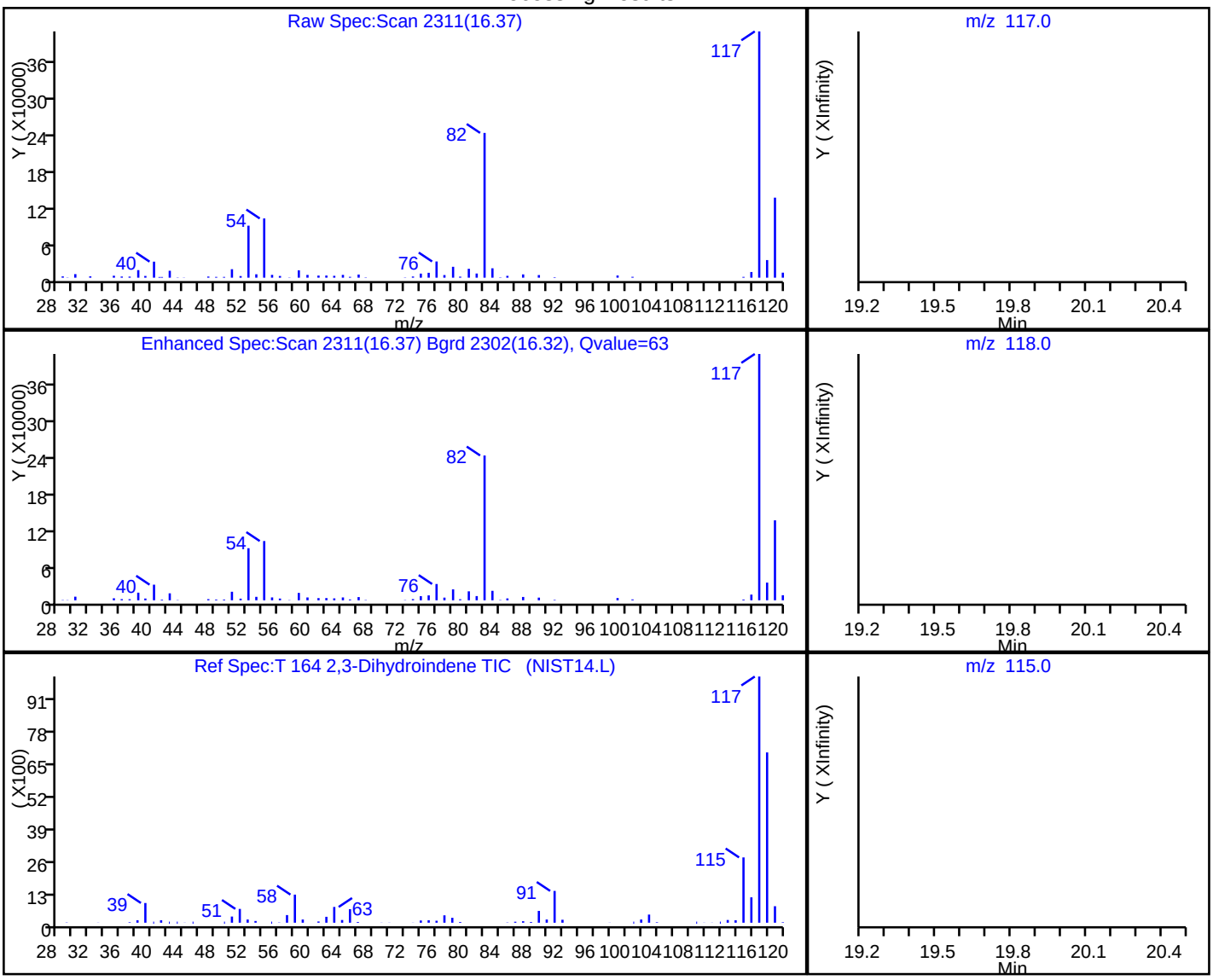
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-08.D				
Injection Date:	18-Mar-2018 02:41:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-8	Lab Sample ID:	140-10956-8		
Client ID:	5644				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	882196	4.000000
16.38	118.00	64457	
16.37	115.00	1823	

Reviewer: tajh, 19-Mar-2018 10:10:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 3413 | Lab Sample ID: 140-10956-9

Matrix: Air | Lab File ID: JC17bk10956-09.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/18/2018 03:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18837 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 3413 | Lab Sample ID: 140-10956-9

Matrix: Air | Lab File ID: JC17bk10956-09.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/18/2018 03:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18837 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3413
Lab Sample ID: 140-10956-9
Matrix: Air
Lab File ID: JC17bk10956-09.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/18/2018 03:27
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18837
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3413 Lab Sample ID: 140-10956-9
Matrix: Air Lab File ID: JC17bk10956-09.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/18/2018 03:27
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18837 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-09.D
Lims ID: 140-10956-A-9
Client ID: 3413
Sample Type: Client
Inject. Date: 18-Mar-2018 03:27:30 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007658-019
Misc. Info.: 3413
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Mar-2018 10:10:53 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: tajh Date: 19-Mar-2018 10:10:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.670	9.678	-0.008	91	166174	4.00	
* 2 1,4-Difluorobenzene	114	11.773	11.776	-0.003	95	954248	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.373	16.381	-0.008	90	906876	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.976	17.978	-0.002	95	648777	3.96	

Reagents:

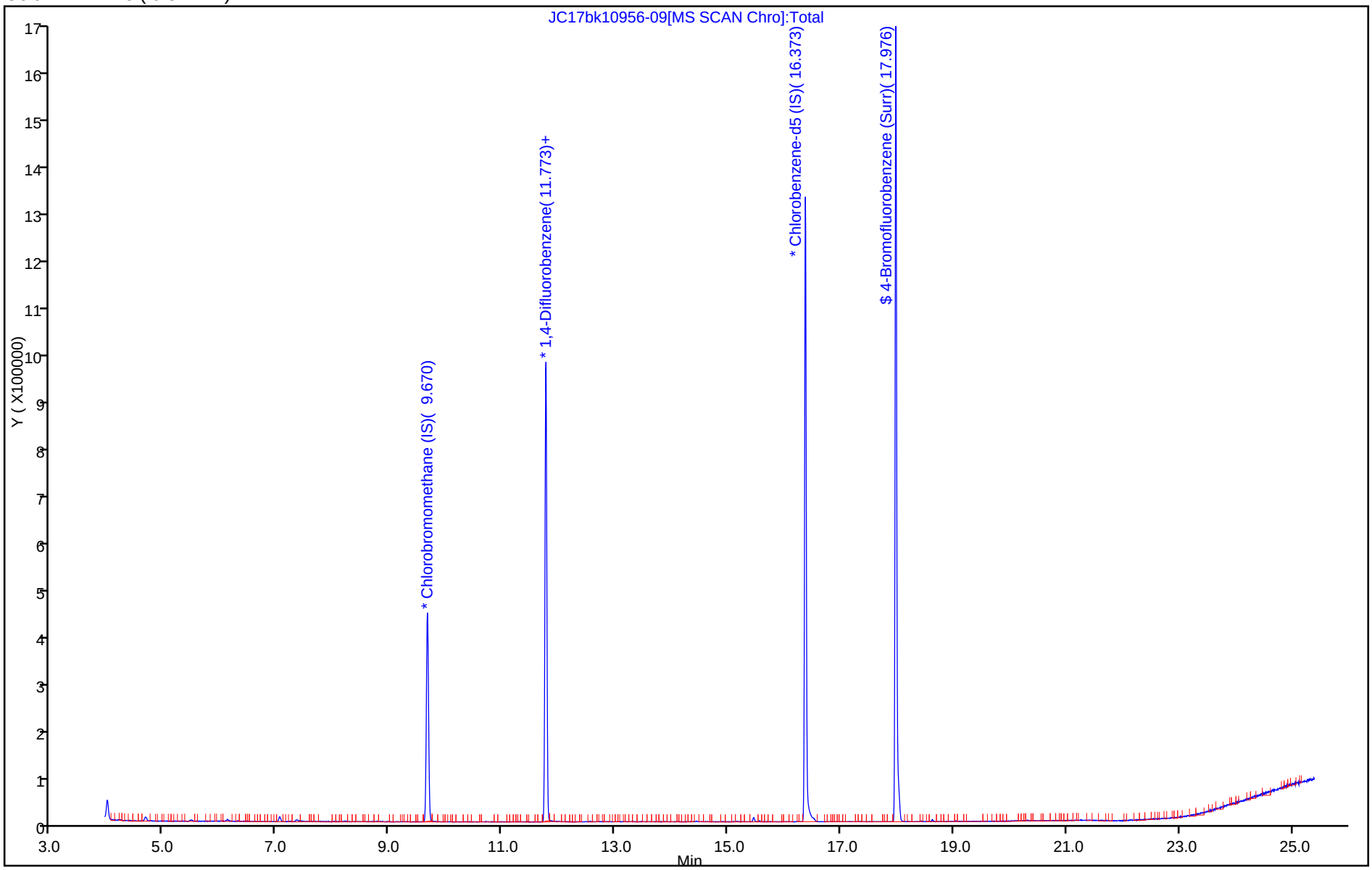
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Mar-2018 10:11:22 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-09.D				
Injection Date:	18-Mar-2018 03:27:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-9	Lab Sample ID:	140-10956-9	Worklist Smp#:	19
Client ID:	3413				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



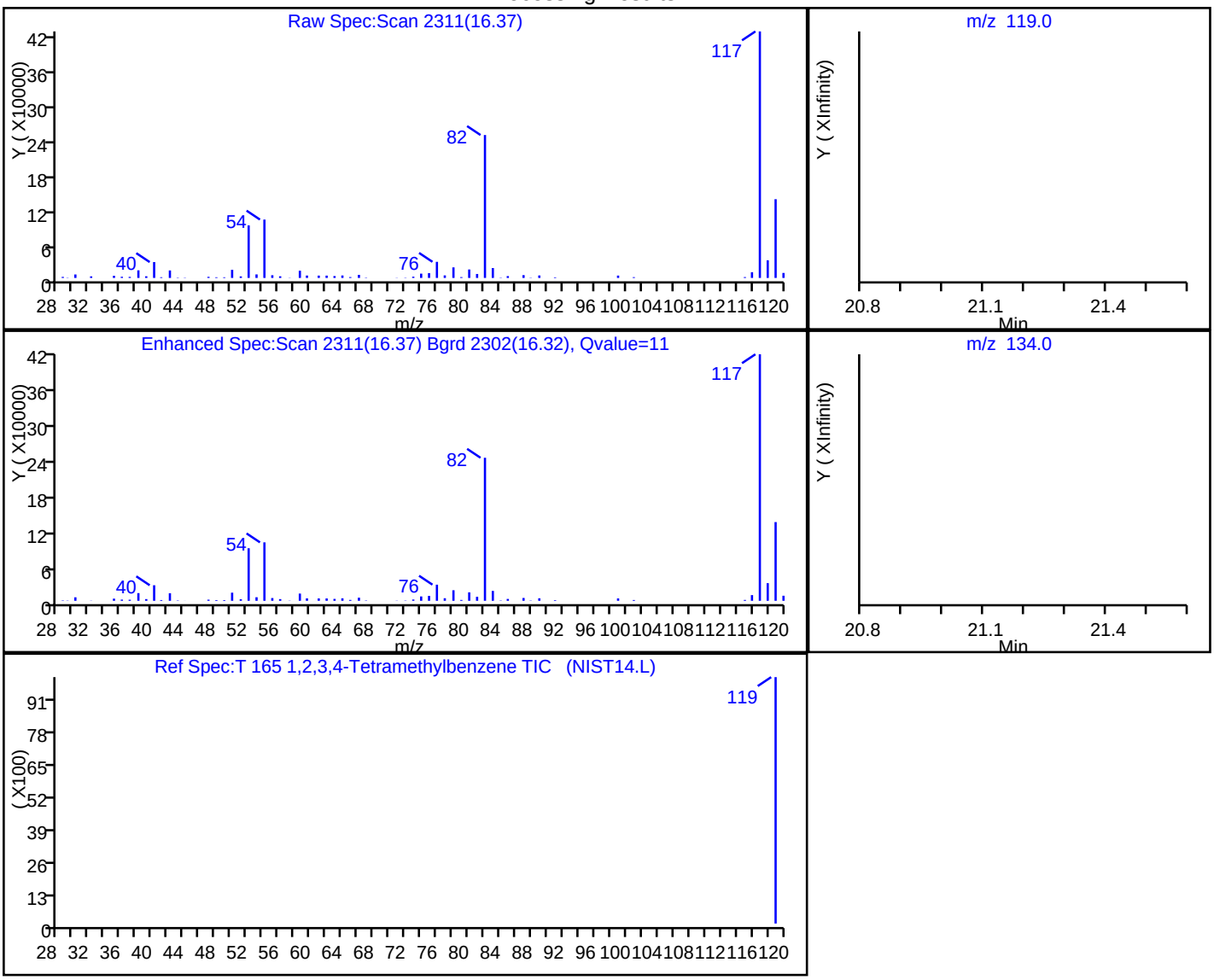
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-09.D				
Injection Date:	18-Mar-2018 03:27:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-9	Lab Sample ID:	140-10956-9		
Client ID:	3413				
Operator ID:	403648	ALS Bottle#:	16	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	285106	1.257530
24.06	134.00	104	

Reviewer: tajh, 19-Mar-2018 10:10:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

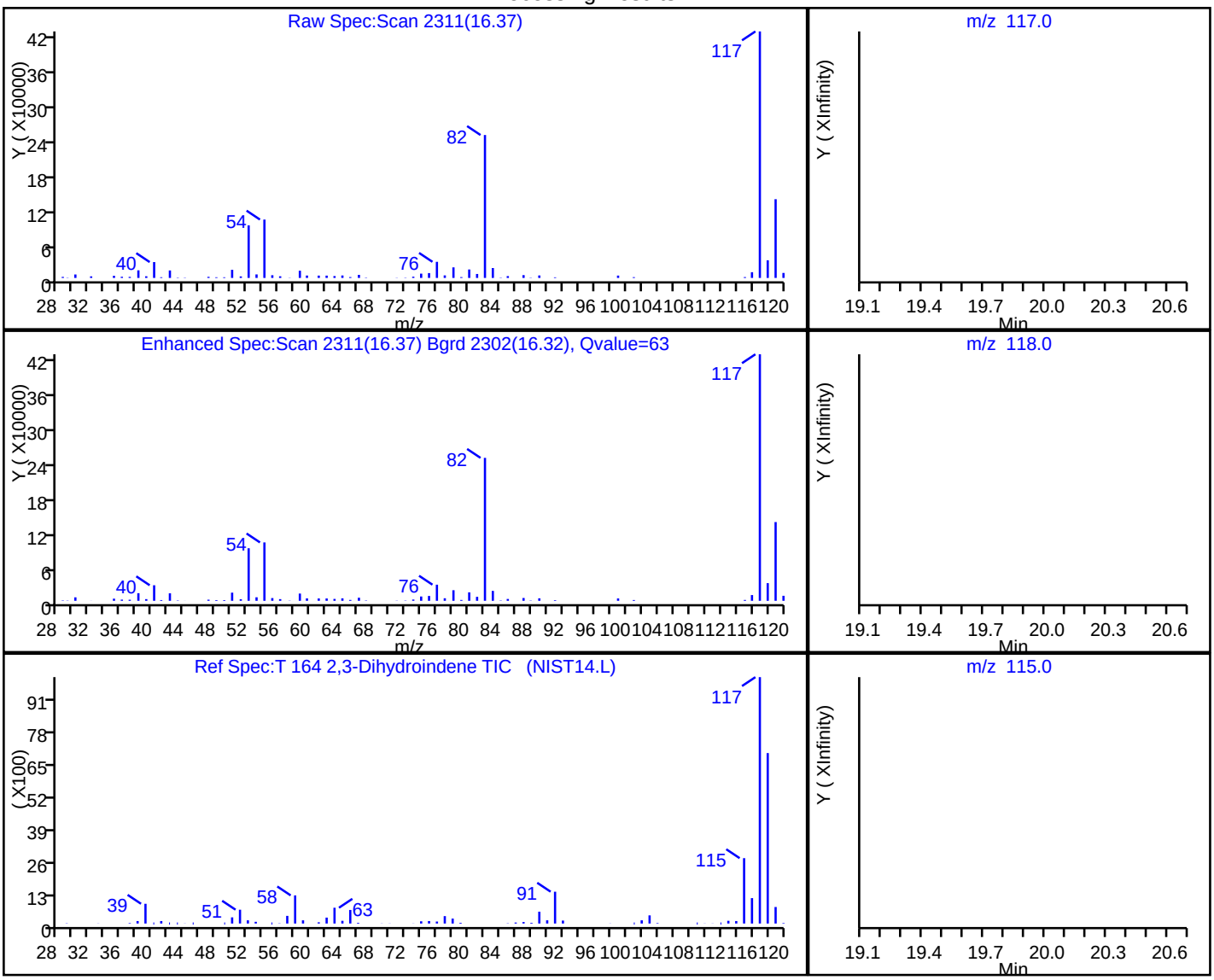
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180315-7658.b\JC17bk10956-09.D				
Injection Date:	18-Mar-2018 03:27:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-9	Lab Sample ID:	140-10956-9		
Client ID:	3413				
Operator ID:	403648	ALS Bottle#:	16	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	906876	4.000000
16.37	118.00	64585	
16.38	115.00	3139	

Reviewer: tajh, 19-Mar-2018 10:10:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 6149 | Lab Sample ID: 140-10956-10

Matrix: Air | Lab File ID: JC20bk10956-10.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 03:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6149
Lab Sample ID: 140-10956-10
Matrix: Air
Lab File ID: JC20bk10956-10.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:32
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6149
Lab Sample ID: 140-10956-10
Matrix: Air
Lab File ID: JC20bk10956-10.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:32
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6149 Lab Sample ID: 140-10956-10
Matrix: Air Lab File ID: JC20bk10956-10.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 03:32
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Lims ID:	140-10956-A-10				
Client ID:	6149				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 03:32:30	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-022				
Misc. Info.:	6149				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:56:39	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:56:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.675	9.680	-0.005	91	167275	4.00	
* 2 1,4-Difluorobenzene	114	11.773	11.778	-0.005	95	941088	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.372	16.378	-0.006	89	799975	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.981	17.975	0.000	96	624004	4.31	
59 Trichloroethene	130	12.461	12.455	-0.006	92	2261	0.0307	

Reagents:

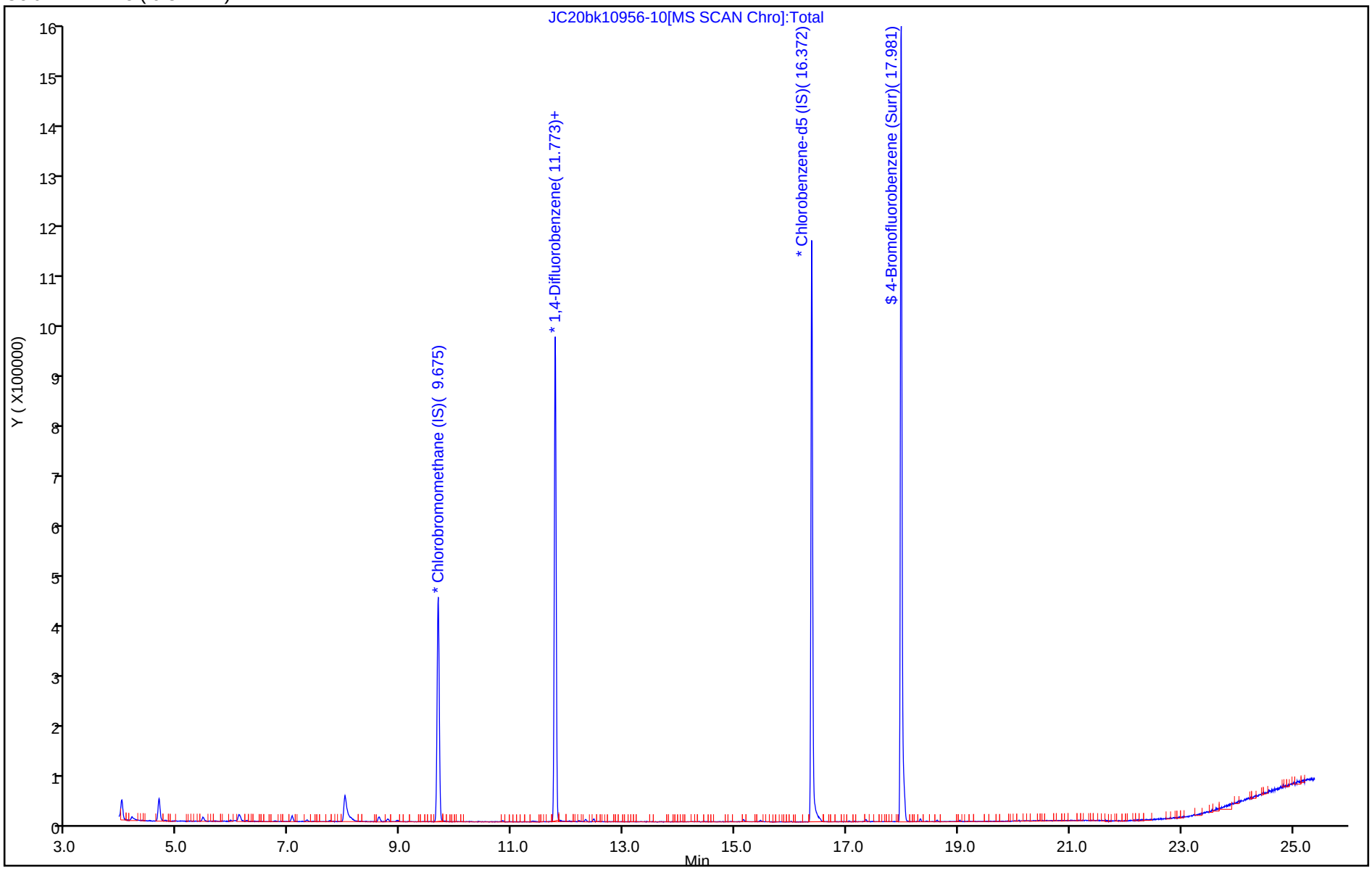
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:56:39 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10	Worklist Smp#:	22
Client ID:	6149				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



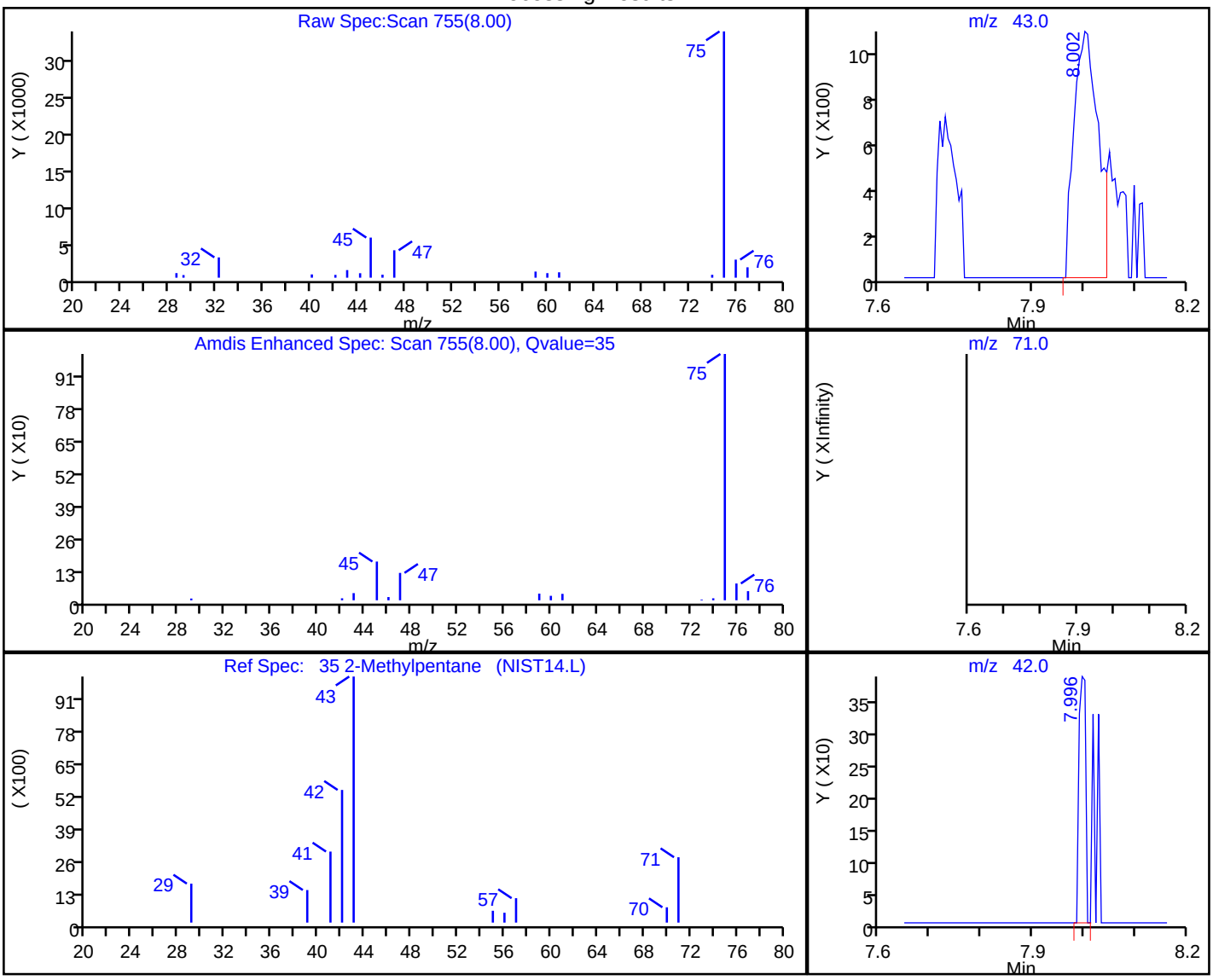
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10		
Client ID:	6149				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

Processing Results



RT	Mass	Response	Amount
8.00	43.00	3401	0.026653
8.00	42.00	353	
7.91	71.00	0	

Reviewer: tajh, 21-Mar-2018 09:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

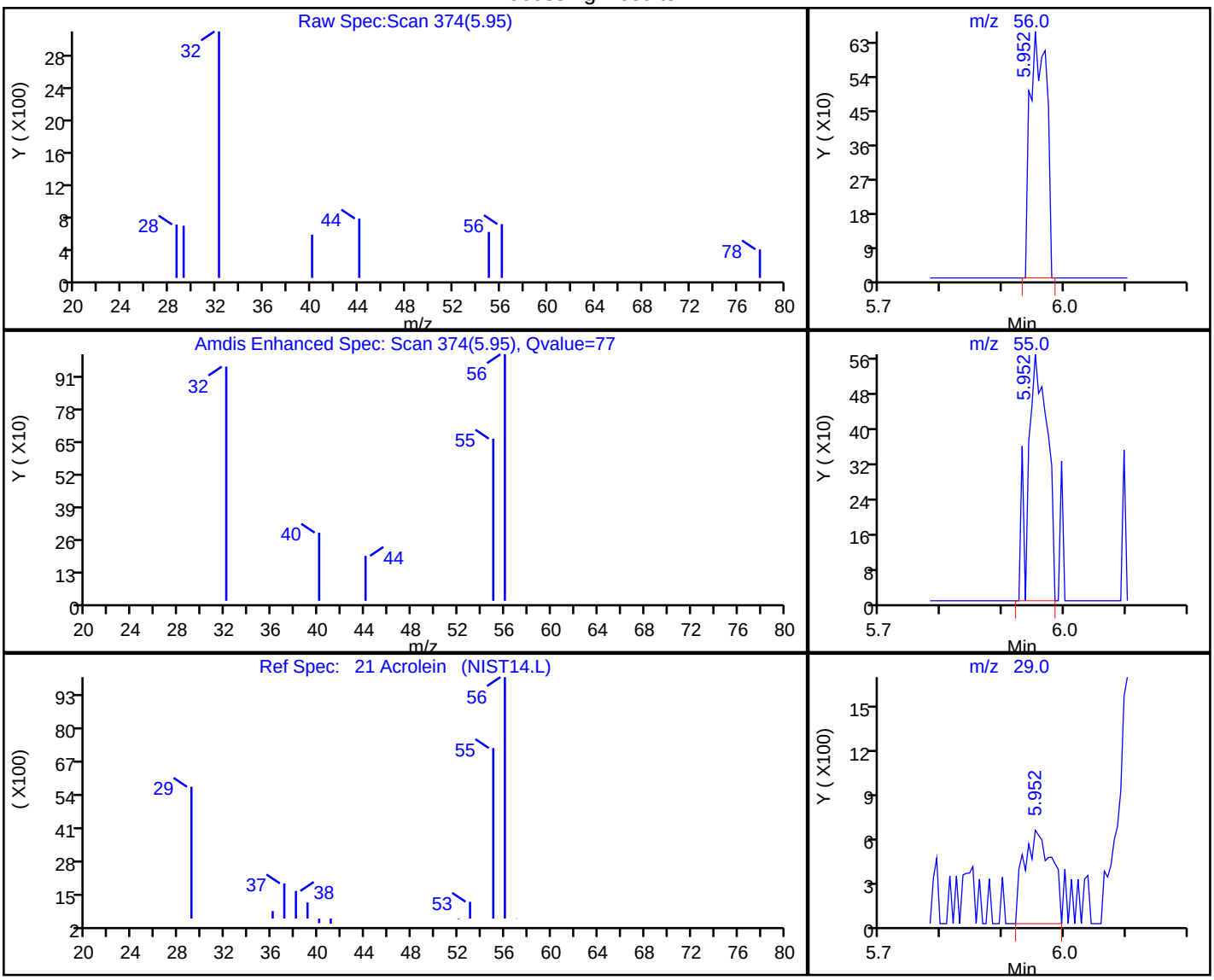
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10		
Client ID:	6149				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

21 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
5.95	56.00	1227	0.084626
5.95	55.00	1223	
5.95	29.00	1973	

Reviewer: tajh, 21-Mar-2018 09:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

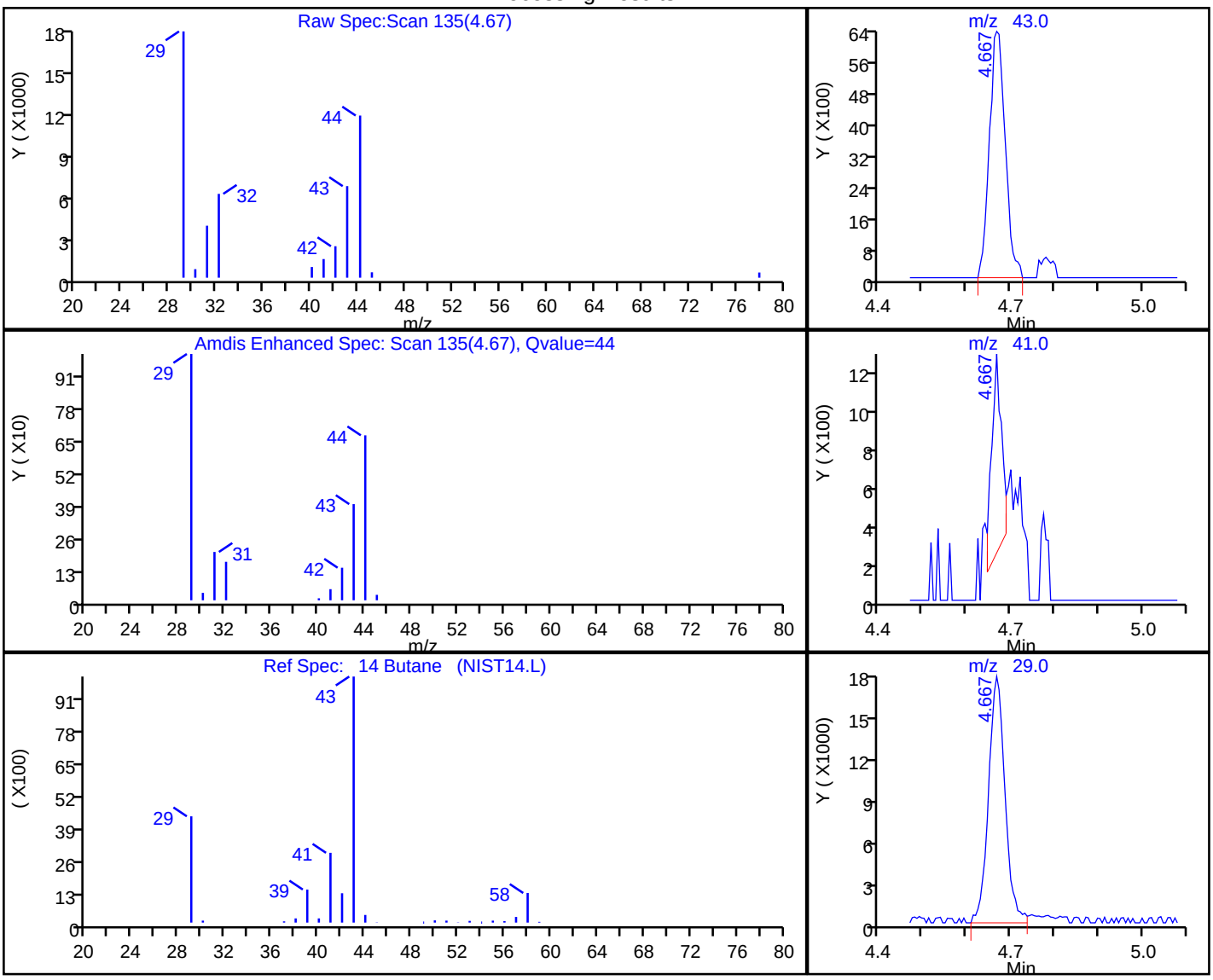
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10		
Client ID:	6149				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	16103	0.192120
4.67	41.00	1652	
4.67	29.00	45245	

Reviewer: tajh, 21-Mar-2018 09:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

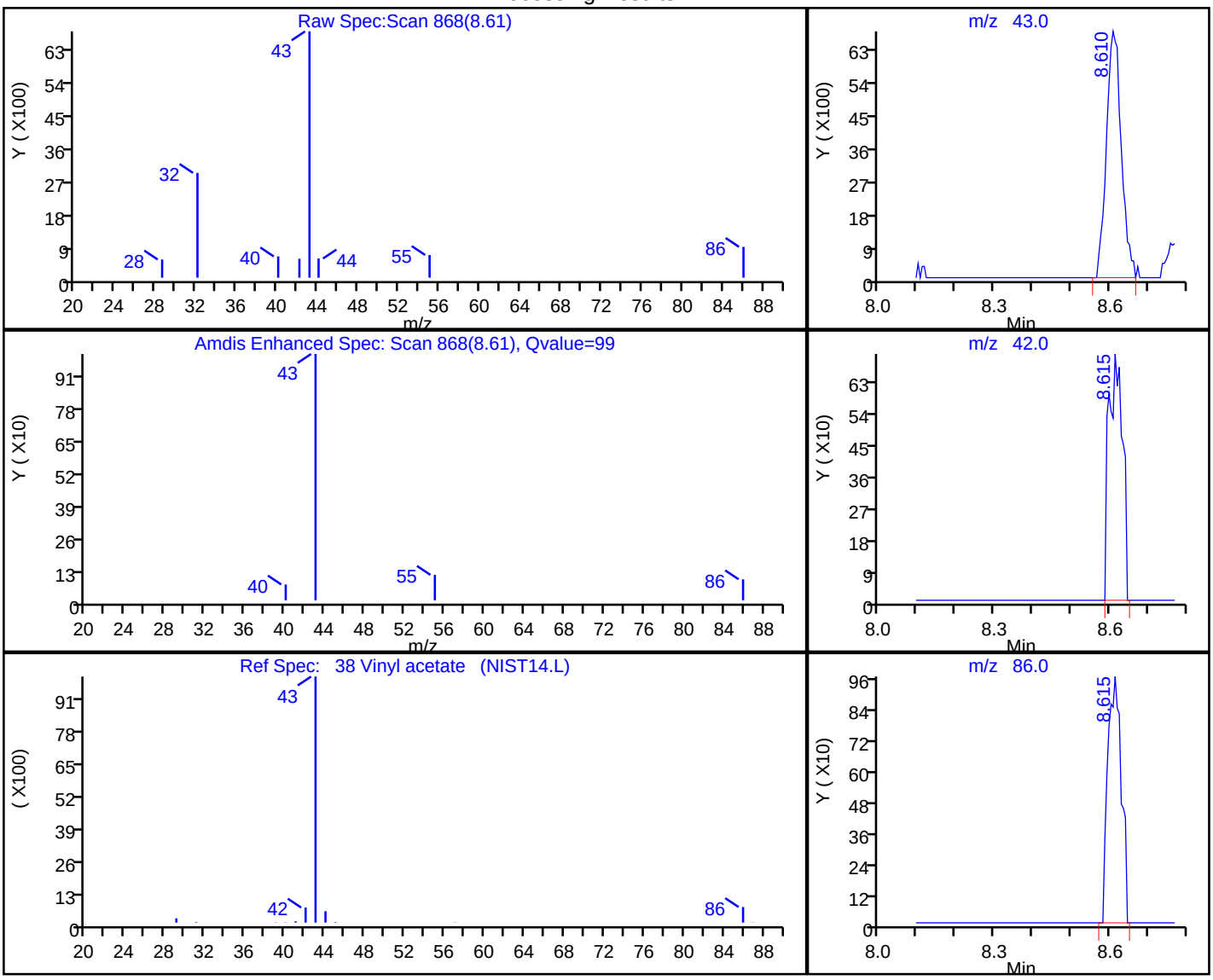
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10		
Client ID:	6149				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.61	43.00	18293	0.154160
8.62	42.00	1767	
8.62	86.00	2374	

Reviewer: tajh, 21-Mar-2018 09:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

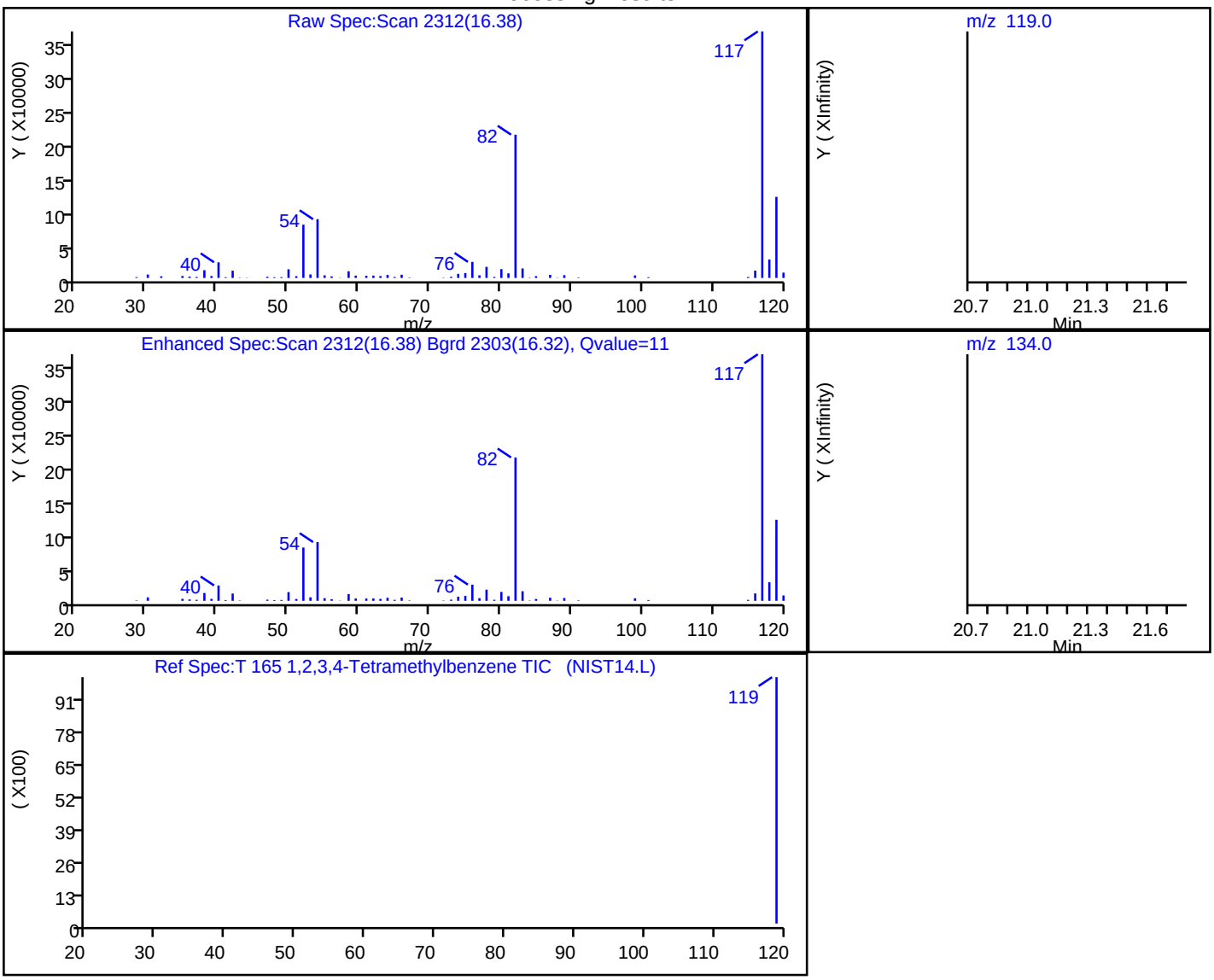
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10		
Client ID:	6149				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	258908	1.294580
12.47	134.00	245	

Reviewer: tajh, 21-Mar-2018 09:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

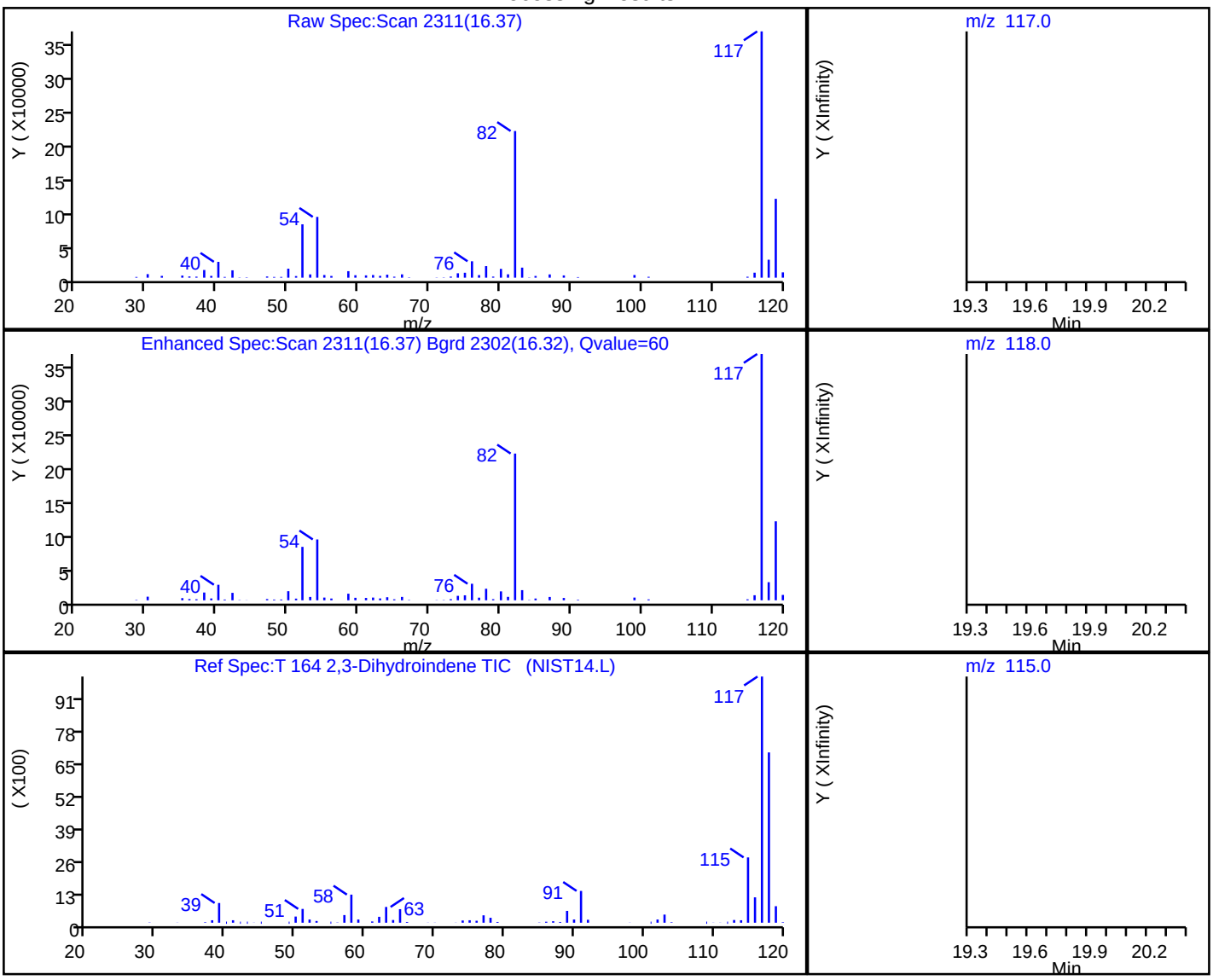
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-10.D				
Injection Date:	21-Mar-2018 03:32:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-10	Lab Sample ID:	140-10956-10		
Client ID:	6149				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	799975	4.000000
16.38	118.00	58670	
16.38	115.00	2916	

Reviewer: tajh, 21-Mar-2018 09:56:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6014
Lab Sample ID: 140-10956-11
Matrix: Air
Lab File ID: JC20bk10956-11.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 04:19
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6014
Lab Sample ID: 140-10956-11
Matrix: Air
Lab File ID: JC20bk10956-11.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 04:19
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 6014
Lab Sample ID: 140-10956-11
Matrix: Air
Lab File ID: JC20bk10956-11.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 04:19
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1

SDG No.:

Client Sample ID: 6014 Lab Sample ID: 140-10956-11

Matrix: Air Lab File ID: JC20bk10956-11.D

Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 04:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Lims ID:	140-10956-A-11				
Client ID:	6014				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 04:19:30	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-023				
Misc. Info.:	6014				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:57:58	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:57:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.670	9.680	-0.010	90	162182	4.00	
* 2 1,4-Difluorobenzene	114	11.773	11.778	-0.005	95	927420	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.373	16.378	-0.006	89	802469	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.976	17.975	-0.005	95	641950	4.42	
14 Butane	43	4.774	4.769	0.000	89	2439	0.0300	
17 Ethanol	31	5.441	5.419	0.016	96	18723	0.9529	
25 Isopropyl alcohol	45	6.227	6.166	0.054	71	2685	0.0507	
33 Carbon disulfide	76	7.233	7.224	0.000	95	4625	0.0297	
40 2-Butanone (MEK)	72	8.922	8.890	0.022	98	3323	0.1603	
72 2-Hexanone	58	14.893	14.883	0.005	87	1320	0.0331	

Reagents:

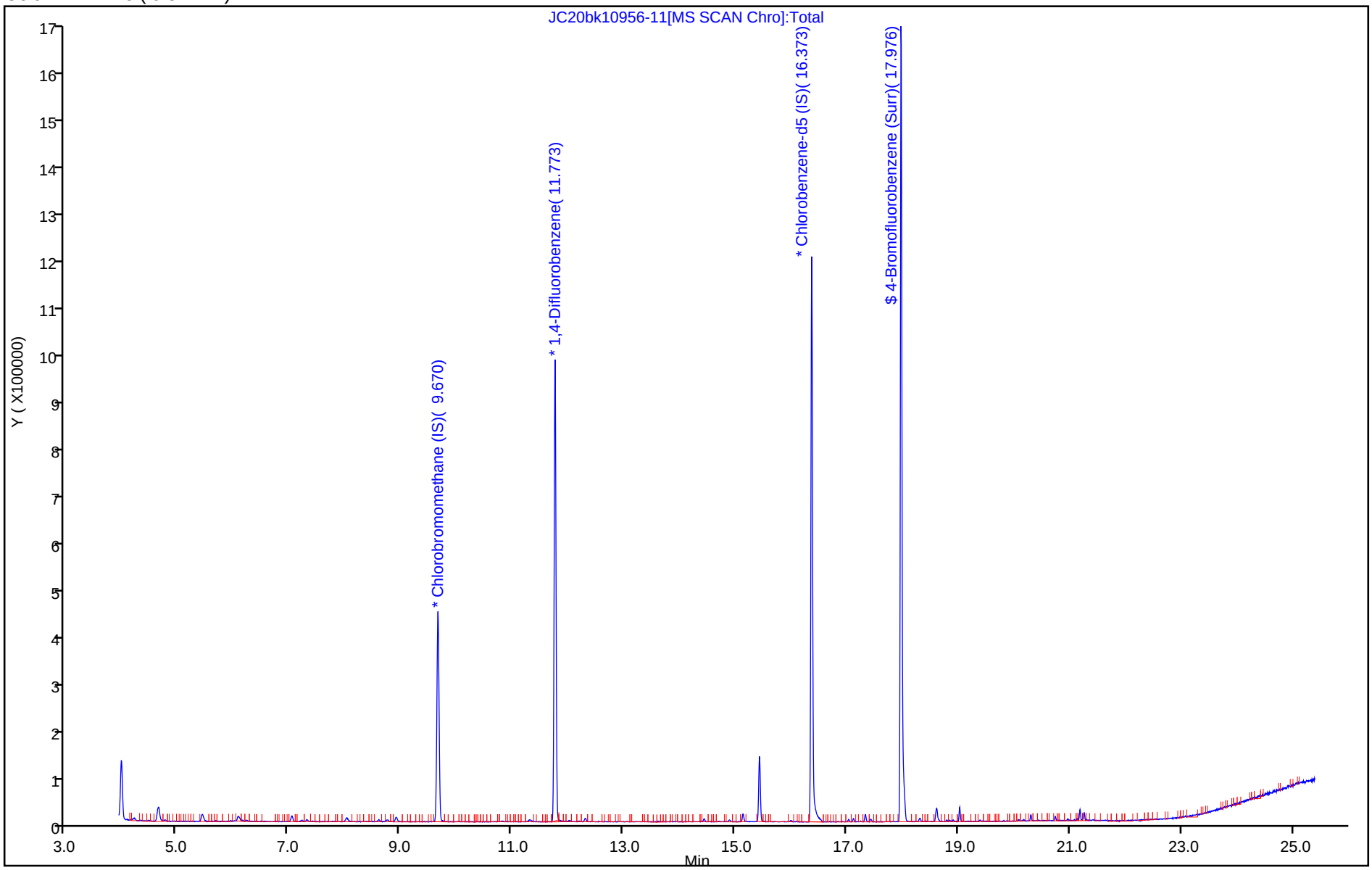
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:57:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11	Worklist Smp#:	23
Client ID:	6014				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



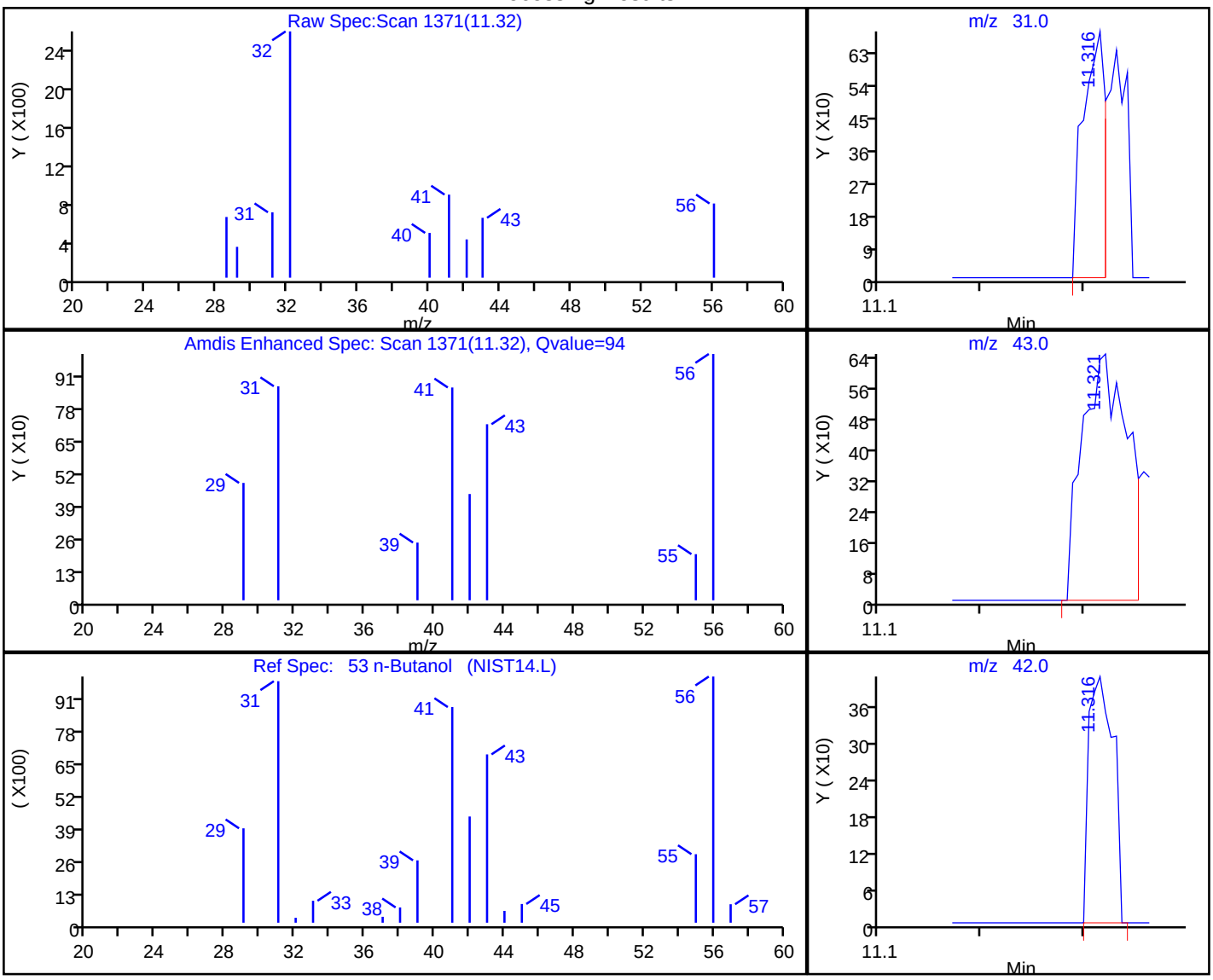
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11		
Client ID:	6014				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

53 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
11.32	31.00	1029	0.064153
11.32	43.00	1964	
11.32	42.00	668	

Reviewer: tajh, 21-Mar-2018 09:57:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

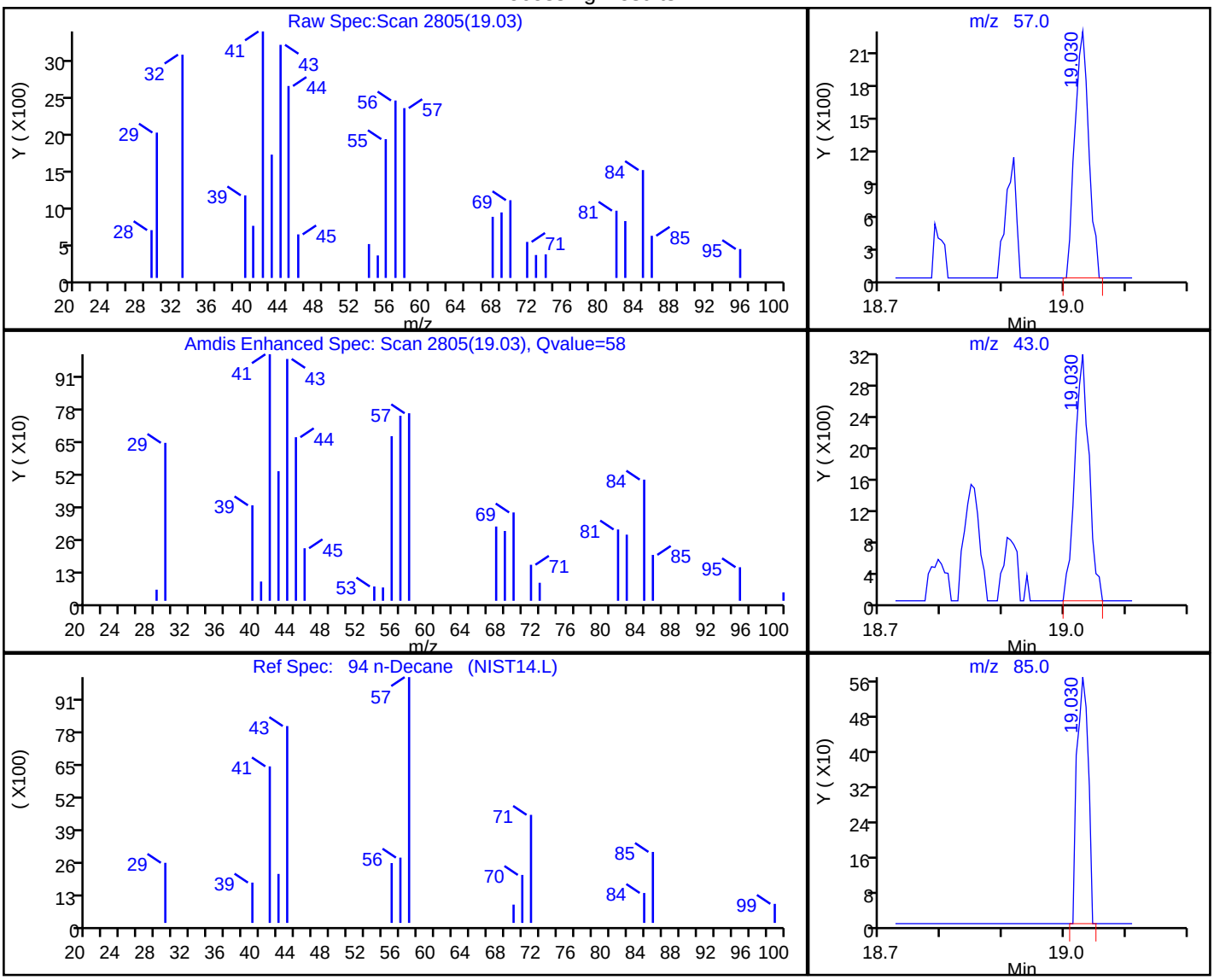
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11		
Client ID:	6014				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

94 n-Decane, CAS: 124-18-5

Processing Results



RT	Mass	Response	Amount
19.03	57.00	3606	0.026607
19.03	43.00	5037	
19.03	85.00	719	

Reviewer: tajh, 21-Mar-2018 09:57:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

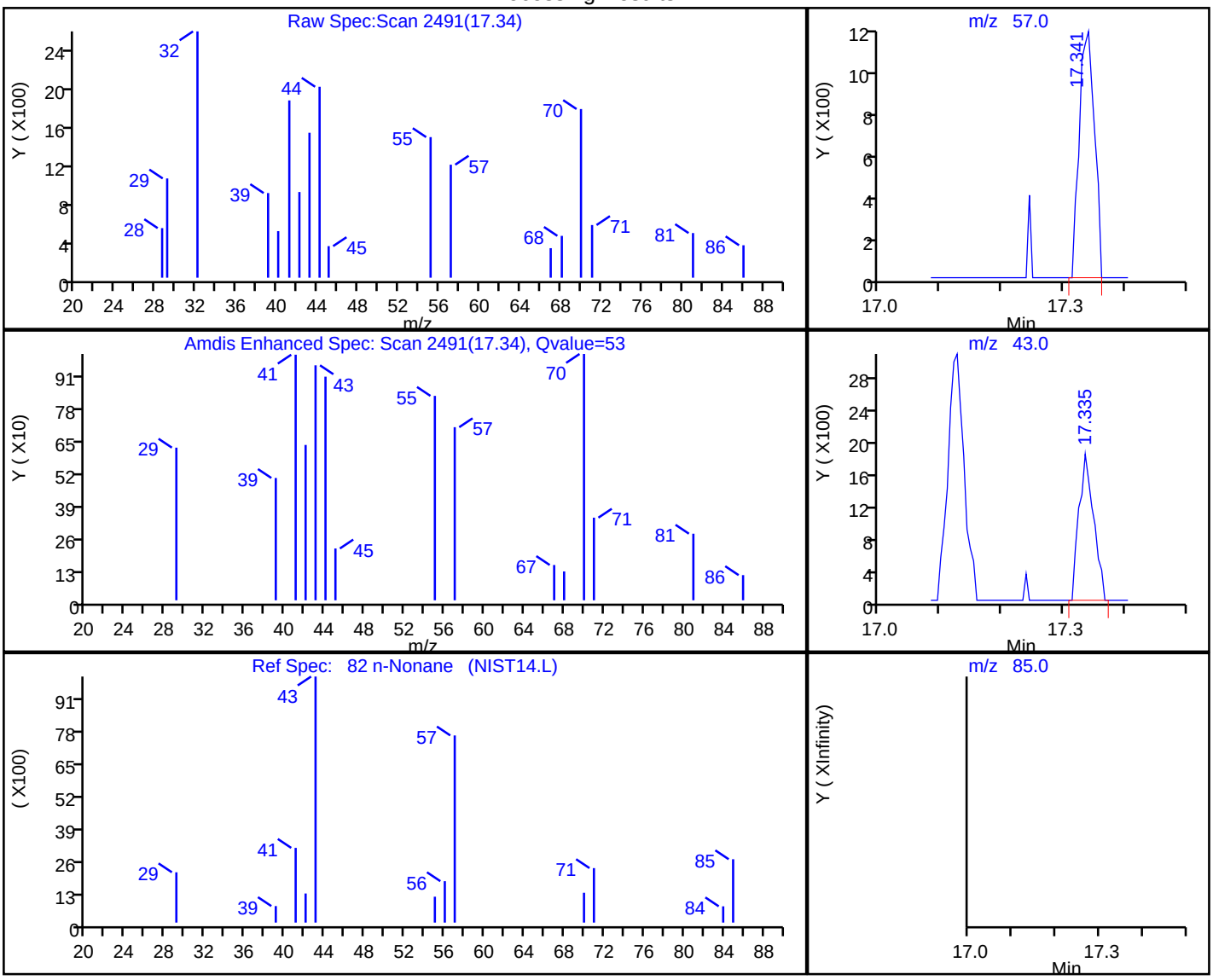
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11		
Client ID:	6014				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

82 n-Nonane, CAS: 111-84-2

Processing Results



RT	Mass	Response	Amount
17.34	57.00	2020	0.017638
17.34	43.00	3033	
17.24	85.00	0	

Reviewer: tajh, 21-Mar-2018 09:57:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

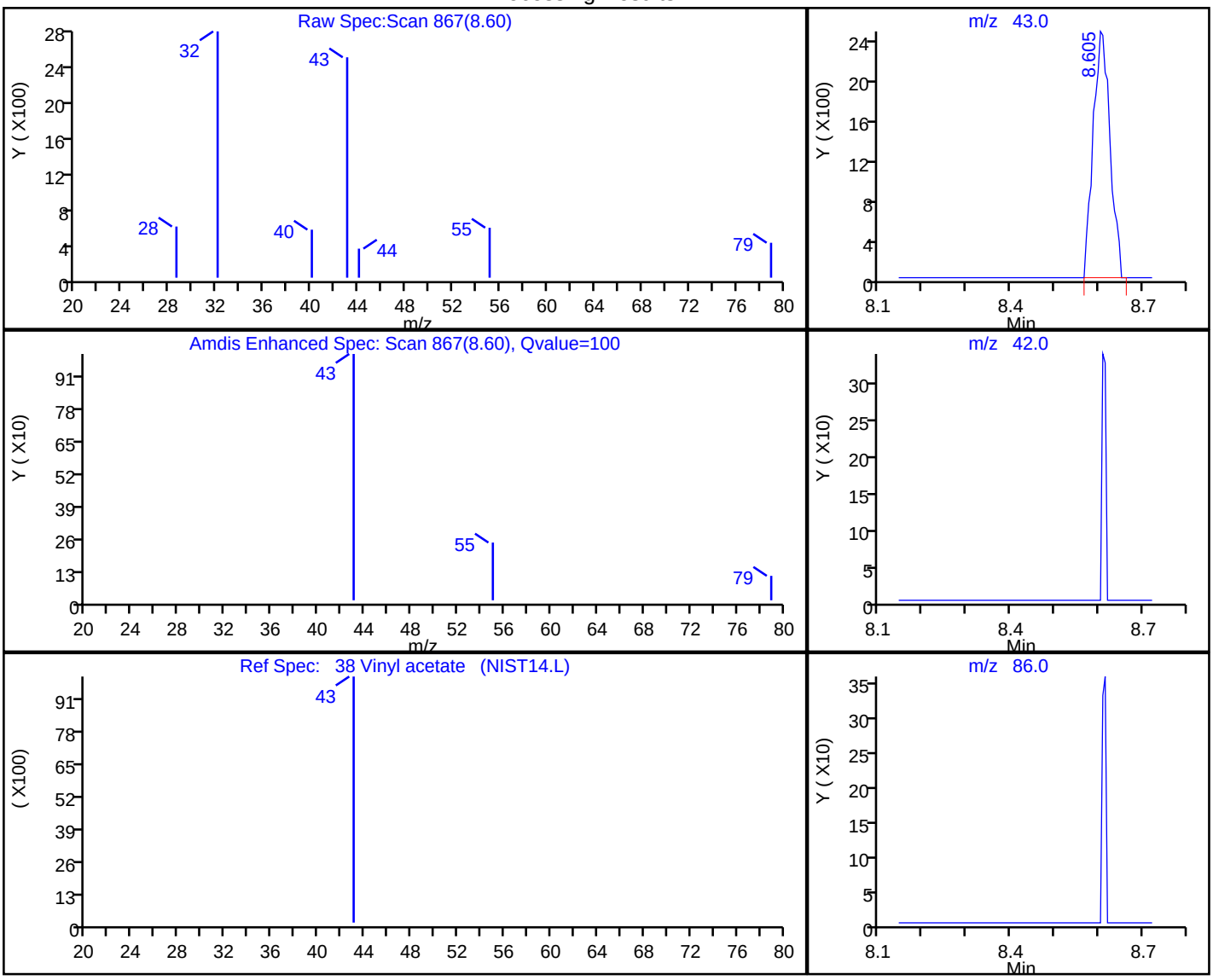
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11		
Client ID:	6014				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.60	43.00	6609	0.057445
8.43	42.00	0	
8.43	86.00	0	

Reviewer: tajh, 21-Mar-2018 09:57:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

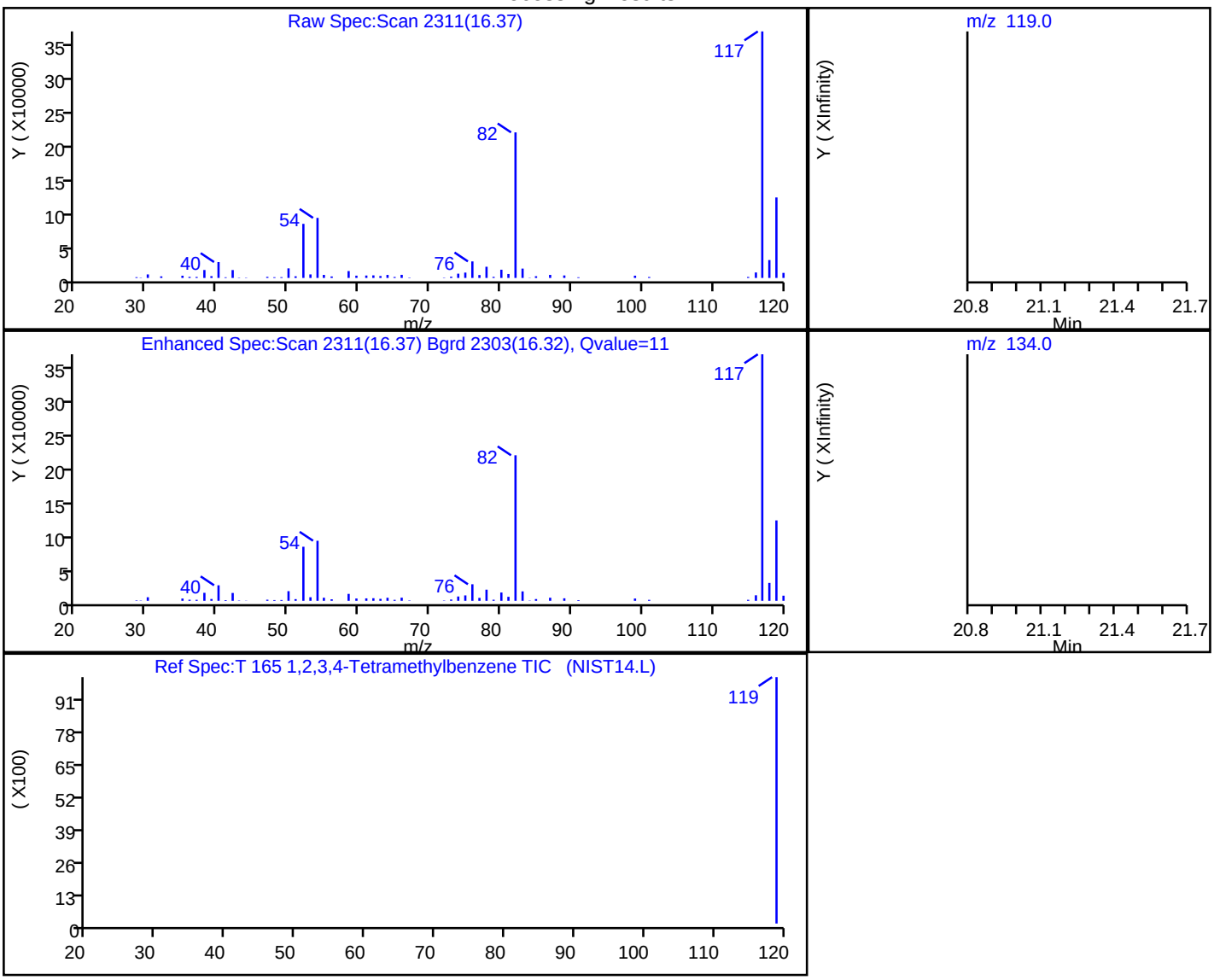
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11		
Client ID:	6014				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	257064	1.281365
15.44	134.00	1226	

Reviewer: tajh, 21-Mar-2018 09:57:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

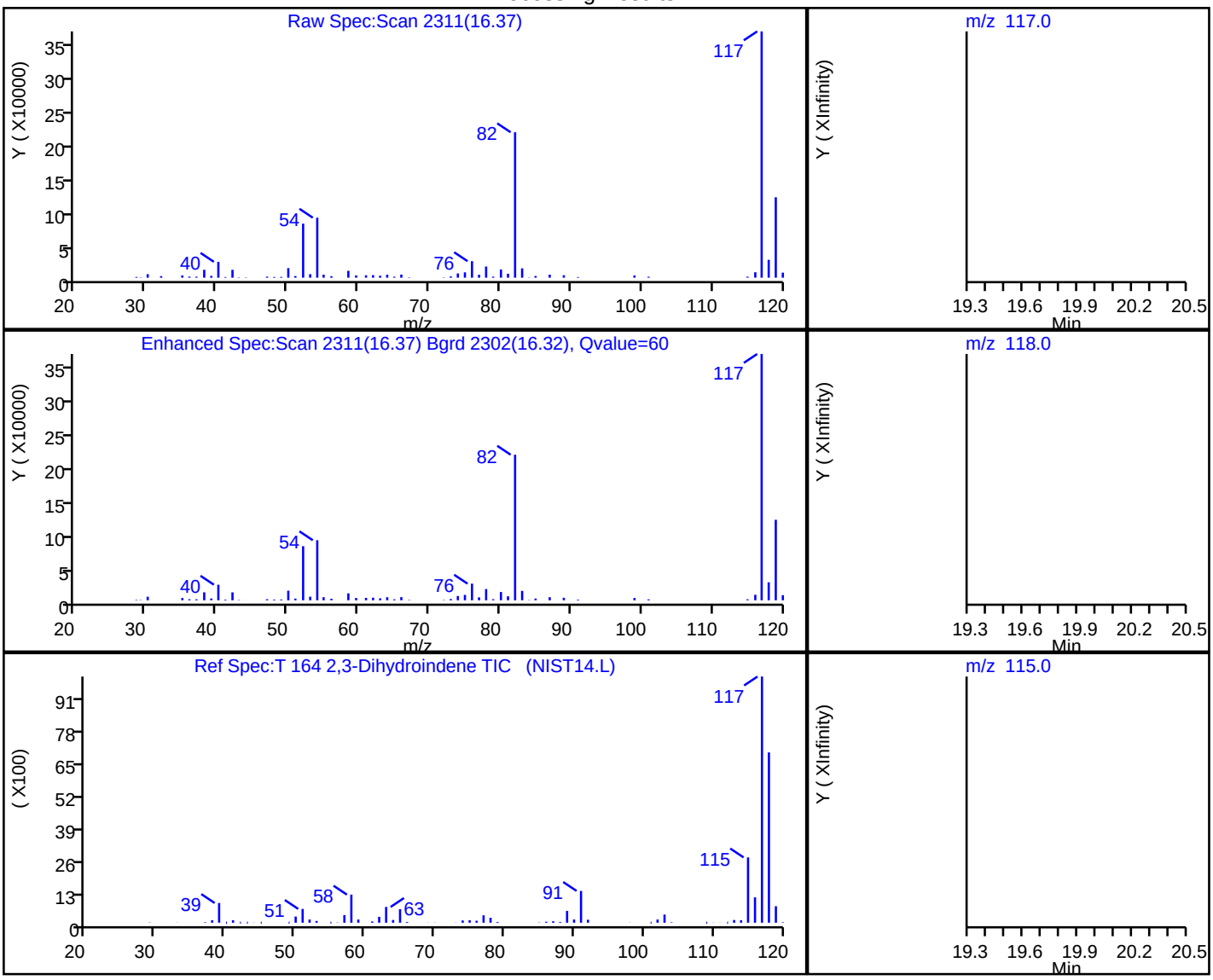
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-11.D				
Injection Date:	21-Mar-2018 04:19:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-11	Lab Sample ID:	140-10956-11		
Client ID:	6014				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	802469	4.000000
16.37	118.00	58104	
16.37	115.00	2909	

Reviewer: tajh, 21-Mar-2018 09:57:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 3708 | Lab Sample ID: 140-10956-12

Matrix: Air | Lab File ID: JC20bk10956-12.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 05:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3708
Lab Sample ID: 140-10956-12
Matrix: Air
Lab File ID: JC20bk10956-12.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 05:07
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	1.2		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3708
Lab Sample ID: 140-10956-12
Matrix: Air
Lab File ID: JC20bk10956-12.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 05:07
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3708 Lab Sample ID: 140-10956-12
Matrix: Air Lab File ID: JC20bk10956-12.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 05:07
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D
Lims ID: 140-10956-A-12
Client ID: 3708
Sample Type: Client
Inject. Date: 21-Mar-2018 05:07:30 ALS Bottle#: 3 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007671-024
Misc. Info.: 3708
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 09:59:38 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 21-Mar-2018 09:59:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.680	-0.002	90	170993	4.00	
* 2 1,4-Difluorobenzene	114	11.776	11.778	-0.002	95	949590	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.378	-0.003	88	867024	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.975	-0.003	94	592608	3.78	
17 Ethanol	31	5.449	5.419	0.024	95	16272	0.7855	
25 Isopropyl alcohol	45	6.208	6.166	0.035	99	68669	1.23	
30 2-Methyl-2-propanol	59	6.902	6.821	0.073	96	10422	0.1272	
32 Methylene Chloride	84	7.058	7.042	0.008	94	7887	0.1288	
43 Ethyl acetate	43	9.543	9.503	0.029	97	15280	0.1581	
53 n-Butanol	31	11.340	11.257	0.073	91	5355	0.3261	
68 Toluene	91	14.444	14.442	-0.003	92	11007	0.0602	
82 n-Nonane	57	17.241	17.238	-0.003	88	9767	0.0789	
94 n-Decane	57	18.914	18.910	-0.003	91	5046	0.0345	

Reagents:

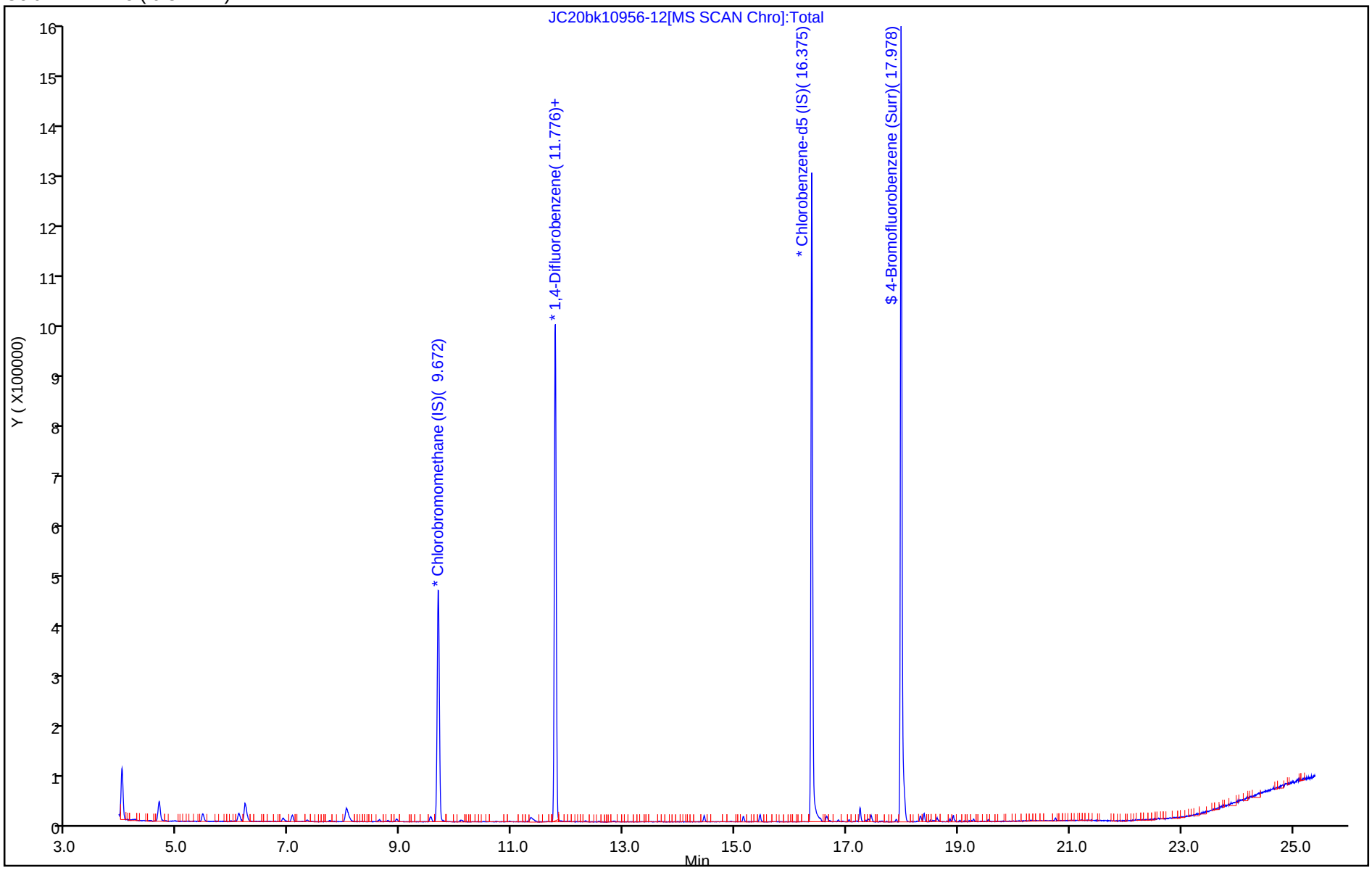
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:59:38 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12	Worklist Smp#:	24
Client ID:	3708				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

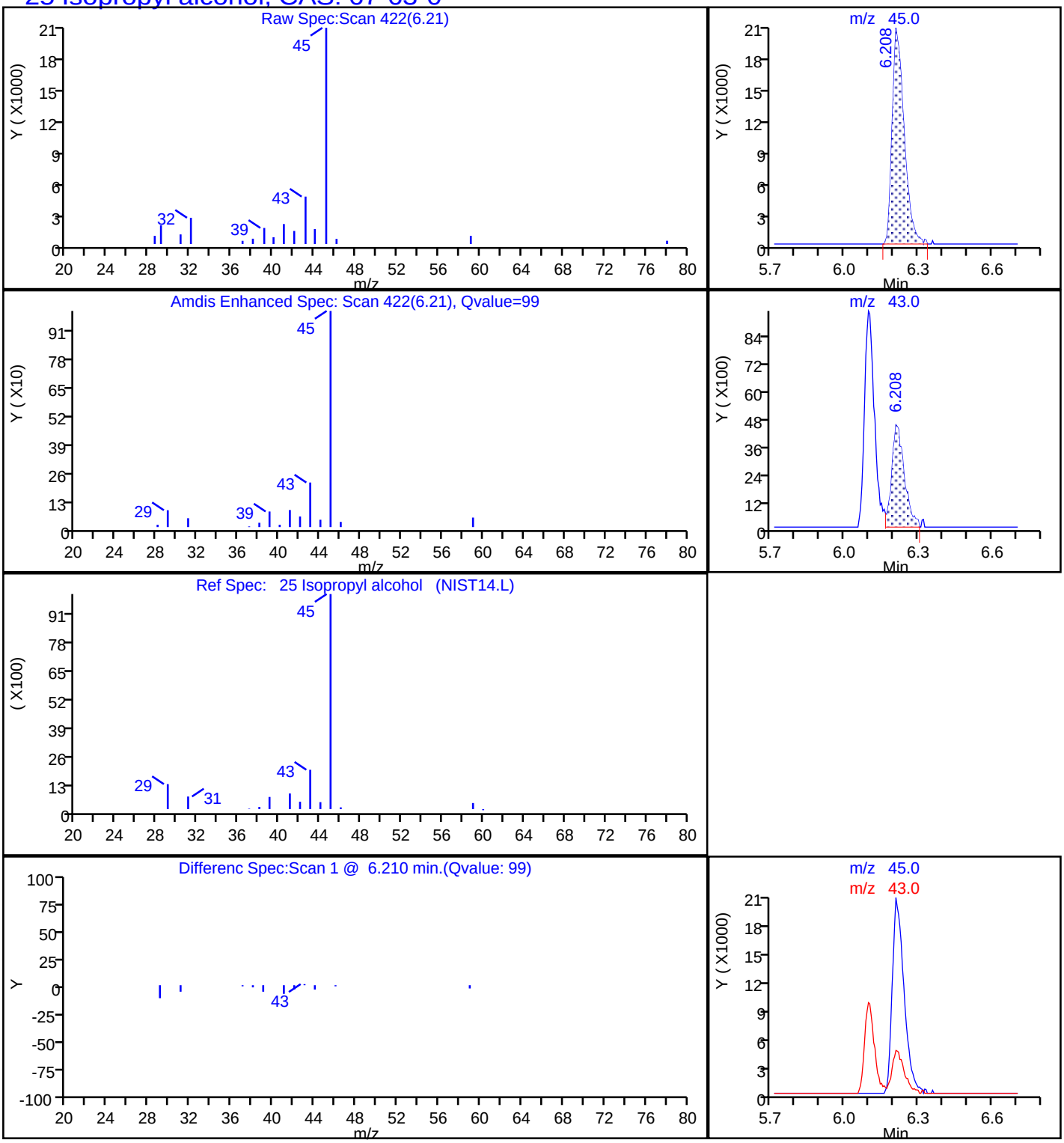


Report Date: 21-Mar-2018 09:59:38 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12		
Client ID:	3708				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

25 Isopropyl alcohol, CAS: 67-63-0



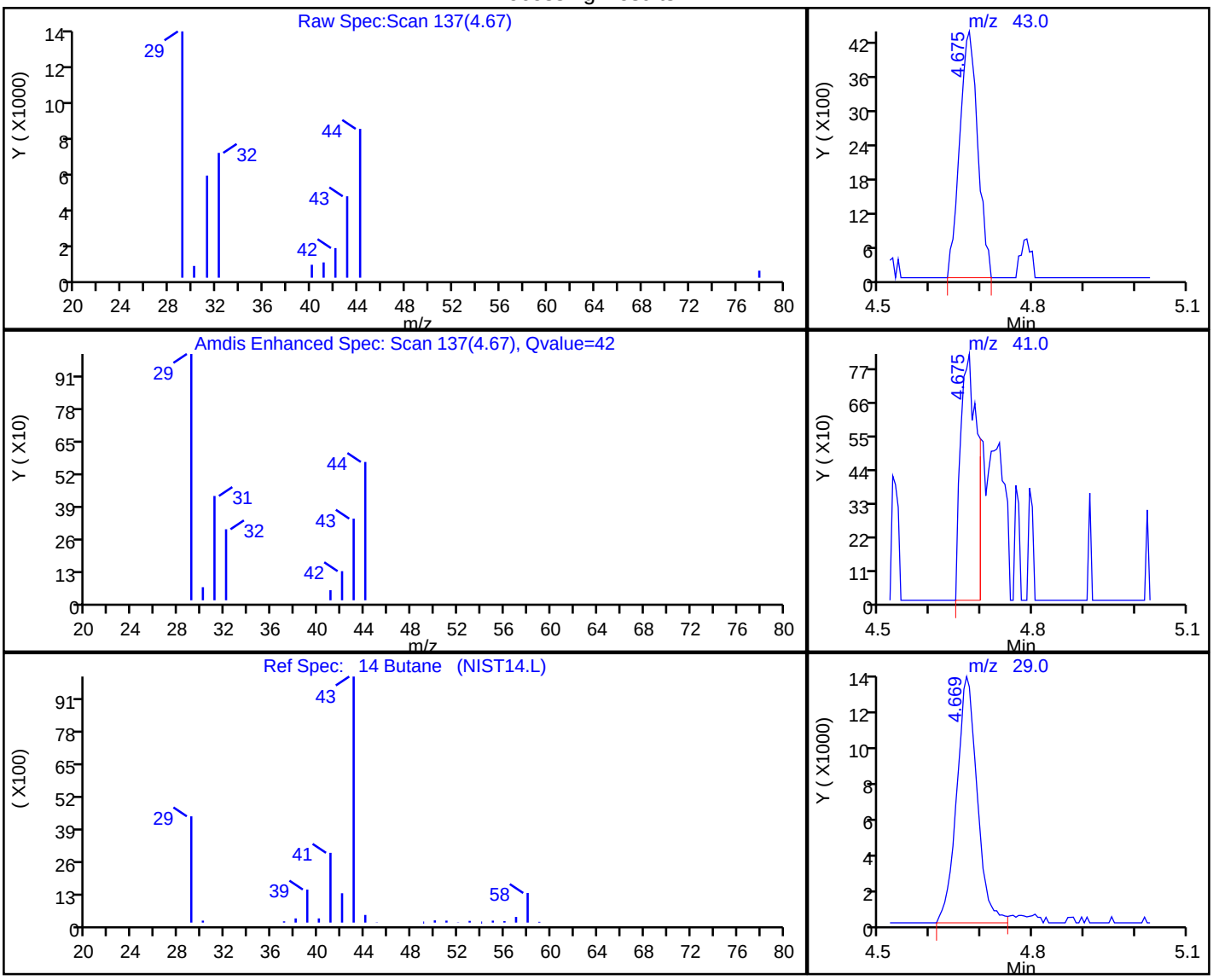
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12		
Client ID:	3708				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	10726	0.125186
4.67	41.00	1820	
4.67	29.00	38614	

Reviewer: tajh, 21-Mar-2018 09:59:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

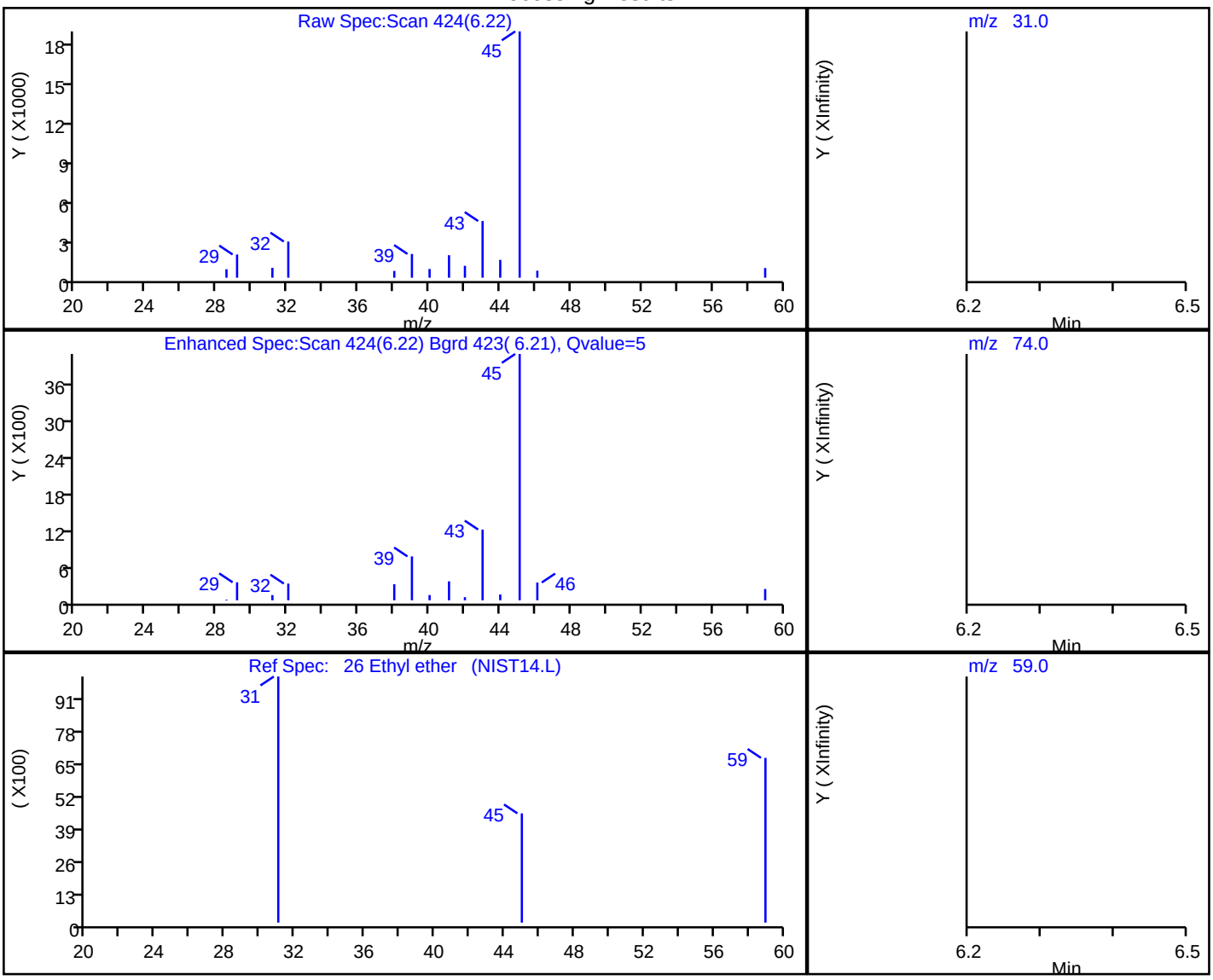
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12		
Client ID:	3708				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

26 Ethyl ether, CAS: 60-29-7

Processing Results



RT	Mass	Response	Amount
6.22	31.00	1190	0.024703
6.21	59.00	2418	
6.35	74.00	0	

Reviewer: tajh, 21-Mar-2018 09:59:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

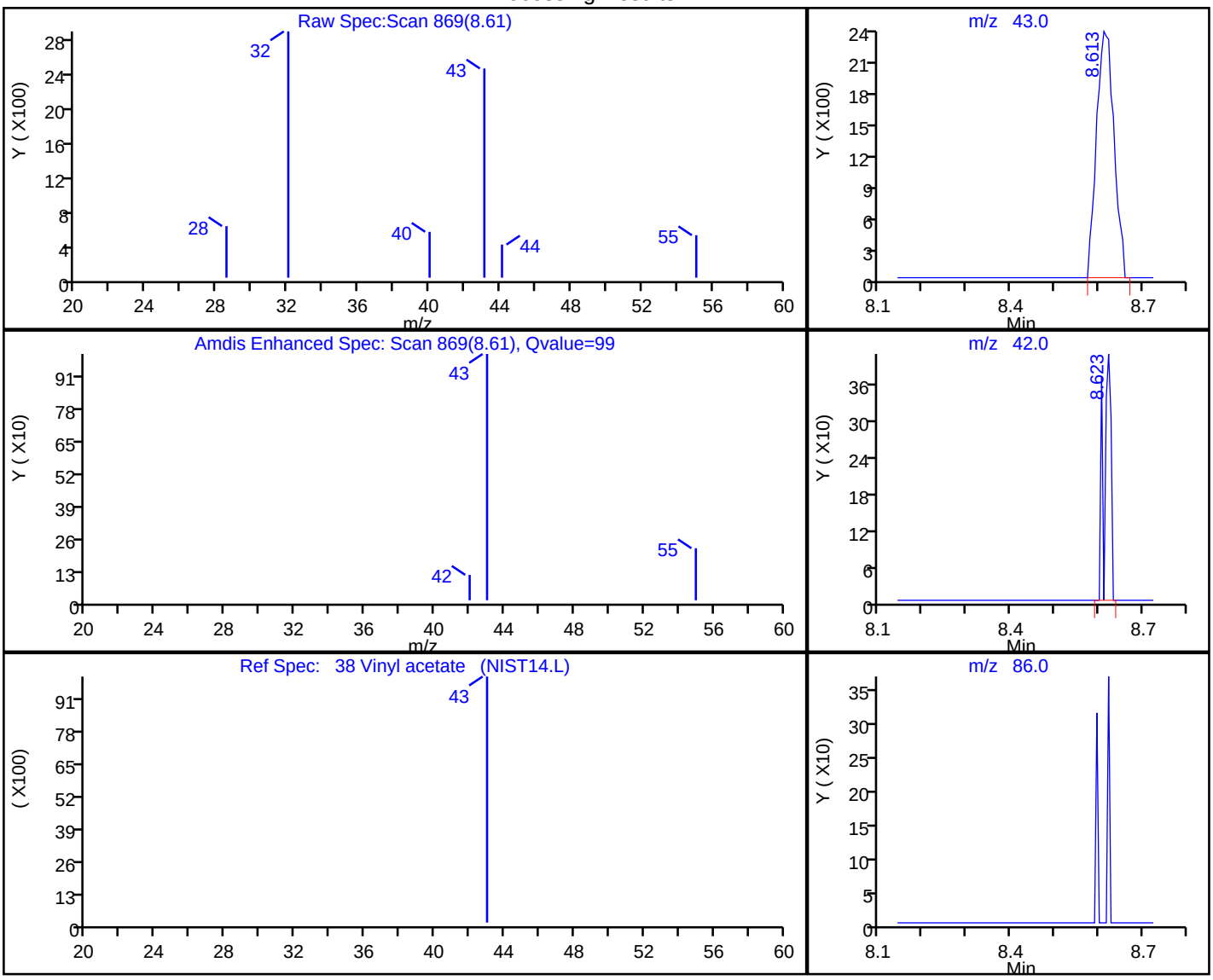
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12		
Client ID:	3708				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.61	43.00	6628	0.054642
8.62	42.00	458	
8.43	86.00	0	

Reviewer: tajh, 21-Mar-2018 09:59:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

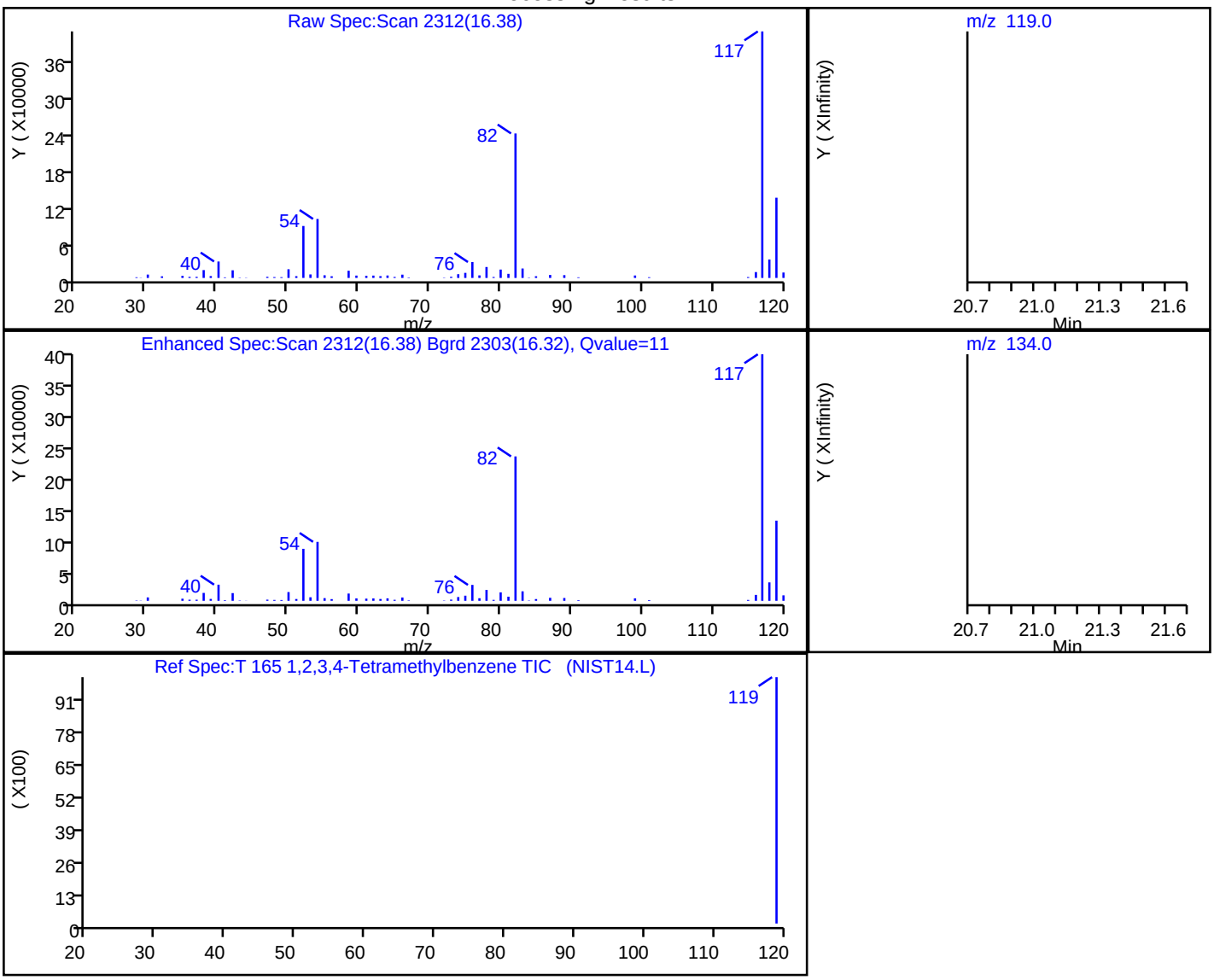
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12		
Client ID:	3708				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	277396	1.279762
24.21	134.00	200	

Reviewer: tajh, 21-Mar-2018 09:59:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

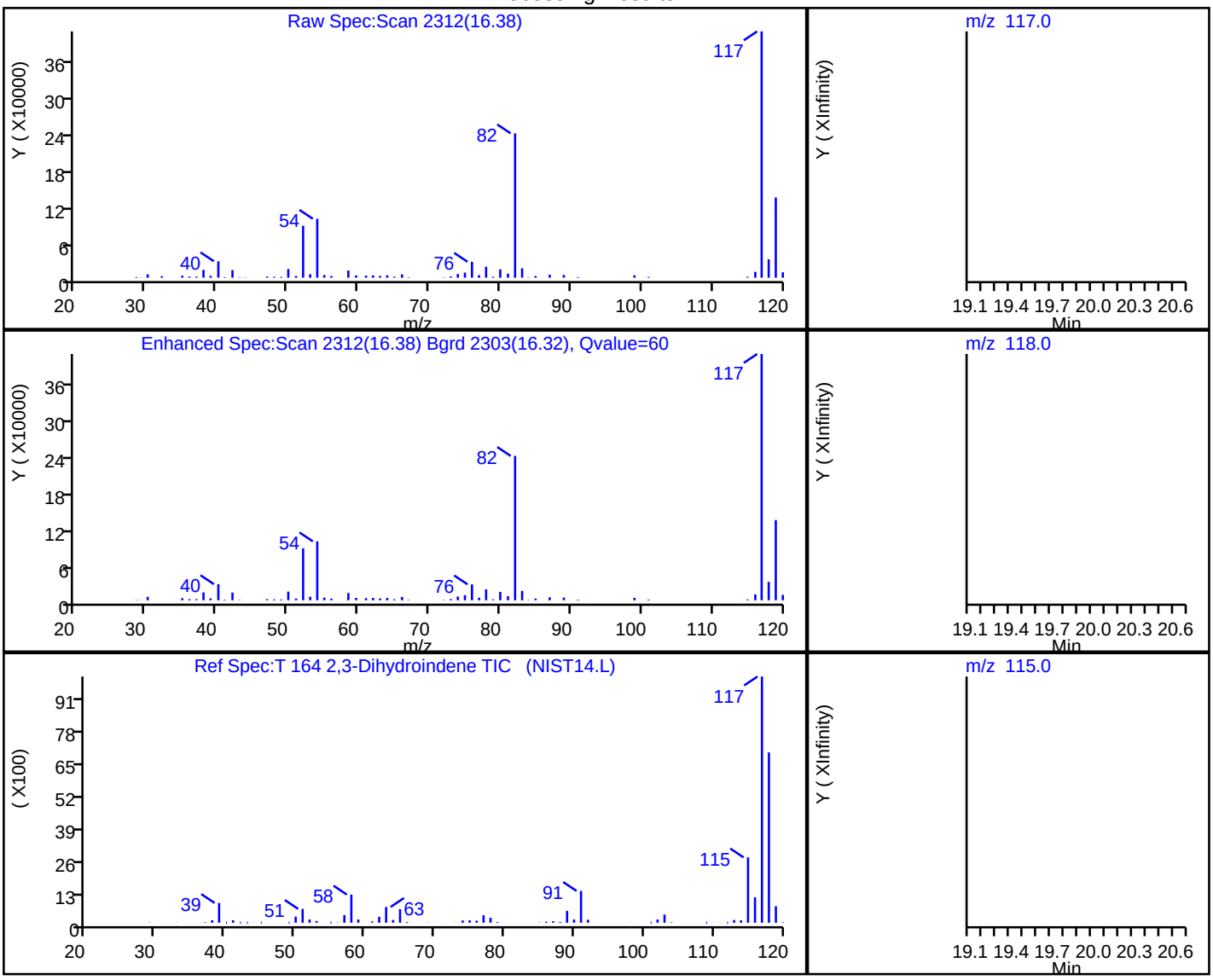
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-12.D				
Injection Date:	21-Mar-2018 05:07:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-12	Lab Sample ID:	140-10956-12		
Client ID:	3708				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	867024	4.000000
16.38	118.00	64043	
16.38	115.00	2910	

Reviewer: tajh, 21-Mar-2018 09:59:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3312
Lab Sample ID: 140-10956-14
Matrix: Air
Lab File ID: JC20bk10956-14.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 06:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3312
Lab Sample ID: 140-10956-14
Matrix: Air
Lab File ID: JC20bk10956-14.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 06:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3312
Lab Sample ID: 140-10956-14
Matrix: Air
Lab File ID: JC20bk10956-14.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 06:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 3312 Lab Sample ID: 140-10956-14
Matrix: Air Lab File ID: JC20bk10956-14.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 06:42
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-14.D
Lims ID: 140-10956-A-14
Client ID: 3312
Sample Type: Client
Inject. Date: 21-Mar-2018 06:42:30 ALS Bottle#: 5 Worklist Smp#: 26
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007671-026
Misc. Info.: 3312
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 10:00:50 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 21-Mar-2018 10:00:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.668	9.680	-0.012	91	185099	4.00	
* 2 1,4-Difluorobenzene	114	11.766	11.778	-0.012	95	1044523	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.378	-0.007	88	928907	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.975	-0.002	95	658288	3.92	
25 Isopropyl alcohol	45	6.187	6.166	0.014	99	35996	0.5958	
32 Methylene Chloride	84	7.048	7.042	-0.002	94	9187	0.1386	
43 Ethyl acetate	43	9.528	9.503	0.014	96	8860	0.0847	
53 n-Butanol	31	11.309	11.257	0.042	88	1878	0.1040	
82 n-Nonane	57	17.237	17.238	-0.007	87	4313	0.0325	

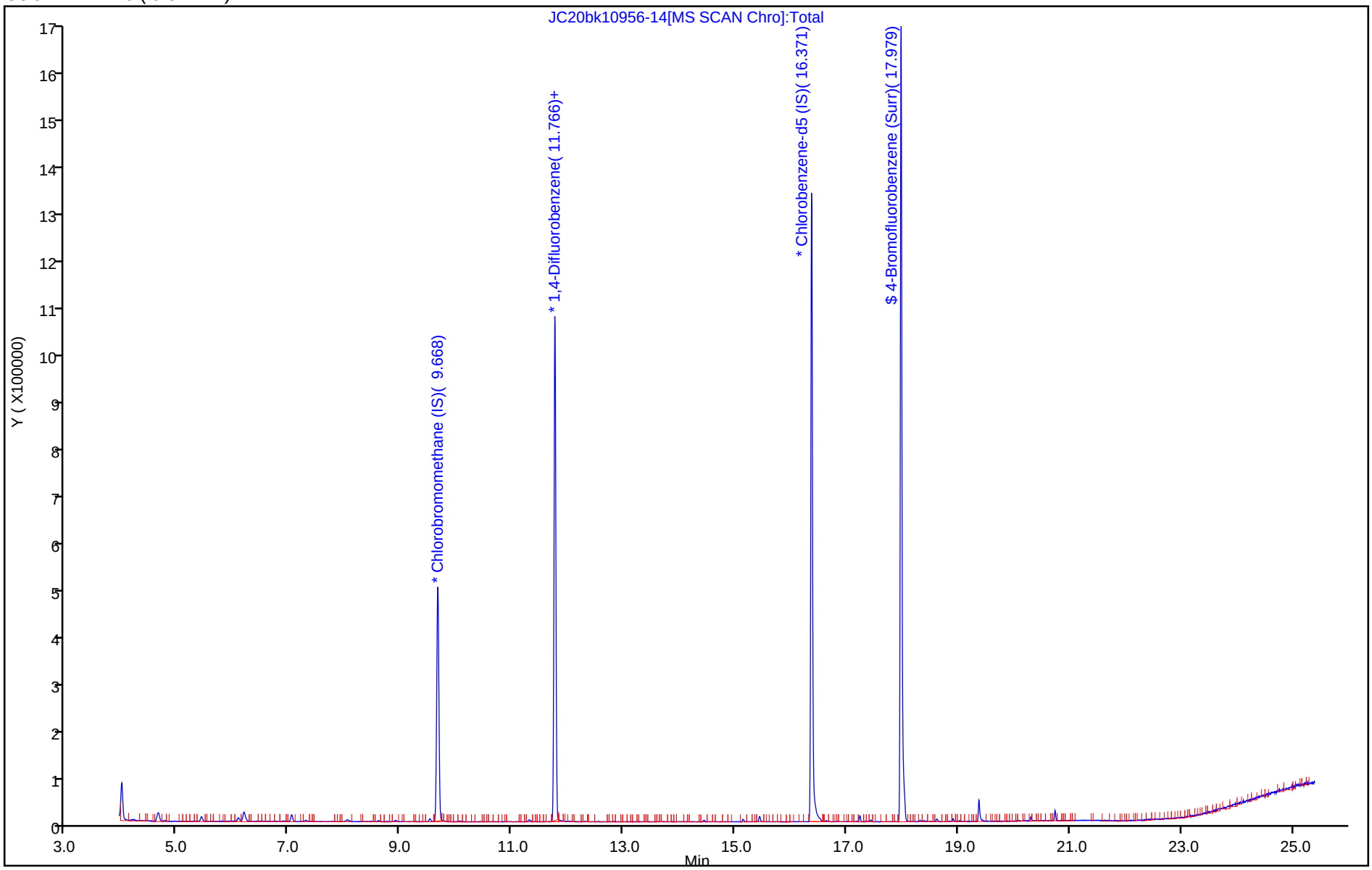
Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 10:00:51 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-14.D				
Injection Date:	21-Mar-2018 06:42:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-14	Lab Sample ID:	140-10956-14	Worklist Smp#:	26
Client ID:	3312				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					



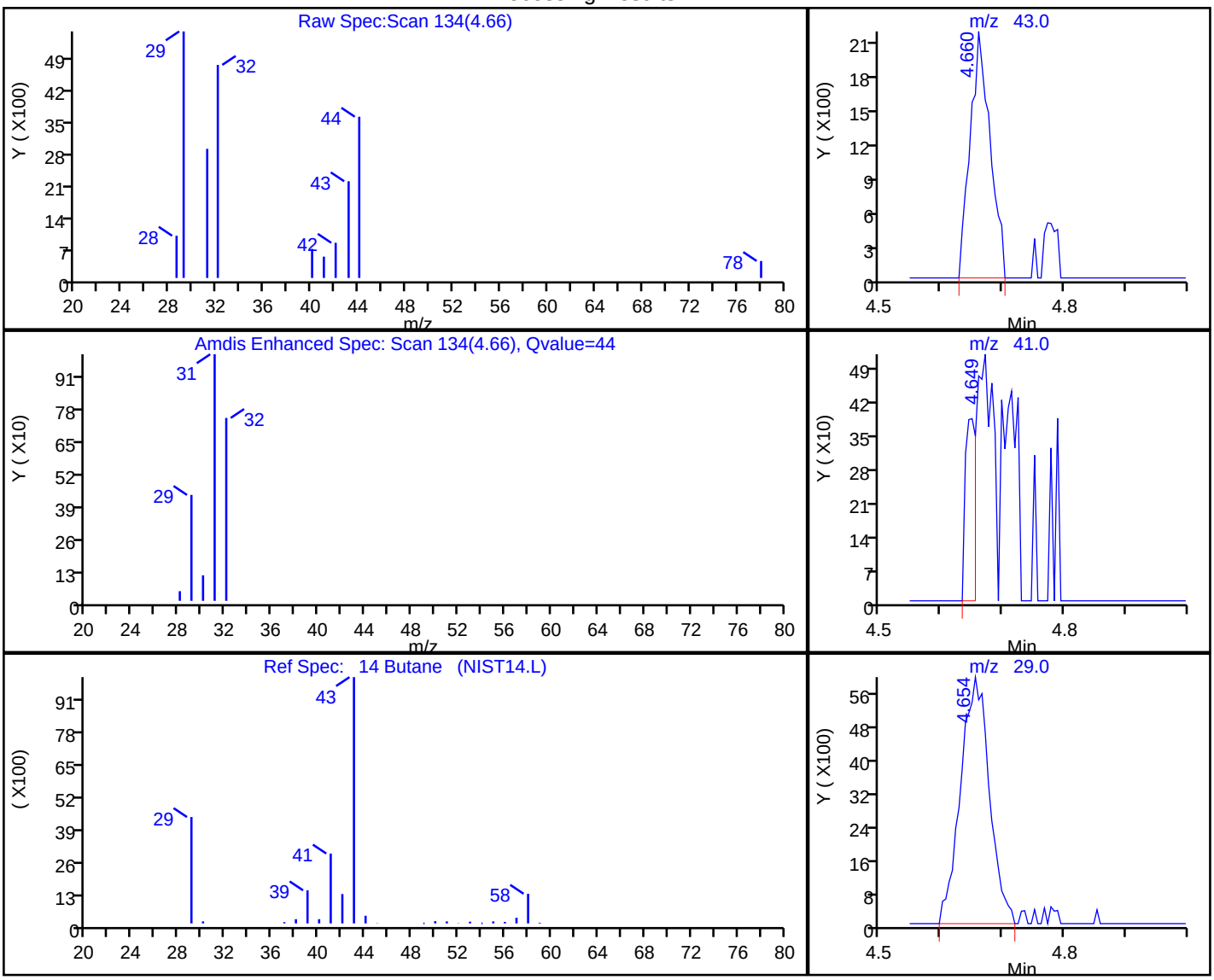
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-14.D				
Injection Date:	21-Mar-2018 06:42:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-14	Lab Sample ID:	140-10956-14		
Client ID:	3312				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	4801	0.051763
4.65	41.00	454	
4.65	29.00	19559	

Reviewer: tajh, 21-Mar-2018 10:00:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

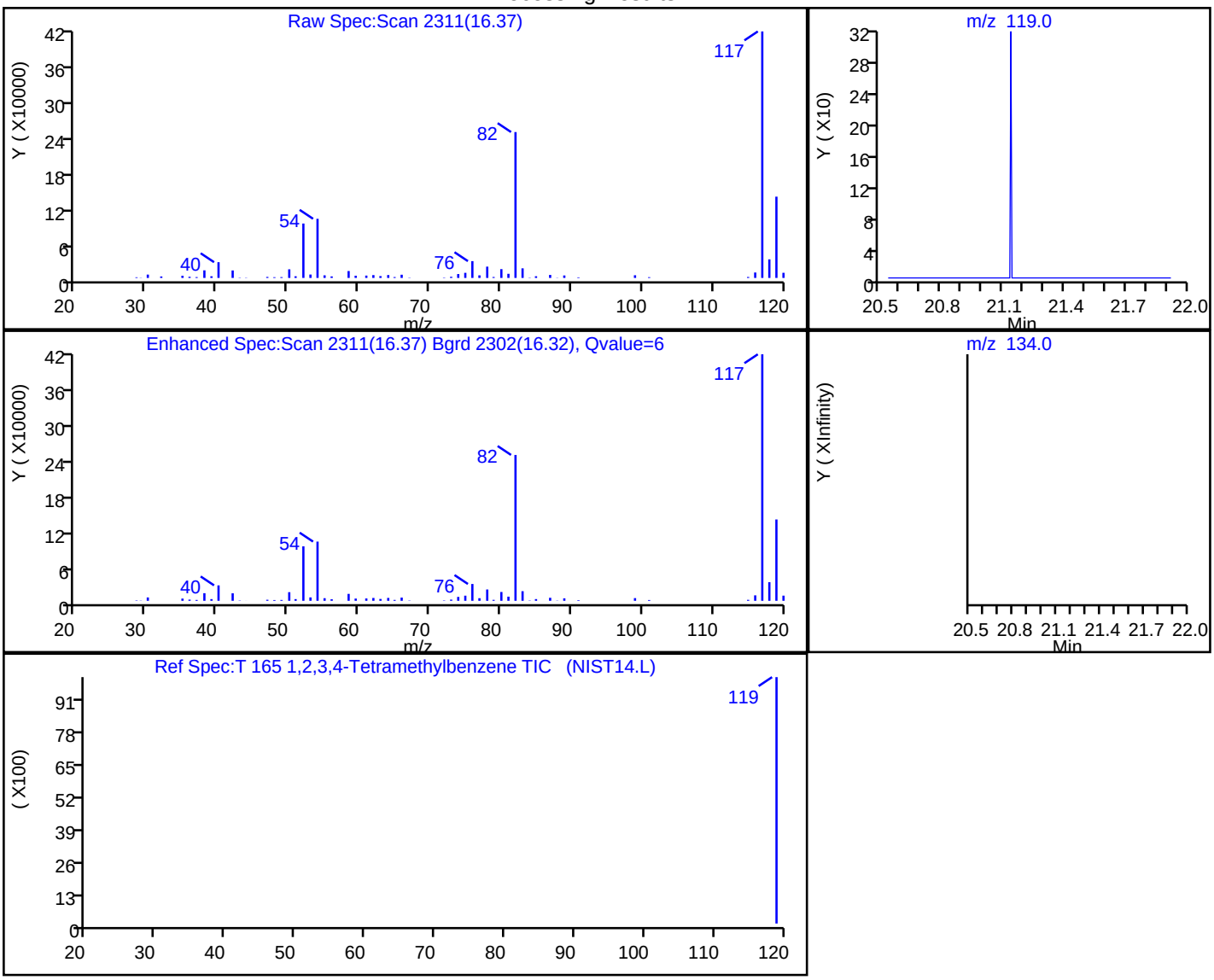
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-14.D				
Injection Date:	21-Mar-2018 06:42:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-14	Lab Sample ID:	140-10956-14		
Client ID:	3312				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	304448	1.310995
23.94	134.00	239	

Reviewer: tajh, 21-Mar-2018 10:00:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

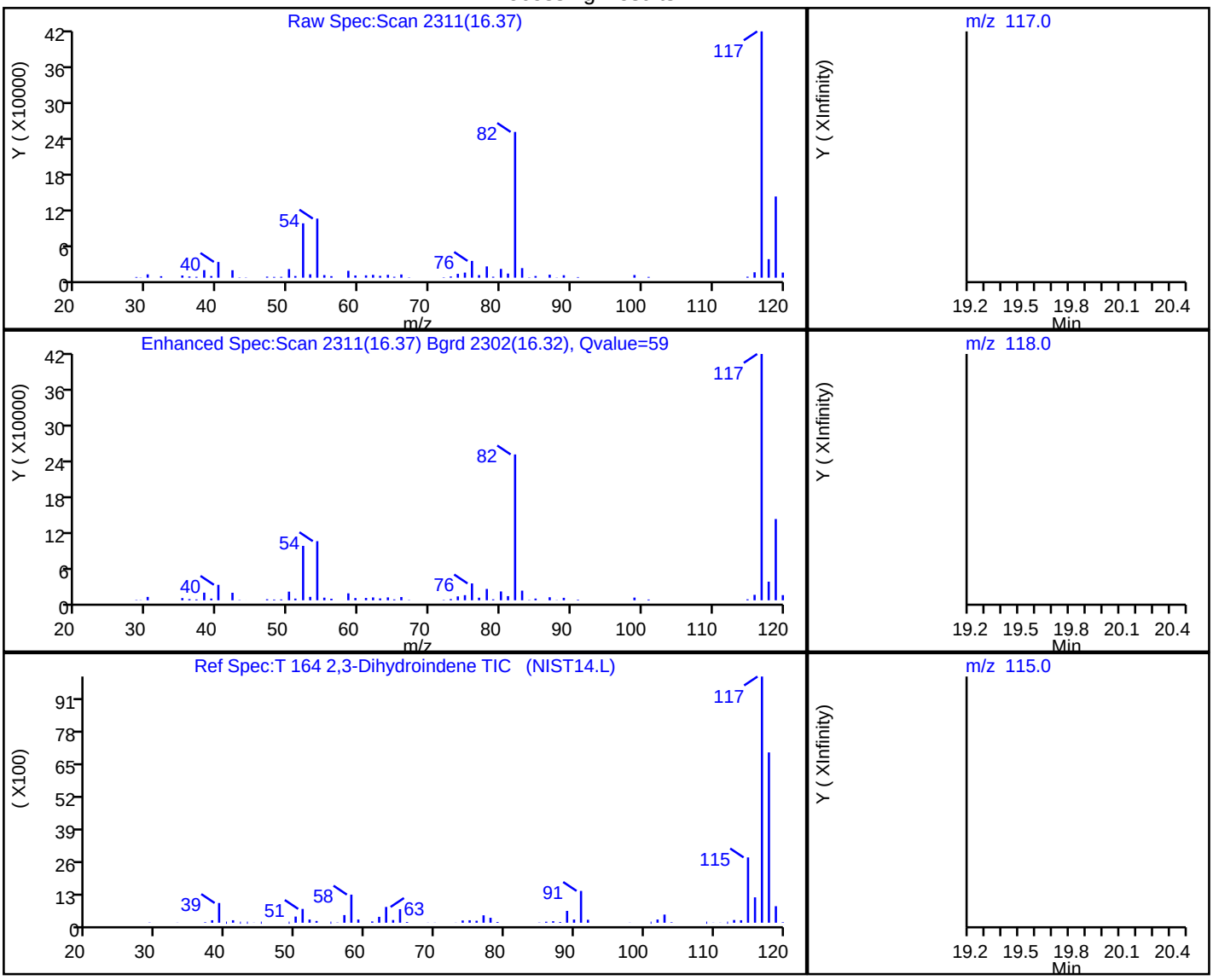
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-14.D				
Injection Date:	21-Mar-2018 06:42:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-14	Lab Sample ID:	140-10956-14		
Client ID:	3312				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	928907	4.000000
16.37	118.00	69899	
16.38	115.00	3348	

Reviewer: tajh, 21-Mar-2018 10:00:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10956-1

SDG No.:

Client Sample ID: 4077 | Lab Sample ID: 140-10956-16

Matrix: Air | Lab File ID: JC20bk10956-16.D

Analysis Method: TO 15 LL | Date Collected: 03/15/2018 11:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 08:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4077
Lab Sample ID: 140-10956-16
Matrix: Air
Lab File ID: JC20bk10956-16.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 08:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4077
Lab Sample ID: 140-10956-16
Matrix: Air
Lab File ID: JC20bk10956-16.D
Analysis Method: TO 15 LL
Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 08:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10956-1
SDG No.:
Client Sample ID: 4077 Lab Sample ID: 140-10956-16
Matrix: Air Lab File ID: JC20bk10956-16.D
Analysis Method: TO 15 LL Date Collected: 03/15/2018 11:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 08:18
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-16.D
Lims ID: 140-10956-A-16
Client ID: 4077
Sample Type: Client
Inject. Date: 21-Mar-2018 08:18:30 ALS Bottle#: 7 Worklist Smp#: 28
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007671-028
Misc. Info.: 4077
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 10:02:24 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 21-Mar-2018 10:02:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.664	9.680	-0.016	91	176765	4.00	
* 2 1,4-Difluorobenzene	114	11.767	11.778	-0.011	95	1007508	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.372	16.378	-0.006	93	889937	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.975	17.975	-0.006	95	644044	4.00	
25 Isopropyl alcohol	45	6.205	6.166	0.032	97	16019	0.2777	
53 n-Butanol	31	11.326	11.257	0.059	74	1119	0.0642	
82 n-Nonane	57	17.244	17.238	0.000	83	2912	0.0229	

Reagents:

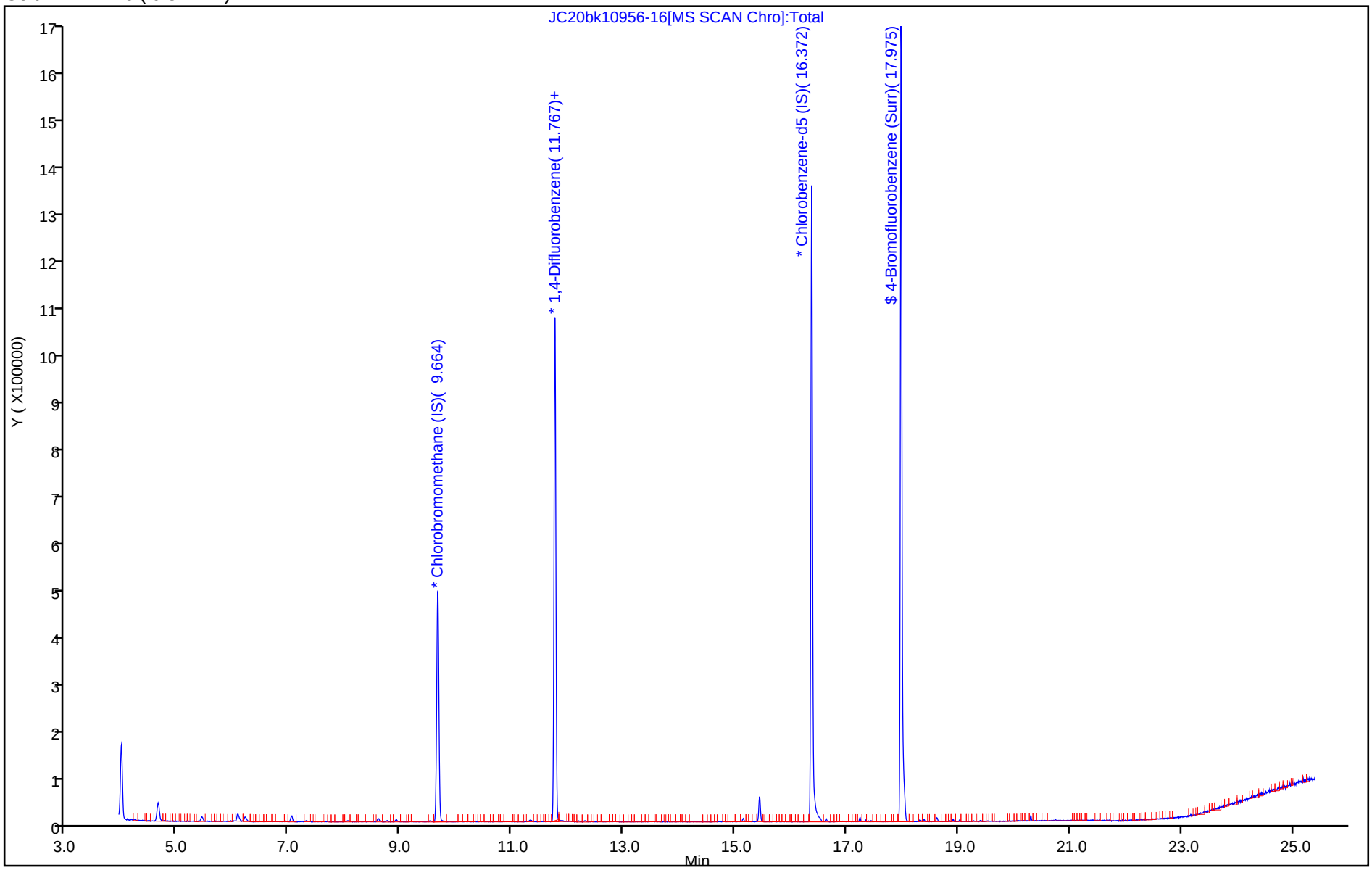
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 10:02:25 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-16.D				
Injection Date:	21-Mar-2018 08:18:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10956-A-16	Lab Sample ID:	140-10956-16	Worklist Smp#:	28
Client ID:	4077				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



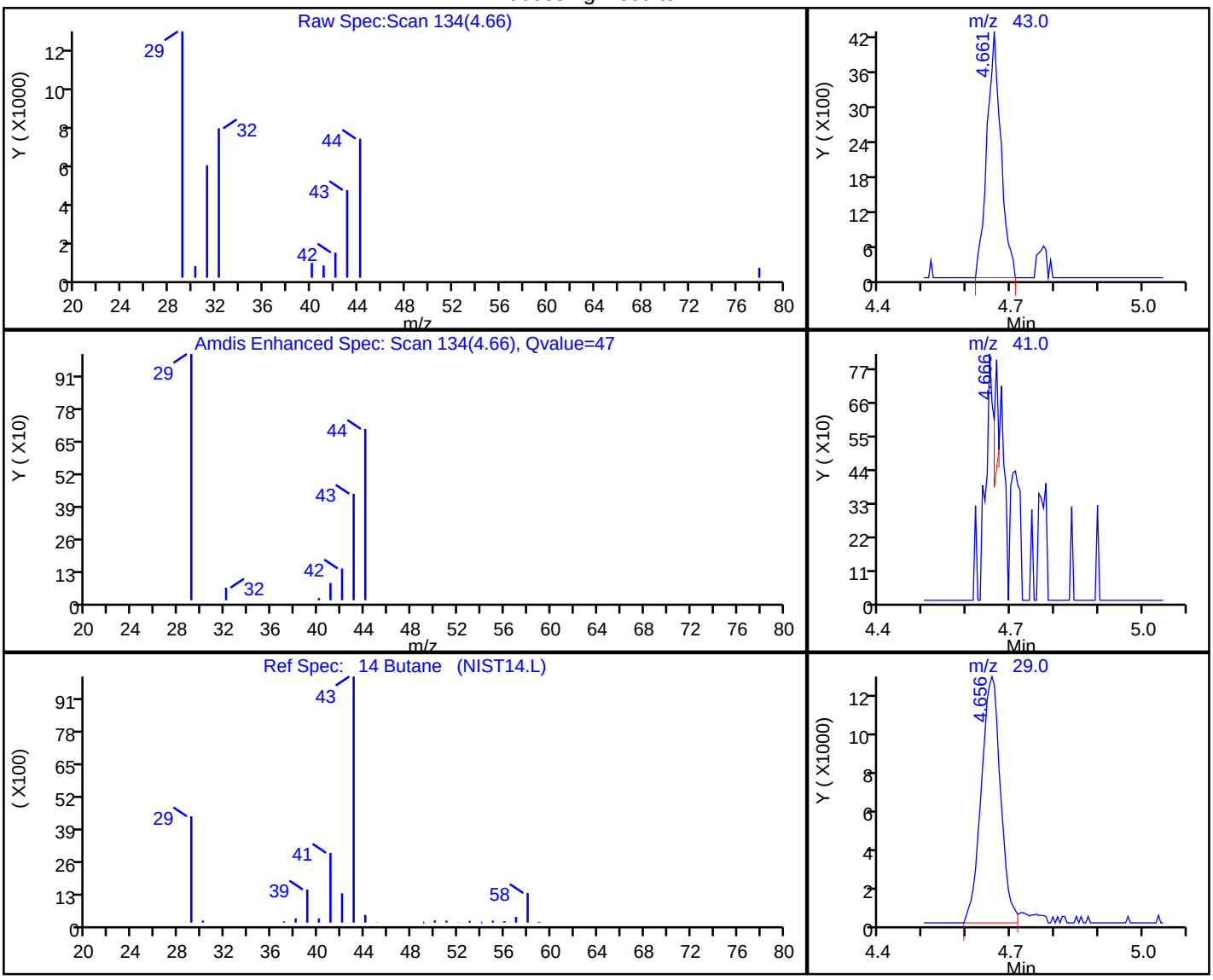
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-16.D				
Injection Date:	21-Mar-2018 08:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-16	Lab Sample ID:	140-10956-16		
Client ID:	4077				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	9467	0.106884
4.67	41.00	188	
4.66	29.00	38183	

Reviewer: tajh, 21-Mar-2018 10:02:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

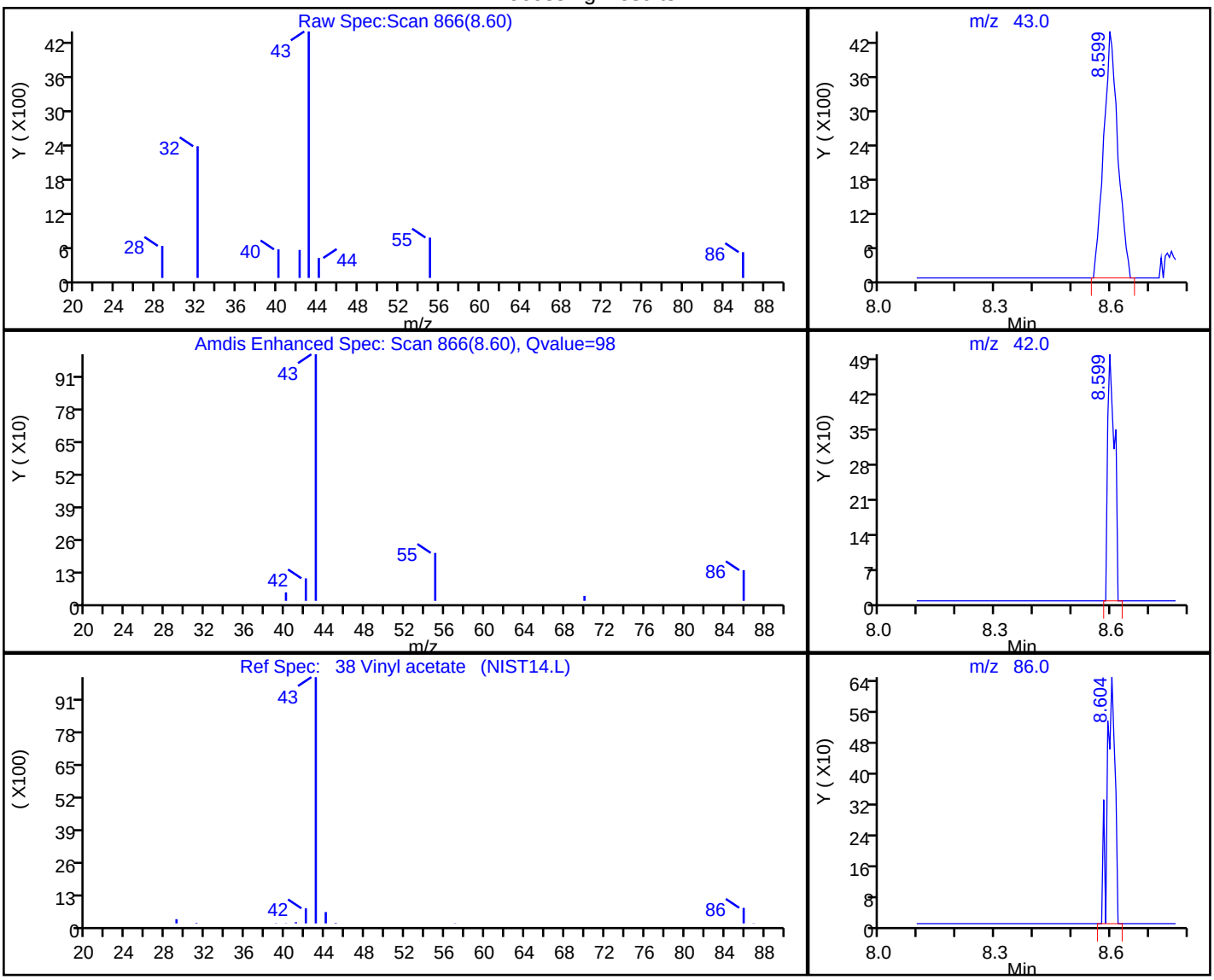
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-16.D				
Injection Date:	21-Mar-2018 08:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-16	Lab Sample ID:	140-10956-16		
Client ID:	4077				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.60	43.00	11332	0.090371
8.60	42.00	620	
8.60	86.00	906	

Reviewer: tajh, 21-Mar-2018 10:02:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

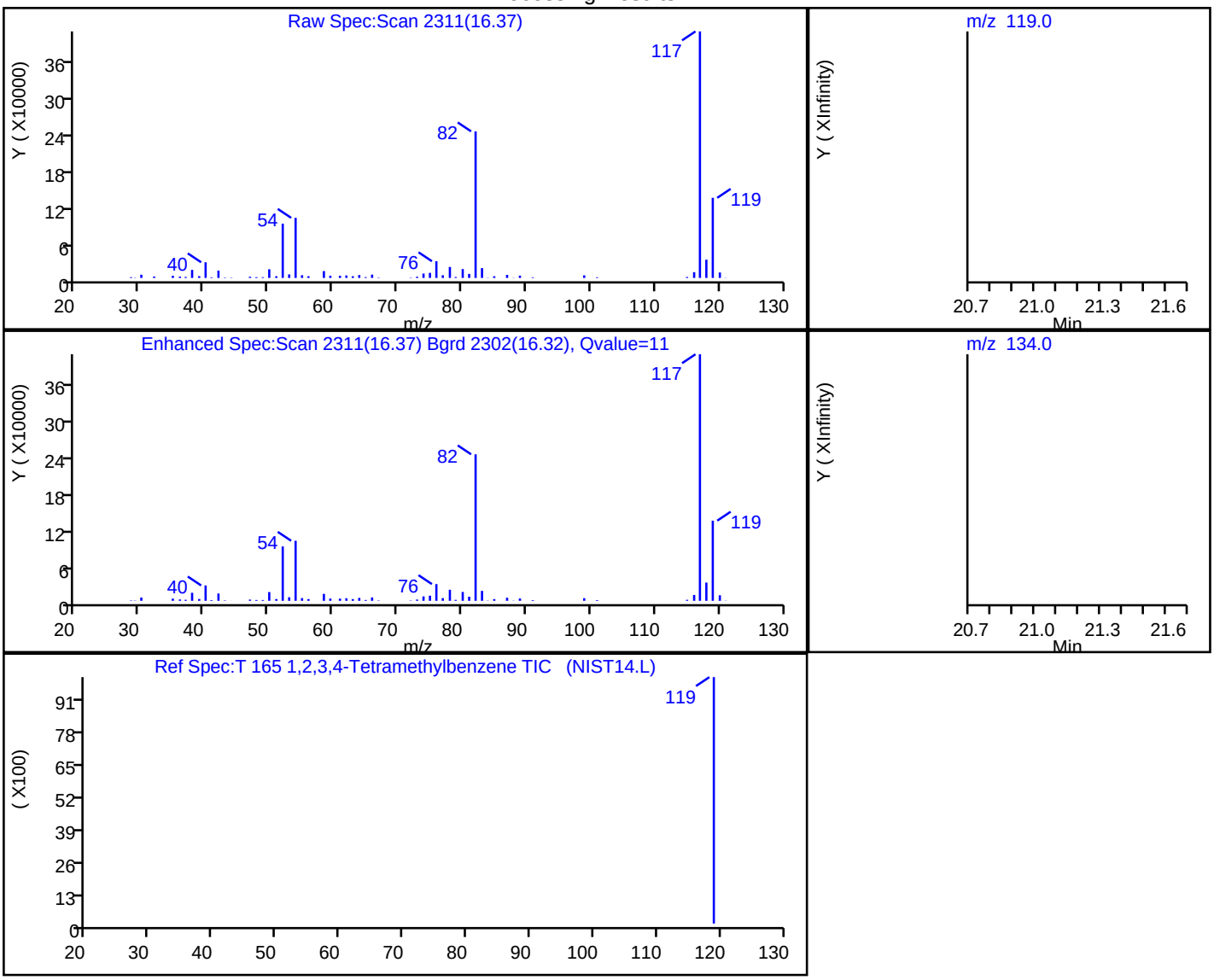
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-16.D				
Injection Date:	21-Mar-2018 08:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-16	Lab Sample ID:	140-10956-16		
Client ID:	4077				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	287887	1.293966
23.97	134.00	131	

Reviewer: tajh, 21-Mar-2018 10:02:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

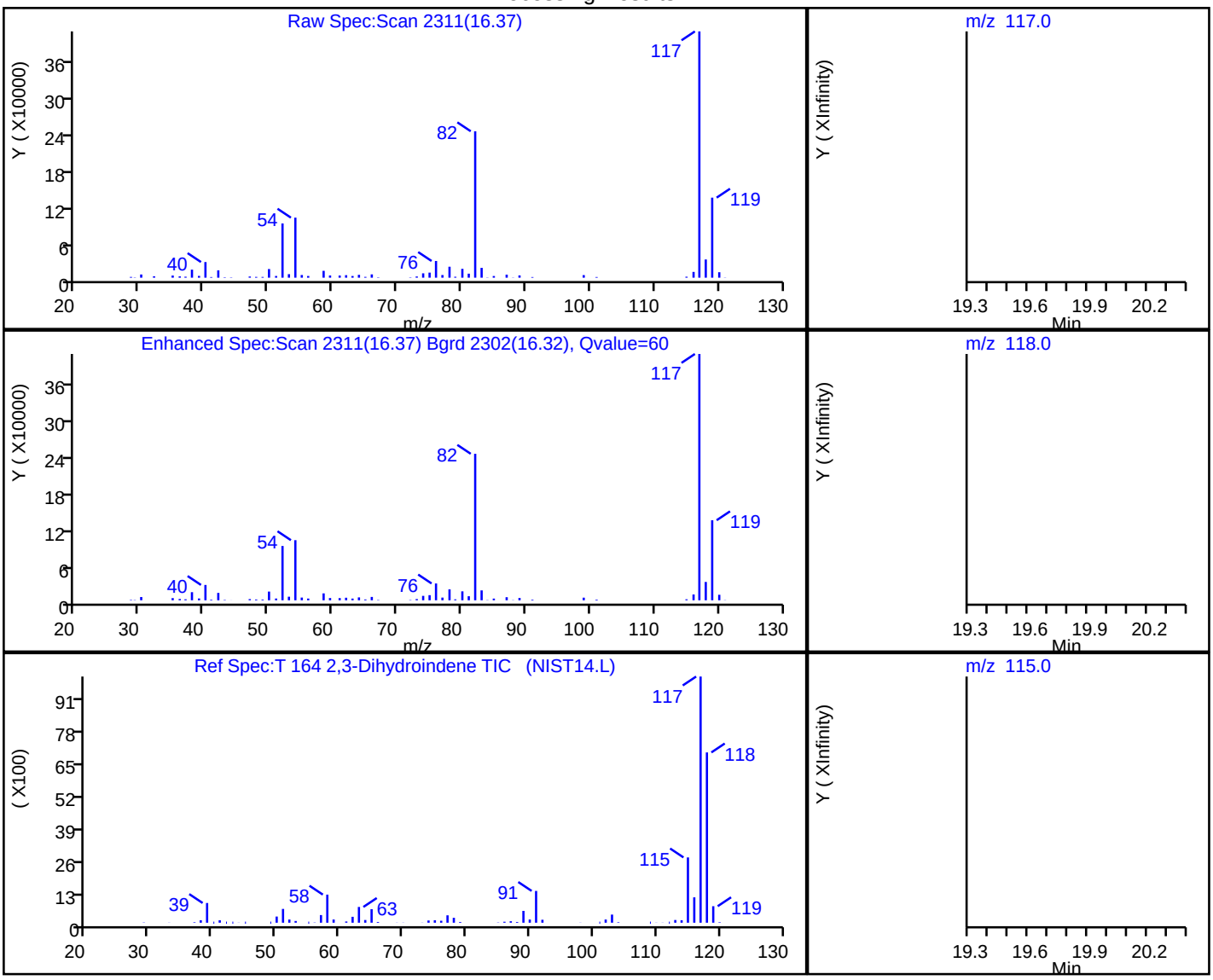
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10956-16.D				
Injection Date:	21-Mar-2018 08:18:30	Instrument ID:	MJ		
Lims ID:	140-10956-A-16	Lab Sample ID:	140-10956-16		
Client ID:	4077				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	889937	4.000000
16.37	118.00	66905	
16.37	115.00	3184	

Reviewer: tajh, 21-Mar-2018 10:02:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 8188 | Lab Sample ID: 140-10978-1

Matrix: Air | Lab File ID: 10978BK01.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 21:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 8188
Lab Sample ID: 140-10978-1
Matrix: Air
Lab File ID: 10978BK01.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 21:57
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 8188 | Lab Sample ID: 140-10978-1

Matrix: Air | Lab File ID: 10978BK01.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 21:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1
SDG No.:
Client Sample ID: 8188 Lab Sample ID: 140-10978-1
Matrix: Air Lab File ID: 10978BK01.D
Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 21:57
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK01.D
Lims ID: 140-10978-A-1
Client ID: 8188
Sample Type: Client
Inject. Date: 21-Mar-2018 21:57:30 ALS Bottle#: 2 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-021
Misc. Info.: 8188
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 22-Mar-2018 10:24:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.571	0.000	96	328163	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.696	0.000	95	1870655	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	88	1641342	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1144949	3.95	
62 4-Methyl-2-pentanone (MIBK	43	11.820	11.734	0.086	98	17796	0.0931	

Reagents:

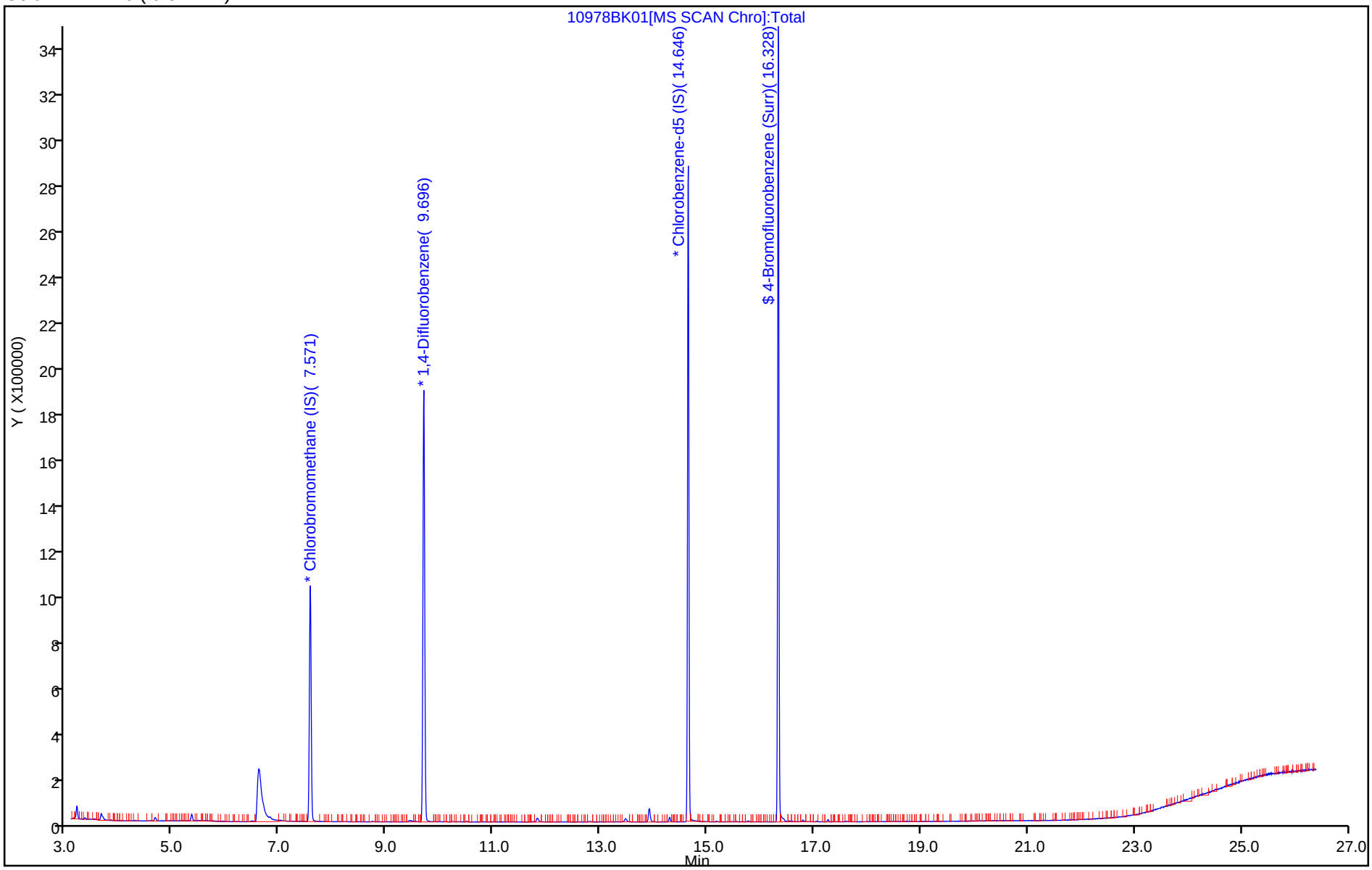
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:52 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK01.D				
Injection Date:	21-Mar-2018 21:57:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10978-A-1	Lab Sample ID:	140-10978-1	Worklist Smp#:	21
Client ID:	8188				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



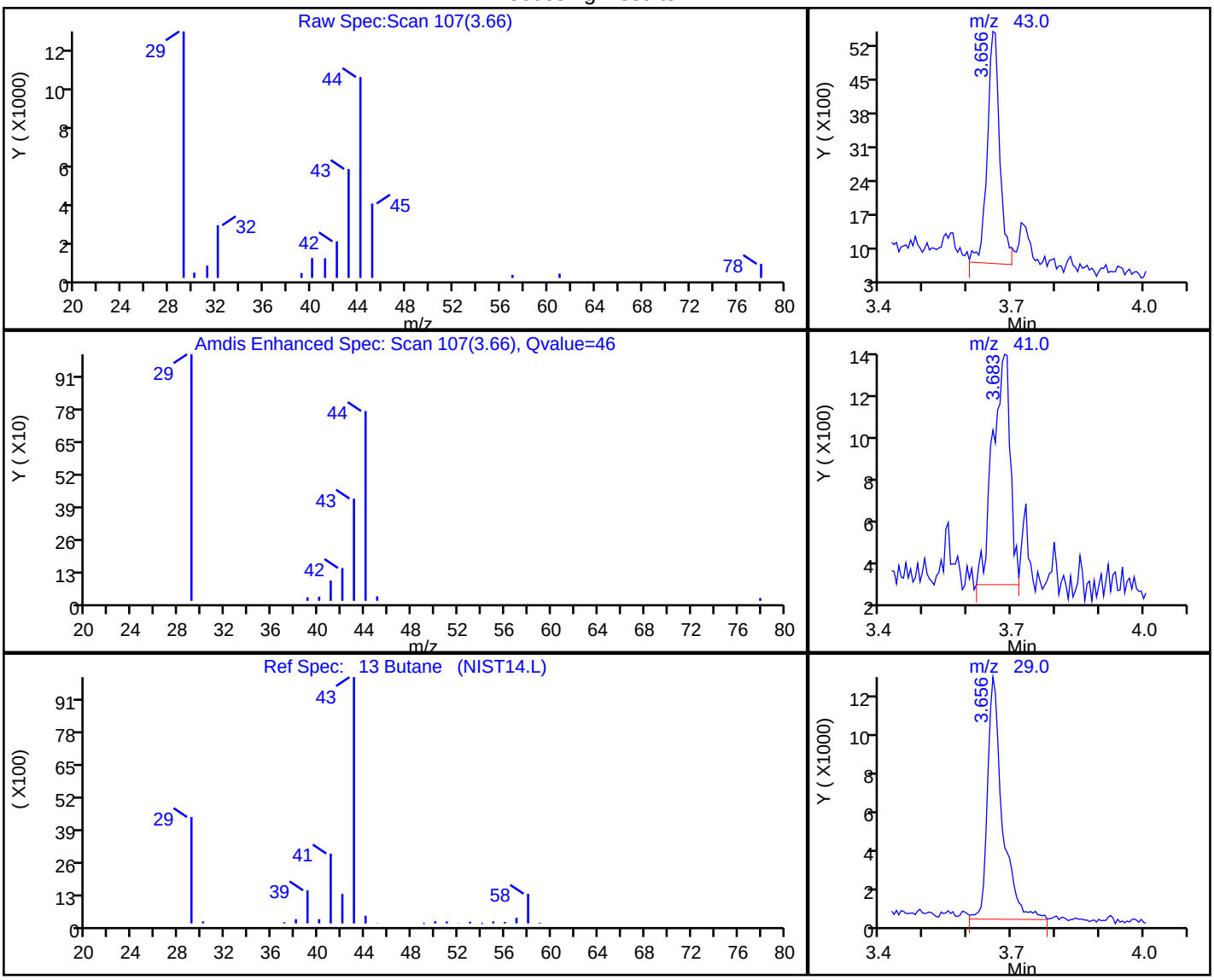
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK01.D				
Injection Date:	21-Mar-2018 21:57:30	Instrument ID:	MG		
Lims ID:	140-10978-A-1	Lab Sample ID:	140-10978-1		
Client ID:	8188				
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.66	43.00	9608	0.054935
3.68	41.00	2938	
3.66	29.00	27815	

Reviewer: tajh, 22-Mar-2018 10:24:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

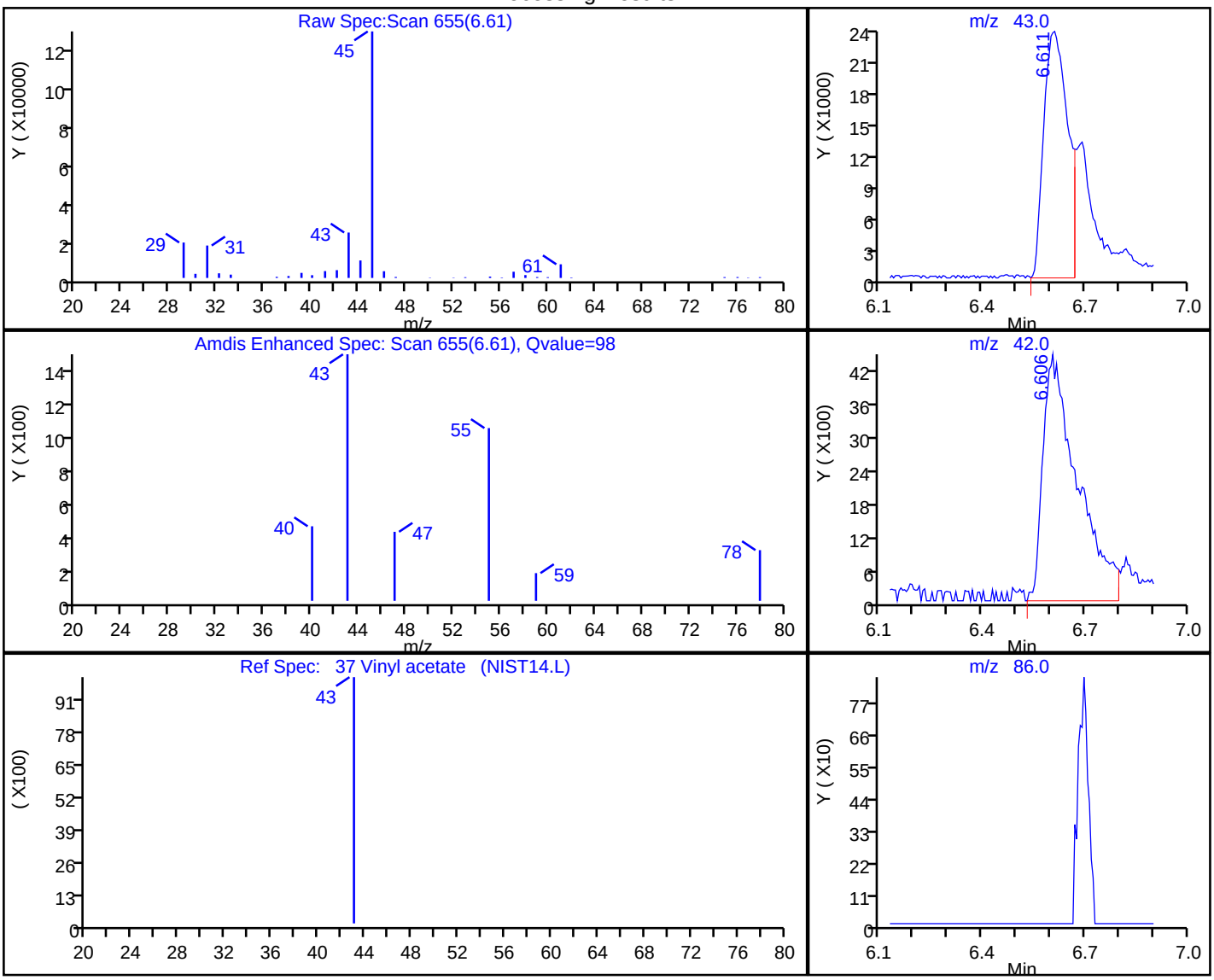
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK01.D				
Injection Date:	21-Mar-2018 21:57:30	Instrument ID:	MG		
Lims ID:	140-10978-A-1	Lab Sample ID:	140-10978-1		
Client ID:	8188				
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
6.61	43.00	114425	0.436702
6.61	42.00	31234	
6.51	86.00	0	

Reviewer: tajh, 22-Mar-2018 10:24:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 8208 | Lab Sample ID: 140-10978-2

Matrix: Air | Lab File ID: 10978BK02.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 22:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.27		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 8208
Lab Sample ID: 140-10978-2
Matrix: Air
Lab File ID: 10978BK02.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 22:40
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 8208
Lab Sample ID: 140-10978-2
Matrix: Air
Lab File ID: 10978BK02.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 22:40
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 8208 Lab Sample ID: 140-10978-2

Matrix: Air Lab File ID: 10978BK02.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 22:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK02.D
Lims ID: 140-10978-A-2
Client ID: 8208
Sample Type: Client
Inject. Date: 21-Mar-2018 22:40:30 ALS Bottle#: 3 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-022
Misc. Info.: 8208
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 22-Mar-2018 10:25:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	317469	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1744156	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	88	1575831	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1085385	3.90	
62 4-Methyl-2-pentanone (MIBK	43	11.799	11.734	0.065	99	48902	0.2744	

Reagents:

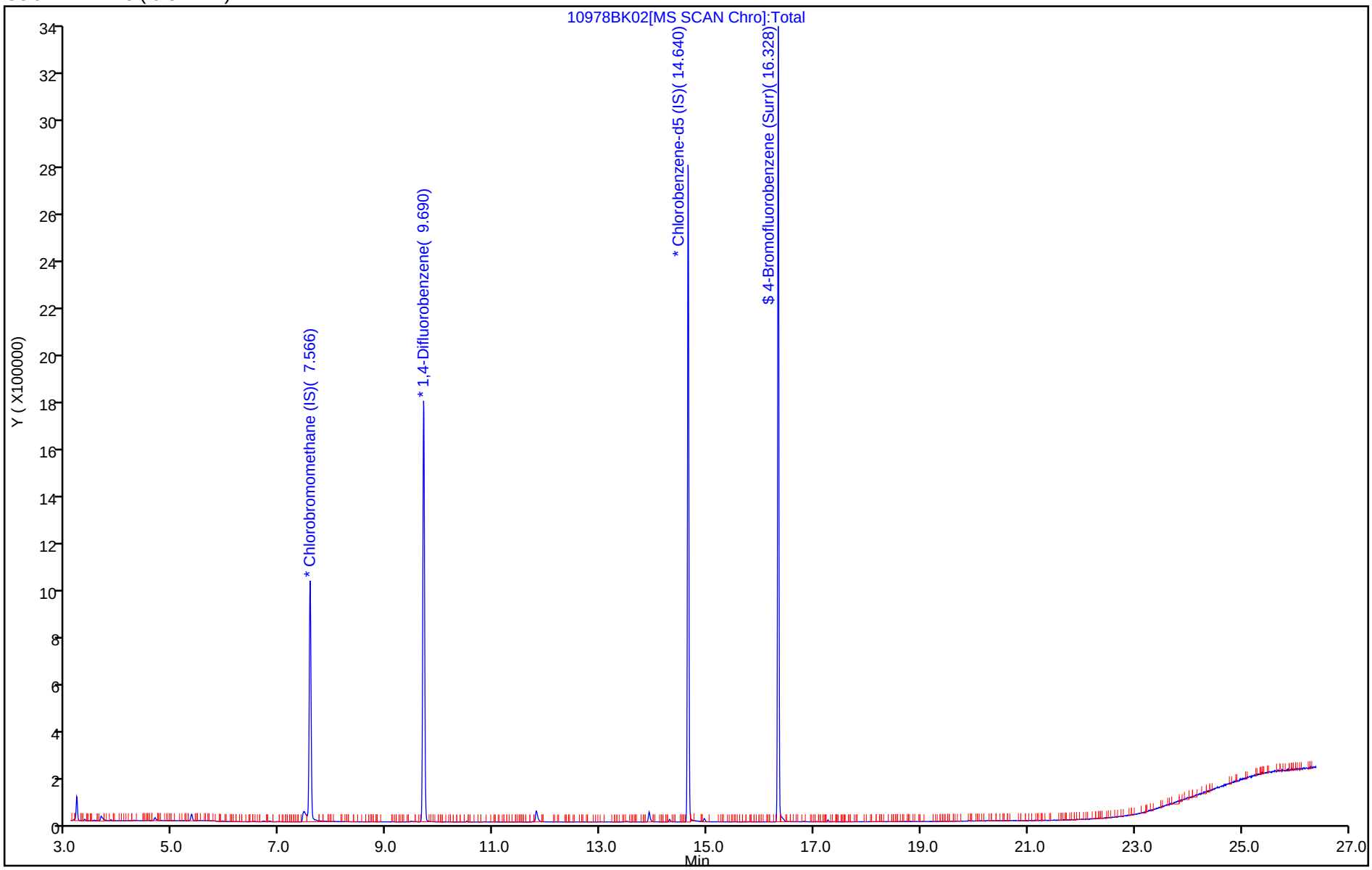
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK02.D				
Injection Date:	21-Mar-2018 22:40:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10978-A-2	Lab Sample ID:	140-10978-2	Worklist Smp#:	22
Client ID:	8208				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

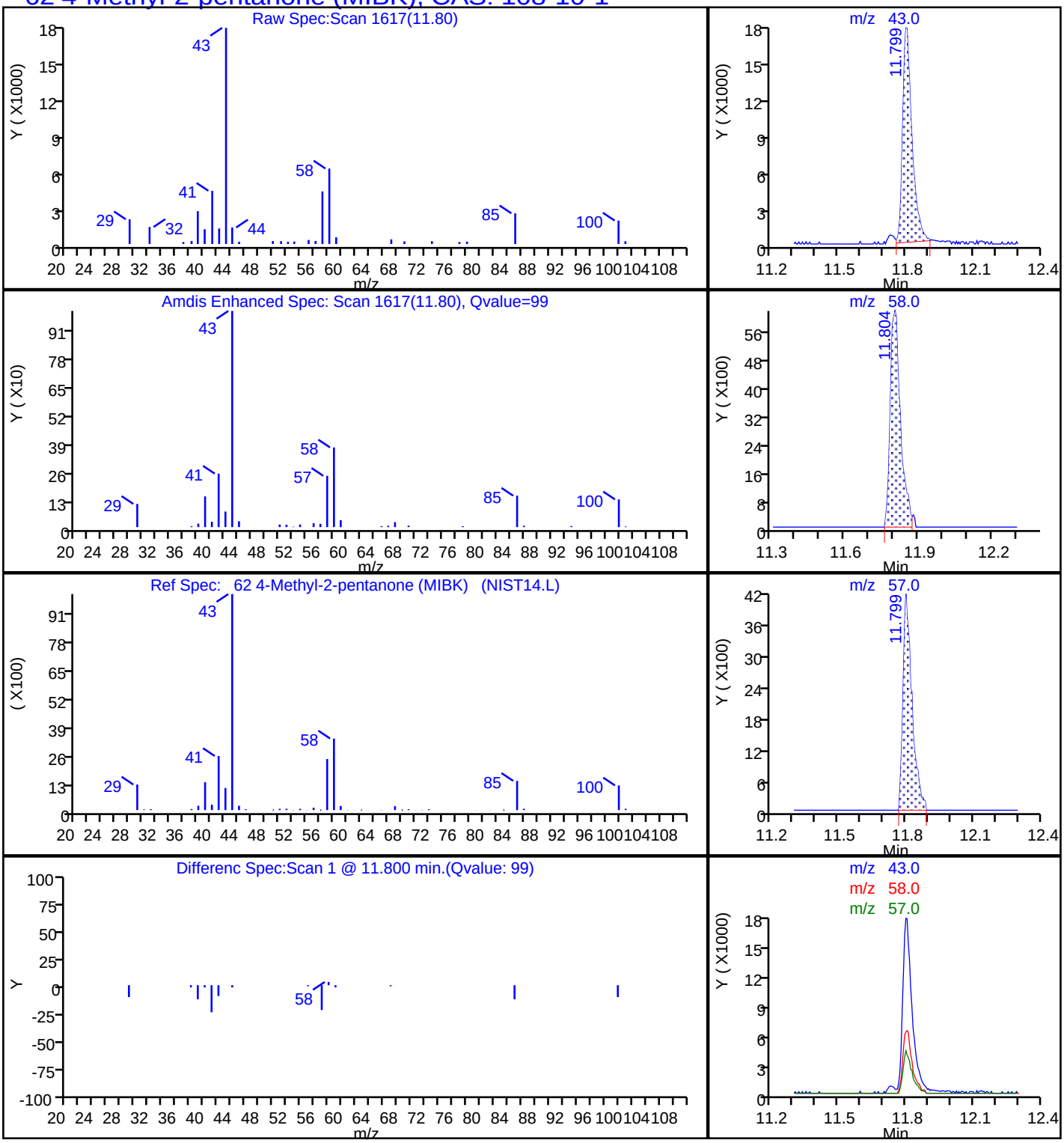


Report Date: 22-Mar-2018 13:17:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK02.D				
Injection Date:	21-Mar-2018 22:40:30	Instrument ID:	MG		
Lims ID:	140-10978-A-2	Lab Sample ID:	140-10978-2		
Client ID:	8208				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

62 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1



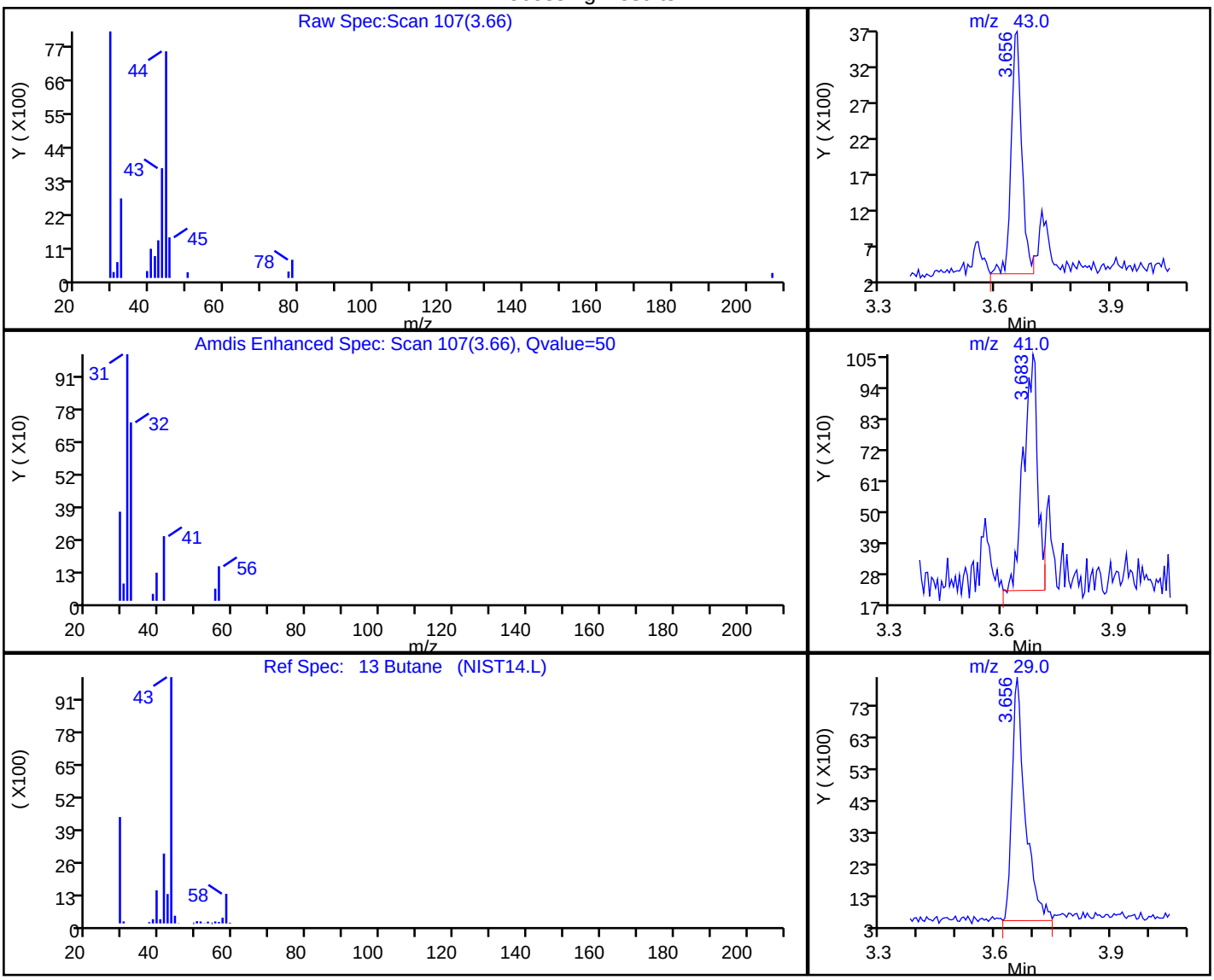
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK02.D				
Injection Date:	21-Mar-2018 22:40:30	Instrument ID:	MG		
Lims ID:	140-10978-A-2	Lab Sample ID:	140-10978-2		
Client ID:	8208				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.66	43.00	6420	0.037944
3.68	41.00	2243	
3.66	29.00	18401	

Reviewer: tajh, 22-Mar-2018 10:25:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

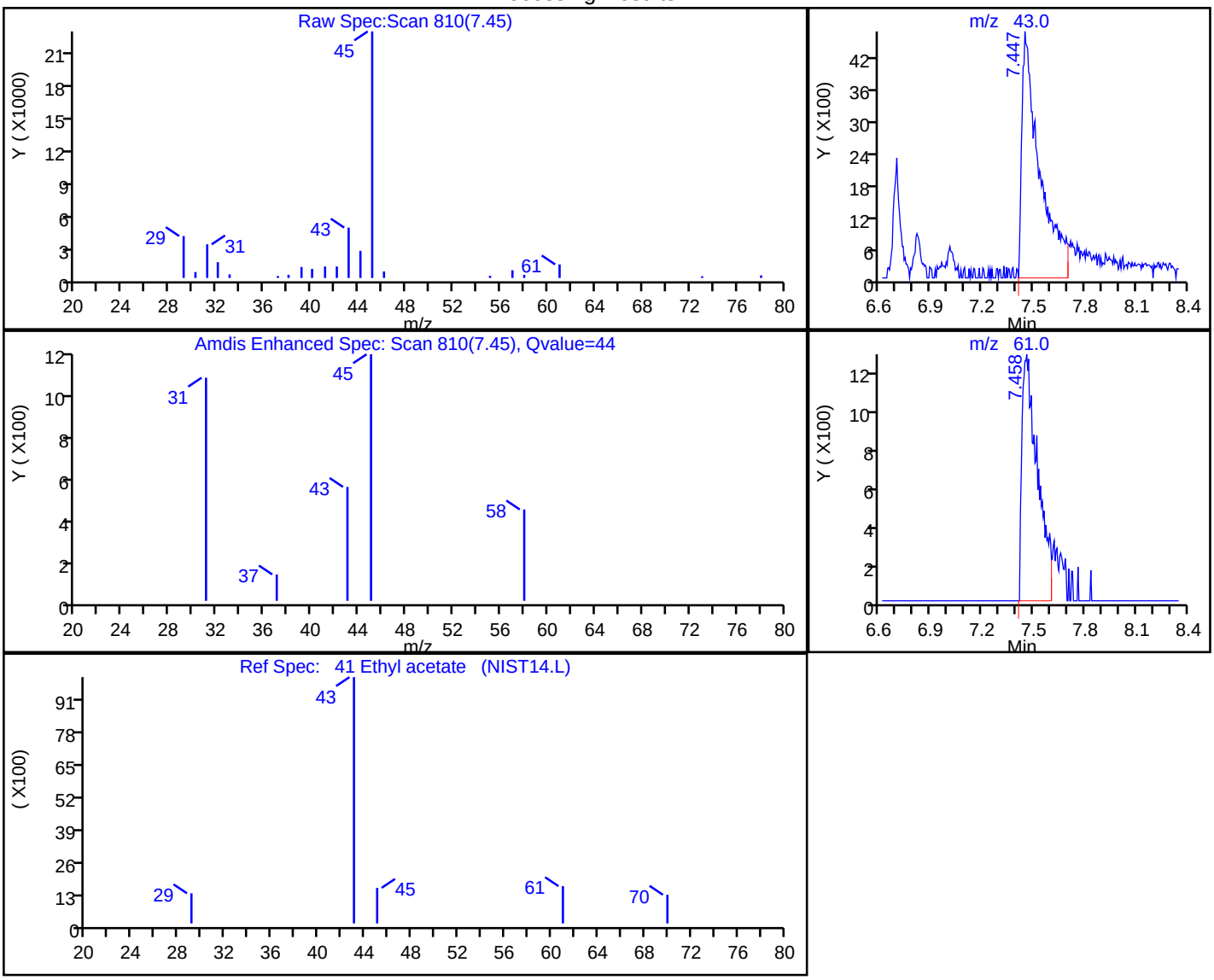
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK02.D				
Injection Date:	21-Mar-2018 22:40:30	Instrument ID:	MG		
Lims ID:	140-10978-A-2	Lab Sample ID:	140-10978-2		
Client ID:	8208				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

41 Ethyl acetate, CAS: 141-78-6

Processing Results



RT	Mass	Response	Amount
7.45	43.00	33572	0.176858
7.46	61.00	8231	

Reviewer: tajh, 22-Mar-2018 10:25:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 8190 | Lab Sample ID: 140-10978-3

Matrix: Air | Lab File ID: 10978BK03.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 23:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 8190
Lab Sample ID: 140-10978-3
Matrix: Air
Lab File ID: 10978BK03.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 23:23
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 8190
Lab Sample ID: 140-10978-3
Matrix: Air
Lab File ID: 10978BK03.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 23:23
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	0.22		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 8190 Lab Sample ID: 140-10978-3

Matrix: Air Lab File ID: 10978BK03.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 23:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK03.D
Lims ID: 140-10978-A-3
Client ID: 8190
Sample Type: Client
Inject. Date: 21-Mar-2018 23:23:30 ALS Bottle#: 4 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-023
Misc. Info.: 8190
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 22-Mar-2018 10:25:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	319930	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1751093	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.640	14.646	-0.006	88	1563753	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1099734	3.98	
13 Butane	43	3.721	3.716	0.005	94	23331	0.1367	
18 2-Methylbutane	43	4.346	4.341	0.005	91	5721	0.0434	
20 Trichlorofluoromethane	101	4.508	4.503	0.005	98	3073	0.0122	
31 Methylene Chloride	84	5.344	5.344	0.000	97	23544	0.2201	
39 Hexane	56	6.951	6.956	-0.005	73	1248	0.0139	
50 n-Butanol	31	9.356	9.210	0.146	88	8804	0.2569	

Reagents:

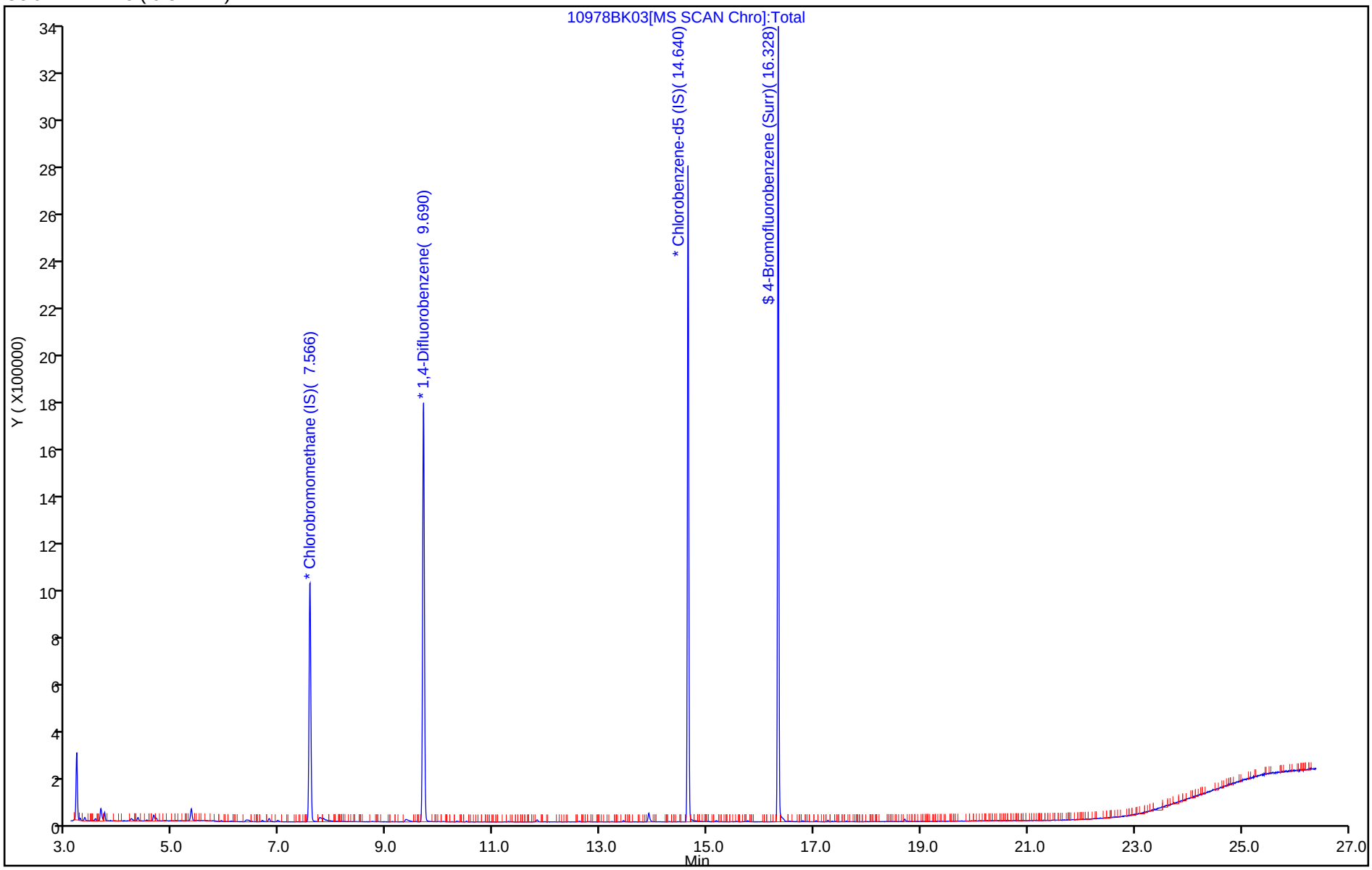
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:57 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK03.D				
Injection Date:	21-Mar-2018 23:23:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10978-A-3	Lab Sample ID:	140-10978-3	Worklist Smp#:	23
Client ID:	8190				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

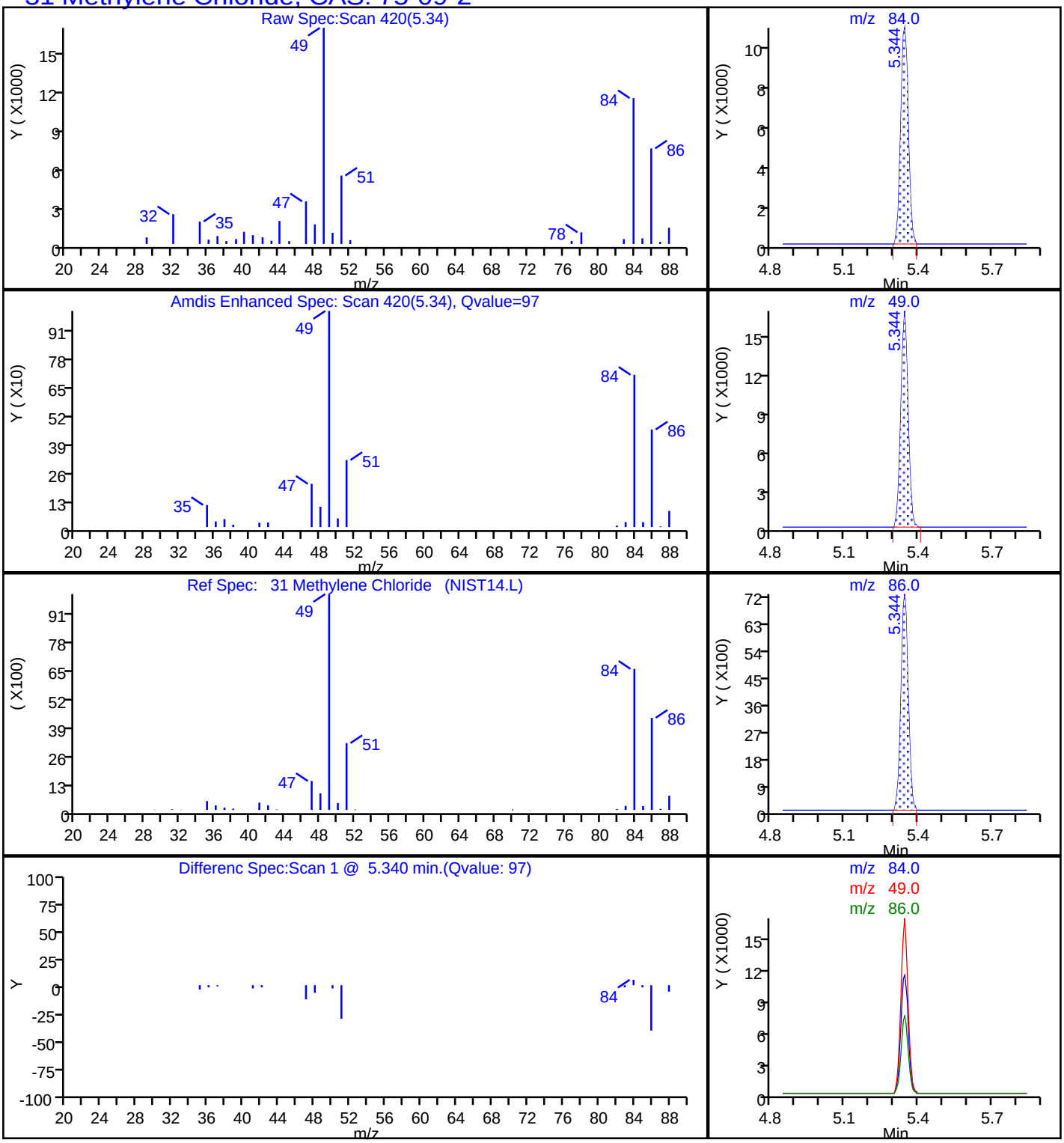


Report Date: 22-Mar-2018 13:17:57 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK03.D				
Injection Date:	21-Mar-2018 23:23:30	Instrument ID:	MG		
Lims ID:	140-10978-A-3	Lab Sample ID:	140-10978-3		
Client ID:	8190				
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



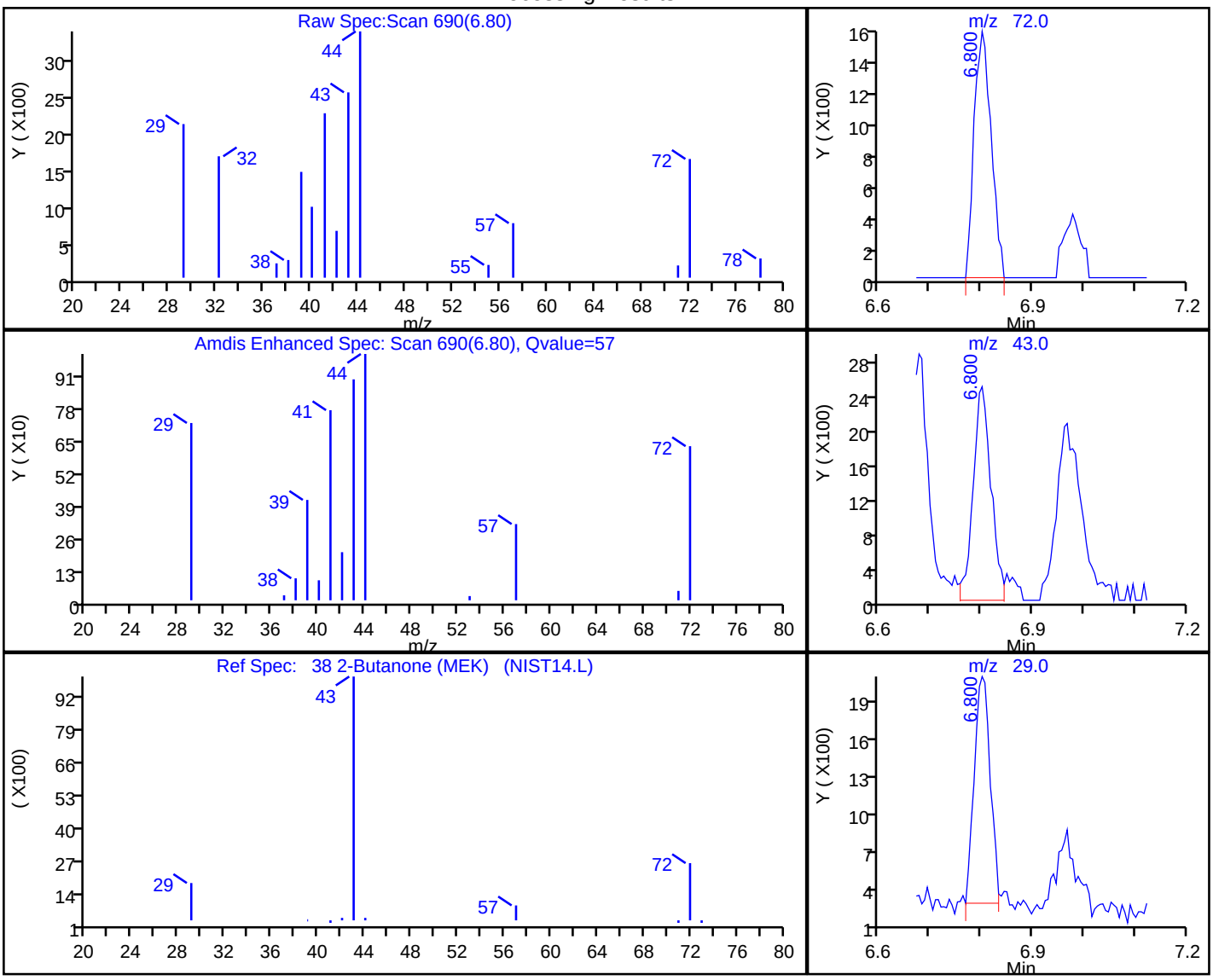
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10978BK03.D				
Injection Date:	21-Mar-2018 23:23:30	Instrument ID:	MG		
Lims ID:	140-10978-A-3	Lab Sample ID:	140-10978-3		
Client ID:	8190				
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
6.80	72.00	3698	0.084700
6.80	43.00	6086	
6.80	29.00	3789	

Reviewer: tajh, 22-Mar-2018 10:25:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11155 | Lab Sample ID: 140-10978-5

Matrix: Air | Lab File ID: RC17lot10978.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/17/2018 15:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18836 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	NC		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11155
Lab Sample ID: 140-10978-5
Matrix: Air
Lab File ID: RC17lot10978.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/17/2018 15:49
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18836
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11155 | Lab Sample ID: 140-10978-5

Matrix: Air | Lab File ID: RC17lot10978.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/17/2018 15:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18836 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND	*	0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11155 Lab Sample ID: 140-10978-5
Matrix: Air Lab File ID: RC17lot10978.D
Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL) Date Analyzed: 03/17/2018 15:49
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18836 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7657.b\RC17lot10978.D
Lims ID: 140-10978-A-5
Client ID: 11155
Sample Type: Client
Inject. Date: 17-Mar-2018 15:49:30 ALS Bottle#: 14 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007657-004
Misc. Info.: 11155
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180315-7657.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Mar-2018 11:35:59 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: tajh Date: 19-Mar-2018 11:13:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.670	-0.005	74	280513	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.811	-0.005	94	1650862	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.837	-0.006	87	1374729	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	91	1051517	4.03	
35 2-Methylpentane	43	6.036	6.204	-0.168	50	1078	NC	
45 1,1,1-Trichloroethane	97	8.663	8.662	0.001	94	12727	0.0467	
102 2,3-Dihydroindene	117	18.633	18.628	0.005	1	516	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

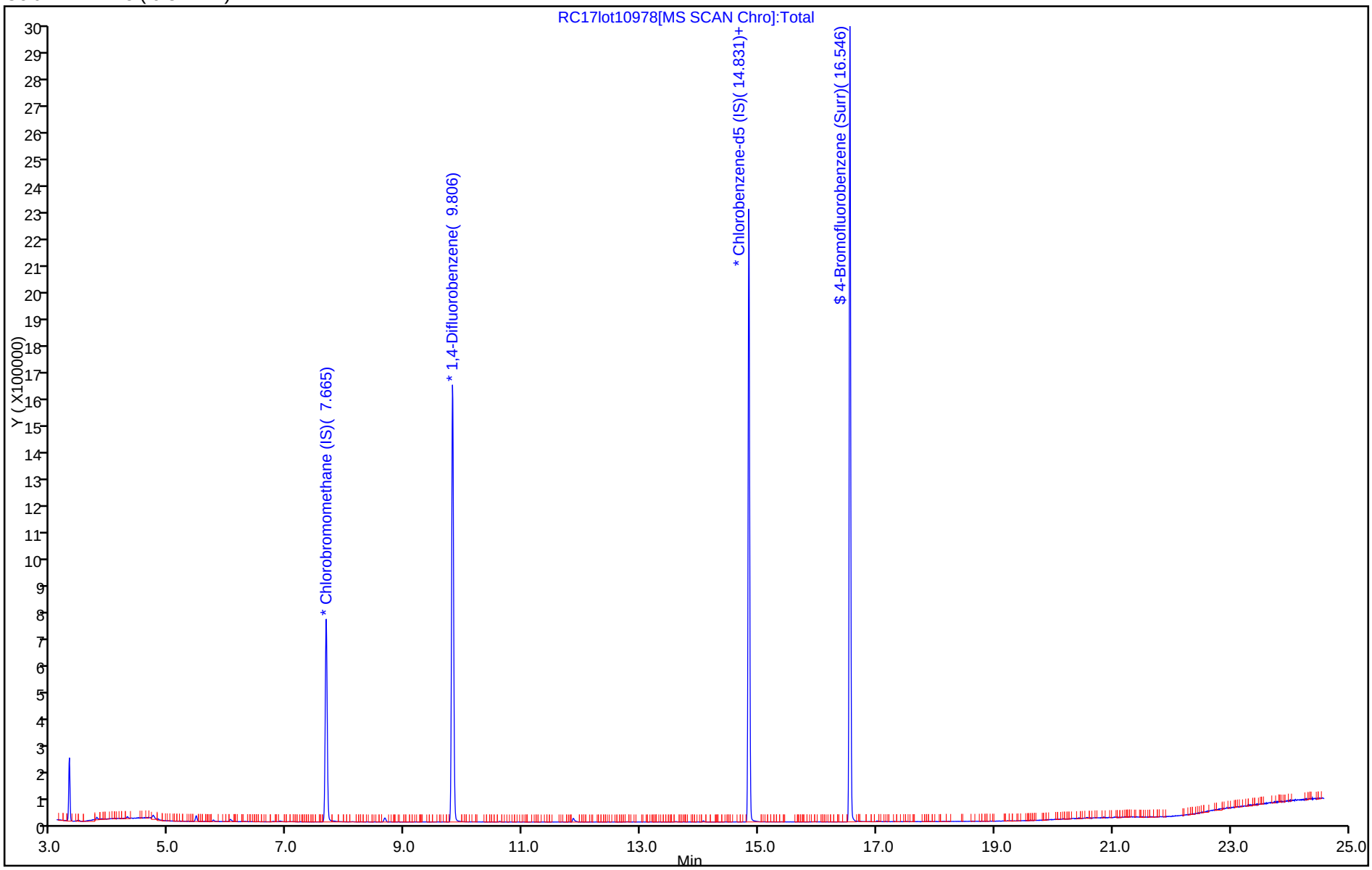
Report Date: 19-Mar-2018 12:35:48 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7657.b\RC17lot10978.D

Injection Date:	17-Mar-2018 15:49:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10978-A-5	Lab Sample ID:	140-10978-5	Worklist Smp#:	4
Client ID:	11155				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

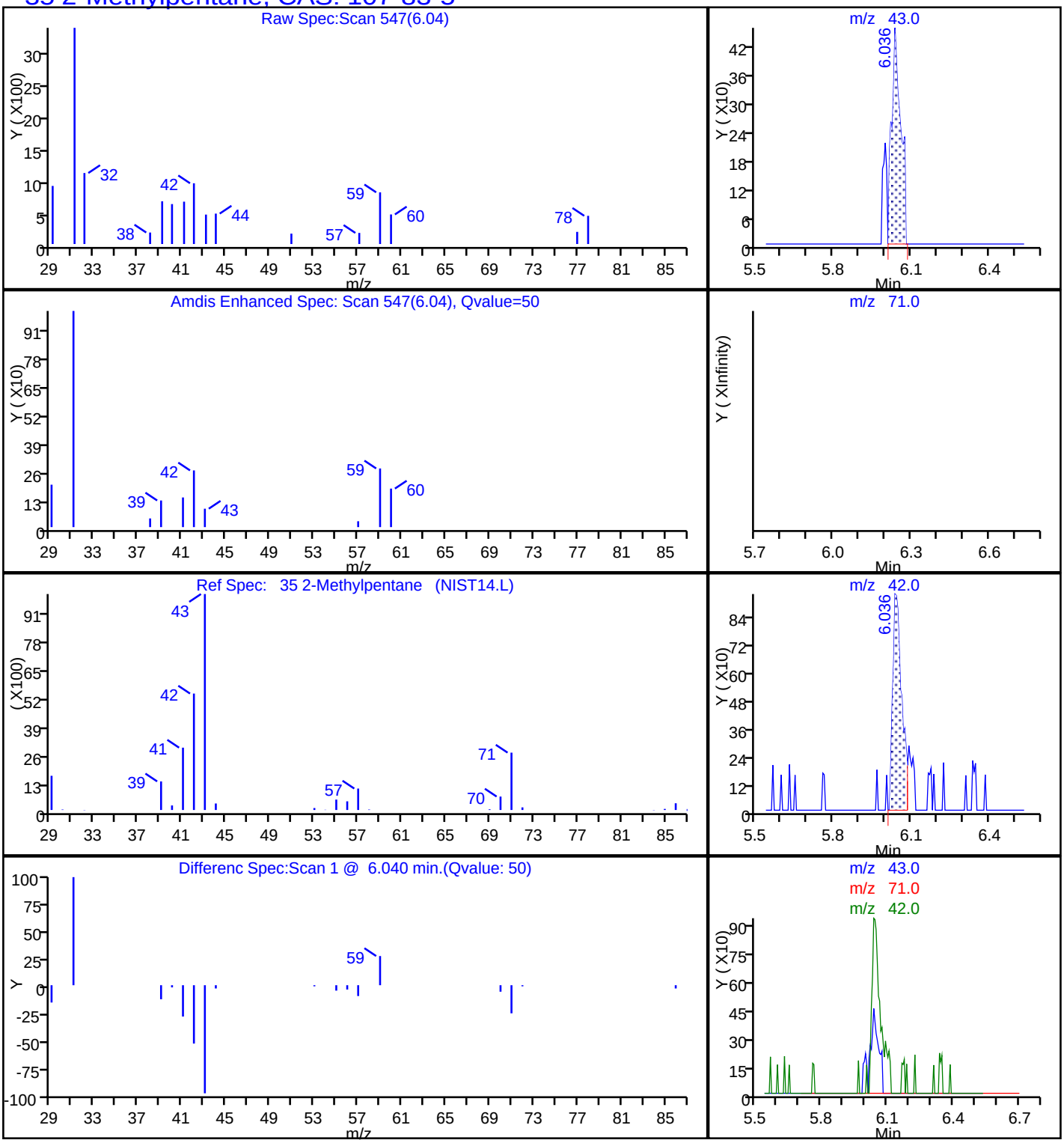


Report Date: 19-Mar-2018 12:35:48 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7657.b\RC17lot10978.D				
Injection Date:	17-Mar-2018 15:49:30	Instrument ID:	MR		
Lims ID:	140-10978-A-5	Lab Sample ID:	140-10978-5		
Client ID:	11155				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

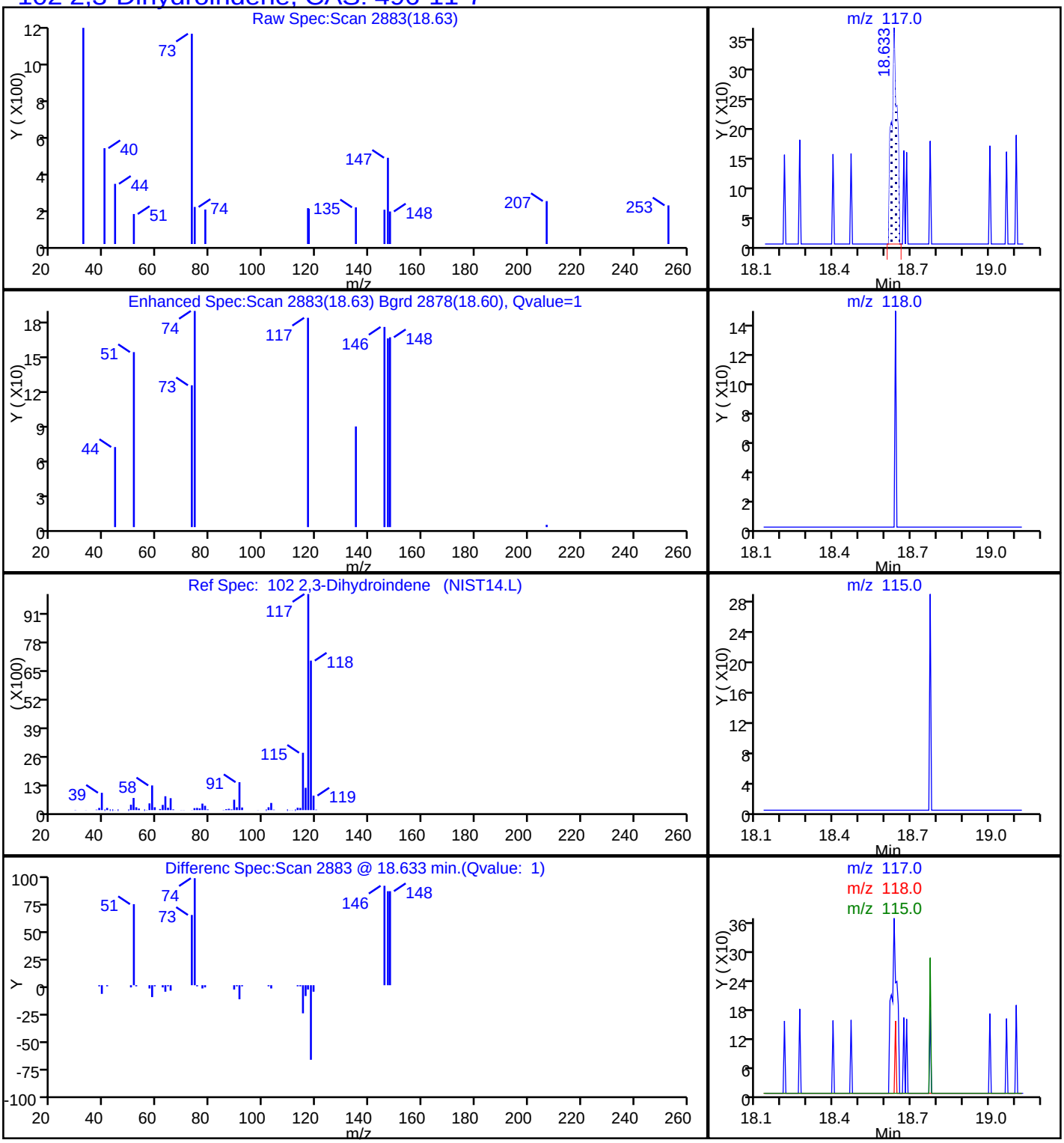


Report Date: 19-Mar-2018 12:35:48 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7657.b\RC17lot10978.D				
Injection Date:	17-Mar-2018 15:49:30	Instrument ID:	MR		
Lims ID:	140-10978-A-5	Lab Sample ID:	140-10978-5		
Client ID:	11155				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7



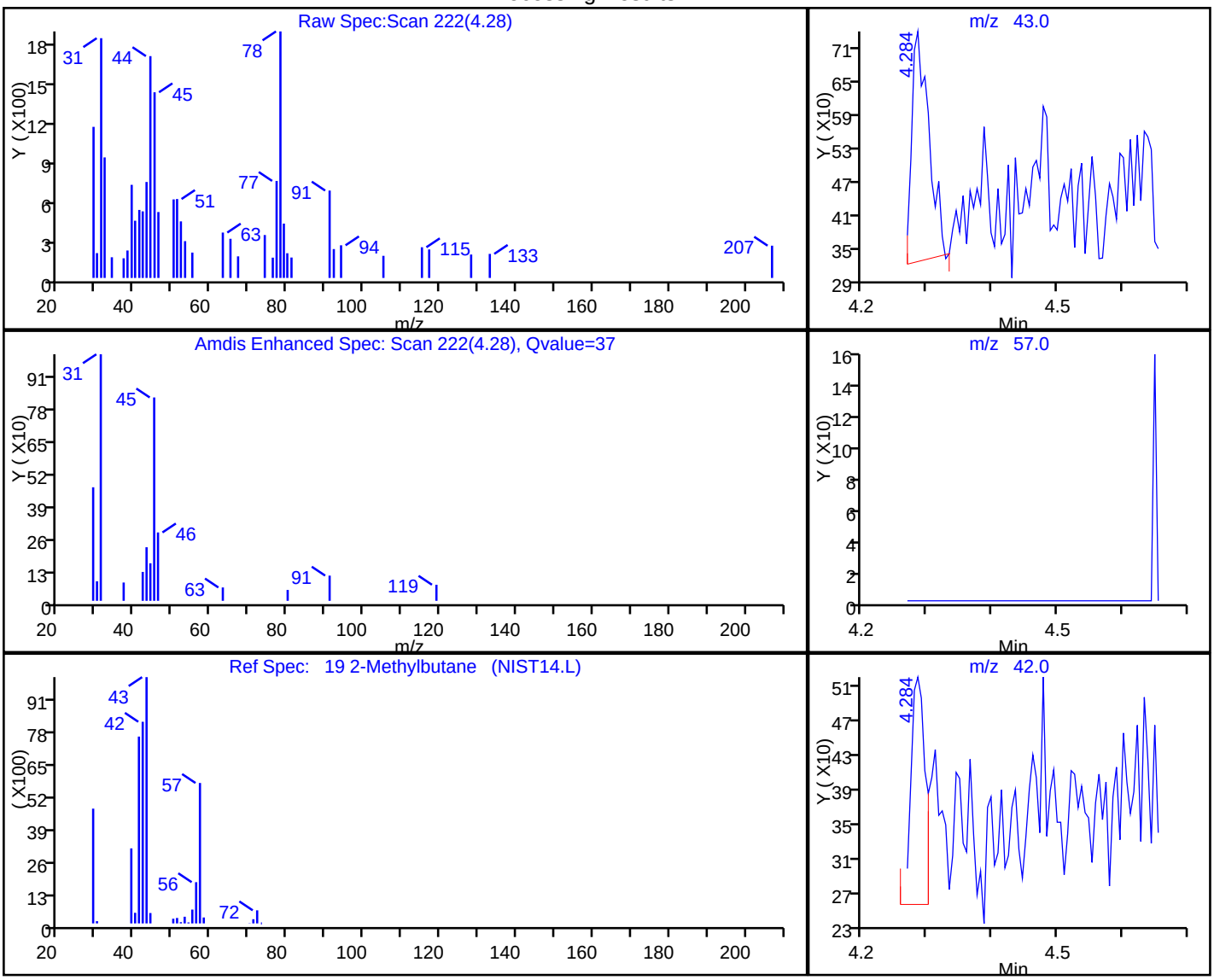
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7657.b\RC17lot10978.D				
Injection Date:	17-Mar-2018 15:49:30	Instrument ID:	MR		
Lims ID:	140-10978-A-5	Lab Sample ID:	140-10978-5		
Client ID:	11155				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.28	43.00	761	0.013701
4.28	42.00	404	
4.46	57.00	0	

Reviewer: tajh, 19-Mar-2018 11:13:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11207 | Lab Sample ID: 140-10978-6

Matrix: Air | Lab File ID: GC20BK10978-06.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 02:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18936 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11207
Lab Sample ID: 140-10978-6
Matrix: Air
Lab File ID: GC20BK10978-06.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 02:25
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11207
Lab Sample ID: 140-10978-6
Matrix: Air
Lab File ID: GC20BK10978-06.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 02:25
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11207 Lab Sample ID: 140-10978-6

Matrix: Air Lab File ID: GC20BK10978-06.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 02:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18936 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-06.D
Lims ID: 140-10978-A-6
Client ID: 11207
Sample Type: Client
Inject. Date: 21-Mar-2018 02:25:30 ALS Bottle#: 3 Worklist Smp#: 27
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007686-027
Misc. Info.: 11207
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 12:52:12 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 22-Mar-2018 12:51:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.577	-0.011	95	345728	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.704	-0.014	95	2011216	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.651	-0.005	87	1808526	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.330	-0.008	95	1269612	3.97	
13 Butane	43	3.721	3.721	0.000	90	6705	0.0364	
18 2-Methylbutane	43	4.352	4.346	0.005	93	2435	0.0171	
22 Acetone	58	4.627	4.620	0.007	99	42093	0.9286	
25 Isopropyl alcohol	45	4.837	4.758	0.078	99	8538	0.0665	
30 2-Methyl-2-propanol	59	5.430	5.338	0.091	92	4694	0.0300	
31 Methylene Chloride	84	5.349	5.351	-0.003	98	16202	0.1401	
38 2-Butanone (MEK)	72	6.951	6.931	0.019	98	5974	0.1265	
50 n-Butanol	31	9.399	9.332	0.059	87	4816	0.1223	
69 2-Hexanone	58	13.201	13.176	0.020	92	2572	0.0285	

Reagents:

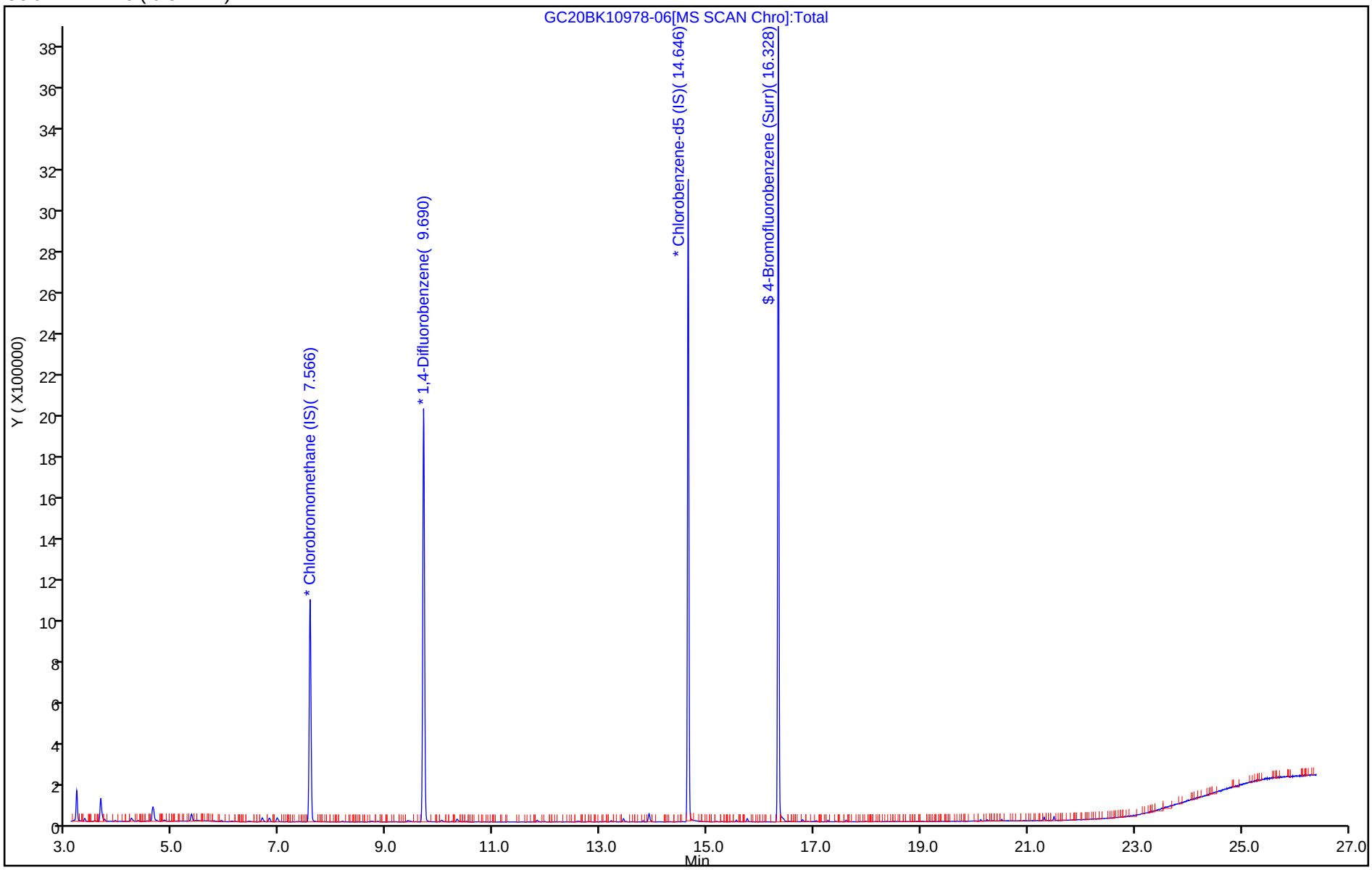
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 12:52:32 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-06.D				
Injection Date:	21-Mar-2018 02:25:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-10978-A-6	Lab Sample ID:	140-10978-6	Worklist Smp#:	27
Client ID:	11207				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



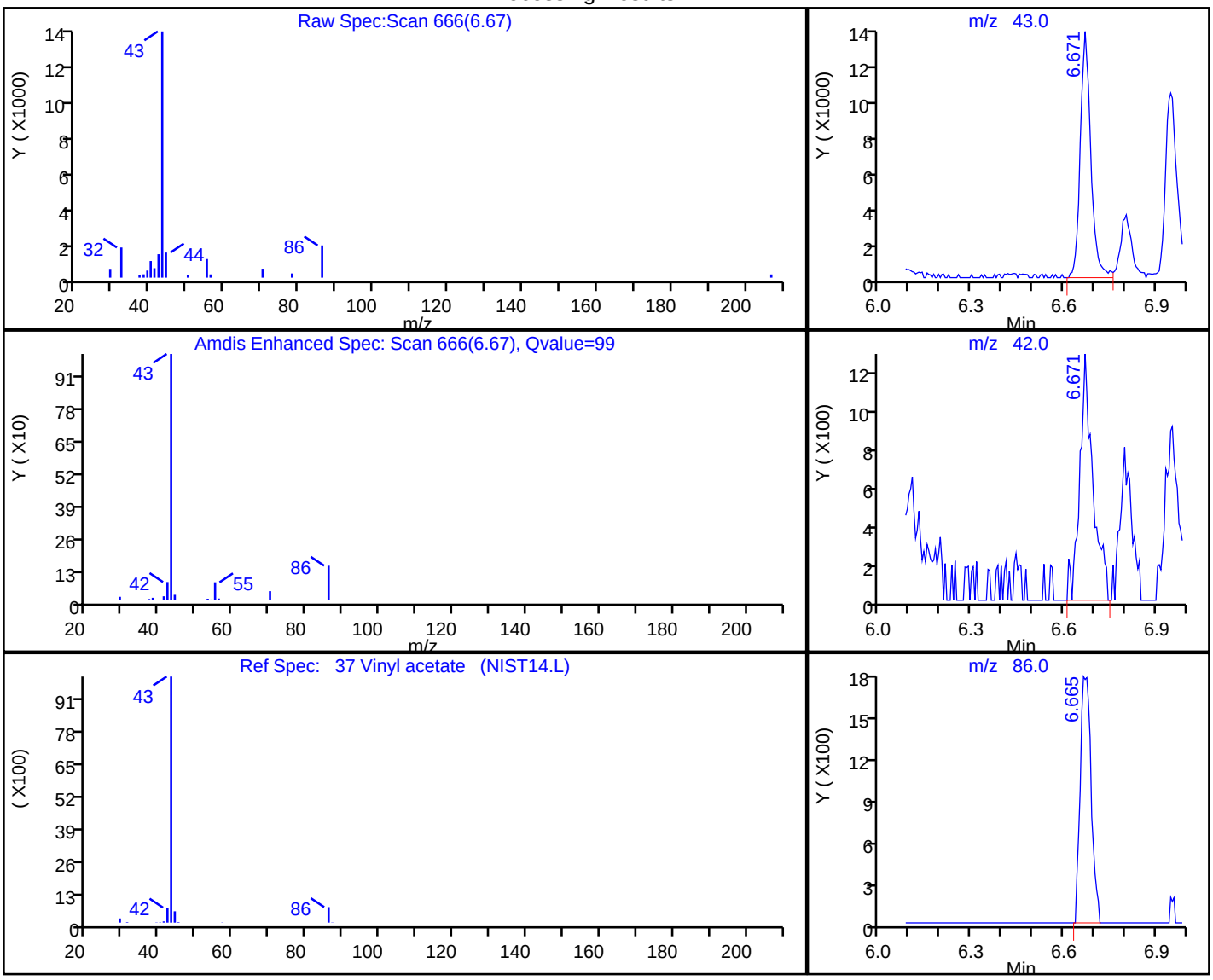
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-06.D				
Injection Date:	21-Mar-2018 02:25:30	Instrument ID:	MG		
Lims ID:	140-10978-A-6	Lab Sample ID:	140-10978-6		
Client ID:	11207				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	27
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
6.67	43.00	31758	0.115108
6.67	42.00	3772	
6.67	86.00	4392	

Reviewer: tajh, 21-Mar-2018 12:16:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11088
Lab Sample ID: 140-10978-7
Matrix: Air
Lab File ID: GC20BK10978-07.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:08
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11088
Lab Sample ID: 140-10978-7
Matrix: Air
Lab File ID: GC20BK10978-07.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:08
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	2.0		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11088
Lab Sample ID: 140-10978-7
Matrix: Air
Lab File ID: GC20BK10978-07.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:08
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11088 Lab Sample ID: 140-10978-7
Matrix: Air Lab File ID: GC20BK10978-07.D
Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 03:08
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18936 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-07.D
Lims ID: 140-10978-A-7
Client ID: 11088
Sample Type: Client
Inject. Date: 21-Mar-2018 03:08:30 ALS Bottle#: 4 Worklist Smp#: 28
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007686-028
Misc. Info.: 11088
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 12:49:04 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 22-Mar-2018 12:49:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.577	-0.011	95	339603	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.704	-0.014	95	1940046	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.651	-0.005	87	1747089	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.330	-0.008	95	1214659	3.94	
16 Ethanol	31	4.201	4.202	-0.005	97	96641	2.00	
25 Isopropyl alcohol	45	4.869	4.755	0.110	98	5413	0.0429	
62 4-Methyl-2-pentanone (MIBK	43	11.815	11.774	0.031	98	20047	0.1011	
73 Tetrachloroethene	129	13.799	13.800	-0.006	96	5545	0.0387	

Reagents:

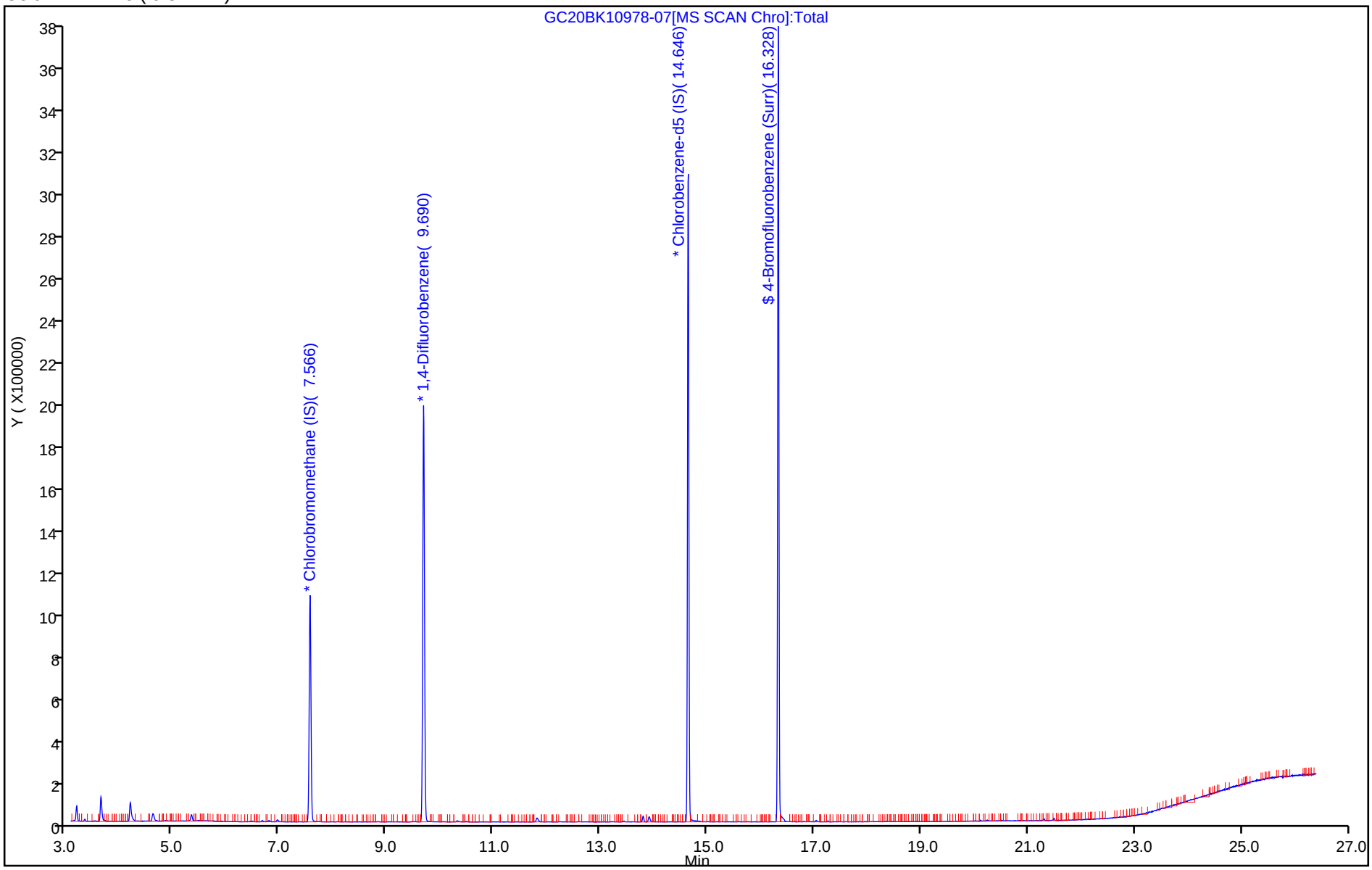
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 12:49:19 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-07.D				
Injection Date:	21-Mar-2018 03:08:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-10978-A-7	Lab Sample ID:	140-10978-7	Worklist Smp#:	28
Client ID:	11088				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

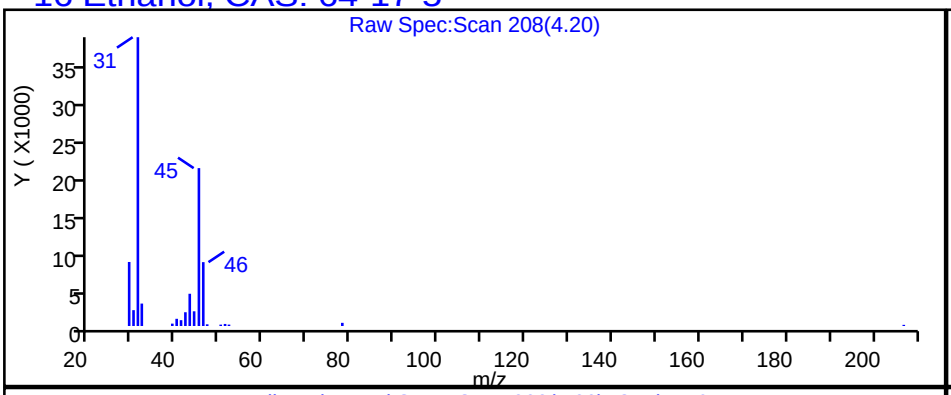


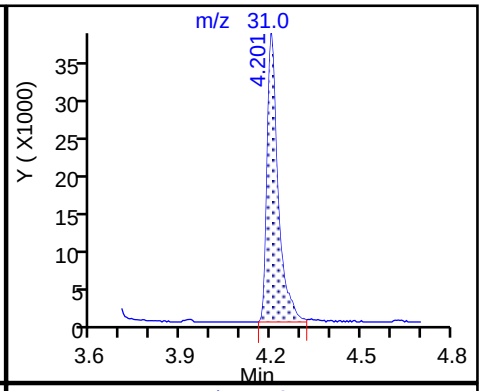
Report Date: 22-Mar-2018 12:49:19 Chrom Revision: 2.2 13-Mar-2018 08:45:20

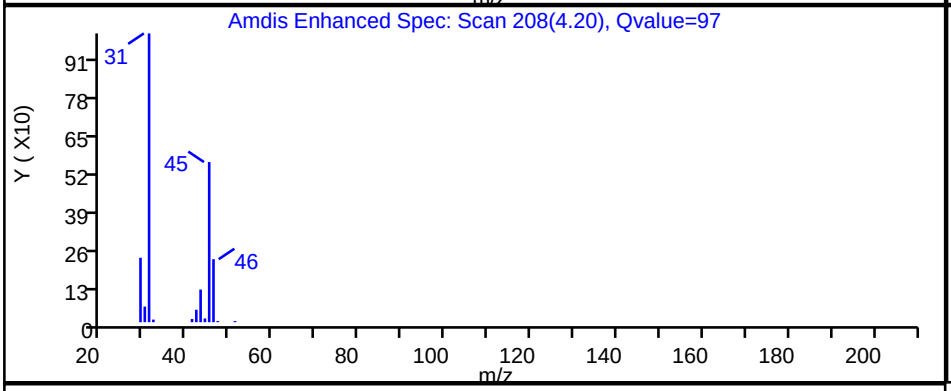
TestAmerica Knoxville

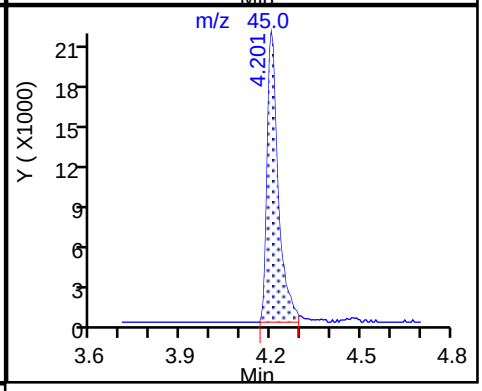
Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-07.D				
Injection Date:	21-Mar-2018 03:08:30	Instrument ID:	MG		
Lims ID:	140-10978-A-7	Lab Sample ID:	140-10978-7		
Client ID:	11088				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

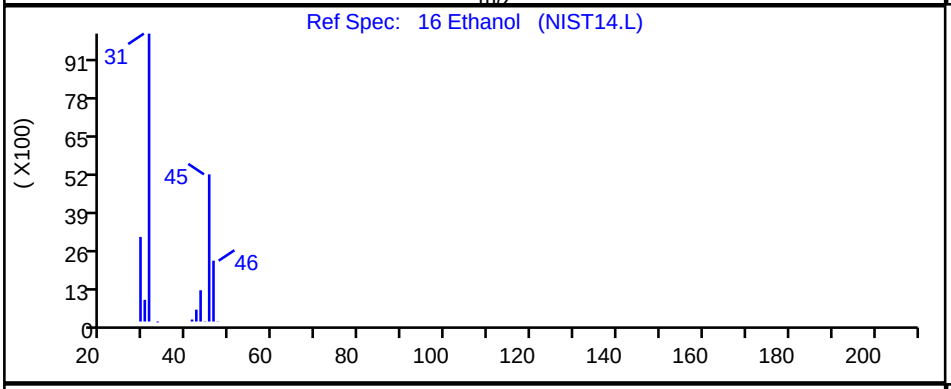
16 Ethanol, CAS: 64-17-5

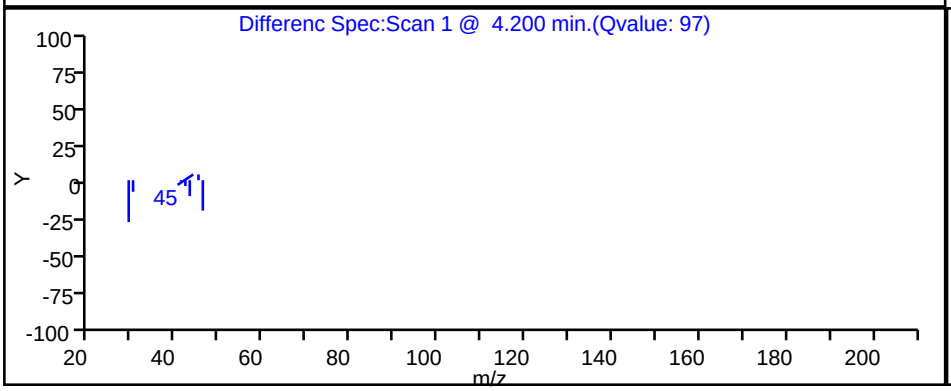


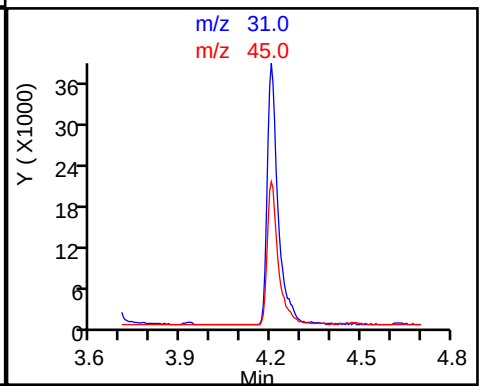












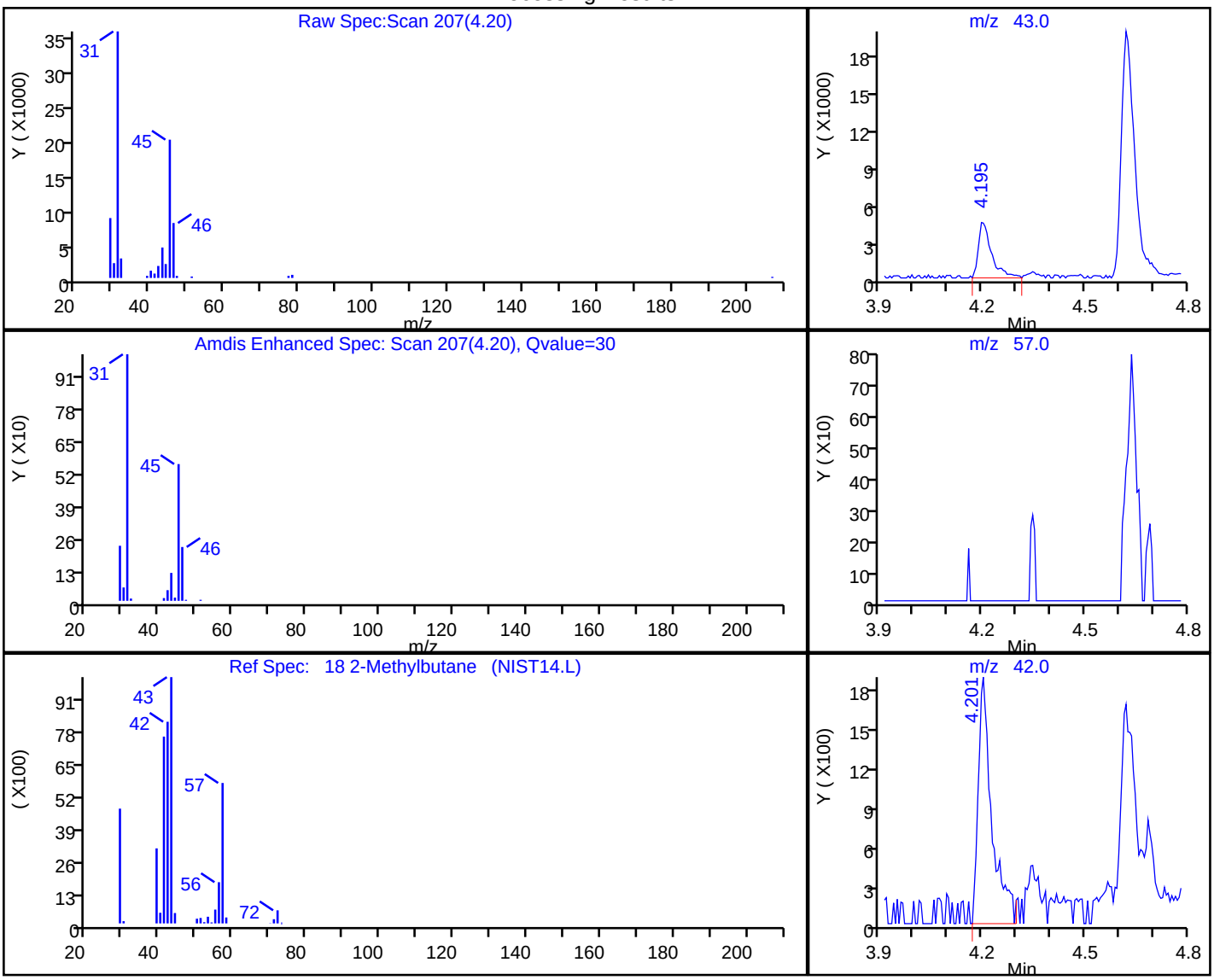
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-07.D				
Injection Date:	21-Mar-2018 03:08:30	Instrument ID:	MG		
Lims ID:	140-10978-A-7	Lab Sample ID:	140-10978-7		
Client ID:	11088				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.20	43.00	11809	0.084356
4.20	42.00	5111	
4.35	57.00	0	

Reviewer: tajh, 21-Mar-2018 12:16:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

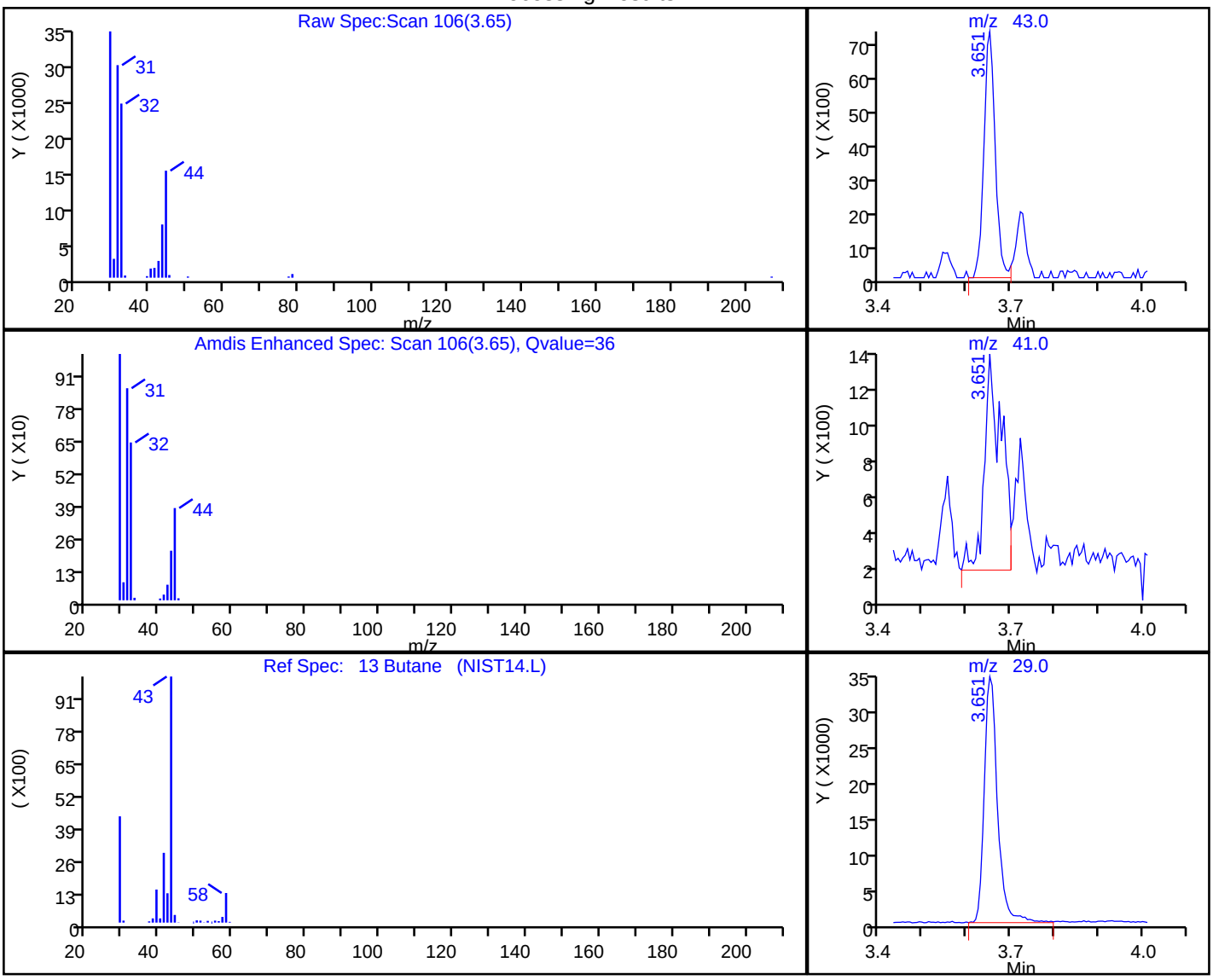
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-07.D				
Injection Date:	21-Mar-2018 03:08:30	Instrument ID:	MG		
Lims ID:	140-10978-A-7	Lab Sample ID:	140-10978-7		
Client ID:	11088				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	13335	0.073630
3.65	41.00	3268	
3.65	29.00	72169	

Reviewer: tajh, 21-Mar-2018 12:16:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10230
Lab Sample ID: 140-10978-8
Matrix: Air
Lab File ID: GC20BK10978-08.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:52
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10230
Lab Sample ID: 140-10978-8
Matrix: Air
Lab File ID: GC20BK10978-08.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:52
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10230
Lab Sample ID: 140-10978-8
Matrix: Air
Lab File ID: GC20BK10978-08.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 03:52
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10230 Lab Sample ID: 140-10978-8
Matrix: Air Lab File ID: GC20BK10978-08.D
Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 03:52
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18936 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-08.D
Lims ID: 140-10978-A-8
Client ID: 10230
Sample Type: Client
Inject. Date: 21-Mar-2018 03:52:30 ALS Bottle#: 5 Worklist Smp#: 29
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007686-029
Misc. Info.: 10230
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 12:49:04 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 22-Mar-2018 12:49:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.577	-0.006	96	329331	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.704	-0.008	95	1863994	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.651	-0.005	88	1691349	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.330	-0.008	95	1194985	4.00	
33 Carbon disulfide	76	5.484	5.475	0.004	100	7329	0.0250	
50 n-Butanol	31	9.453	9.333	0.113	90	1460	0.0400	

Reagents:

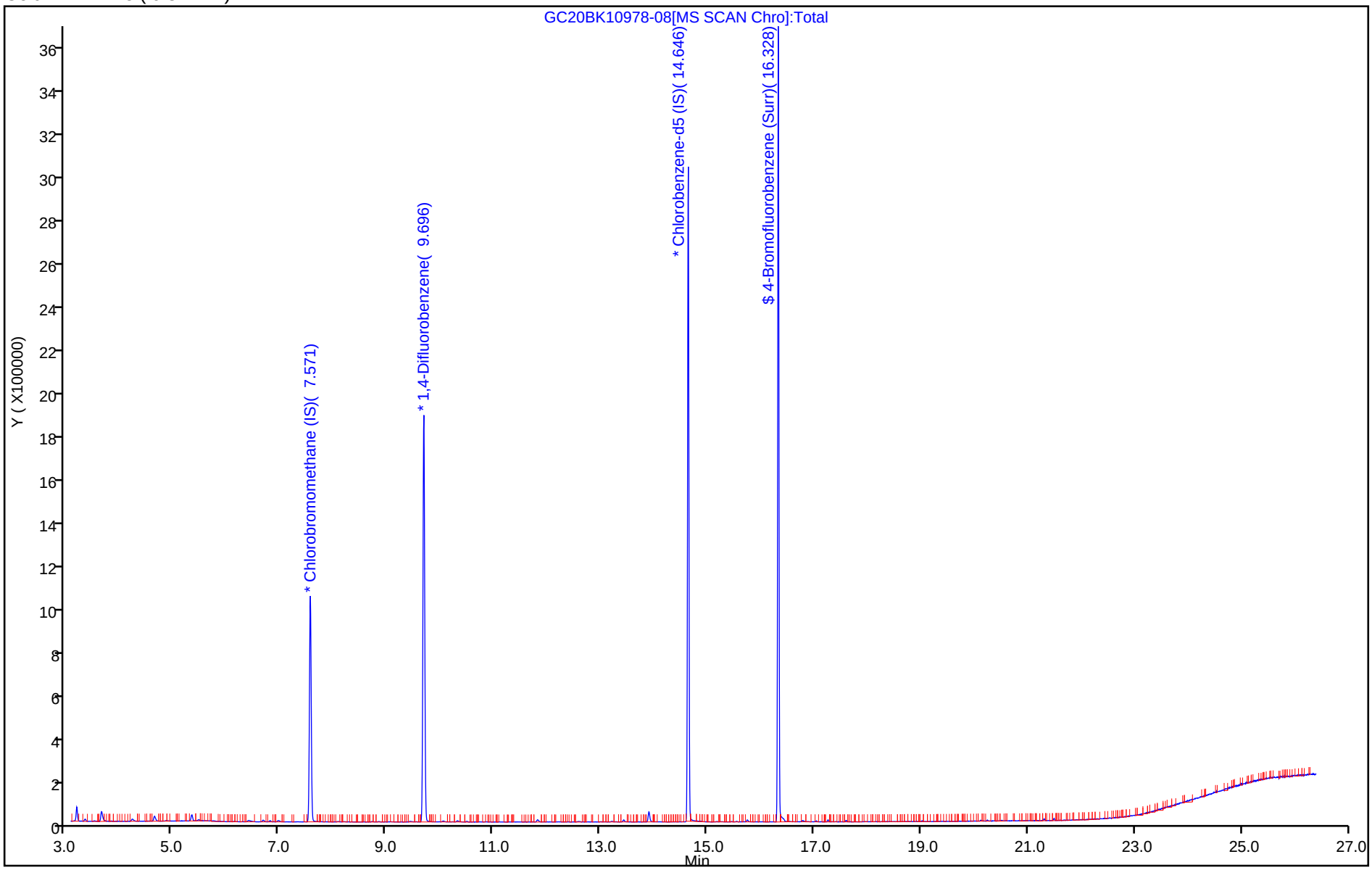
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 12:49:31 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-08.D				
Injection Date:	21-Mar-2018 03:52:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-10978-A-8	Lab Sample ID:	140-10978-8	Worklist Smp#:	29
Client ID:	10230				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



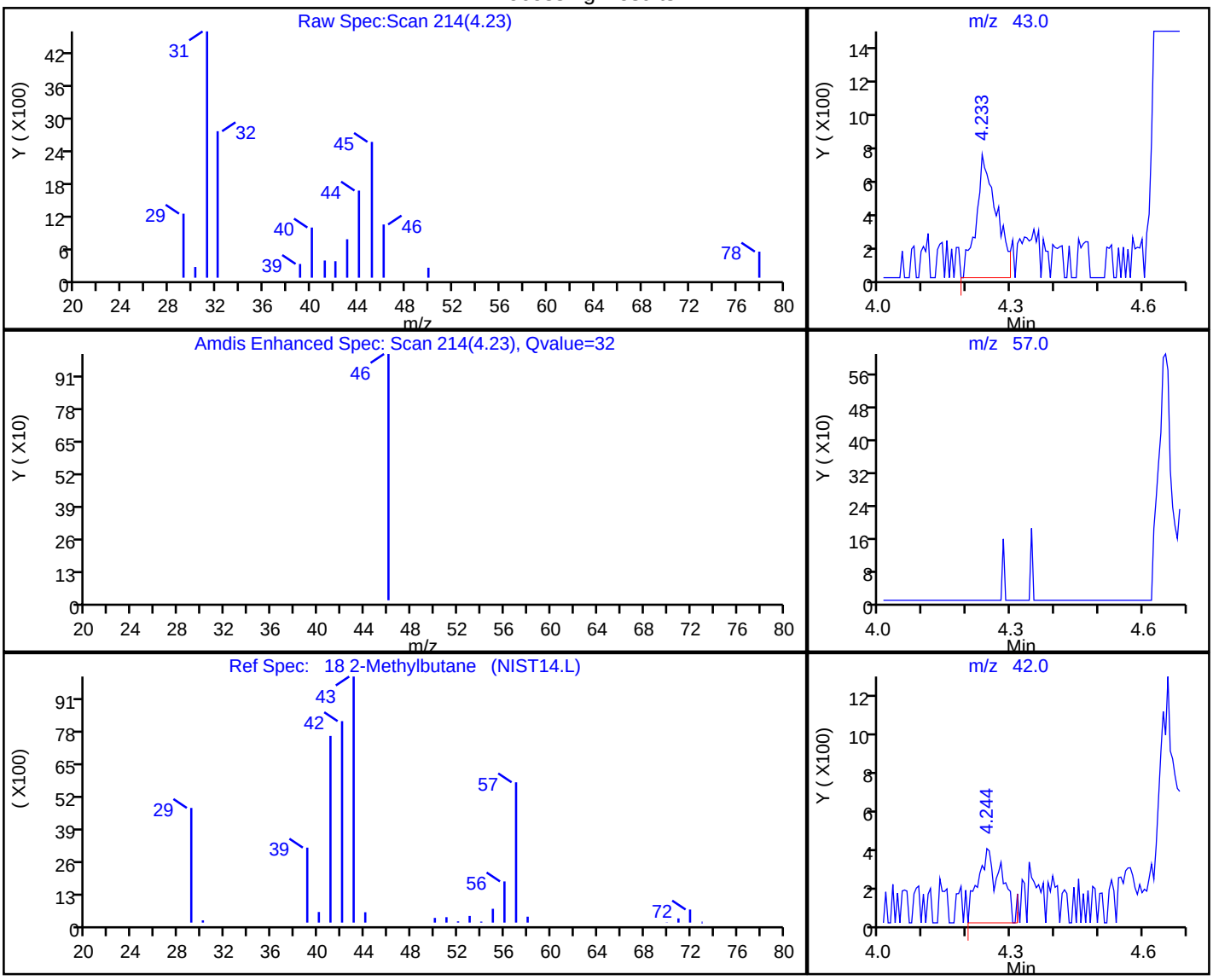
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-08.D				
Injection Date:	21-Mar-2018 03:52:30	Instrument ID:	MG		
Lims ID:	140-10978-A-8	Lab Sample ID:	140-10978-8		
Client ID:	10230				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.23	43.00	2269	0.016714
4.24	42.00	1465	
4.35	57.00	0	

Reviewer: tajh, 21-Mar-2018 12:17:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

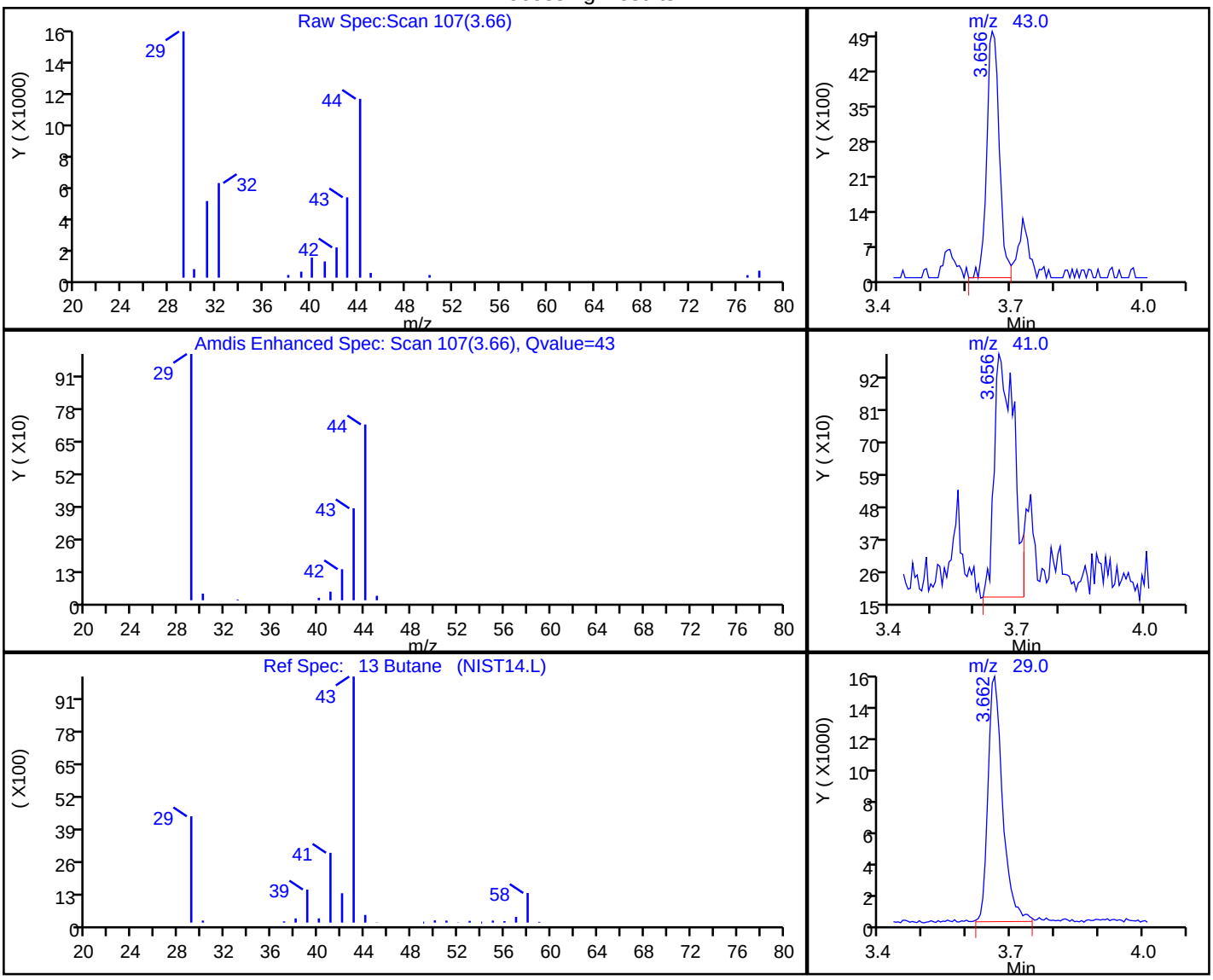
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-08.D				
Injection Date:	21-Mar-2018 03:52:30	Instrument ID:	MG		
Lims ID:	140-10978-A-8	Lab Sample ID:	140-10978-8		
Client ID:	10230				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.66	43.00	9702	0.055241
3.66	41.00	2715	
3.66	29.00	35346	

Reviewer: tajh, 21-Mar-2018 12:17:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11212 | Lab Sample ID: 140-10978-9
Matrix: Air | Lab File ID: GC20BK10978-09.D
Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 04:36
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18936 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11212
Lab Sample ID: 140-10978-9
Matrix: Air
Lab File ID: GC20BK10978-09.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 04:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11212
Lab Sample ID: 140-10978-9
Matrix: Air
Lab File ID: GC20BK10978-09.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 04:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11212 Lab Sample ID: 140-10978-9

Matrix: Air Lab File ID: GC20BK10978-09.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 04:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18936 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-09.D				
Lims ID:	140-10978-A-9				
Client ID:	11212				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 04:36:30	ALS Bottle#:	6	Worklist Smp#:	30
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007686-030				
Misc. Info.:	11212				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2018 12:49:04	Calib Date:	20-Mar-2018 22:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	22-Mar-2018 12:49:43		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.577	-0.011	96	331549	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.704	-0.014	95	1840127	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.651	-0.005	88	1653837	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.330	-0.008	95	1167371	4.00	
33 Carbon disulfide	76	5.479	5.475	-0.001	96	7234	0.0245	

Reagents:

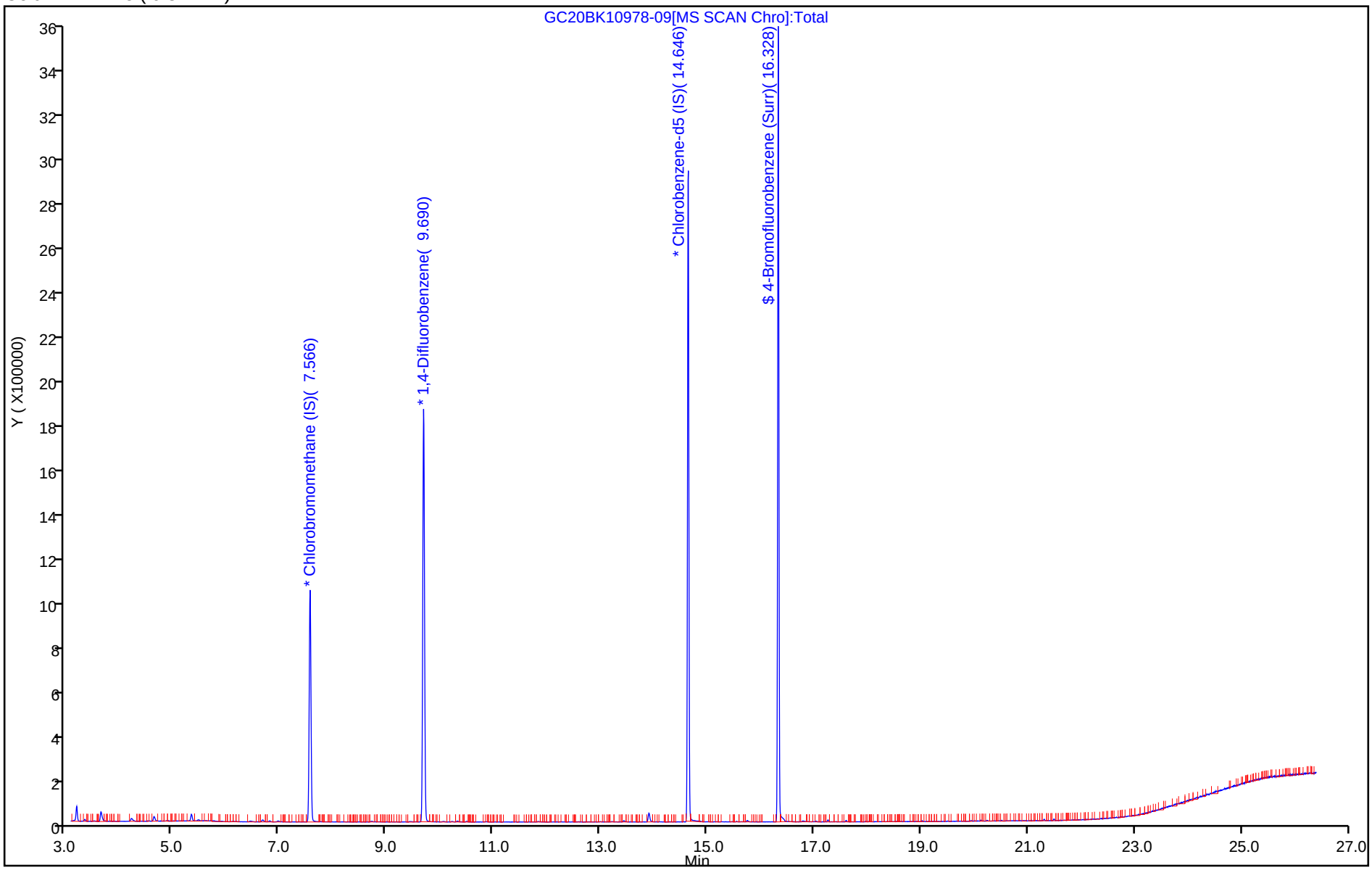
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 12:49:44 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-09.D				
Injection Date:	21-Mar-2018 04:36:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-10978-A-9	Lab Sample ID:	140-10978-9	Worklist Smp#:	30
Client ID:	11212				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



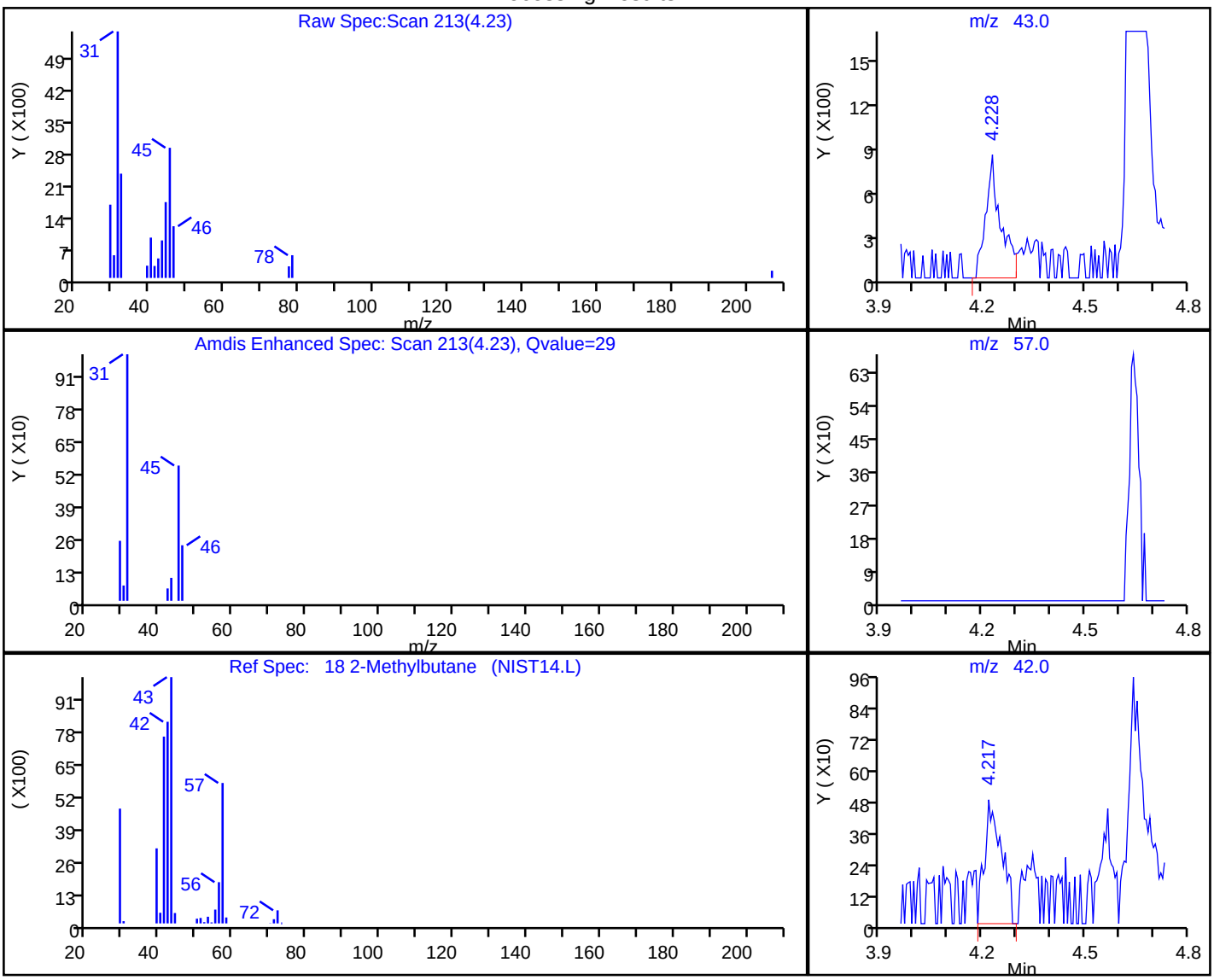
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-09.D				
Injection Date:	21-Mar-2018 04:36:30	Instrument ID:	MG		
Lims ID:	140-10978-A-9	Lab Sample ID:	140-10978-9		
Client ID:	11212				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	30
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.23	43.00	2552	0.018673
4.22	42.00	1662	
4.35	57.00	0	

Reviewer: tajh, 21-Mar-2018 12:17:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

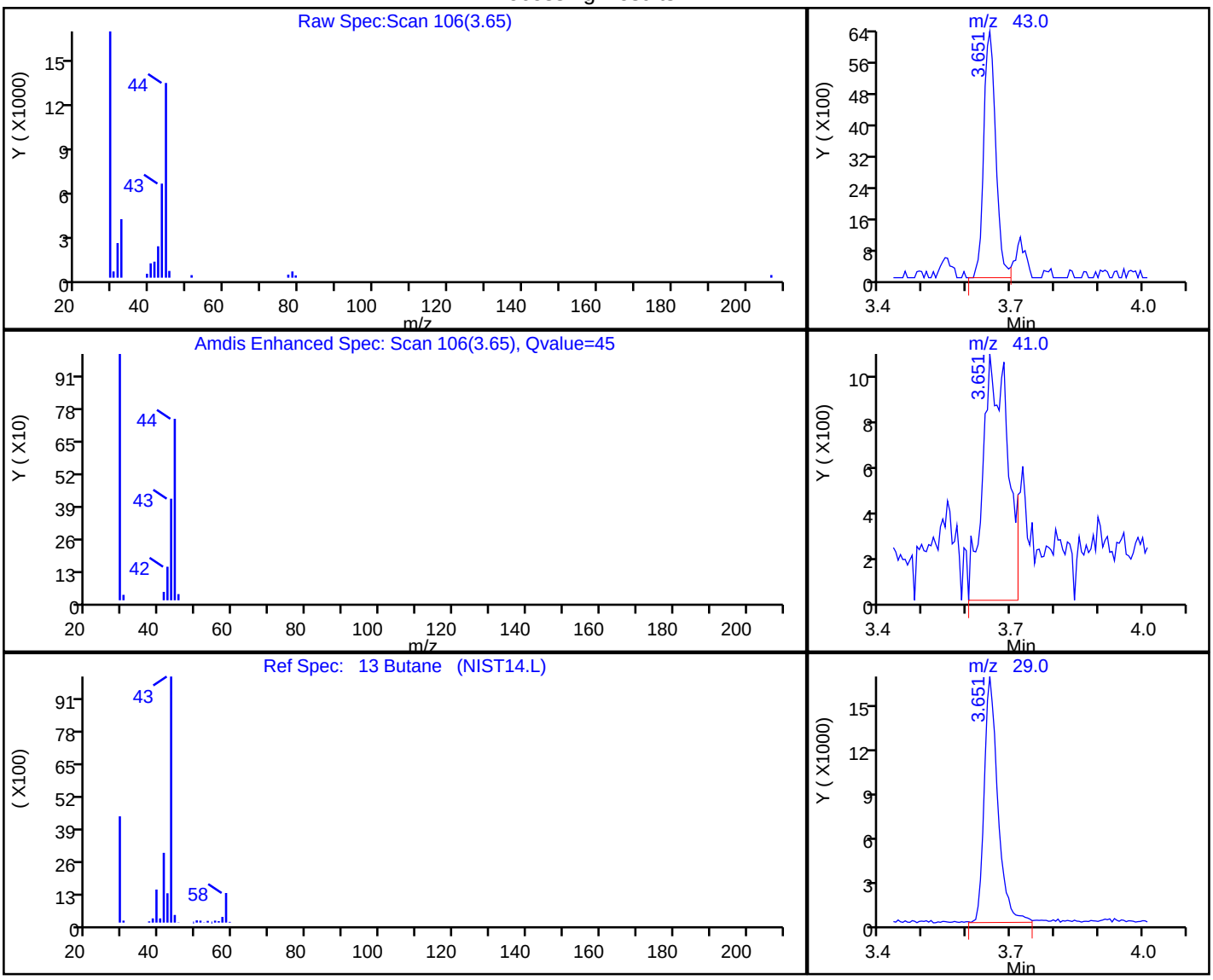
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-09.D				
Injection Date:	21-Mar-2018 04:36:30	Instrument ID:	MG		
Lims ID:	140-10978-A-9	Lab Sample ID:	140-10978-9		
Client ID:	11212				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	30
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	12222	0.069124
3.65	41.00	4300	
3.65	29.00	35811	

Reviewer: tajh, 21-Mar-2018 12:17:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

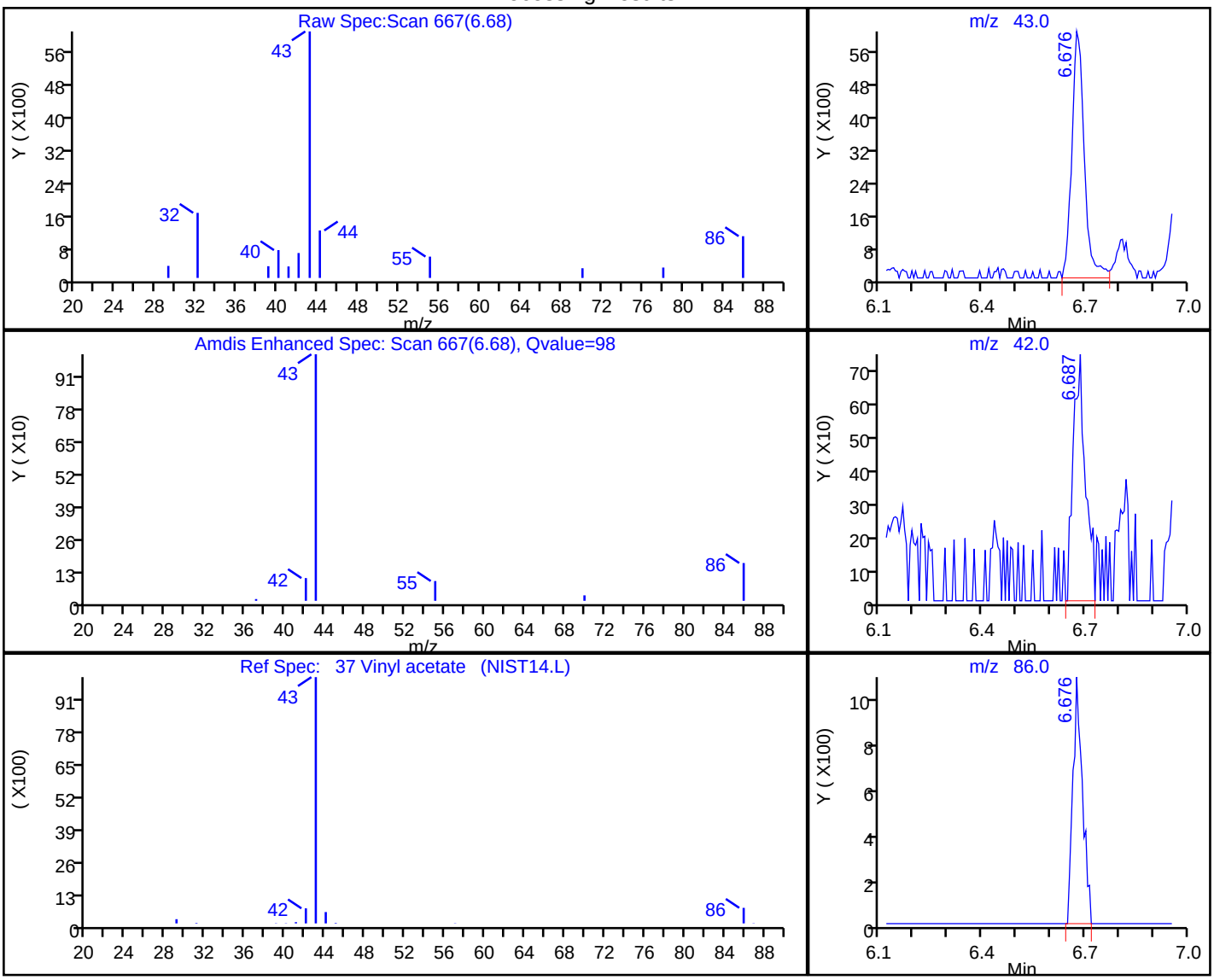
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-09.D				
Injection Date:	21-Mar-2018 04:36:30	Instrument ID:	MG		
Lims ID:	140-10978-A-9	Lab Sample ID:	140-10978-9		
Client ID:	11212				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	30
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
6.68	43.00	15450	0.058394
6.69	42.00	1862	
6.68	86.00	1990	

Reviewer: tajh, 21-Mar-2018 12:17:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10417
Lab Sample ID: 140-10978-10
Matrix: Air
Lab File ID: GC20BK10978-10.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 05:20
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10417
Lab Sample ID: 140-10978-10
Matrix: Air
Lab File ID: GC20BK10978-10.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 05:20
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10417
Lab Sample ID: 140-10978-10
Matrix: Air
Lab File ID: GC20BK10978-10.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 05:20
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18936
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 10417 Lab Sample ID: 140-10978-10

Matrix: Air Lab File ID: GC20BK10978-10.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 05:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18936 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-10.D
Lims ID: 140-10978-A-10
Client ID: 10417
Sample Type: Client
Inject. Date: 21-Mar-2018 05:20:30 ALS Bottle#: 7 Worklist Smp#: 31
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007686-031
Misc. Info.: 10417
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 12:49:04 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 22-Mar-2018 12:50:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.577	-0.011	96	327302	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.704	-0.014	95	1858669	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.651	-0.005	88	1675048	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.330	-0.008	95	1184040	4.00	
13 Butane	43	3.721	3.718	0.000	92	5110	0.0293	
31 Methylene Chloride	84	5.349	5.347	-0.003	96	14349	0.1311	

Reagents:

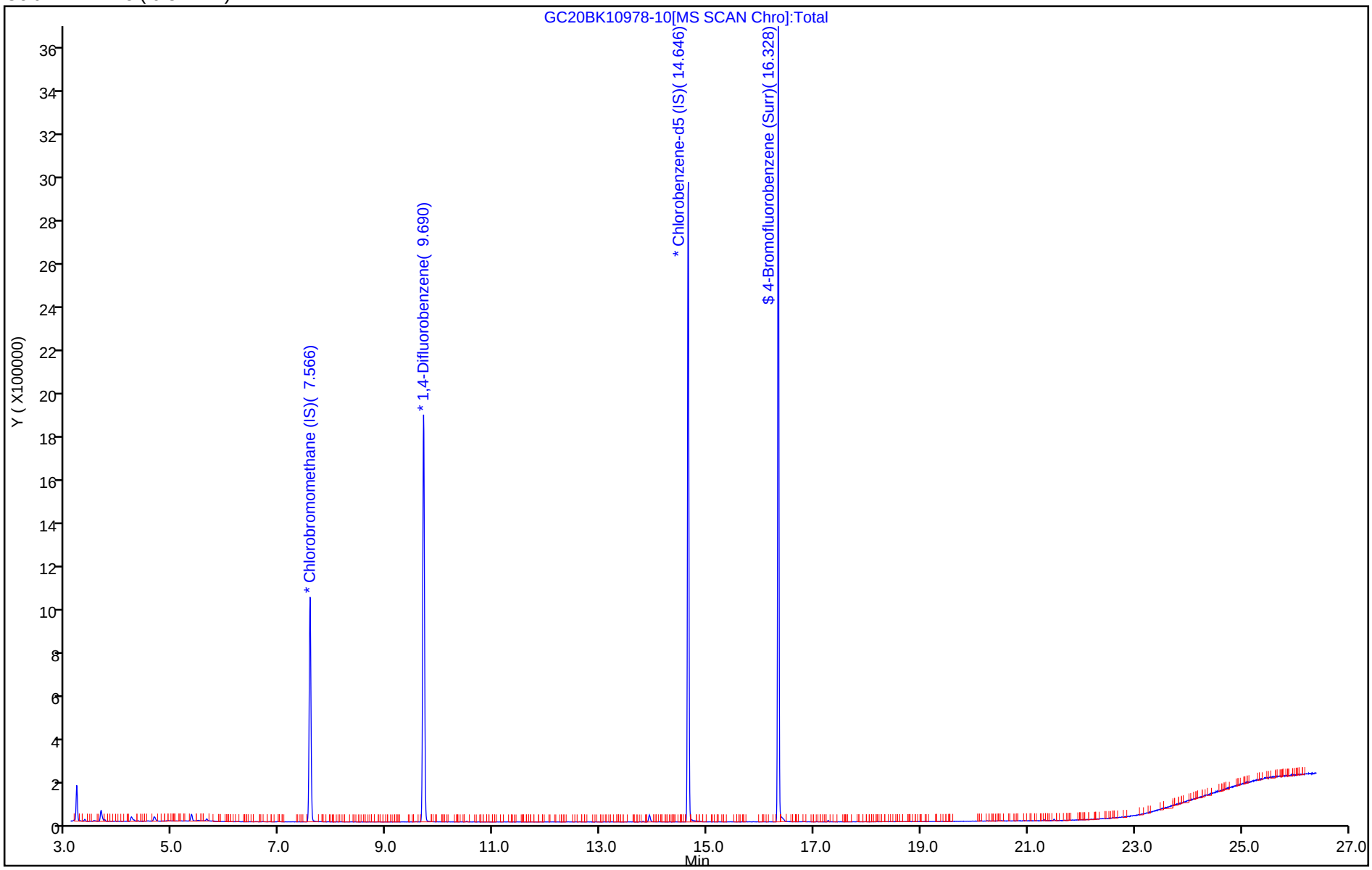
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 12:50:23 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-10.D				
Injection Date:	21-Mar-2018 05:20:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-10978-A-10	Lab Sample ID:	140-10978-10	Worklist Smp#:	31
Client ID:	10417				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



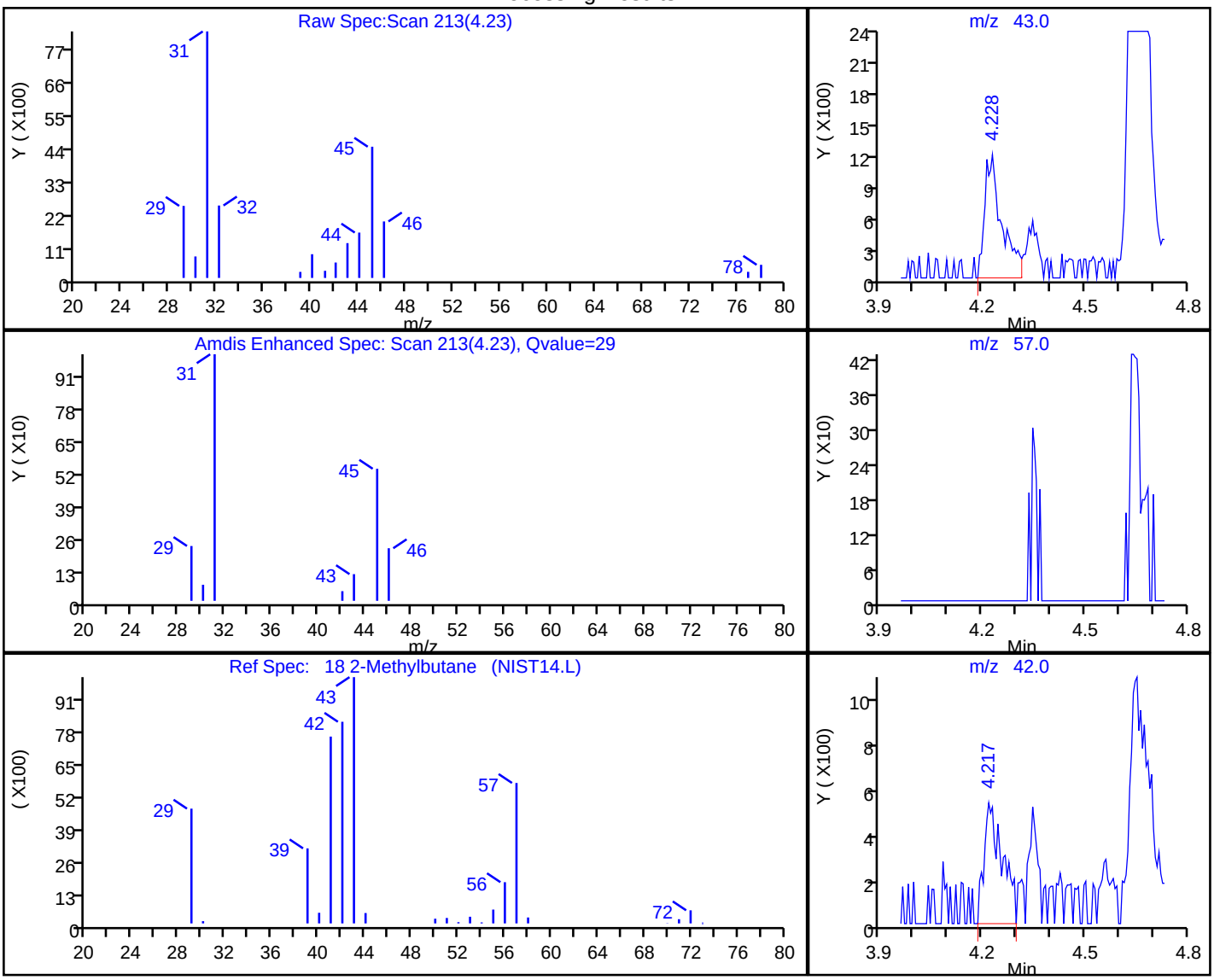
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20BK10978-10.D				
Injection Date:	21-Mar-2018 05:20:30	Instrument ID:	MG		
Lims ID:	140-10978-A-10	Lab Sample ID:	140-10978-10		
Client ID:	10417				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	31
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.23	43.00	4096	0.030359
4.22	42.00	2017	
4.35	57.00	0	

Reviewer: tajh, 21-Mar-2018 12:17:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 10987 | Lab Sample ID: 140-10978-11

Matrix: Air | Lab File ID: 10978BK11.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 14:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10987
Lab Sample ID: 140-10978-11
Matrix: Air
Lab File ID: 10978BK11.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 14:59
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18894
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND	*	0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 10987 | Lab Sample ID: 140-10978-11

Matrix: Air | Lab File ID: 10978BK11.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 14:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND	*	0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 10987 Lab Sample ID: 140-10978-11

Matrix: Air Lab File ID: 10978BK11.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 14:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18894 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK11.D				
Lims ID:	140-10978-A-11				
Client ID:	10987				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 14:59:30	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007672-010				
Misc. Info.:	10987				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 16:25:15	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: barlozhetskayaa		Date:	21-Mar-2018 16:54:04		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.673	0.000	89	242326	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.777	-0.006	95	1342269	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.376	0.000	88	1192419	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.979	0.000	96	858437	3.98	
25 Isopropyl alcohol	45	6.284	6.171	0.113	97	42346	0.5354	

Reagents:

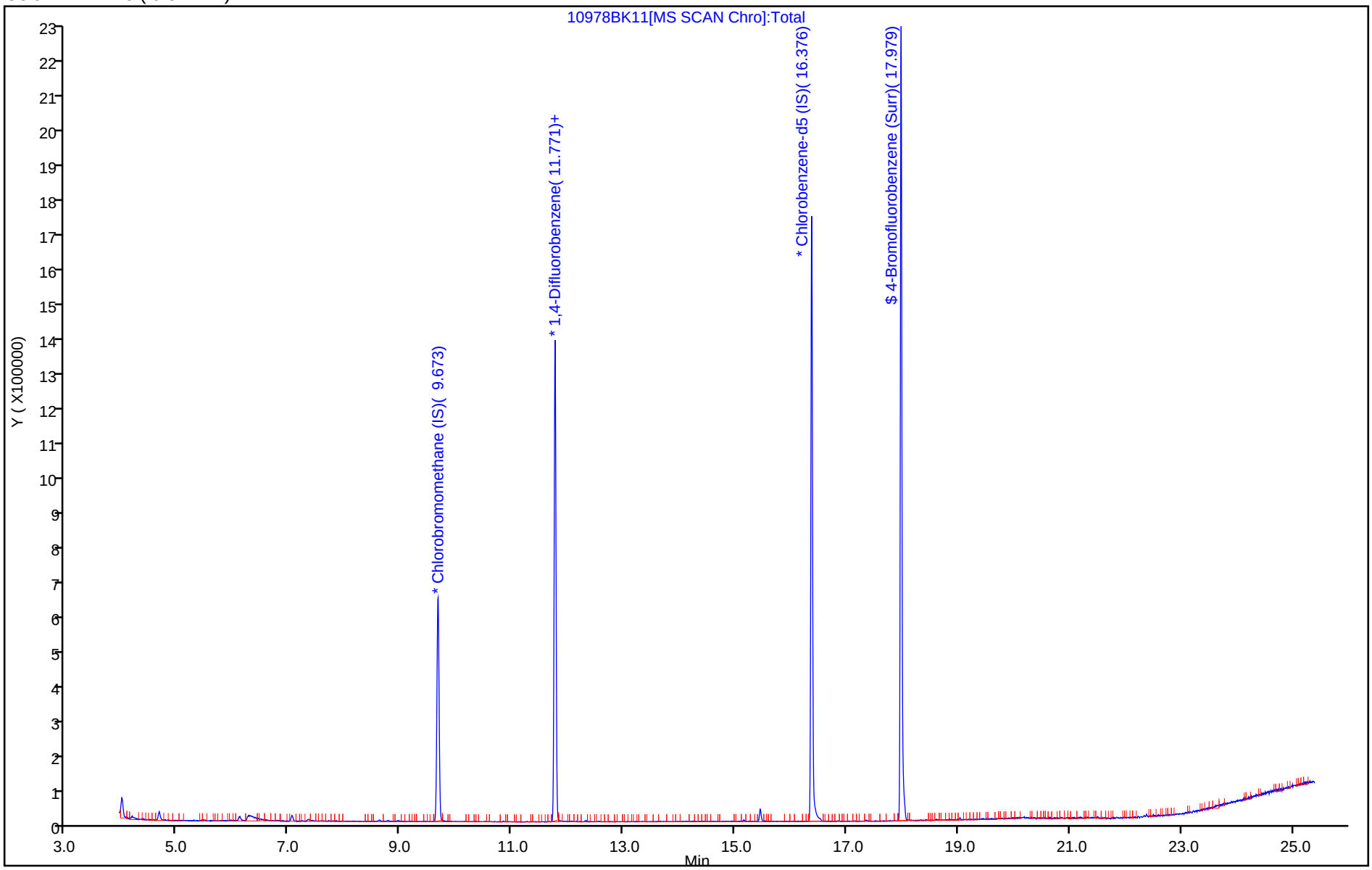
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 16:54:05 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK11.D				
Injection Date:	21-Mar-2018 14:59:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10978-A-11	Lab Sample ID:	140-10978-11	Worklist Smp#:	10
Client ID:	10987				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



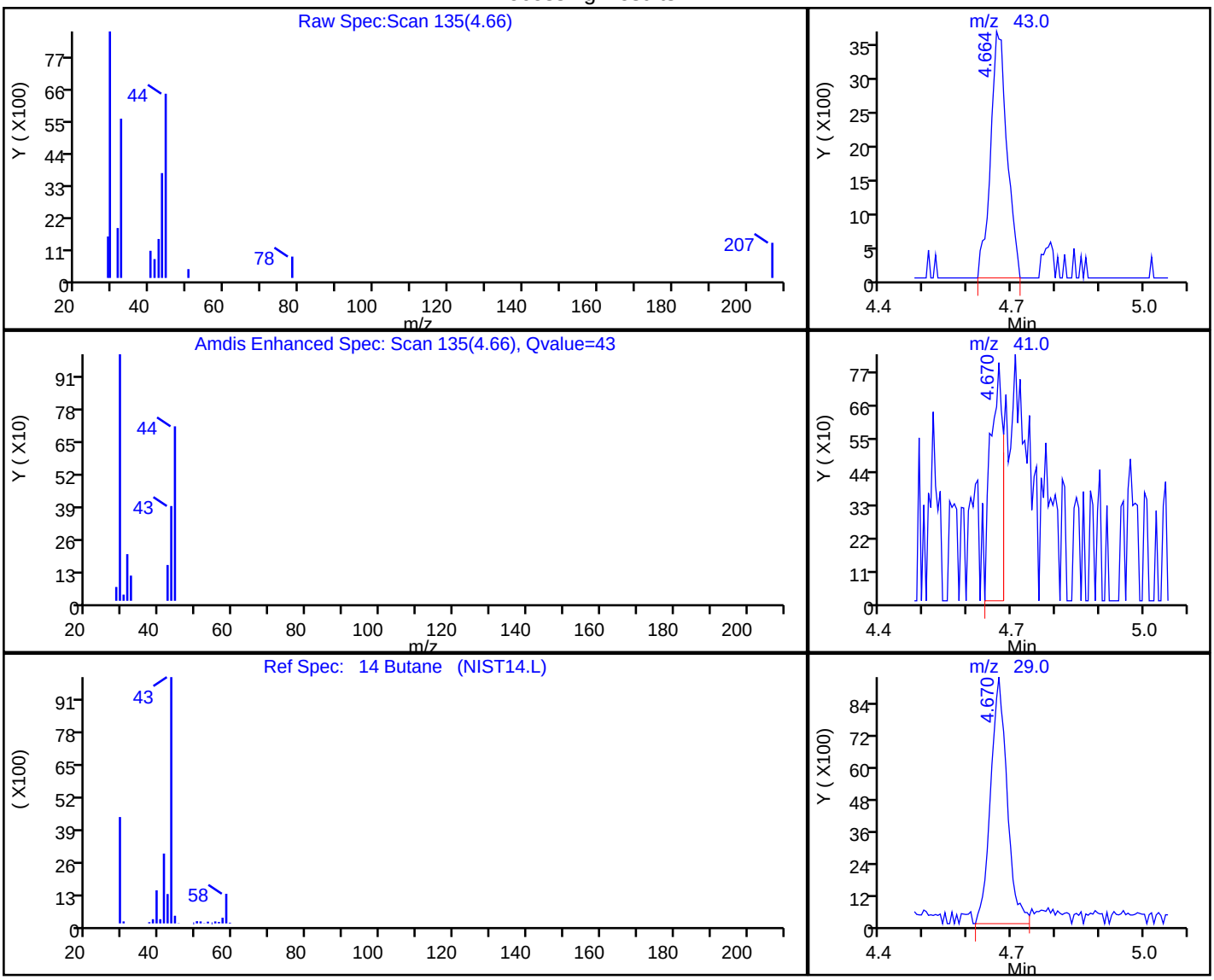
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK11.D				
Injection Date:	21-Mar-2018 14:59:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-11	Lab Sample ID:	140-10978-11		
Client ID:	10987				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	9467	0.077967
4.67	41.00	1524	
4.67	29.00	24451	

Reviewer: tajh, 21-Mar-2018 15:41:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

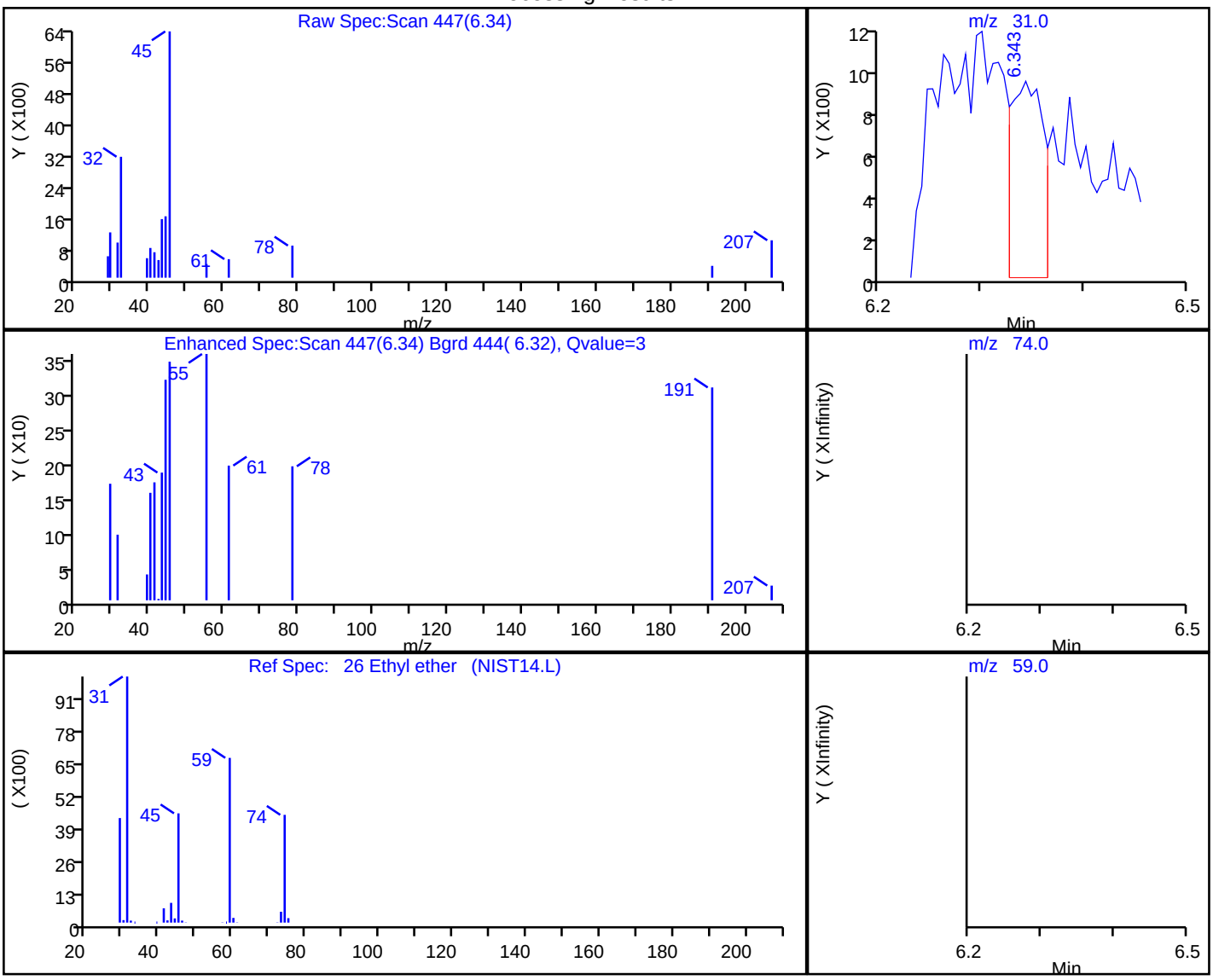
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK11.D				
Injection Date:	21-Mar-2018 14:59:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-11	Lab Sample ID:	140-10978-11		
Client ID:	10987				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

26 Ethyl ether, CAS: 60-29-7

Processing Results



RT	Mass	Response	Amount
6.34	31.00	2066	0.030263
6.34	74.00	0	
6.34	59.00	0	

Reviewer: tajh, 21-Mar-2018 15:41:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

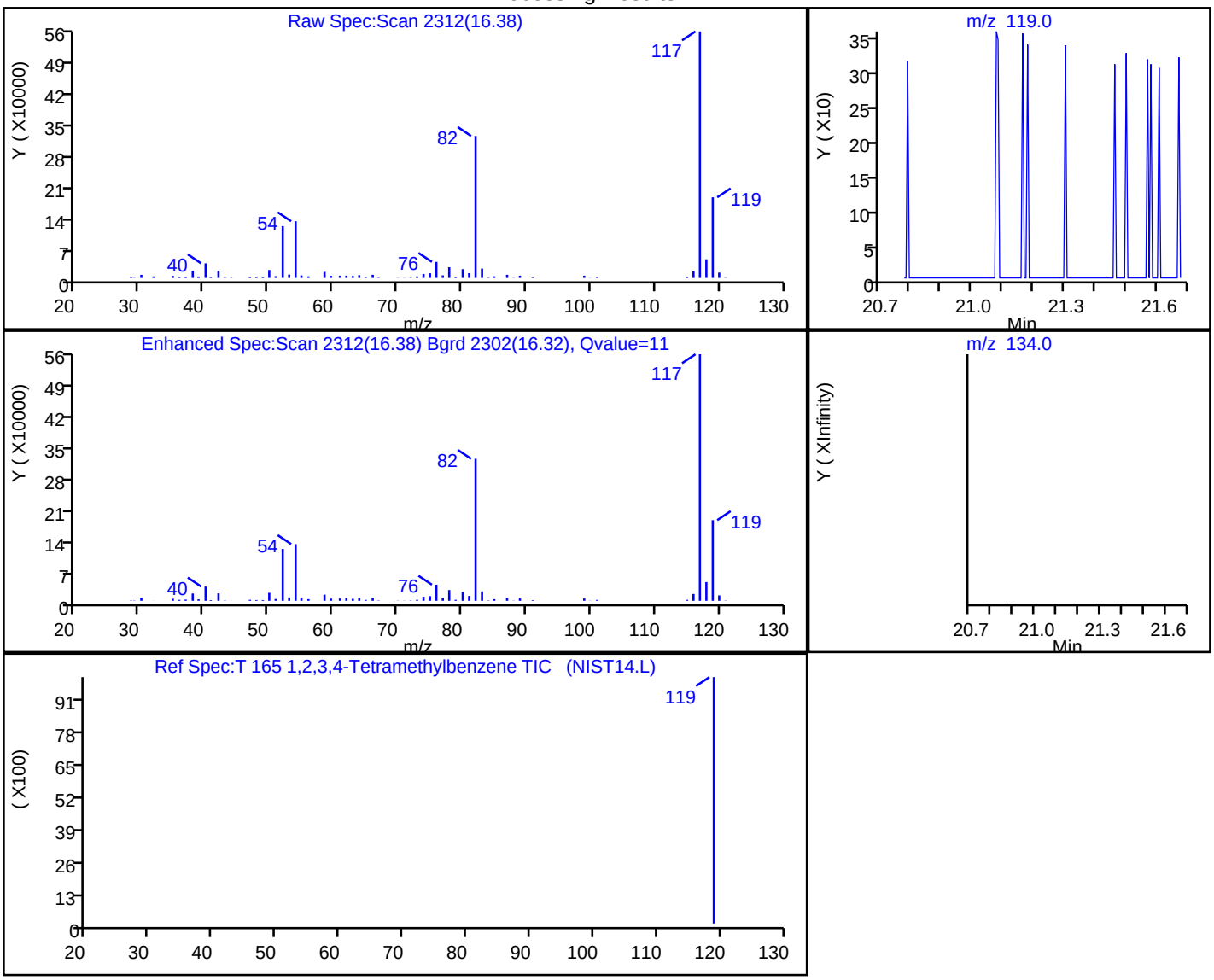
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK11.D				
Injection Date:	21-Mar-2018 14:59:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-11	Lab Sample ID:	140-10978-11		
Client ID:	10987				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	385577	1.293428
23.72	134.00	115	

Reviewer: tajh, 21-Mar-2018 15:41:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

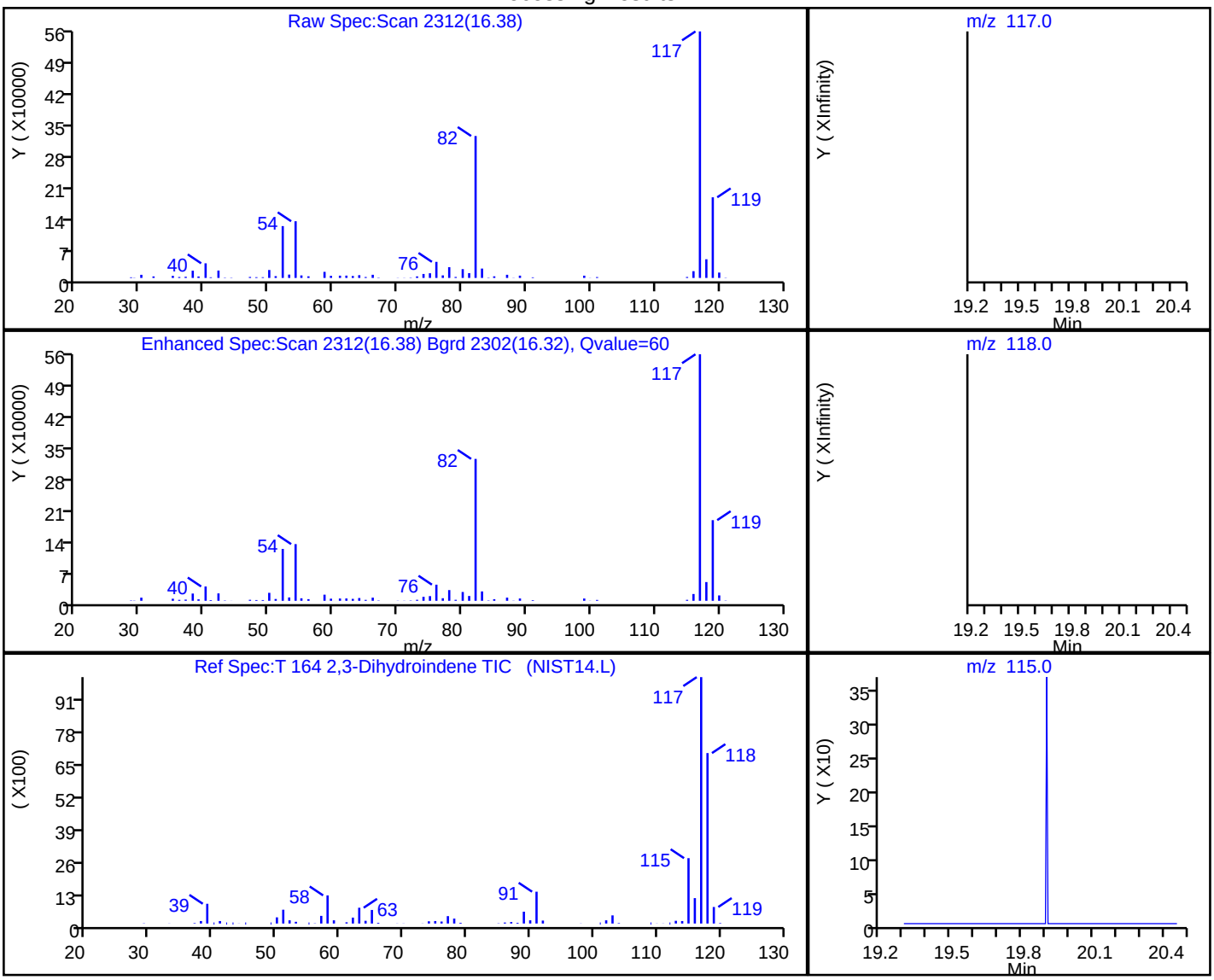
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK11.D				
Injection Date:	21-Mar-2018 14:59:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-11	Lab Sample ID:	140-10978-11		
Client ID:	10987				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	1192419	4.000000
16.38	118.00	88890	
16.37	115.00	4756	

Reviewer: tajh, 21-Mar-2018 15:41:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 10580 | Lab Sample ID: 140-10978-12

Matrix: Air | Lab File ID: 10978BK12.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 15:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.43		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10580
Lab Sample ID: 140-10978-12
Matrix: Air
Lab File ID: 10978BK12.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 15:46
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18894
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND	*	0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 10580 | Lab Sample ID: 140-10978-12

Matrix: Air | Lab File ID: 10978BK12.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 15:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND	*	0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1
SDG No.:
Client Sample ID: 10580 Lab Sample ID: 140-10978-12
Matrix: Air Lab File ID: 10978BK12.D
Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 15:46
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18894 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK12.D
Lims ID: 140-10978-A-12
Client ID: 10580
Sample Type: Client
Inject. Date: 21-Mar-2018 15:46:30 ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007672-011
Misc. Info.: 10580
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 16:25:15 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 21-Mar-2018 16:25:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.673	0.000	89	234040	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.777	-0.006	95	1314379	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.376	0.000	88	1175648	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.979	0.000	96	870061	4.09	
65 4-Methyl-2-pentanone (MIBK	43	13.616	13.588	0.021	97	51757	0.4296	

Reagents:

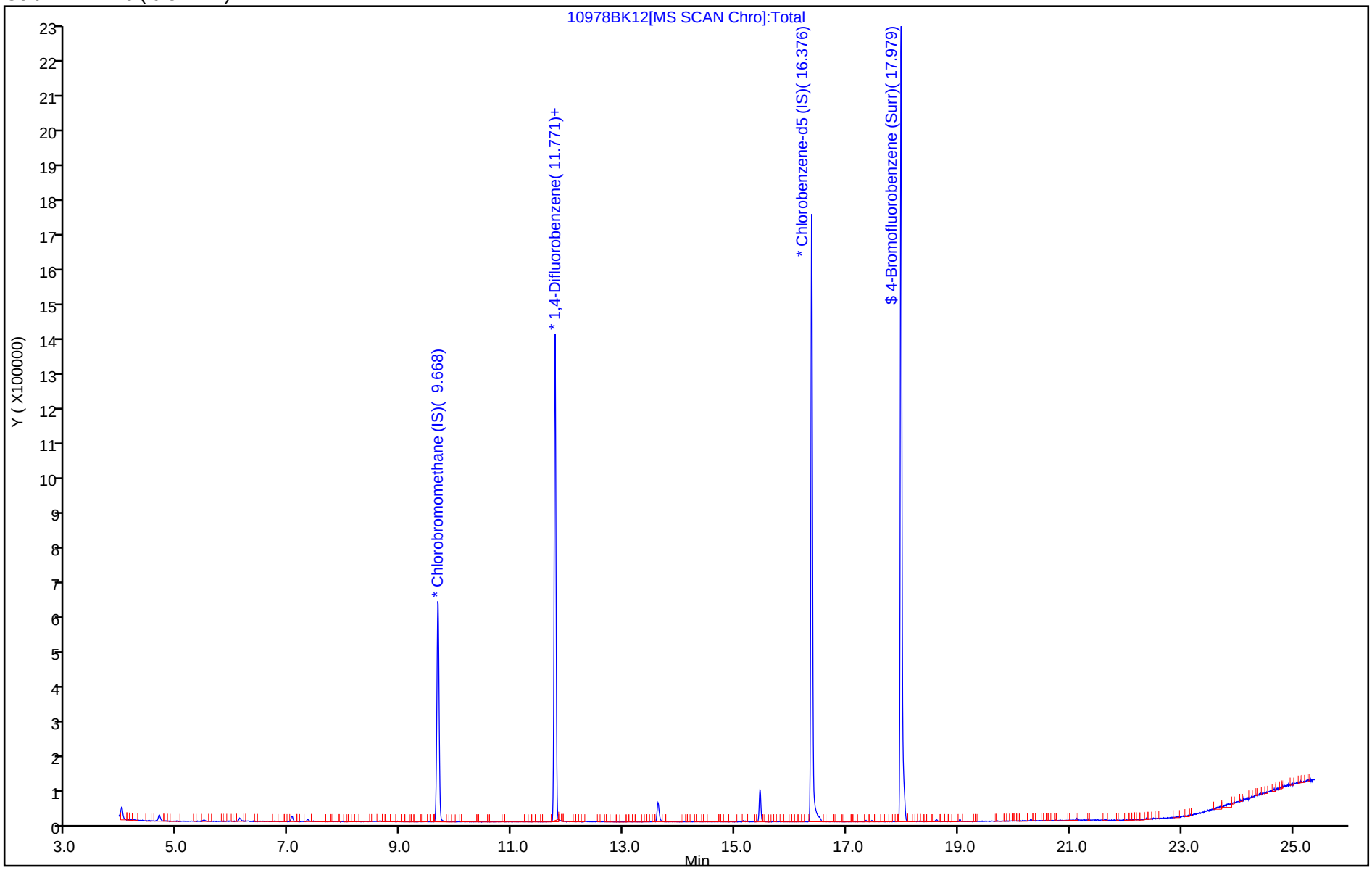
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 16:25:15 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK12.D				
Injection Date:	21-Mar-2018 15:46:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10978-A-12	Lab Sample ID:	140-10978-12	Worklist Smp#:	11
Client ID:	10580				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

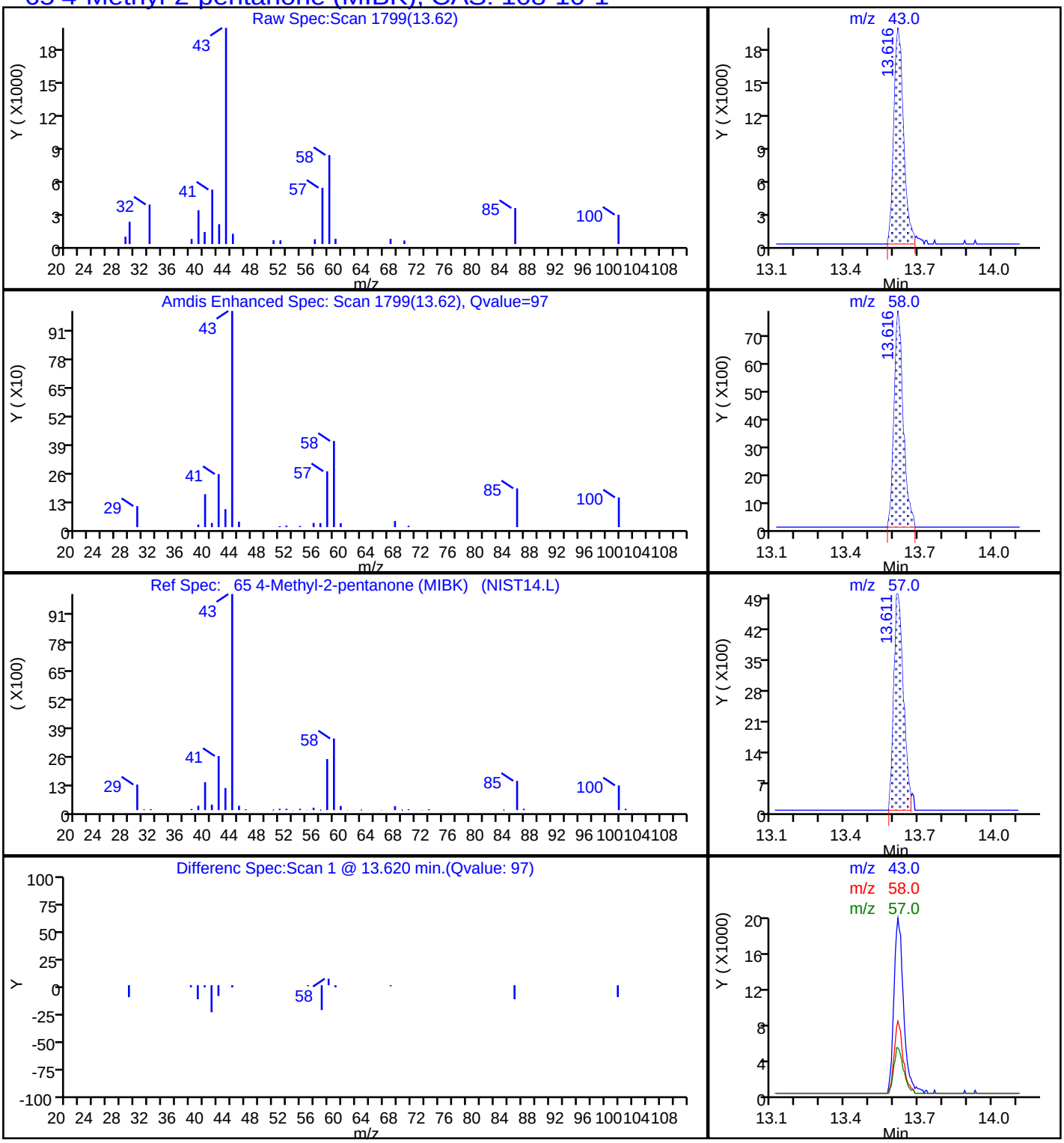


Report Date: 21-Mar-2018 16:25:16 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK12.D				
Injection Date:	21-Mar-2018 15:46:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-12	Lab Sample ID:	140-10978-12		
Client ID:	10580				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

65 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1



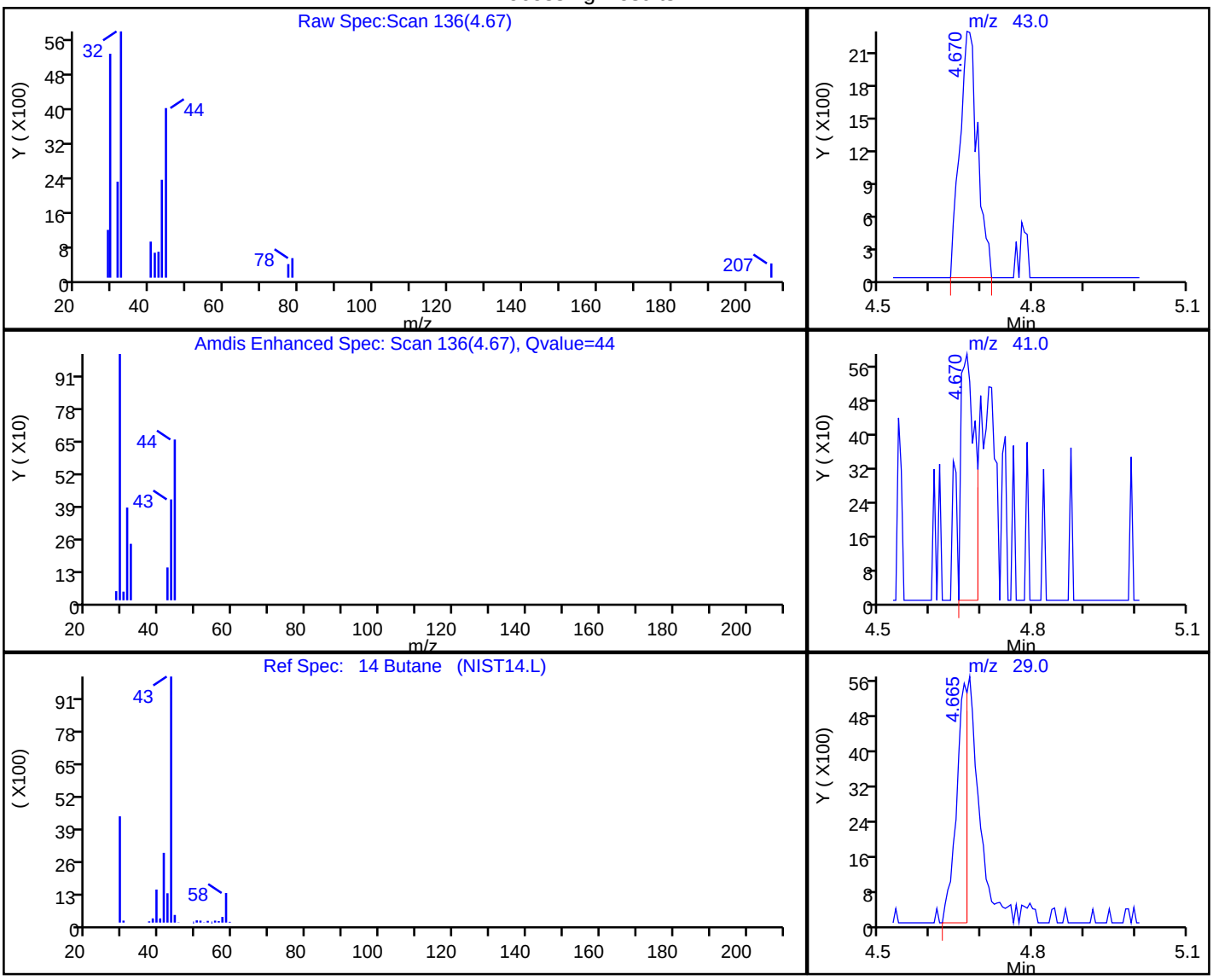
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK12.D				
Injection Date:	21-Mar-2018 15:46:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-12	Lab Sample ID:	140-10978-12		
Client ID:	10580				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	5536	0.047207
4.67	41.00	1069	
4.66	29.00	8369	

Reviewer: tajh, 21-Mar-2018 16:25:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

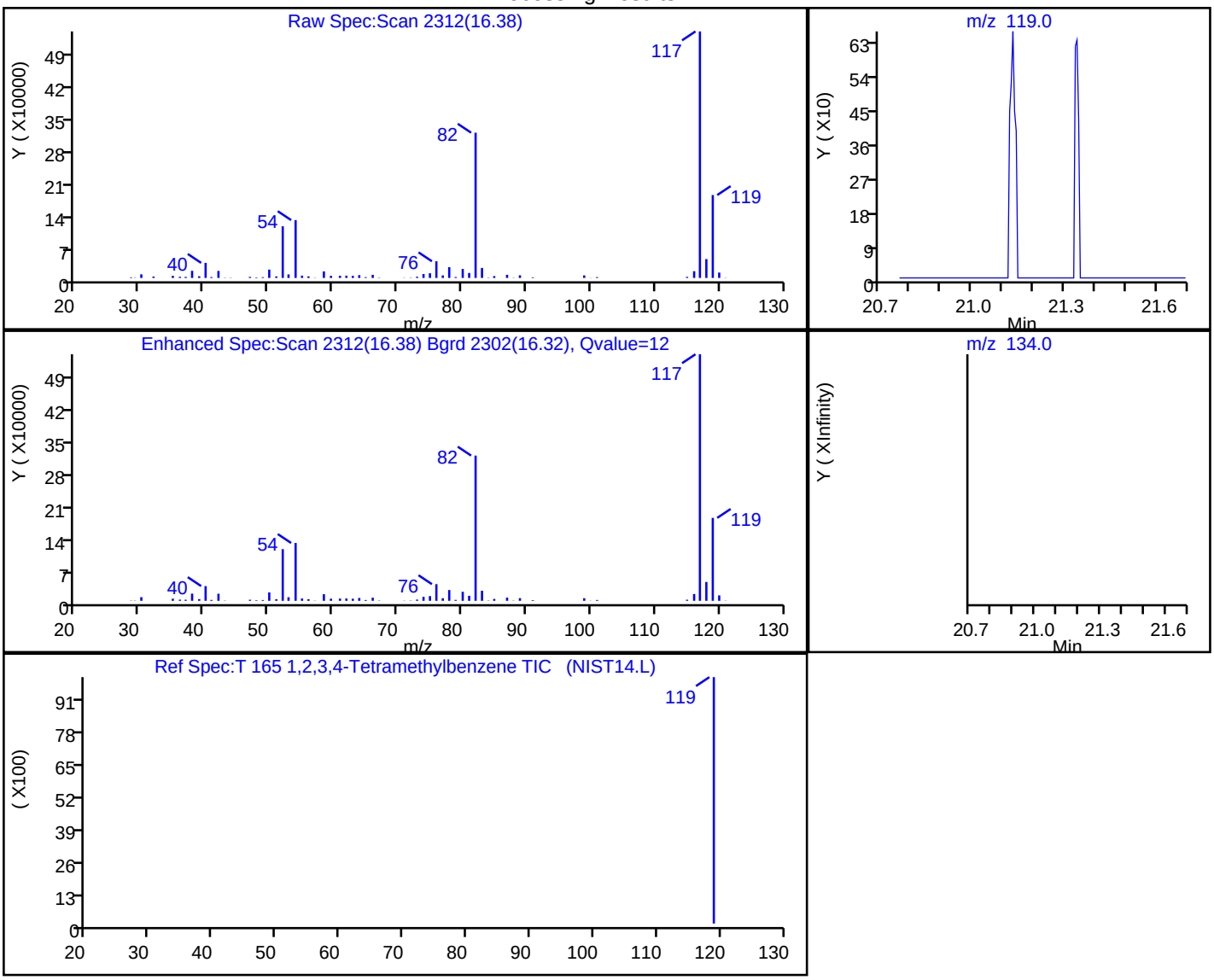
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK12.D				
Injection Date:	21-Mar-2018 15:46:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-12	Lab Sample ID:	140-10978-12		
Client ID:	10580				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	378816	1.288876
15.45	134.00	578	

Reviewer: tajh, 21-Mar-2018 16:25:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

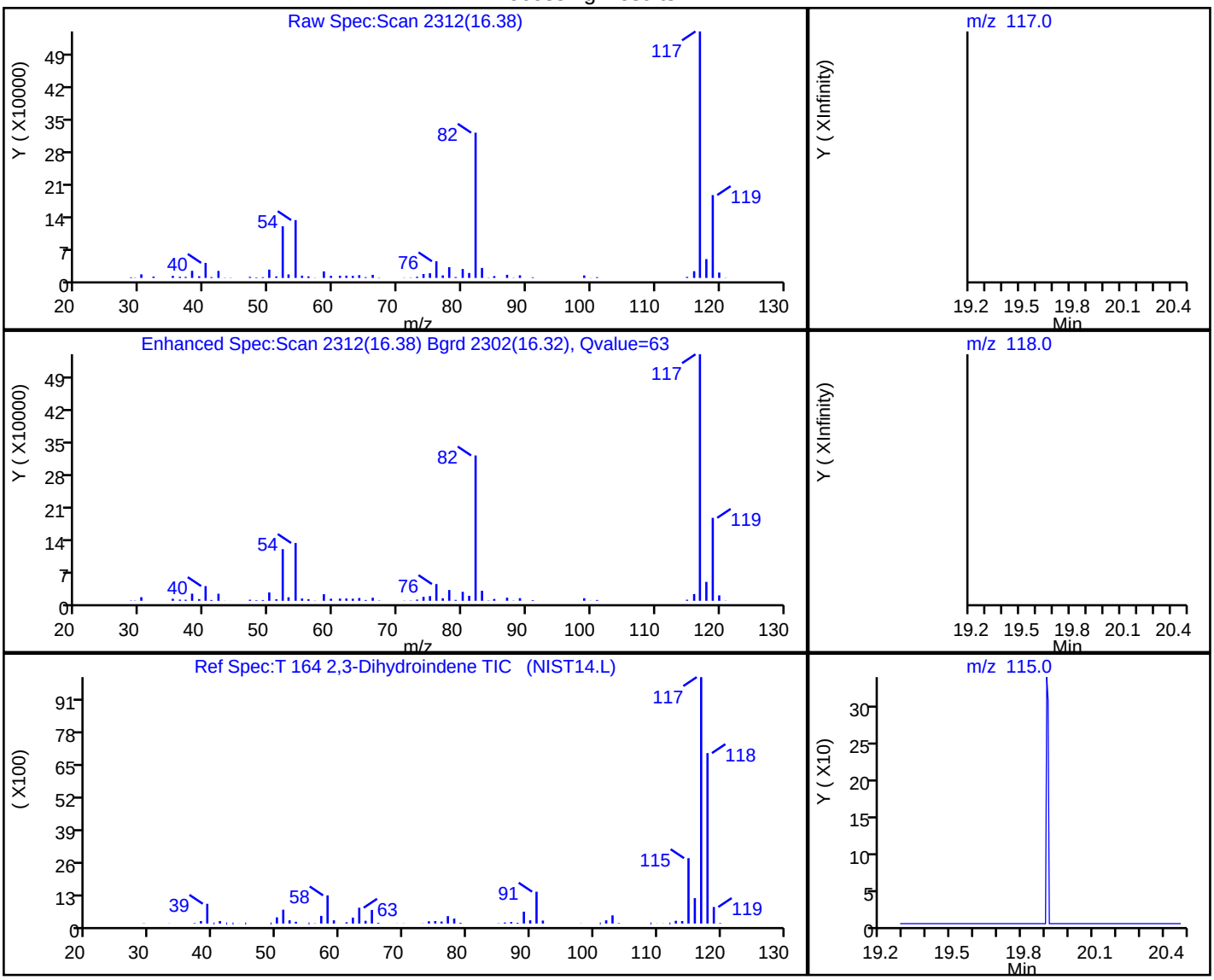
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK12.D				
Injection Date:	21-Mar-2018 15:46:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-12	Lab Sample ID:	140-10978-12		
Client ID:	10580				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	1175648	4.000000
16.38	118.00	88461	
16.38	115.00	4412	

Reviewer: tajh, 21-Mar-2018 16:25:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11679 | Lab Sample ID: 140-10978-13

Matrix: Air | Lab File ID: 10978BK13.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 11679
Lab Sample ID: 140-10978-13
Matrix: Air
Lab File ID: 10978BK13.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 16:34
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18894
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND	*	0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11679 | Lab Sample ID: 140-10978-13

Matrix: Air | Lab File ID: 10978BK13.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND	*	0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 11679 Lab Sample ID: 140-10978-13

Matrix: Air Lab File ID: 10978BK13.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 16:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18894 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D
Lims ID: 140-10978-A-13
Client ID: 11679
Sample Type: Client
Inject. Date: 21-Mar-2018 16:34:30 ALS Bottle#: 14 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007672-012
Misc. Info.: 11679
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 17:25:37 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 17:45:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.675	9.673	0.002	89	231419	4.00	
* 2 1,4-Difluorobenzene	114	11.773	11.777	-0.004	95	1299505	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.373	16.376	-0.003	92	1159646	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.976	17.976	-0.003	95	871704	4.16	
9 Chloromethane	52	4.484	4.470	0.013	96	2044	0.0841	
23 Acetonitrile	40	6.017	6.017	0.002	98	3315	0.1306	M
22 Acetone	58	6.077	6.062	0.012	99	29976	1.14	
25 Isopropyl alcohol	45	6.259	6.169	0.088	84	3705	0.0491	
40 2-Butanone (MEK)	72	8.922	8.890	0.029	99	5811	0.1964	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

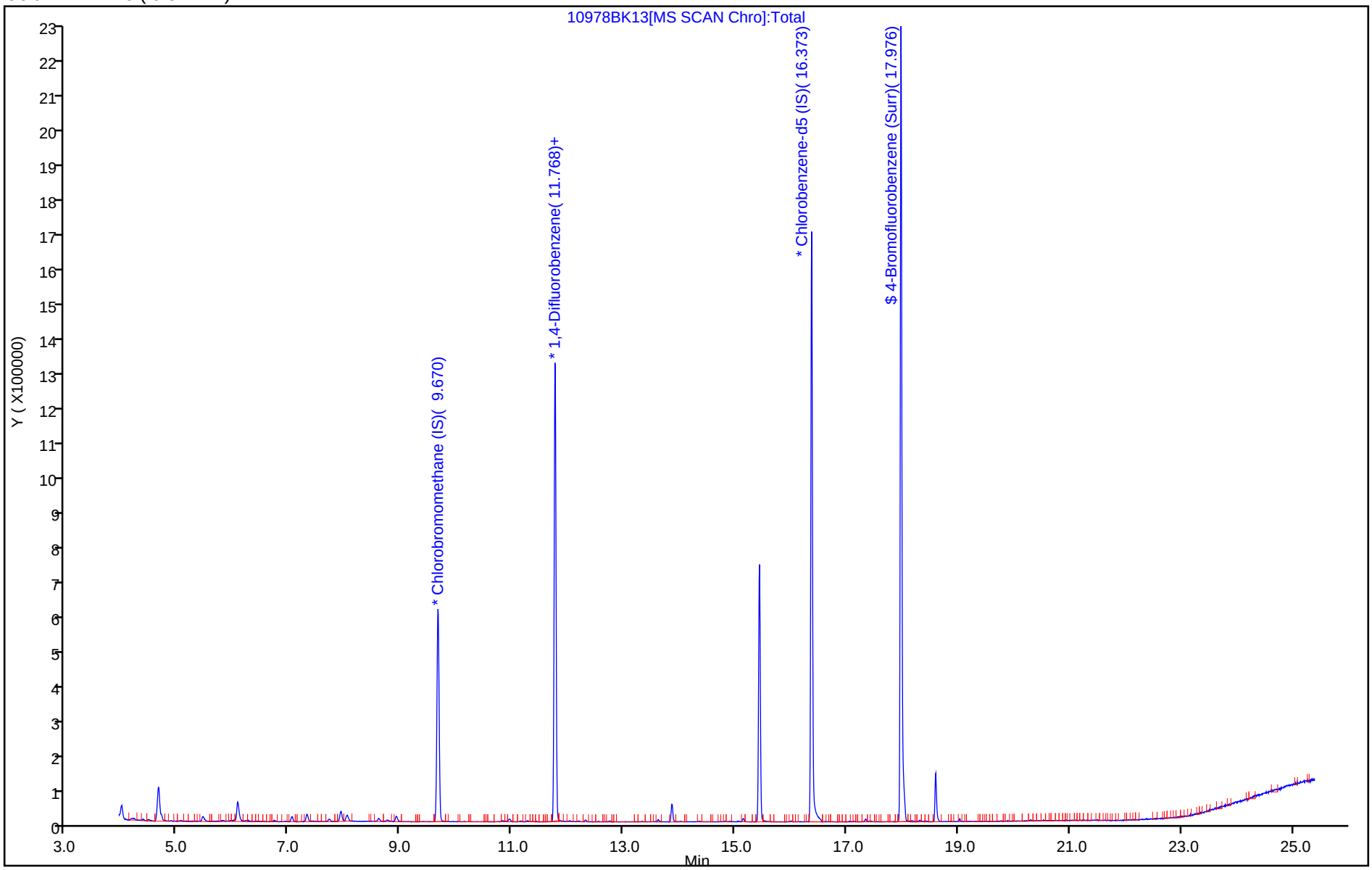
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 17:45:29 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13	Worklist Smp#:	12
Client ID:	11679				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



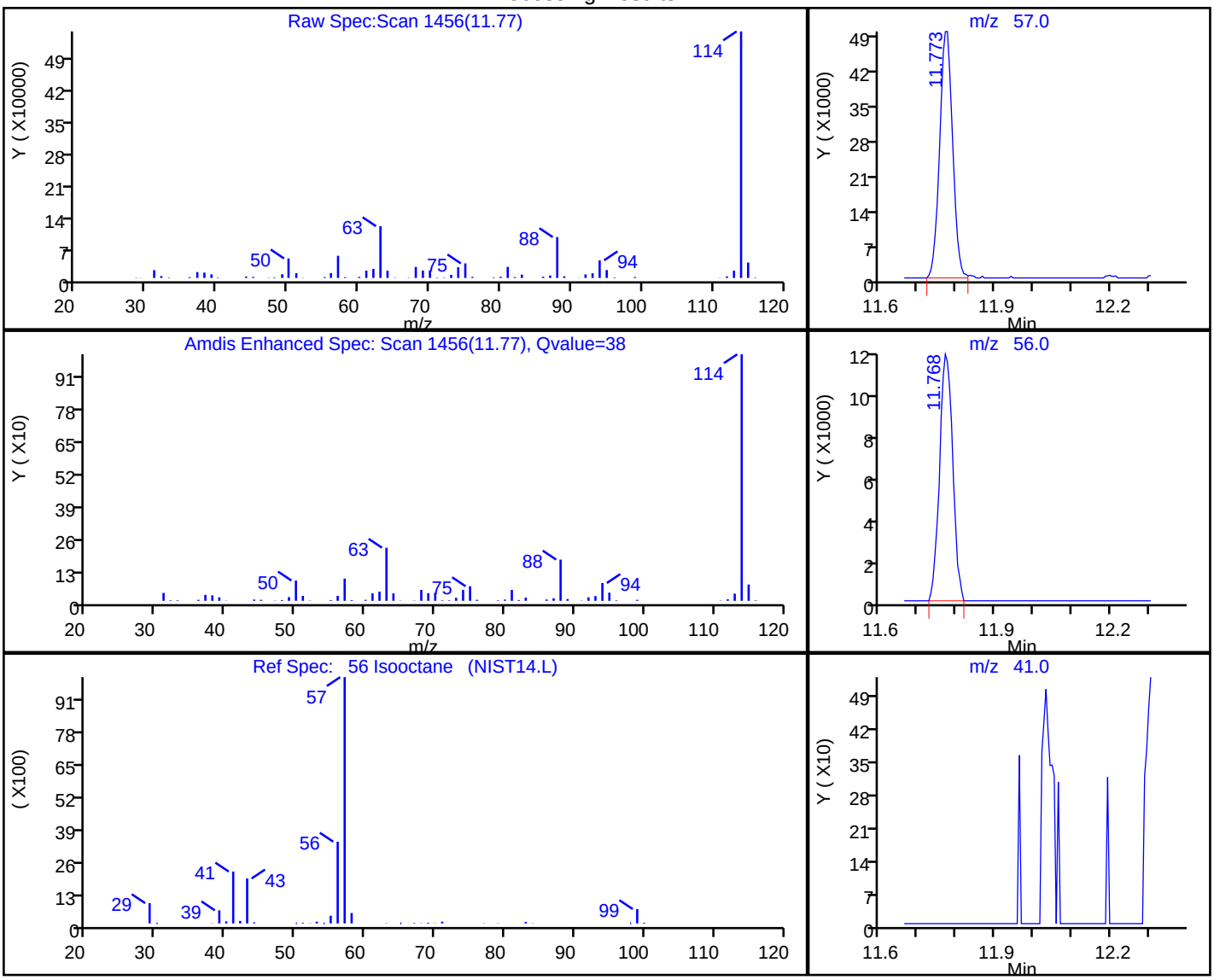
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Isooctane, CAS: 540-84-1

Processing Results



RT	Mass	Response	Amount
11.77	57.00	115594	0.312554
11.77	56.00	26514	
11.98	41.00	0	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

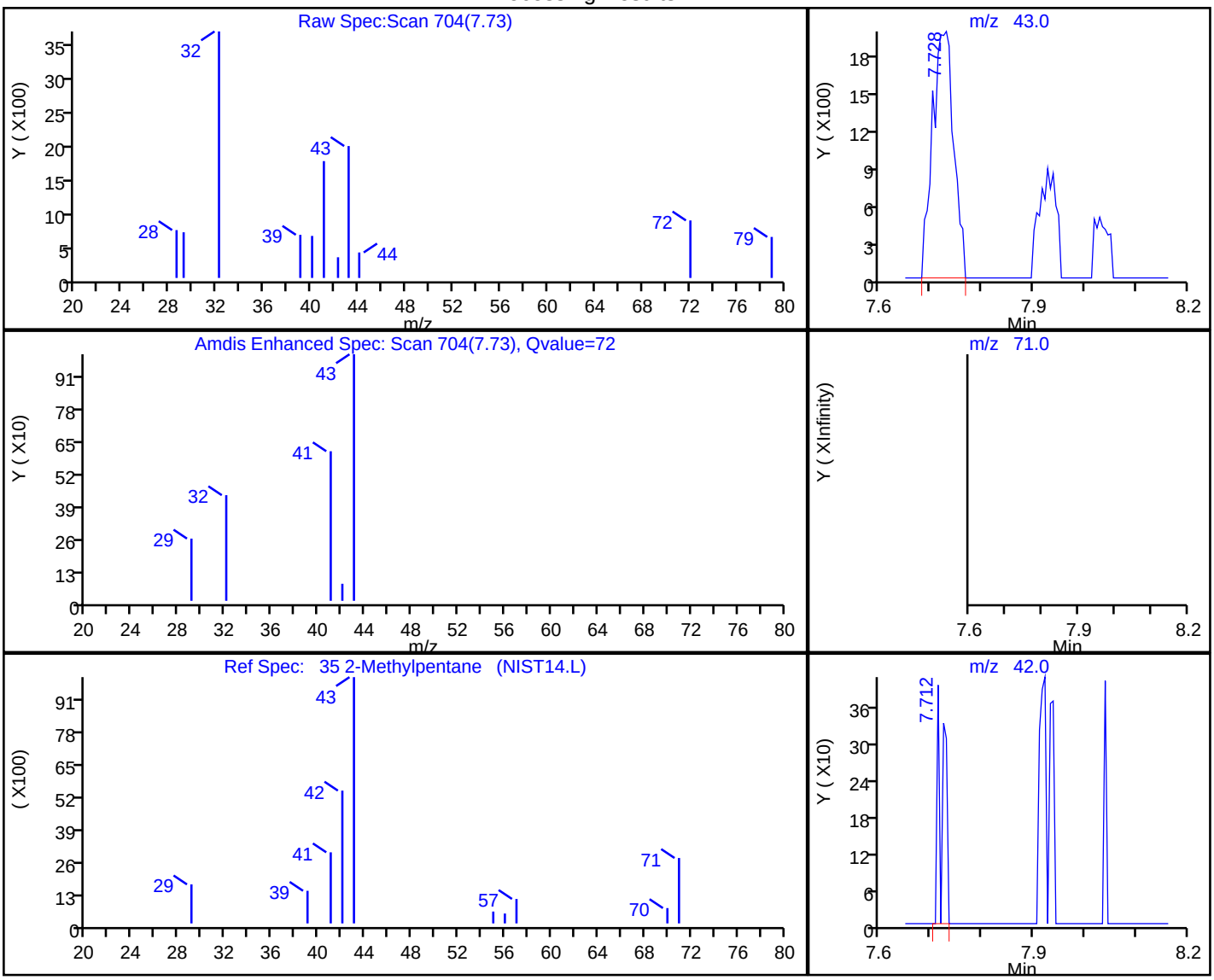
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

Processing Results



RT	Mass	Response	Amount
7.73	43.00	5592	0.031677
7.90	71.00	0	
7.71	42.00	328	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Knoxville

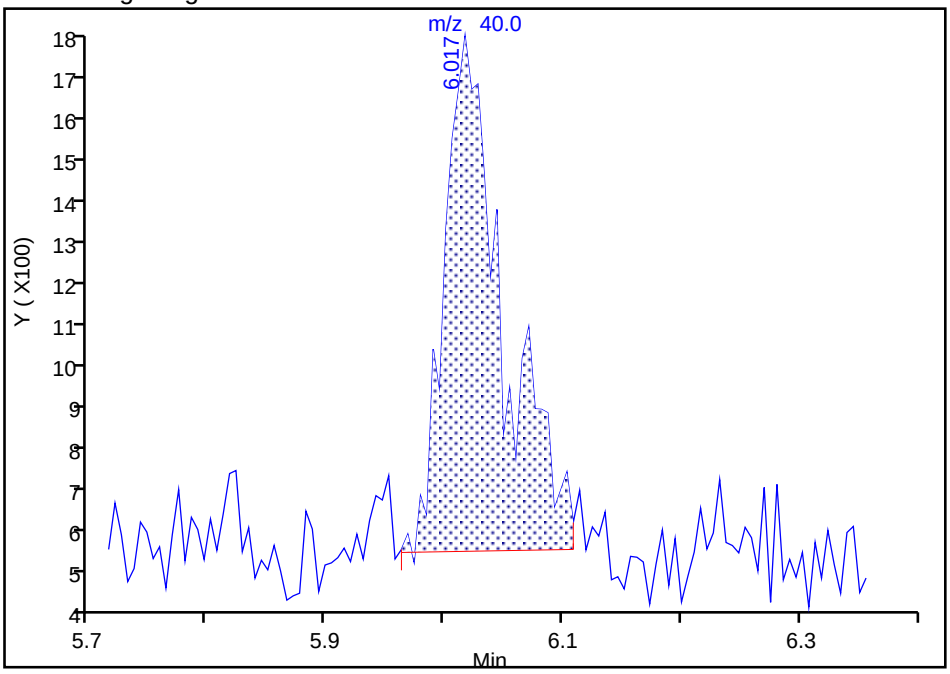
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

23 Acetonitrile, CAS: 75-05-8

Signal: 1

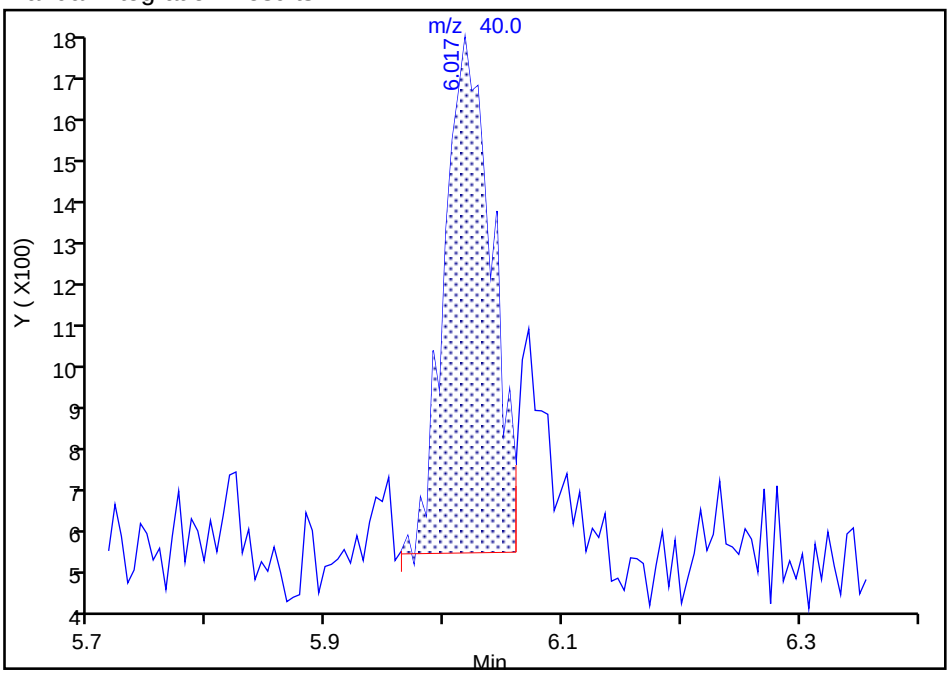
Processing Integration Results

RT: 6.02
Area: 4085
Amount: 0.160922
Amount Units: ppb v/v



Manual Integration Results

RT: 6.02
Area: 3315
Amount: 0.130589
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 21-Mar-2018 17:19:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

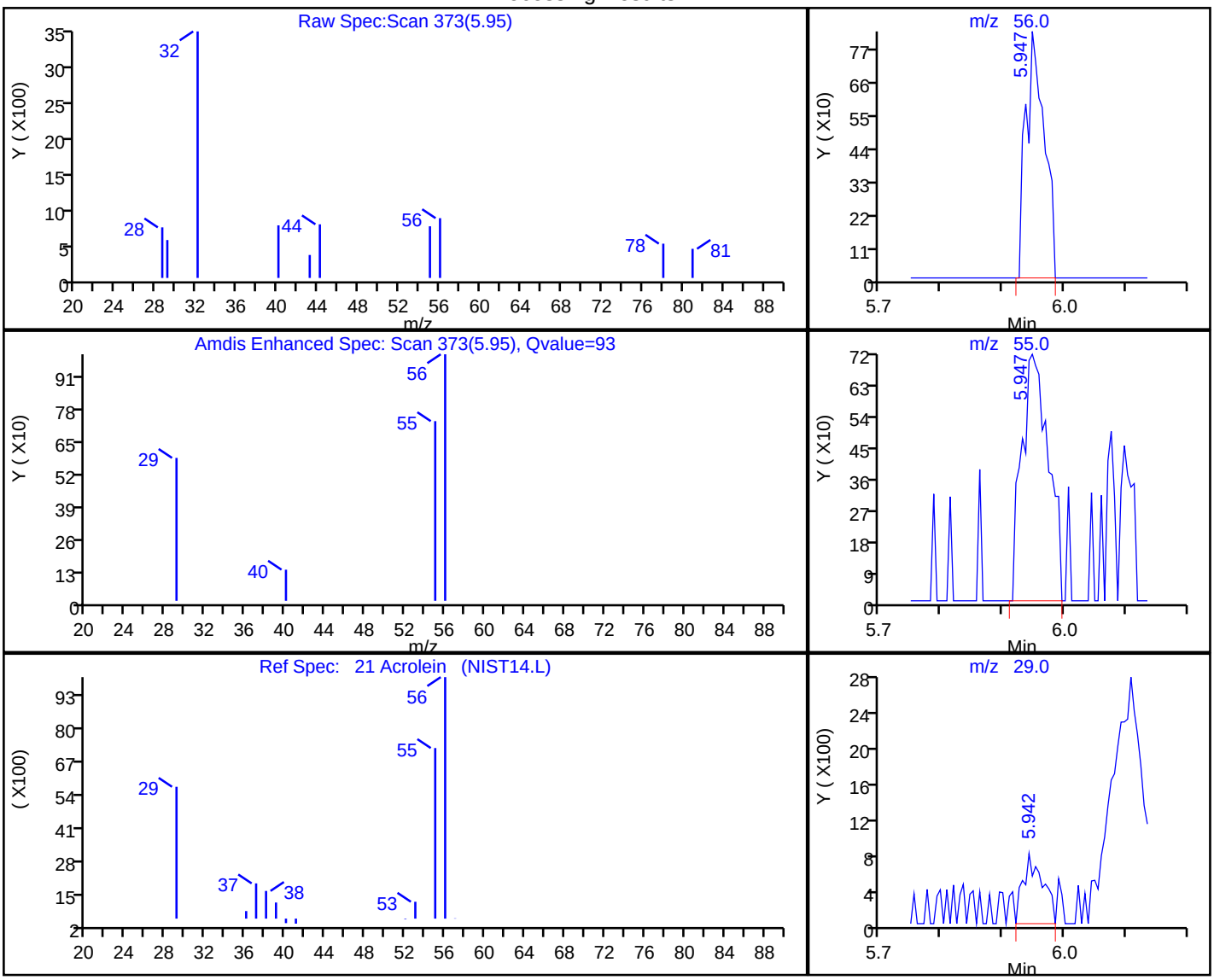
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

21 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
5.95	56.00	1729	0.086196
5.95	55.00	2169	
5.94	29.00	1712	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

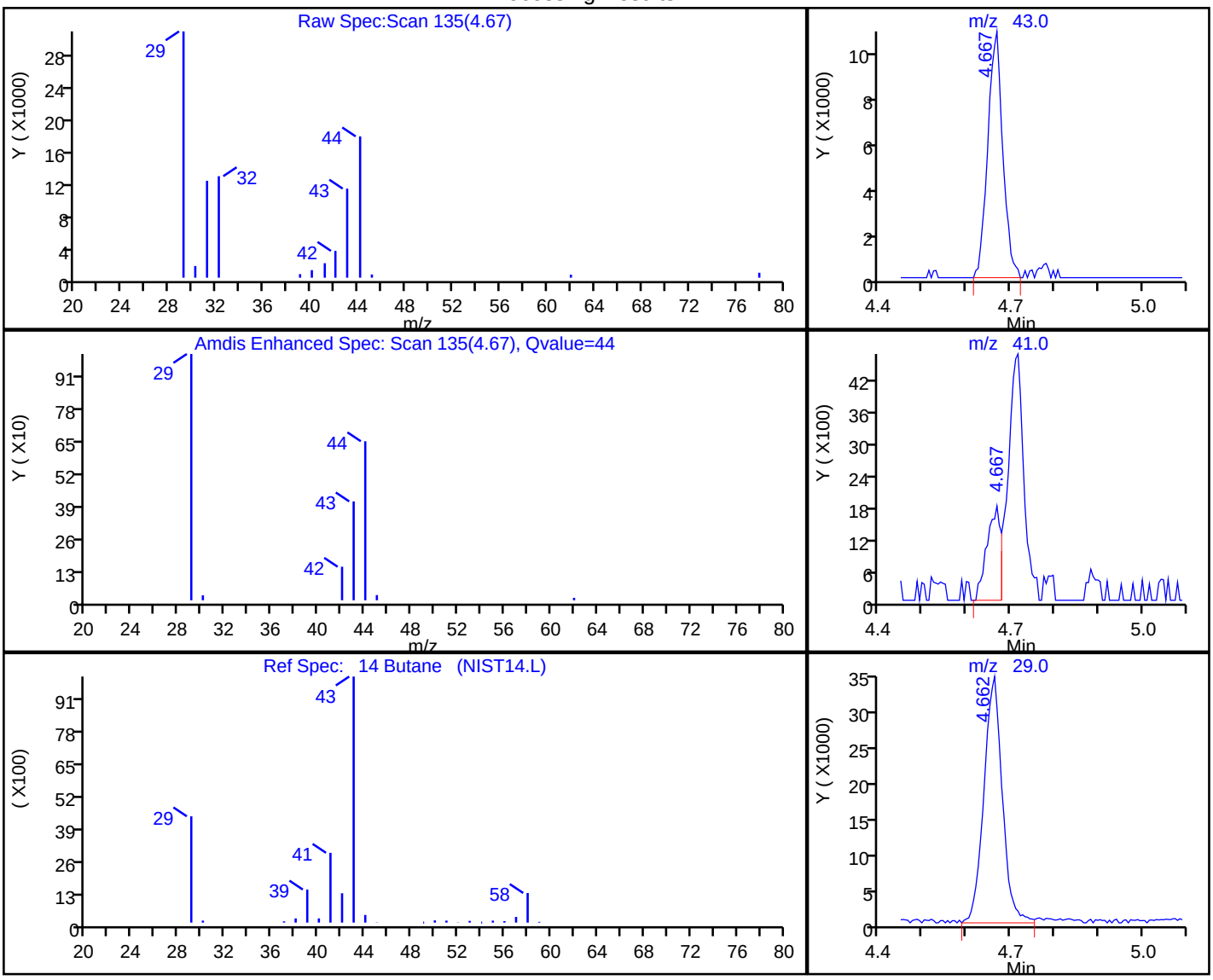
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	26197	0.225917
4.67	41.00	3921	
4.66	29.00	101789	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

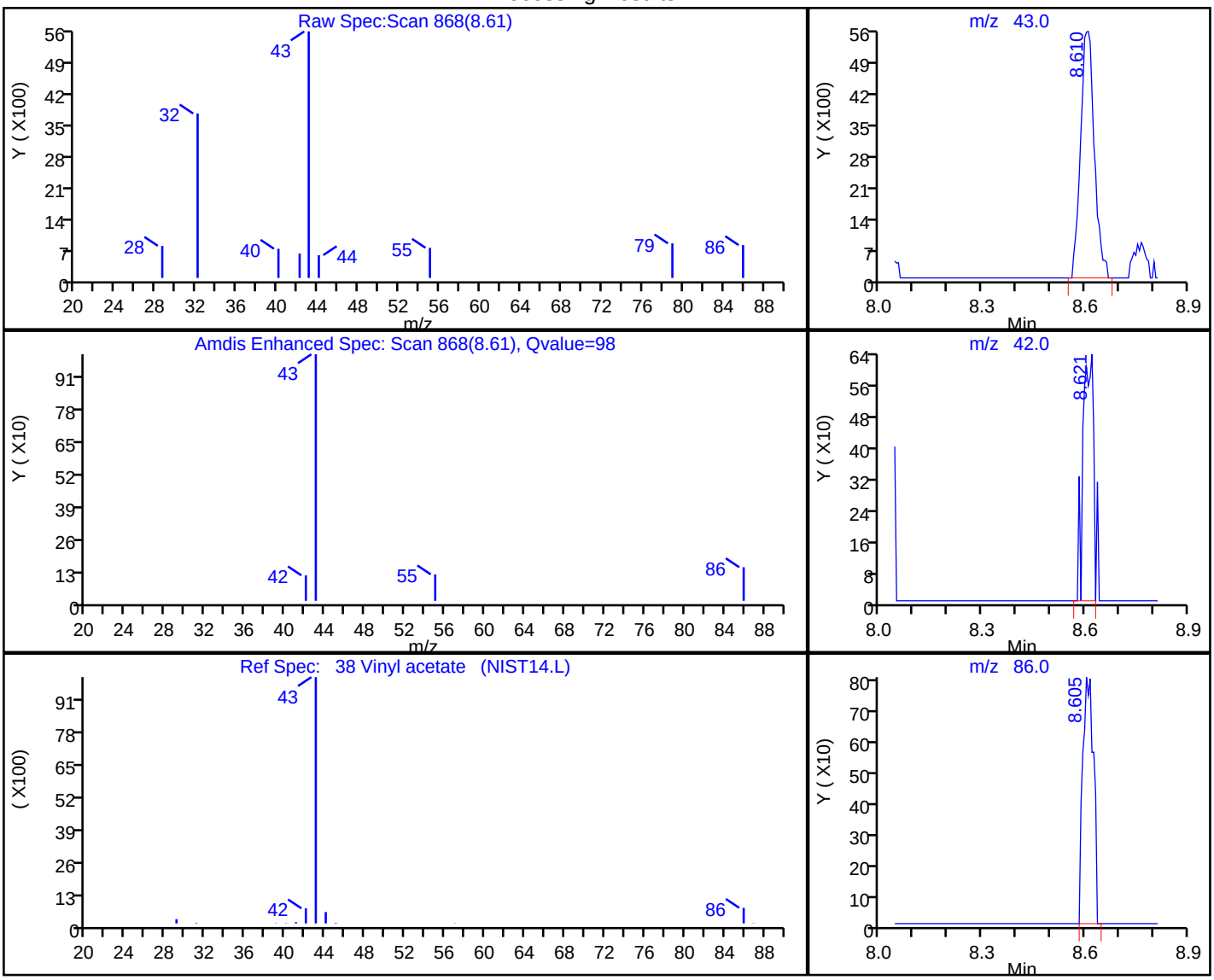
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.61	43.00	15758	0.095989
8.62	42.00	1327	
8.60	86.00	1764	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

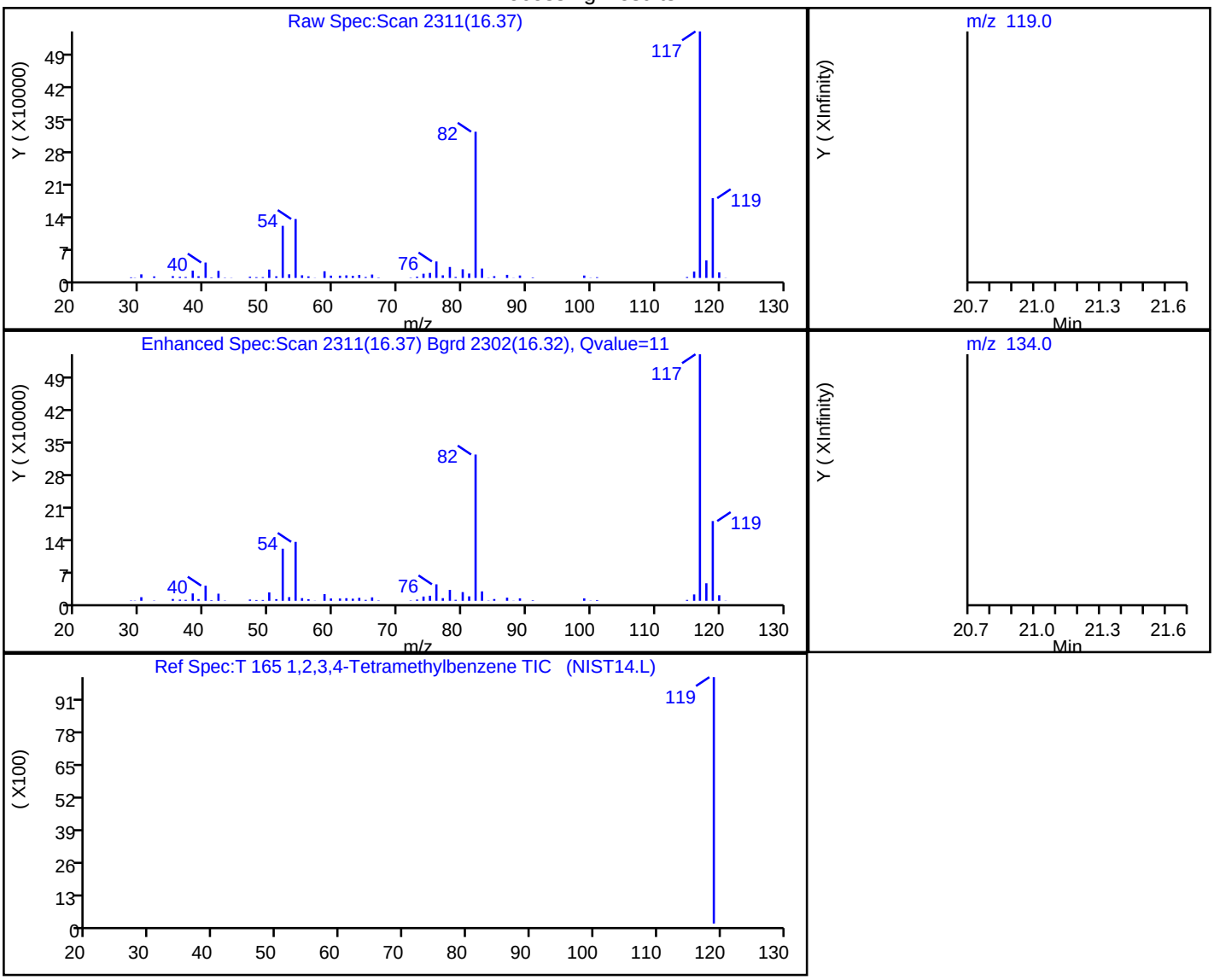
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	374679	1.292391
15.43	134.00	4351	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

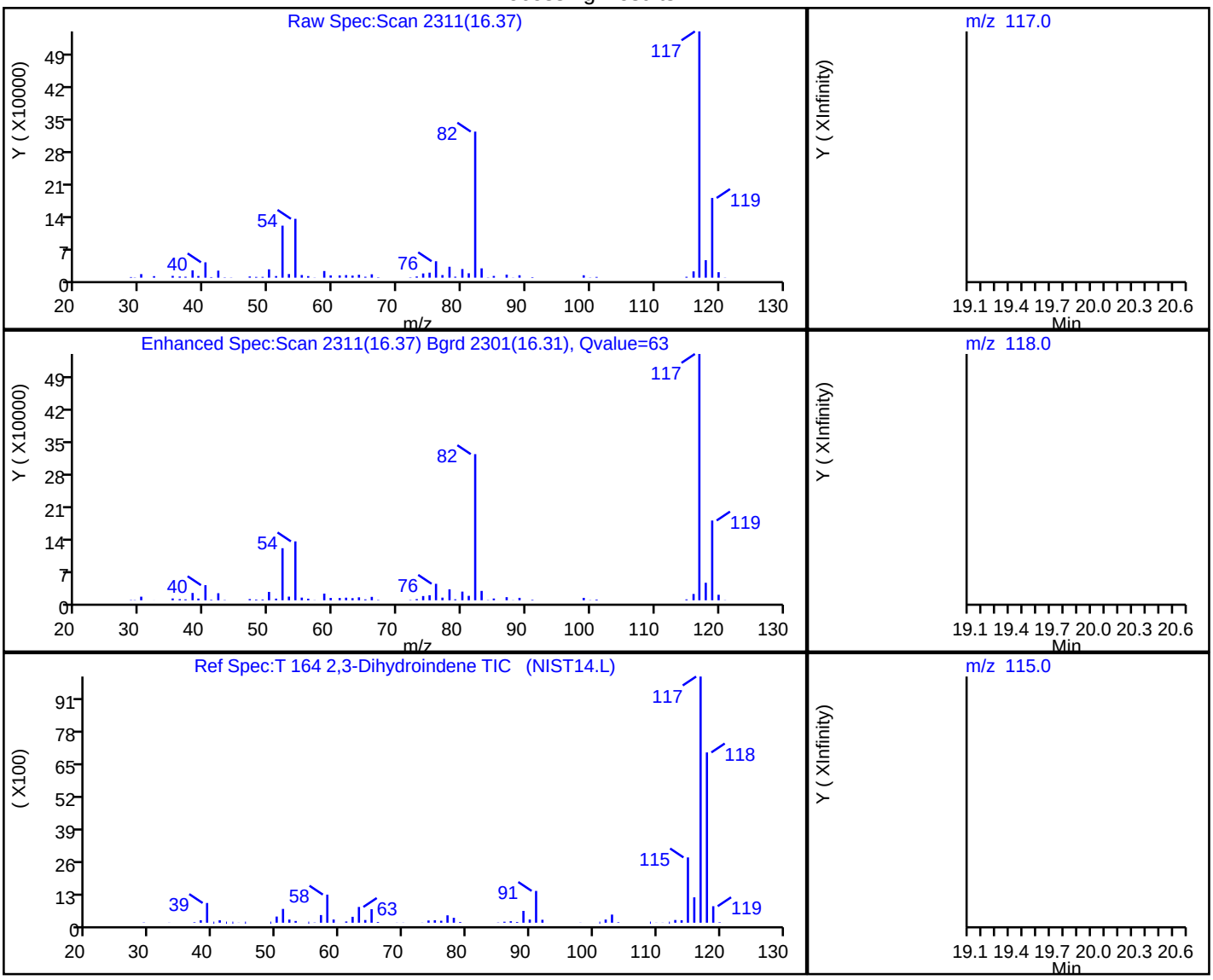
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK13.D				
Injection Date:	21-Mar-2018 16:34:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-13	Lab Sample ID:	140-10978-13		
Client ID:	11679				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	1159646	4.000000
16.38	118.00	88355	
16.38	115.00	4131	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:25:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 09523 | Lab Sample ID: 140-10978-14

Matrix: Air | Lab File ID: 10978BK14.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10978-1
SDG No.:
Client Sample ID: 09523
Lab Sample ID: 140-10978-14
Matrix: Air
Lab File ID: 10978BK14.D
Analysis Method: TO 15 LL
Date Collected: 03/16/2018 15:00
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 17:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18894
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND	*	0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10978-1

SDG No.:

Client Sample ID: 09523 | Lab Sample ID: 140-10978-14

Matrix: Air | Lab File ID: 10978BK14.D

Analysis Method: TO 15 LL | Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND	*	0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10978-1

SDG No.:

Client Sample ID: 09523 Lab Sample ID: 140-10978-14

Matrix: Air Lab File ID: 10978BK14.D

Analysis Method: TO 15 LL Date Collected: 03/16/2018 15:00

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 17:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18894 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK14.D
Lims ID: 140-10978-A-14
Client ID: 09523
Sample Type: Client
Inject. Date: 21-Mar-2018 17:21:30 ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007672-013
Misc. Info.: 09523
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 18:31:53 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 18:31:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.668	9.673	-0.005	90	232938	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.777	-0.006	95	1316983	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.371	16.376	-0.005	89	1188037	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.974	17.973	-0.005	96	856756	3.99	
33 Carbon disulfide	76	7.231	7.226	0.005	96	4189	0.0187	

Reagents:

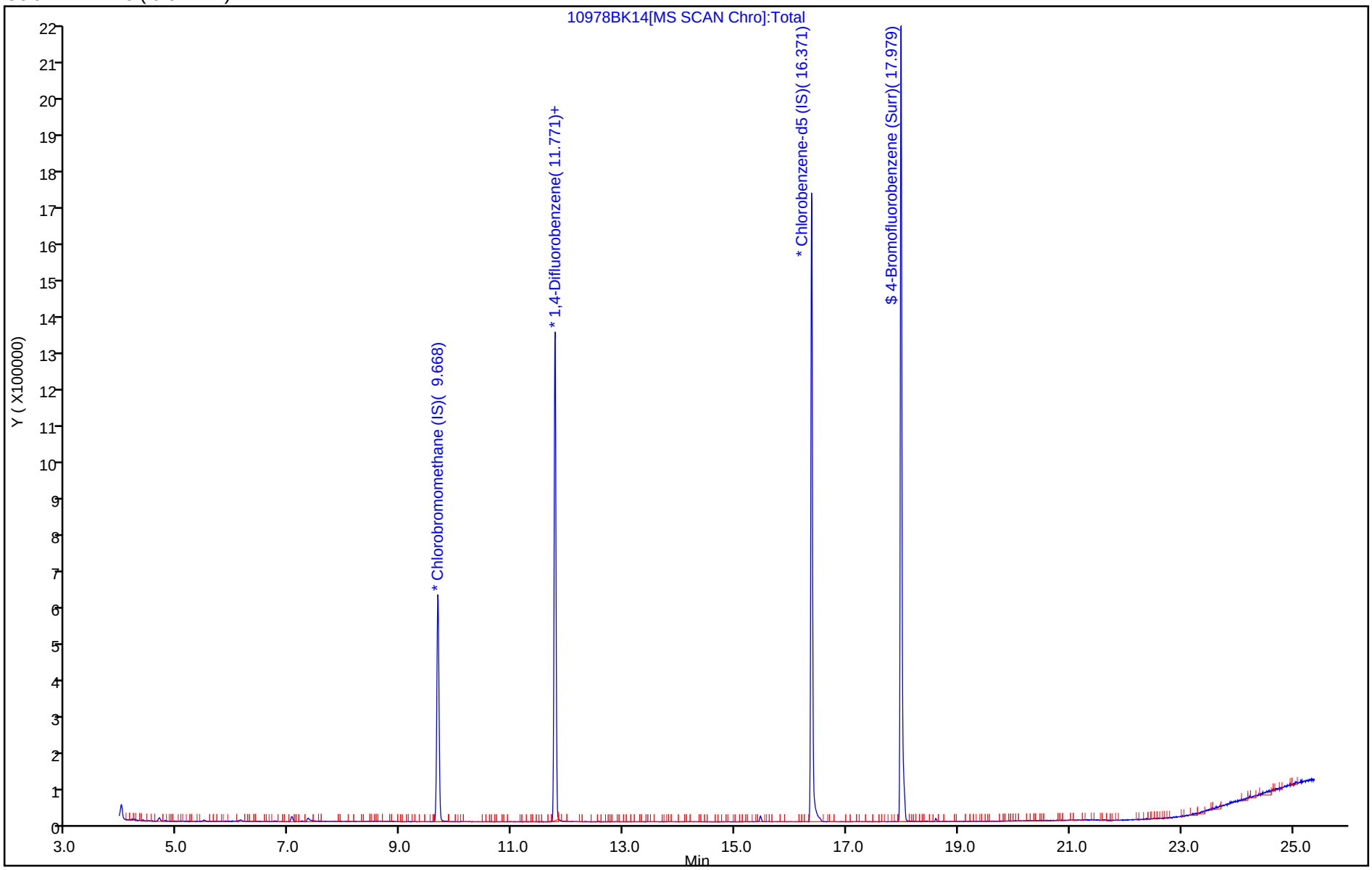
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 18:31:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK14.D				
Injection Date:	21-Mar-2018 17:21:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10978-A-14	Lab Sample ID:	140-10978-14	Worklist Smp#:	13
Client ID:	09523				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



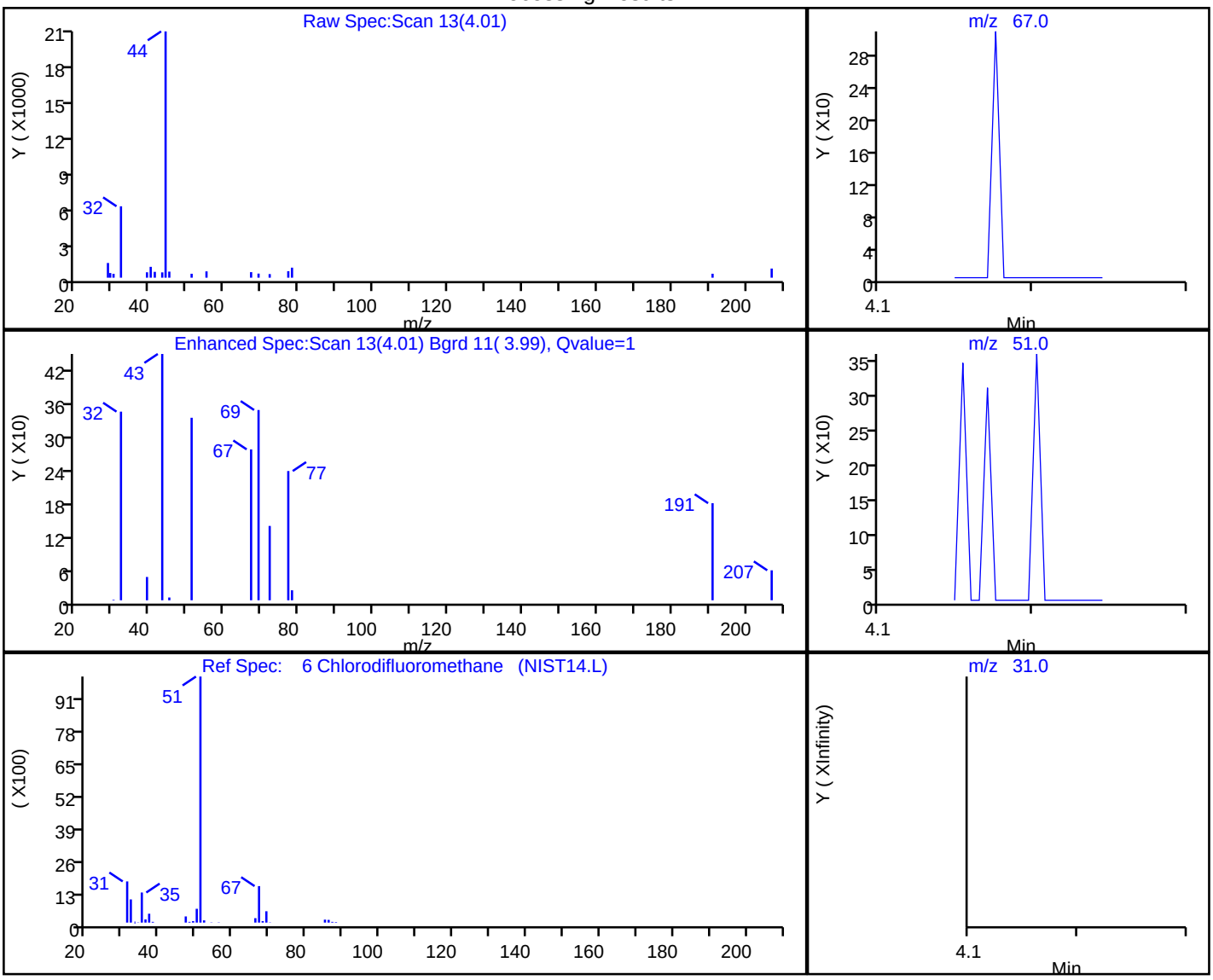
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK14.D				
Injection Date:	21-Mar-2018 17:21:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-14	Lab Sample ID:	140-10978-14		
Client ID:	09523				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

Processing Results



RT	Mass	Response	Amount
4.01	67.00	370	0.014867
4.01	51.00	216	
4.20	31.00	0	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:31:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

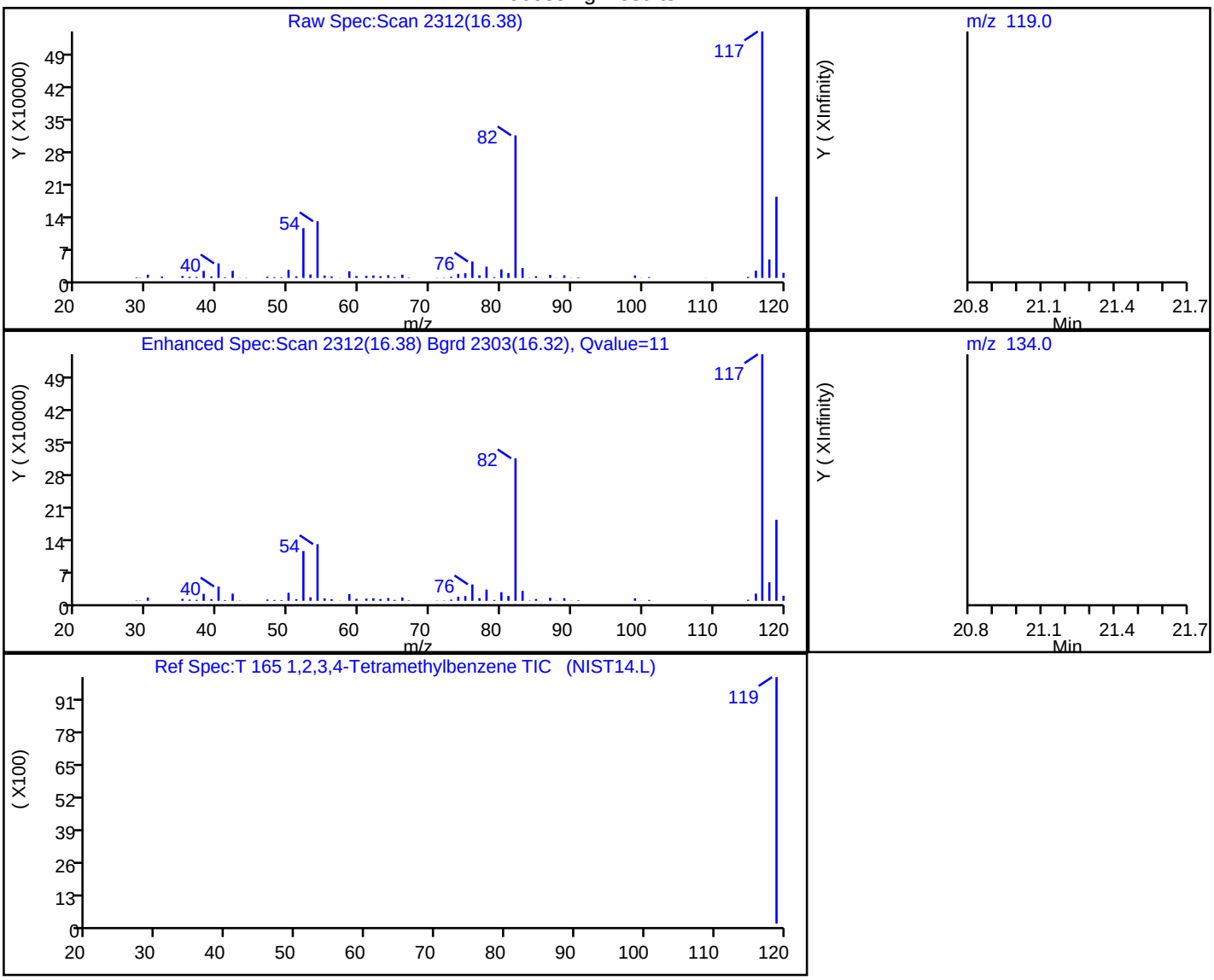
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK14.D				
Injection Date:	21-Mar-2018 17:21:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-14	Lab Sample ID:	140-10978-14		
Client ID:	09523				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	379462	1.277610
23.76	134.00	353	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:16:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

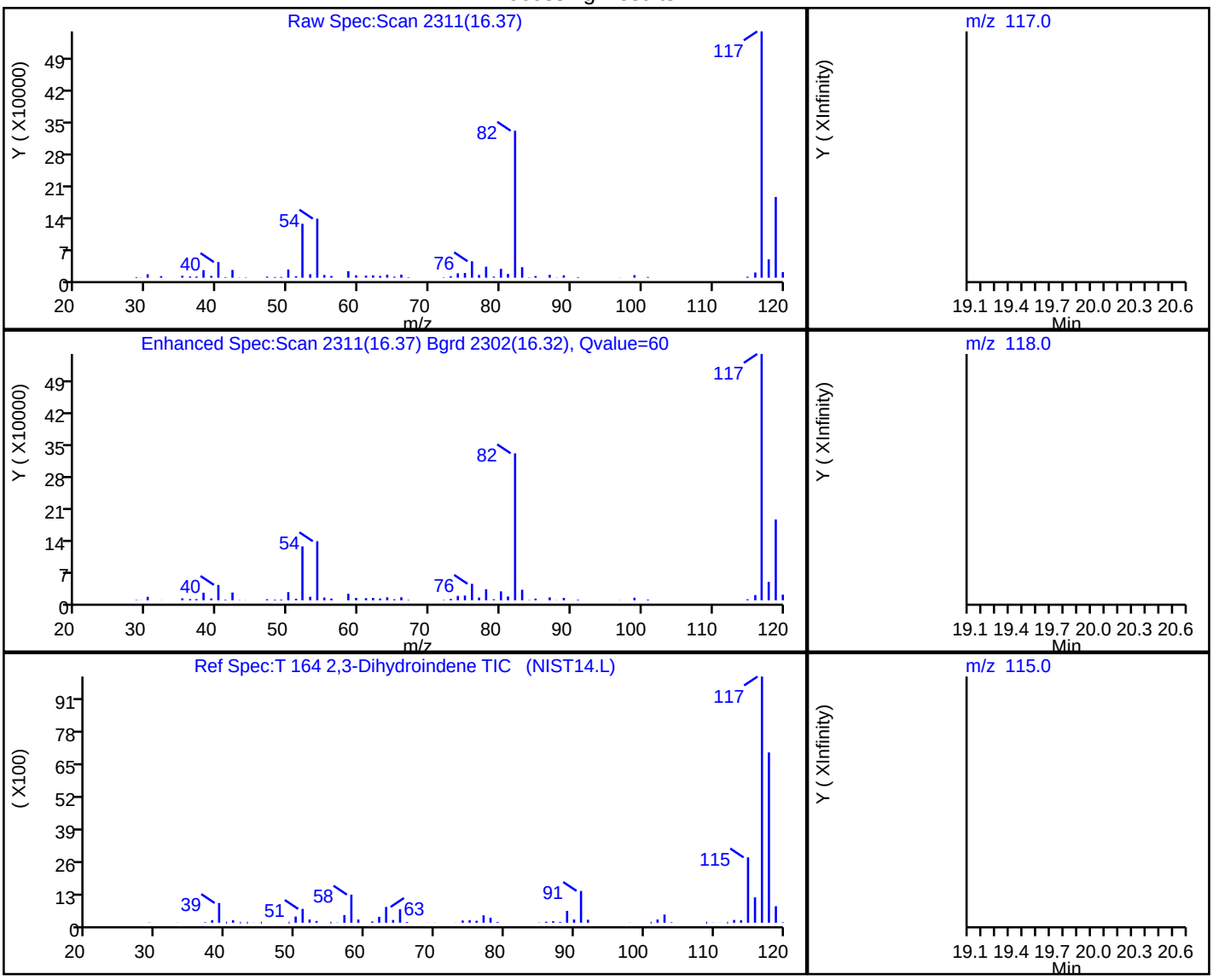
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10978BK14.D				
Injection Date:	21-Mar-2018 17:21:30	Instrument ID:	MJ		
Lims ID:	140-10978-A-14	Lab Sample ID:	140-10978-14		
Client ID:	09523				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	1188037	4.000000
16.38	118.00	89354	
16.38	115.00	4504	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:16:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 09937 | Lab Sample ID: 140-10985-3

Matrix: Air | Lab File ID: 10985BK03.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/19/2018 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	0.48		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	NC		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09937
Lab Sample ID: 140-10985-3
Matrix: Air
Lab File ID: 10985BK03.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 17:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09937
Lab Sample ID: 140-10985-3
Matrix: Air
Lab File ID: 10985BK03.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 17:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09937 Lab Sample ID: 140-10985-3
Matrix: Air Lab File ID: 10985BK03.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/19/2018 17:21
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Lims ID:	140-10985-A-3				
Client ID:	09937				
Sample Type:	Client				
Inject. Date:	19-Mar-2018 17:21:30	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007666-010				
Misc. Info.:	09937				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 12:07:38	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK027				

First Level Reviewer: tajh Date: 20-Mar-2018 12:07:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.660	7.676	-0.016	76	306467	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.816	-0.010	94	1828267	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.832	14.837	-0.005	87	1506217	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1142196	4.00	
24 Isopropyl alcohol	45	4.812	4.806	0.000	95	5709	0.0463	
29 2-Methyl-2-propanol	59	5.298	5.279	0.011	94	4649	0.0201	
33 Carbon disulfide	76	5.584	5.586	-0.010	98	11645	0.0363	
35 2-Methylpentane	43	6.268	6.200	0.059	1	296	NC	
59 1,4-Dioxane	88	10.803	10.791	0.000	81	24469	0.4751	
102 2,3-Dihydroindene	117	18.628	18.621	0.000	54	257	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

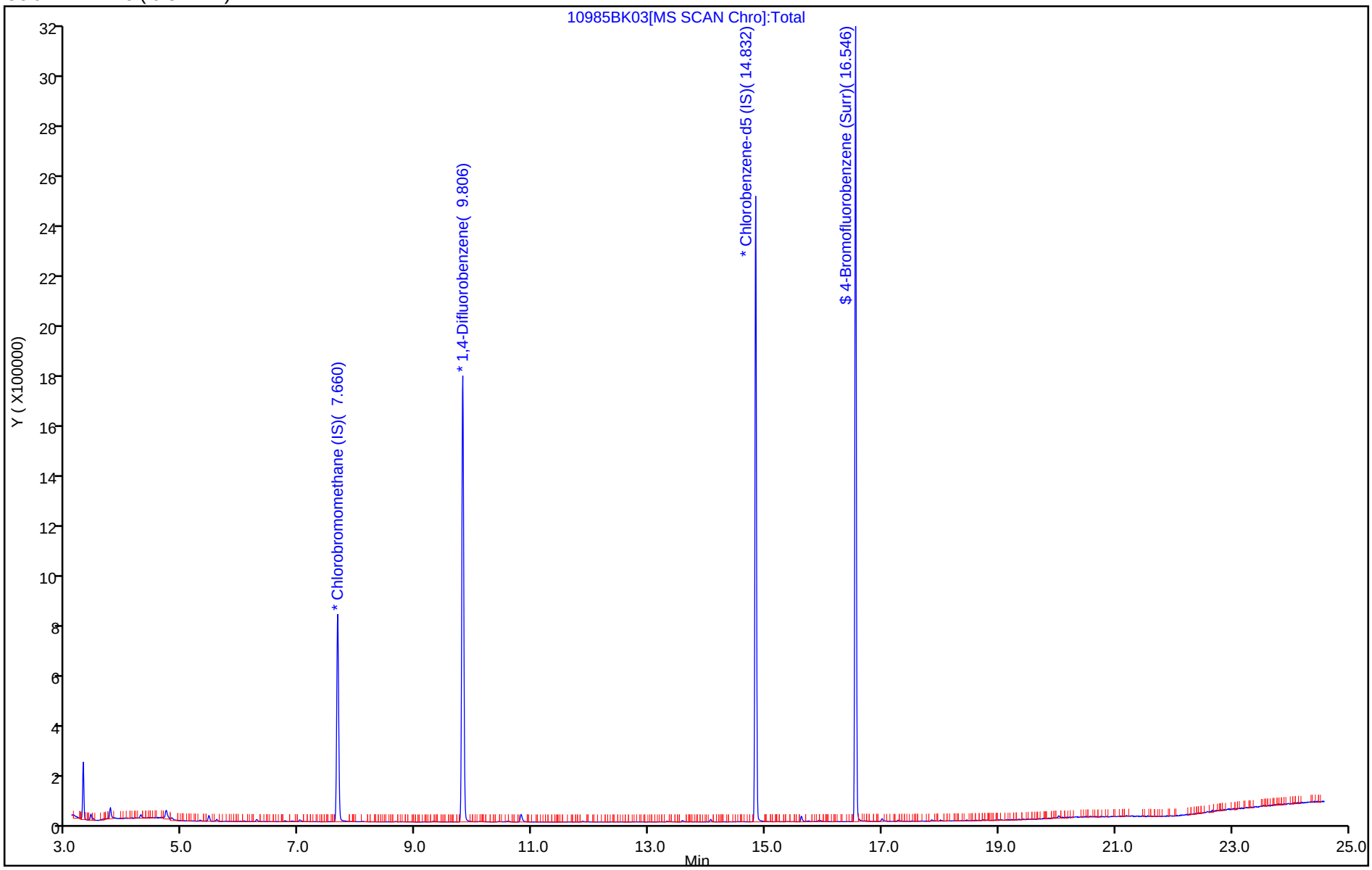
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:07:39 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Injection Date:	19-Mar-2018 17:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-3	Lab Sample ID:	140-10985-3	Worklist Smp#:	10
Client ID:	09937				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

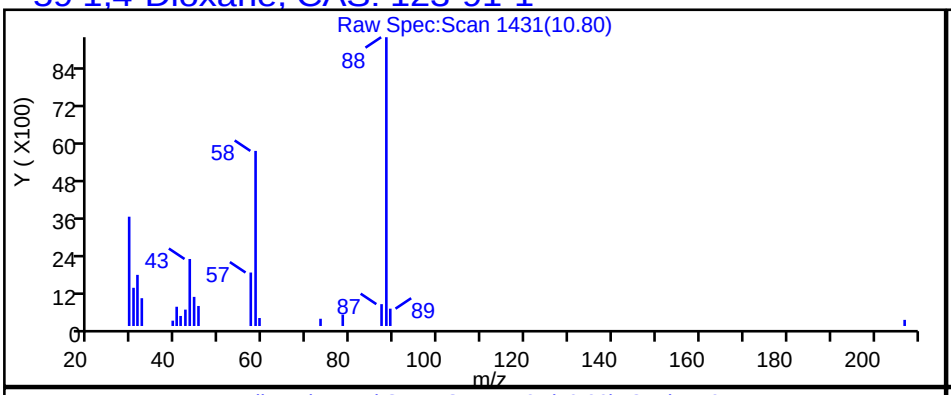


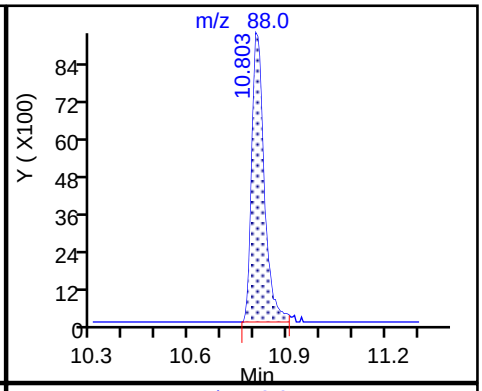
Report Date: 20-Mar-2018 12:07:39 Chrom Revision: 2.2 13-Mar-2018 08:45:20

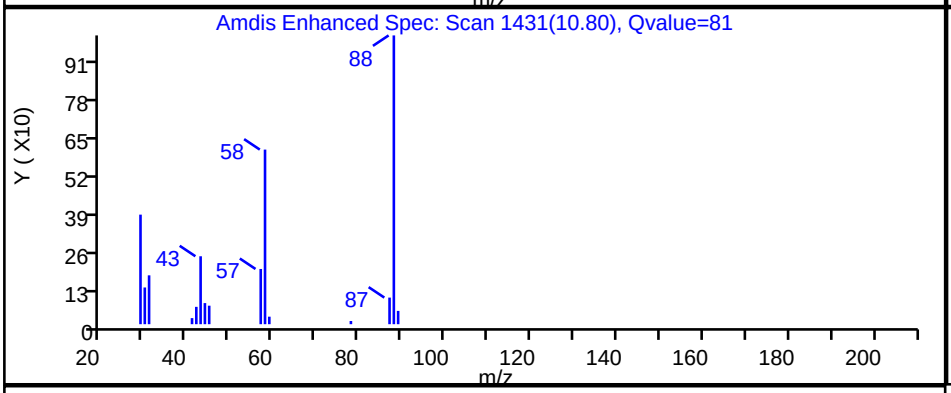
TestAmerica Knoxville

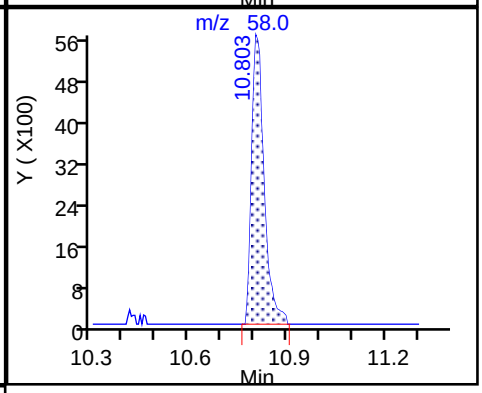
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Injection Date:	19-Mar-2018 17:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-3	Lab Sample ID:	140-10985-3		
Client ID:	09937				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

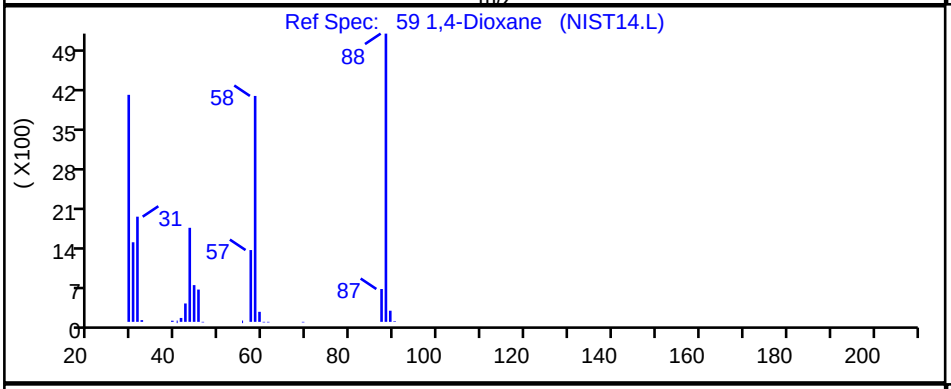
59 1,4-Dioxane, CAS: 123-91-1

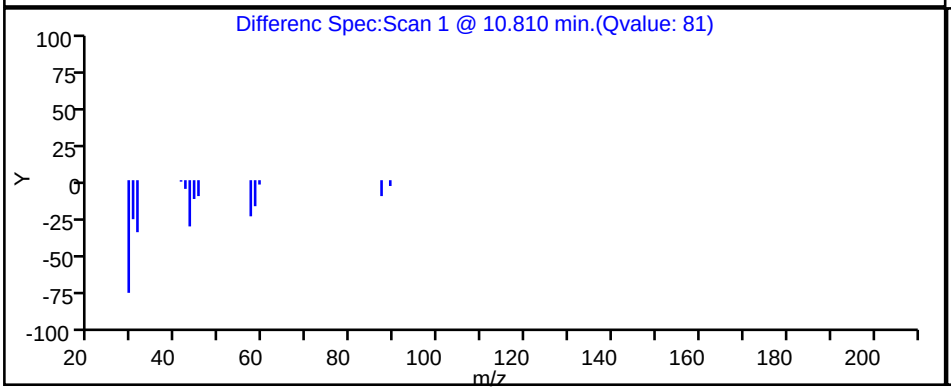


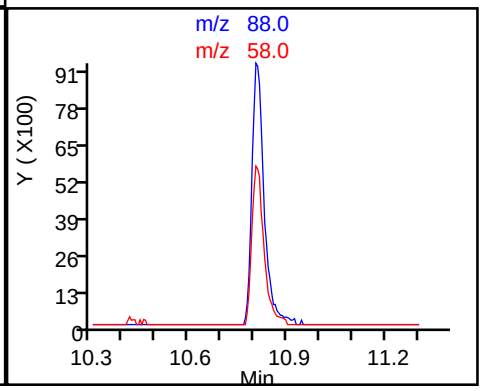










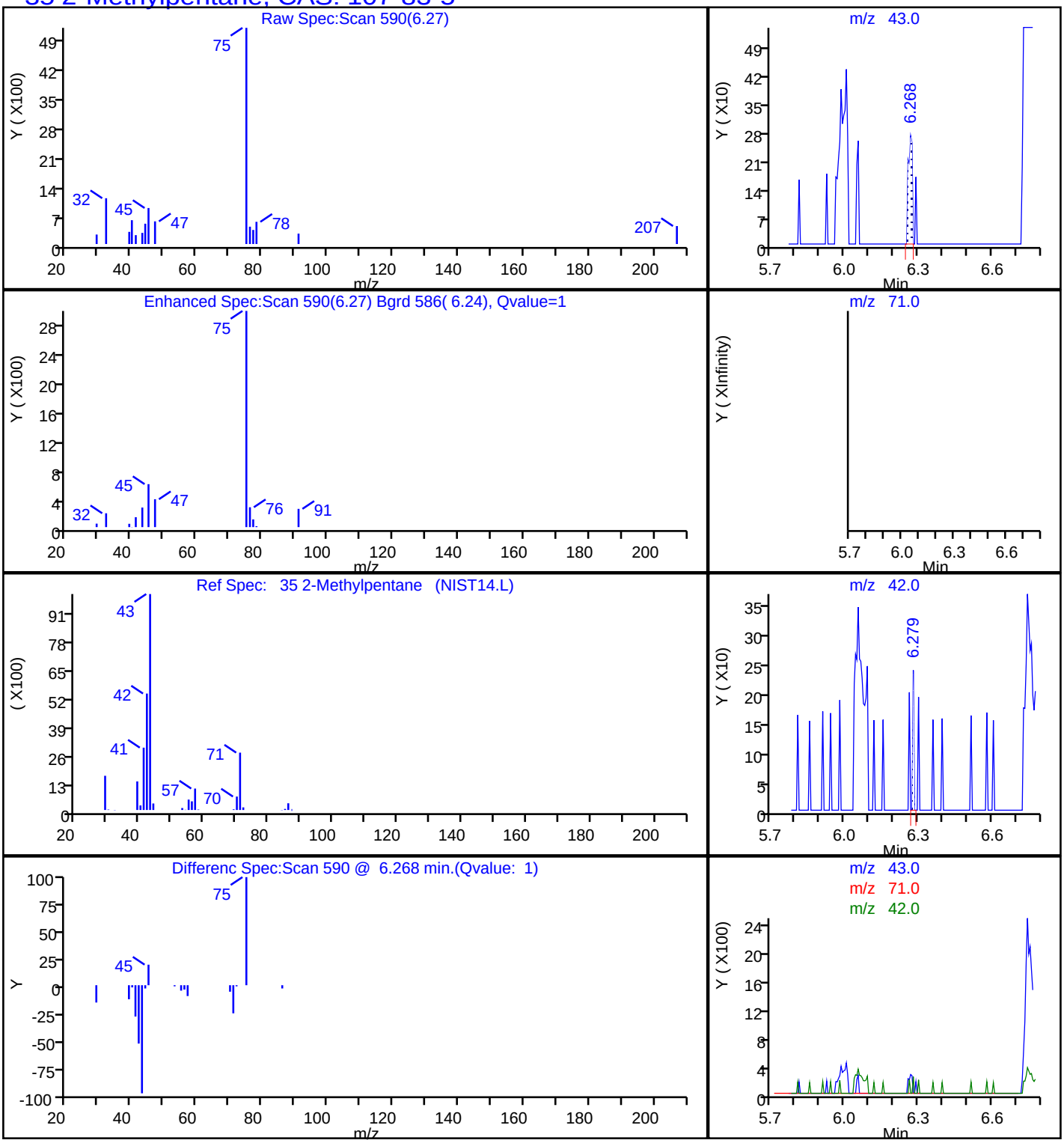


Report Date: 20-Mar-2018 12:07:39 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Injection Date:	19-Mar-2018 17:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-3	Lab Sample ID:	140-10985-3		
Client ID:	09937				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

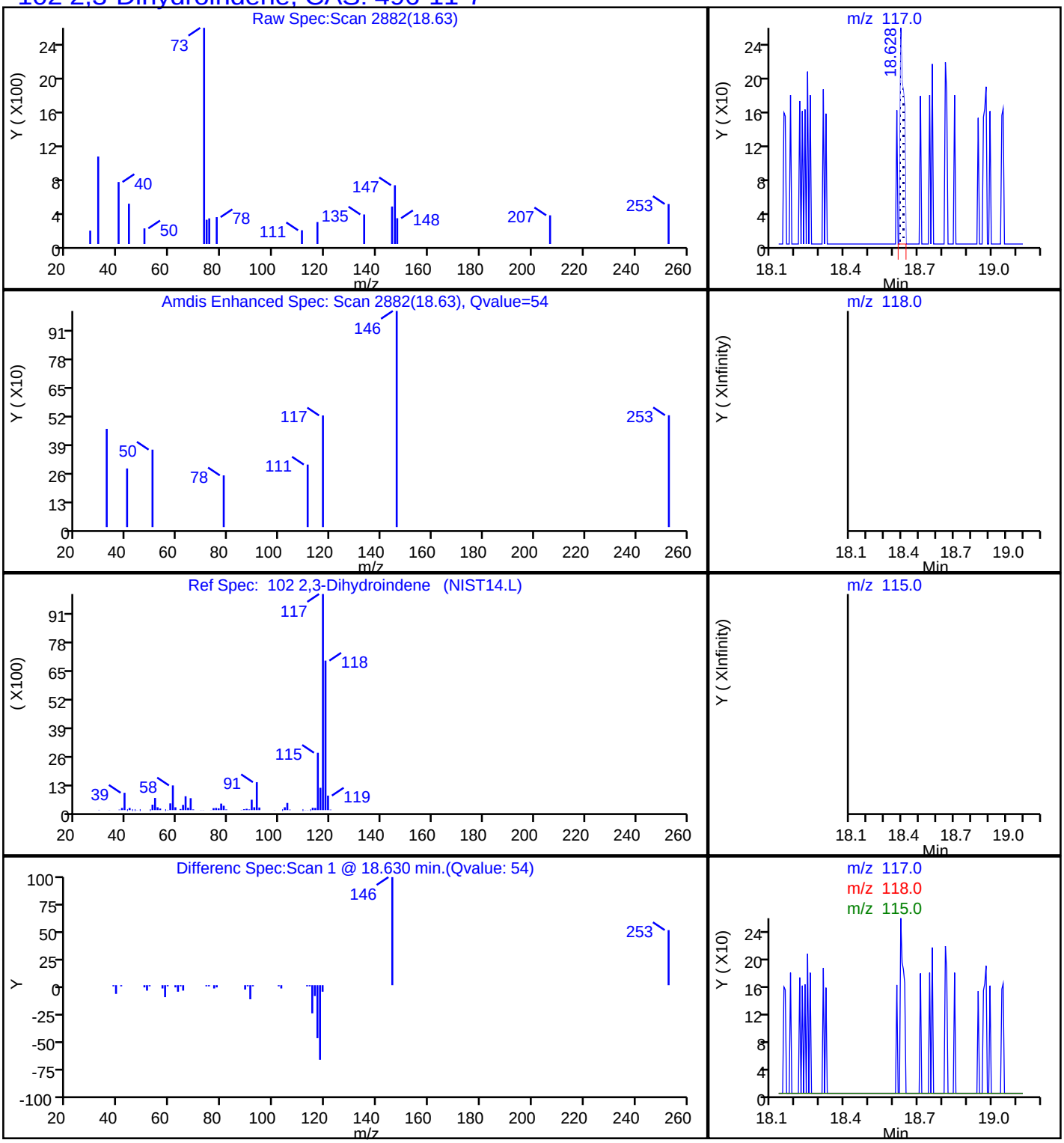


Report Date: 20-Mar-2018 12:07:39 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Injection Date:	19-Mar-2018 17:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-3	Lab Sample ID:	140-10985-3		
Client ID:	09937				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7



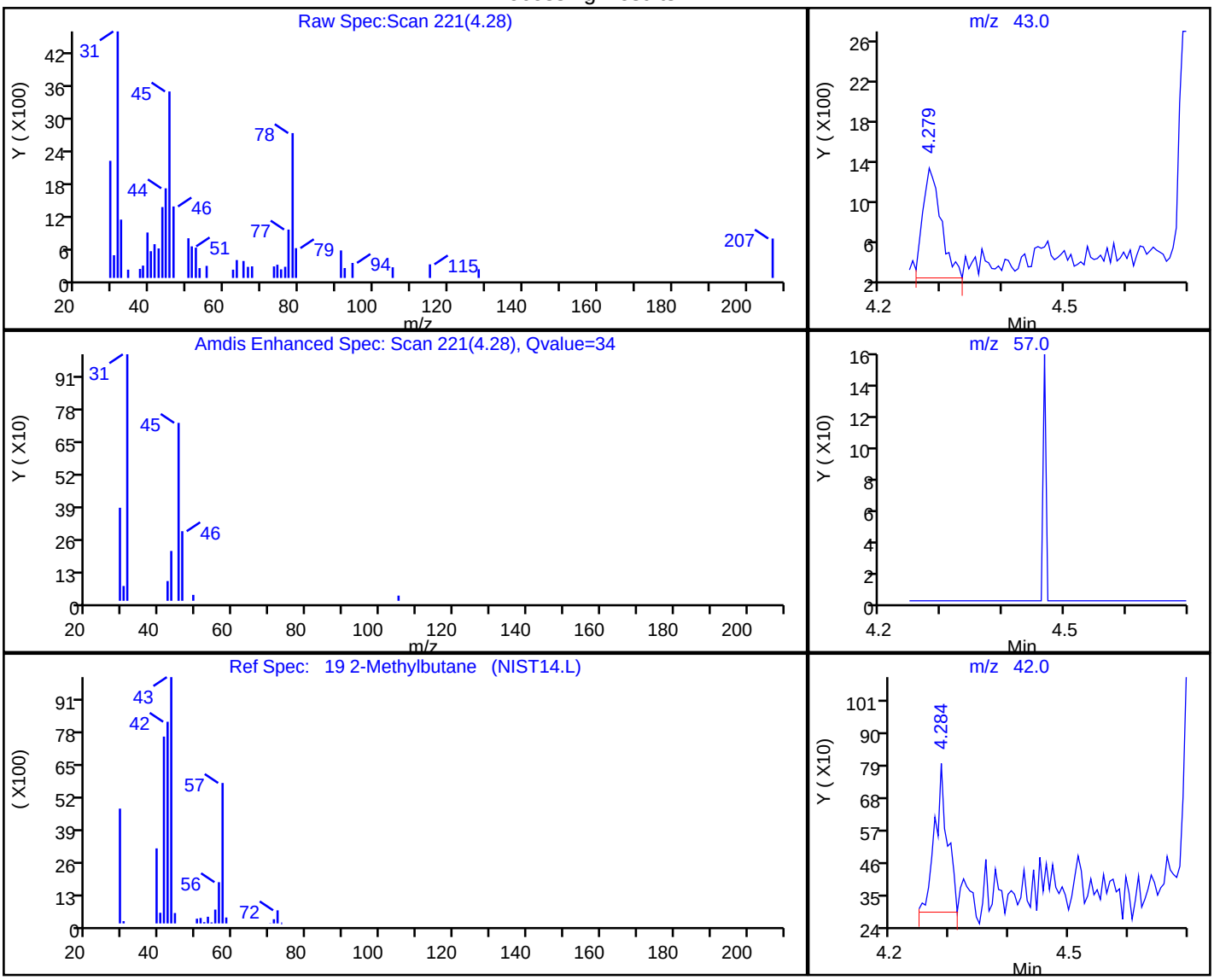
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Injection Date:	19-Mar-2018 17:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-3	Lab Sample ID:	140-10985-3		
Client ID:	09937				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.28	43.00	2173	0.035808
4.28	42.00	744	
4.47	57.00	0	

Reviewer: tajh, 20-Mar-2018 12:07:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

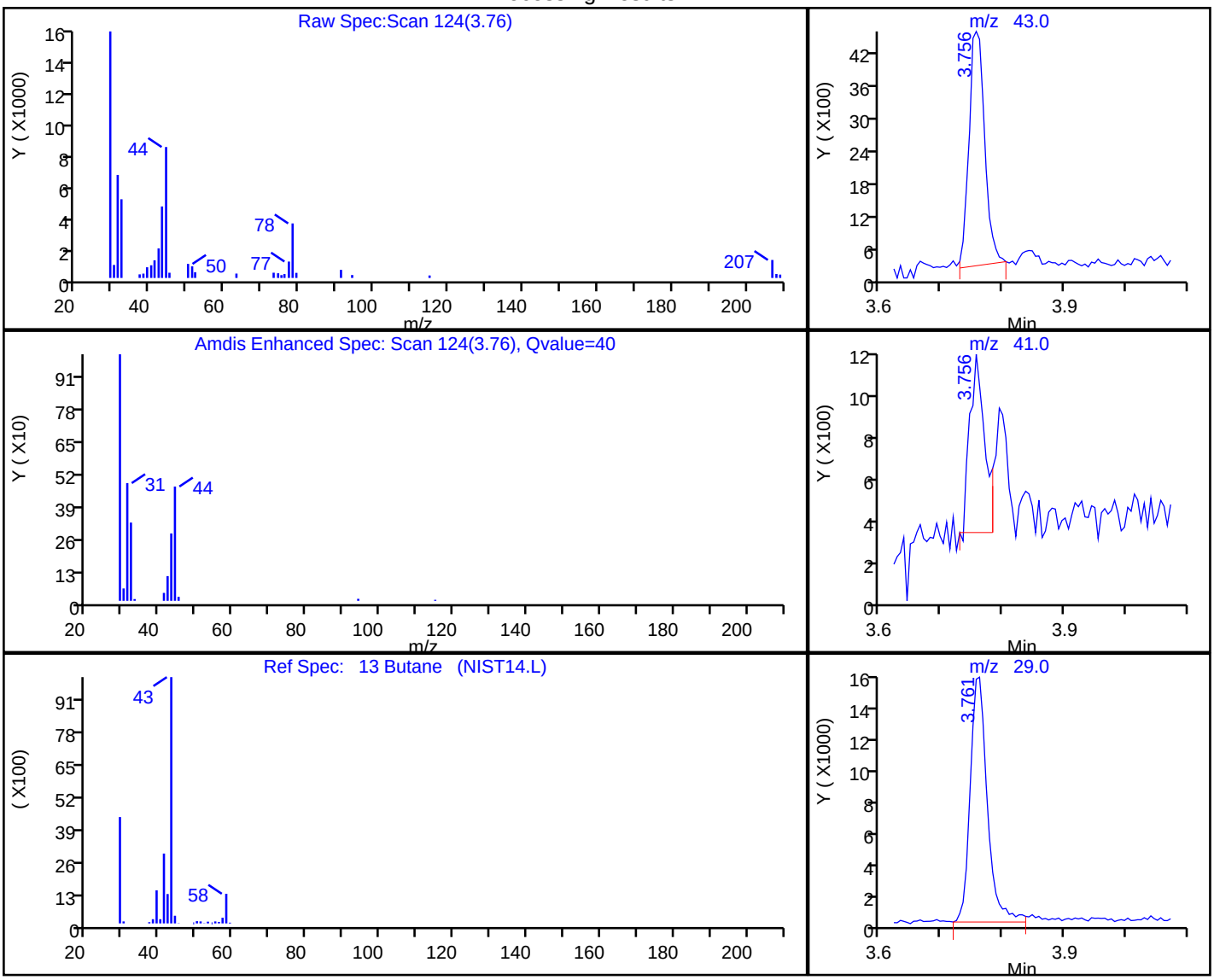
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK03.D				
Injection Date:	19-Mar-2018 17:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-3	Lab Sample ID:	140-10985-3		
Client ID:	09937				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.76	43.00	7798	0.090549
3.76	41.00	1396	
3.76	29.00	30429	

Reviewer: tajh, 20-Mar-2018 12:07:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 10479 | Lab Sample ID: 140-10985-5

Matrix: Air | Lab File ID: 10985BK05.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/19/2018 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10479 | Lab Sample ID: 140-10985-5
Matrix: Air | Lab File ID: 10985BK05.D
Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) | Date Analyzed: 03/19/2018 19:03
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10479
Lab Sample ID: 140-10985-5
Matrix: Air
Lab File ID: 10985BK05.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 19:03
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	0.066		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10479 Lab Sample ID: 140-10985-5
Matrix: Air Lab File ID: 10985BK05.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/19/2018 19:03
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK05.D
Lims ID: 140-10985-A-5
Client ID: 10479
Sample Type: Client
Inject. Date: 19-Mar-2018 19:03:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007666-012
Misc. Info.: 10479
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 12:07:57 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 20-Mar-2018 12:07:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.676	-0.011	76	303084	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1793337	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.837	-0.006	87	1442822	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	95	1100758	4.02	
56 Trichloroethene	130	10.566	10.560	-0.005	98	10752	0.0664	
102 2,3-Dihydroindene	117	18.638	18.621	0.010	1	121	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

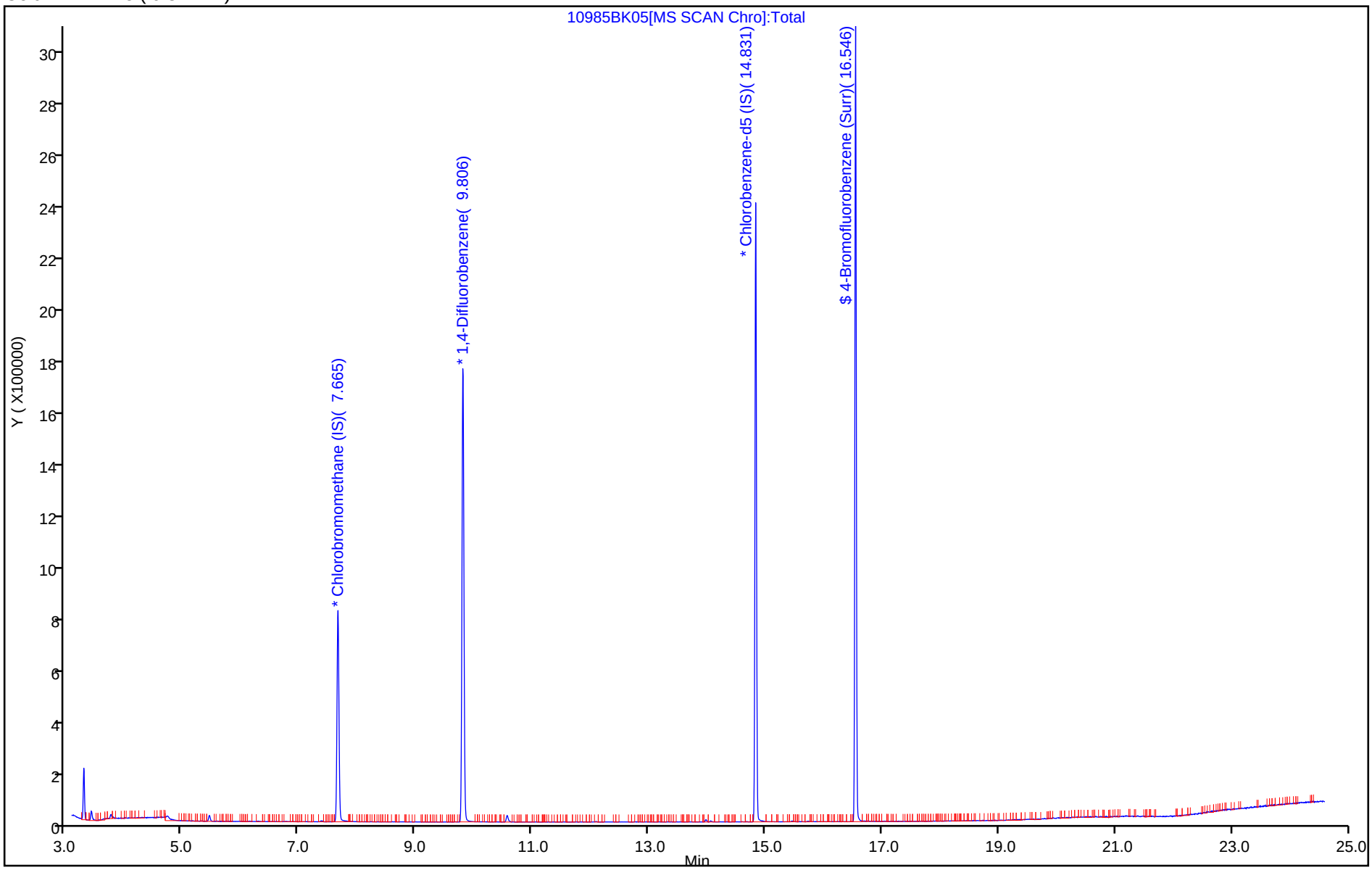
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:07:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK05.D				
Injection Date:	19-Mar-2018 19:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-5	Lab Sample ID:	140-10985-5	Worklist Smp#:	12
Client ID:	10479				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

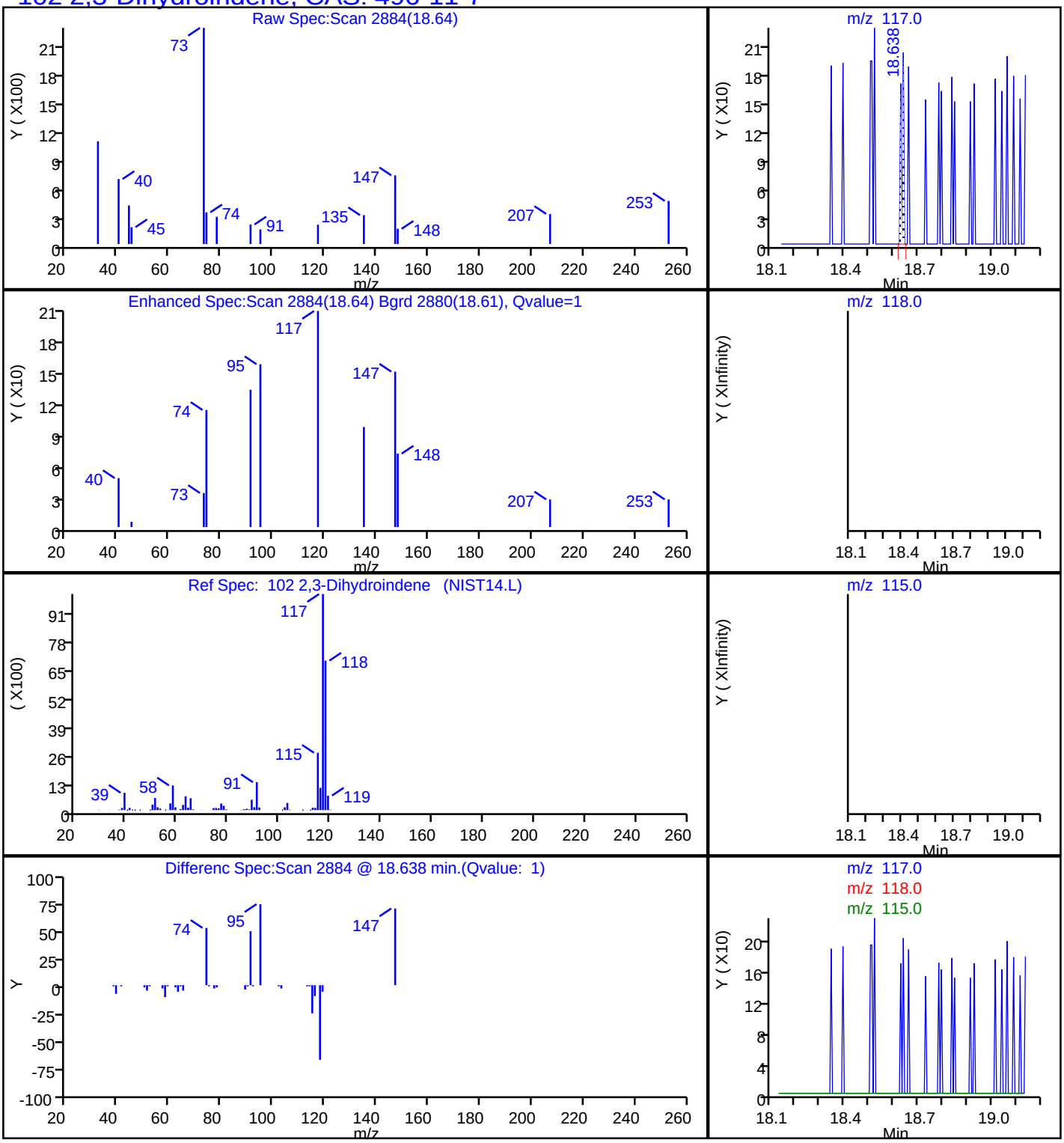


Report Date: 20-Mar-2018 12:07:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK05.D				
Injection Date:	19-Mar-2018 19:03:30	Instrument ID:	MR		
Lims ID:	140-10985-A-5	Lab Sample ID:	140-10985-5		
Client ID:	10479				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7

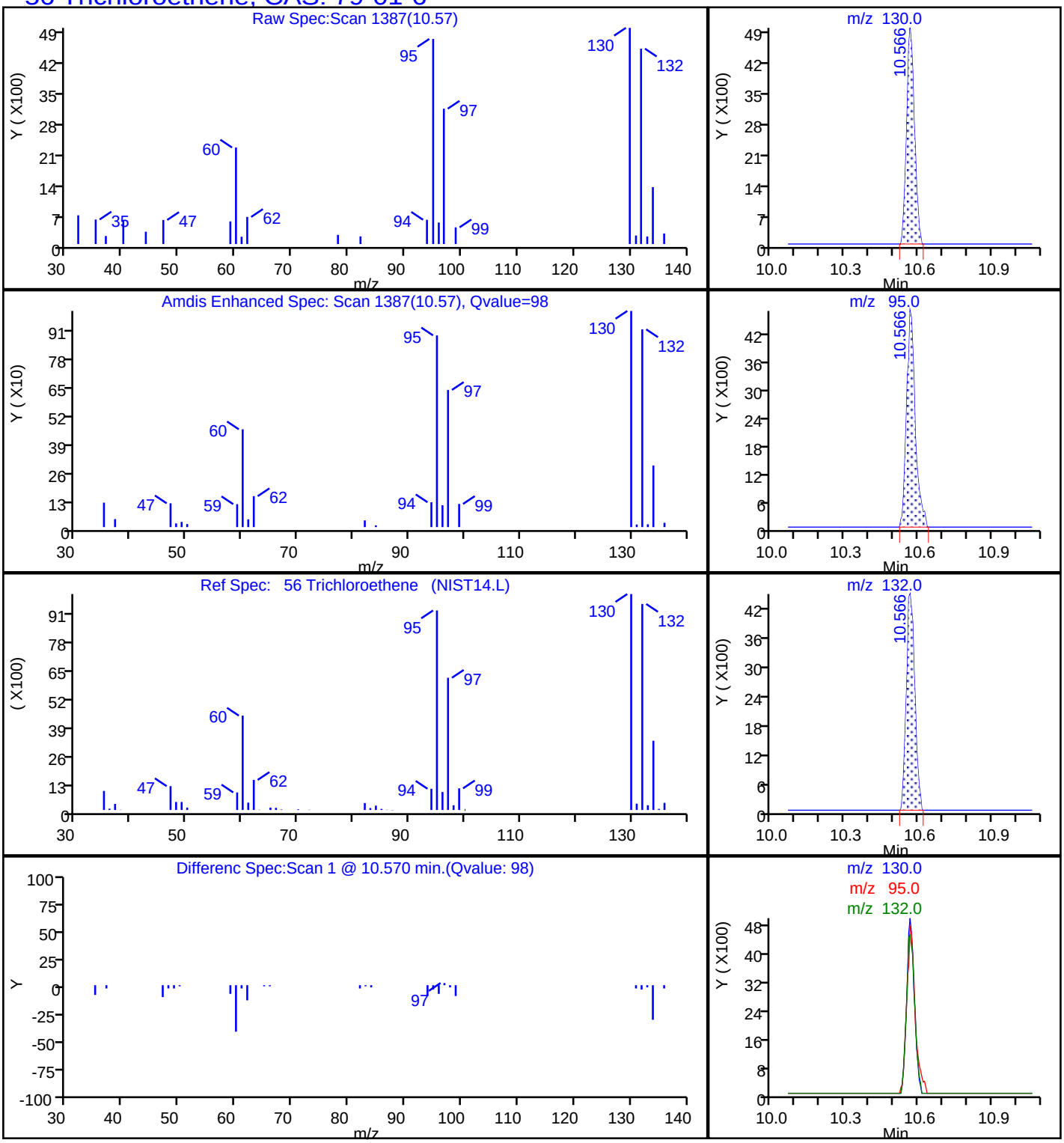


Report Date: 20-Mar-2018 12:07:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK05.D				
Injection Date:	19-Mar-2018 19:03:30	Instrument ID:	MR		
Lims ID:	140-10985-A-5	Lab Sample ID:	140-10985-5		
Client ID:	10479				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



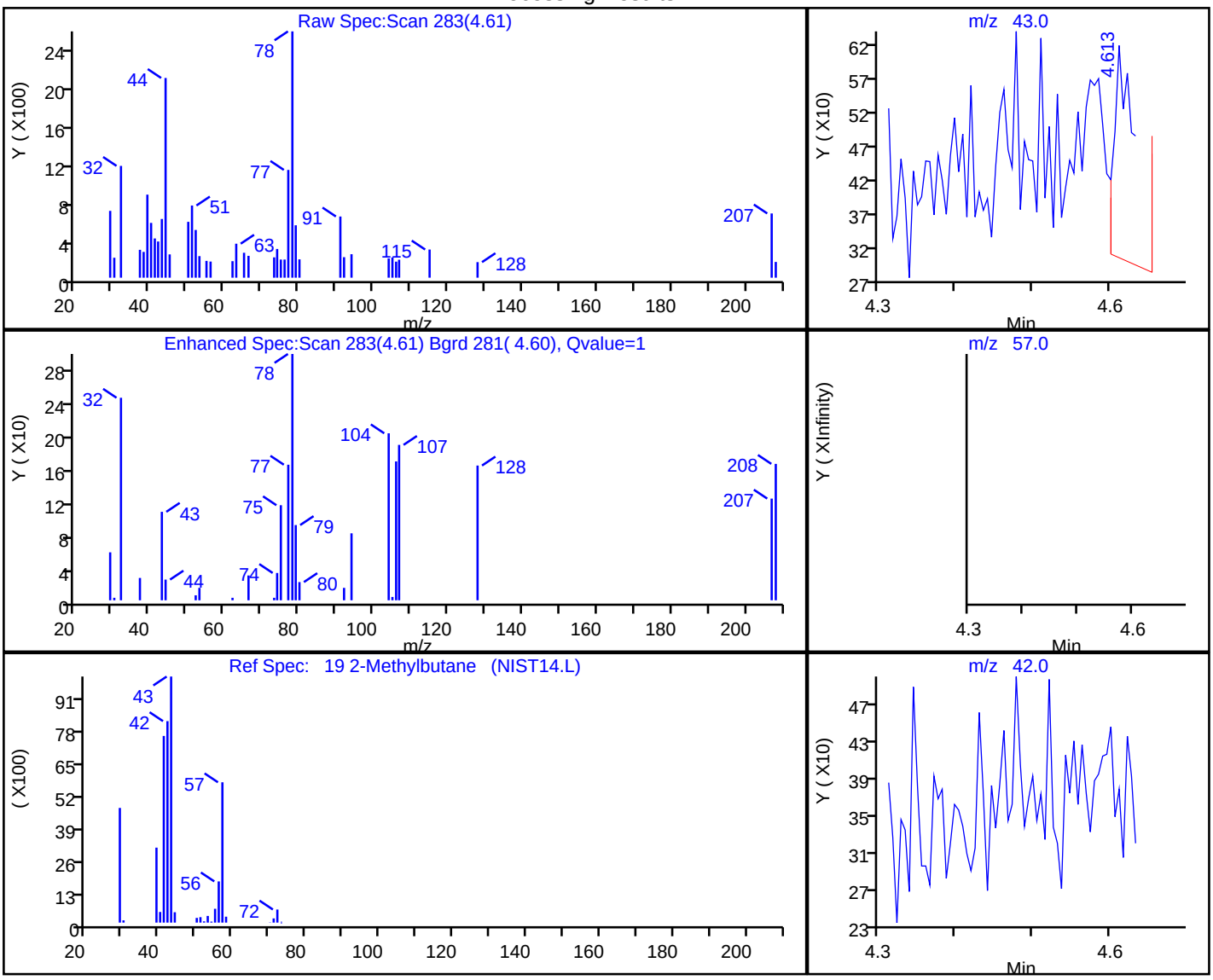
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK05.D				
Injection Date:	19-Mar-2018 19:03:30	Instrument ID:	MR		
Lims ID:	140-10985-A-5	Lab Sample ID:	140-10985-5		
Client ID:	10479				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.61	43.00	785	0.013080
4.47	57.00	0	
4.47	42.00	0	

Reviewer: tajh, 20-Mar-2018 12:07:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

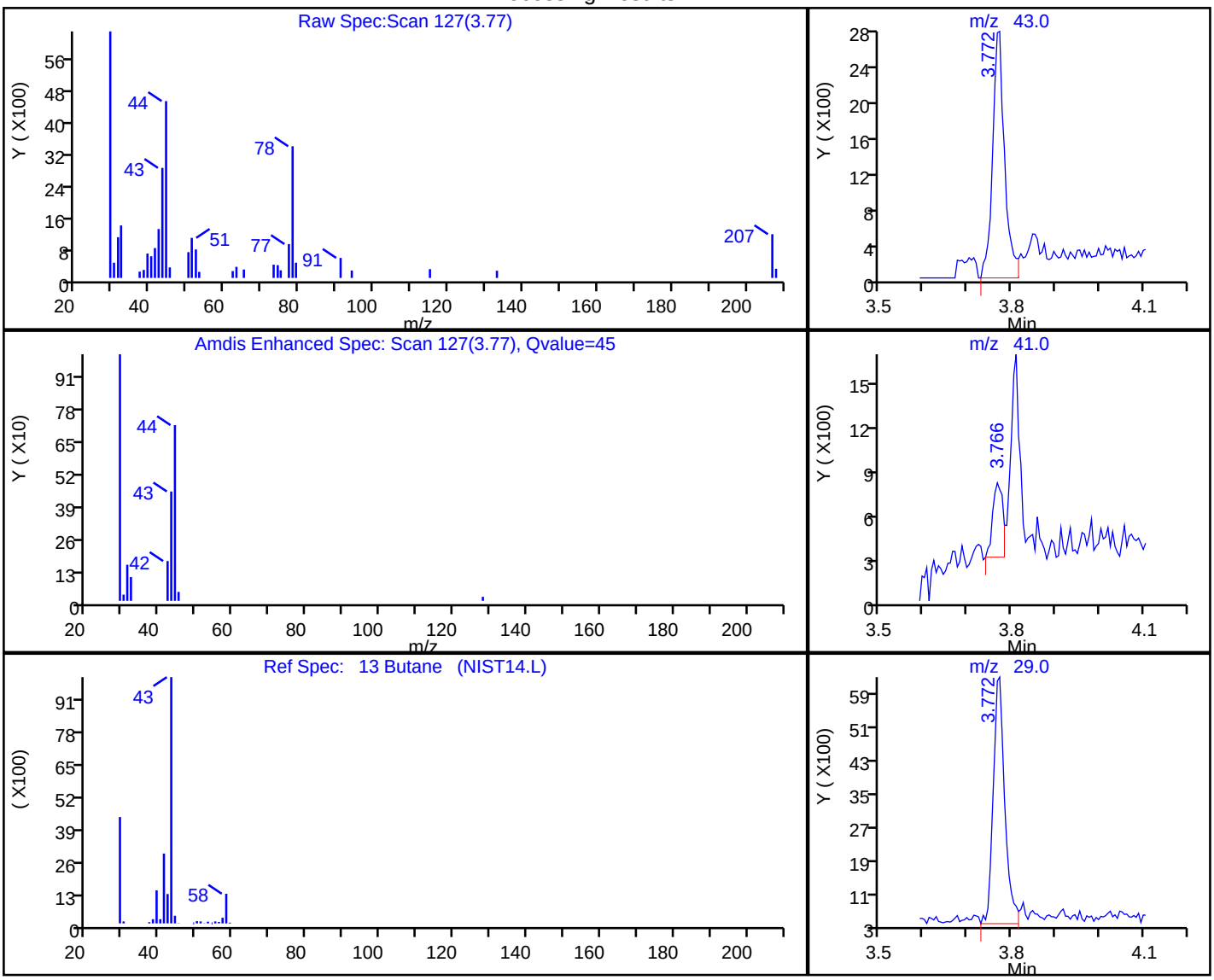
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK05.D				
Injection Date:	19-Mar-2018 19:03:30	Instrument ID:	MR		
Lims ID:	140-10985-A-5	Lab Sample ID:	140-10985-5		
Client ID:	10479				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.77	43.00	5302	0.062253
3.77	41.00	808	
3.77	29.00	10695	

Reviewer: tajh, 20-Mar-2018 12:07:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 09672 | Lab Sample ID: 140-10985-7

Matrix: Air | Lab File ID: 10985BK07.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/19/2018 20:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09672
Lab Sample ID: 140-10985-7
Matrix: Air
Lab File ID: 10985BK07.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 20:46
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09672
Lab Sample ID: 140-10985-7
Matrix: Air
Lab File ID: 10985BK07.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 20:46
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09672 Lab Sample ID: 140-10985-7
Matrix: Air Lab File ID: 10985BK07.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/19/2018 20:46
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK07.D
Lims ID: 140-10985-A-7
Client ID: 09672
Sample Type: Client
Inject. Date: 19-Mar-2018 20:46:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007666-014
Misc. Info.: 09672
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 12:08:16 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 20-Mar-2018 12:08:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.676	-0.011	76	298367	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1753601	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1452470	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1121866	4.07	
20 Acrolein	56	4.635	4.622	0.006	85	1736	0.1054	

Reagents:

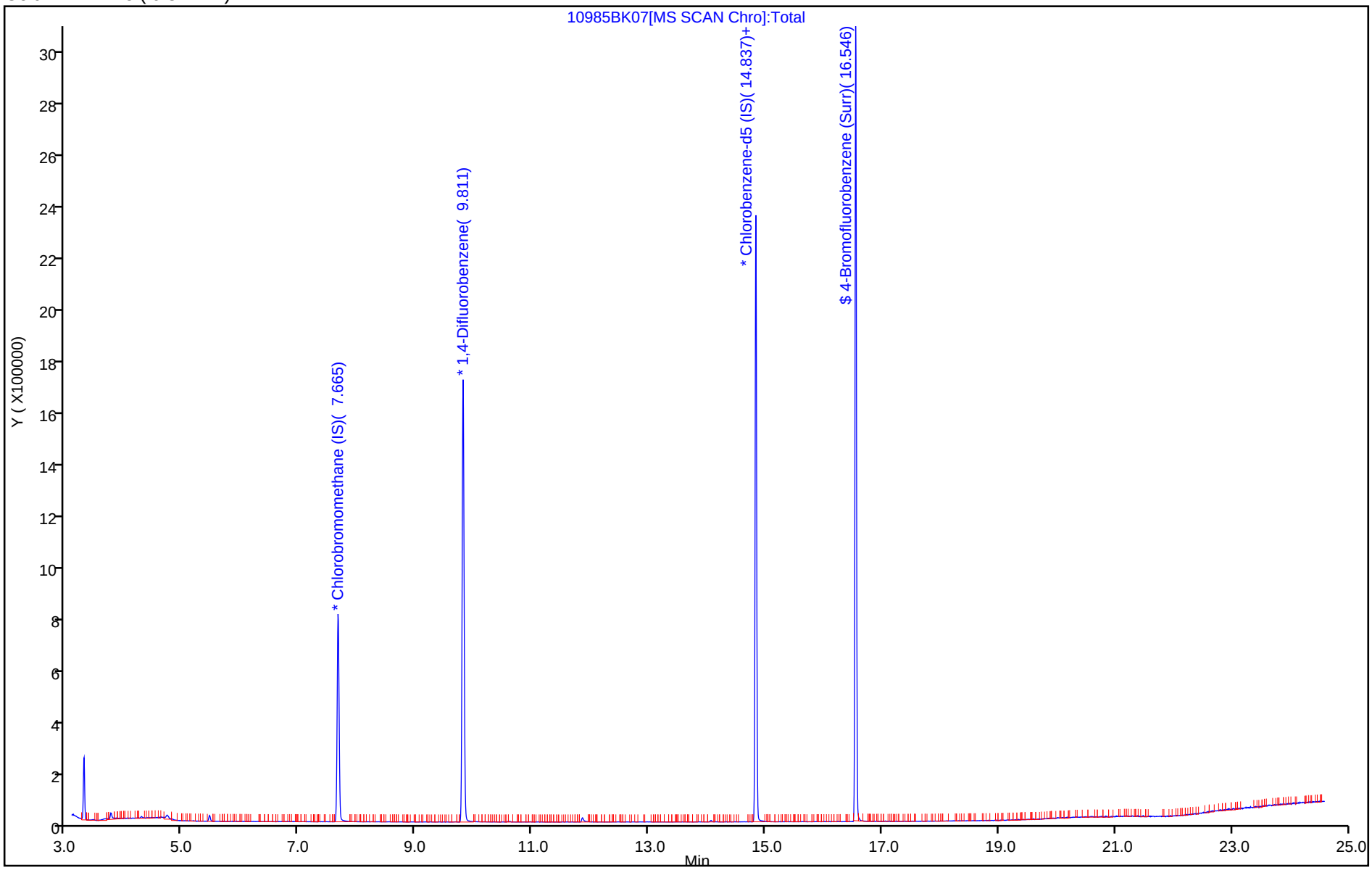
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:08:17 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK07.D				
Injection Date:	19-Mar-2018 20:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-7	Lab Sample ID:	140-10985-7	Worklist Smp#:	14
Client ID:	09672				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



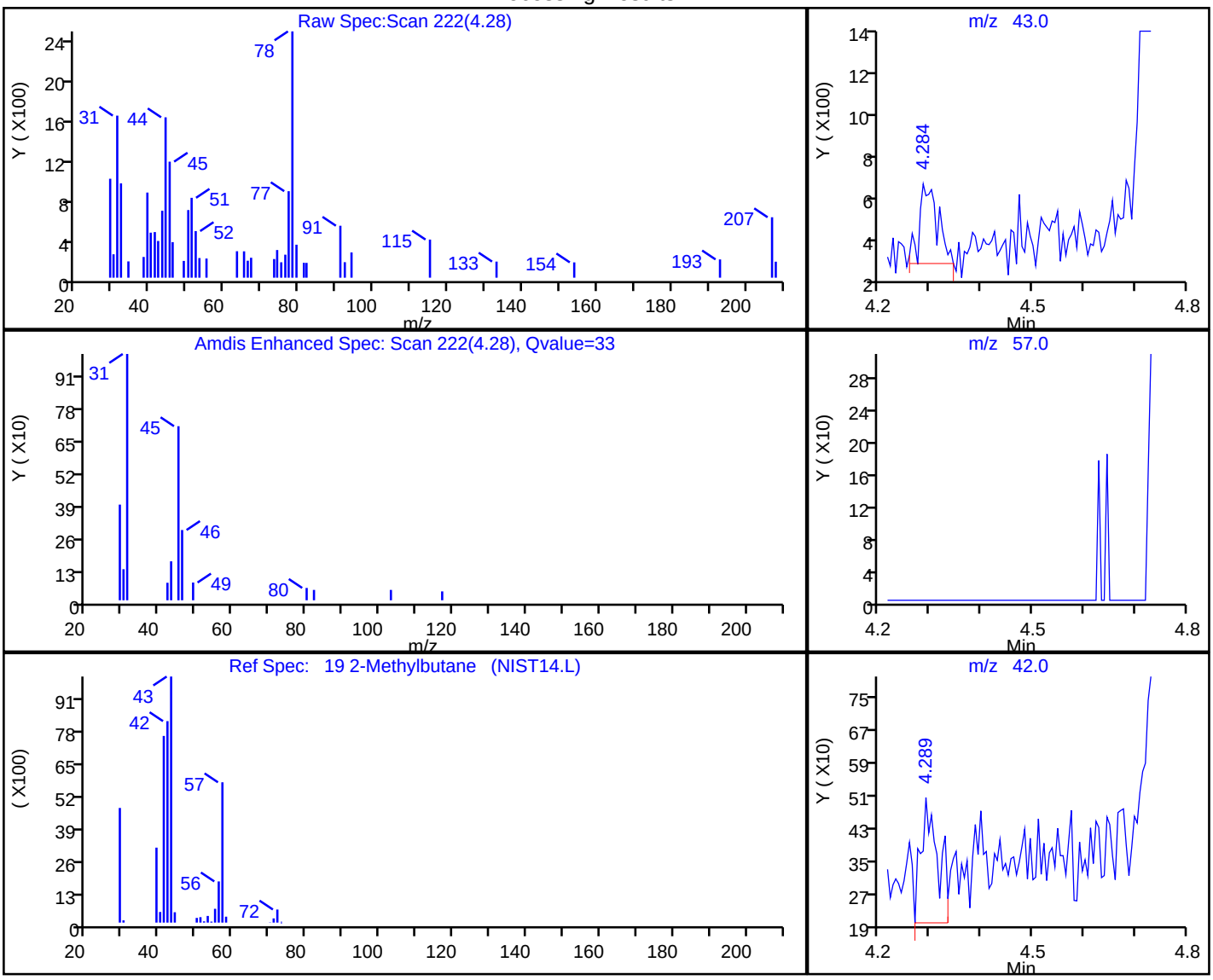
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK07.D				
Injection Date:	19-Mar-2018 20:46:30	Instrument ID:	MR		
Lims ID:	140-10985-A-7	Lab Sample ID:	140-10985-7		
Client ID:	09672				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.28	43.00	880	0.014895
4.29	42.00	697	
4.47	57.00	0	

Reviewer: tajh, 20-Mar-2018 12:08:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

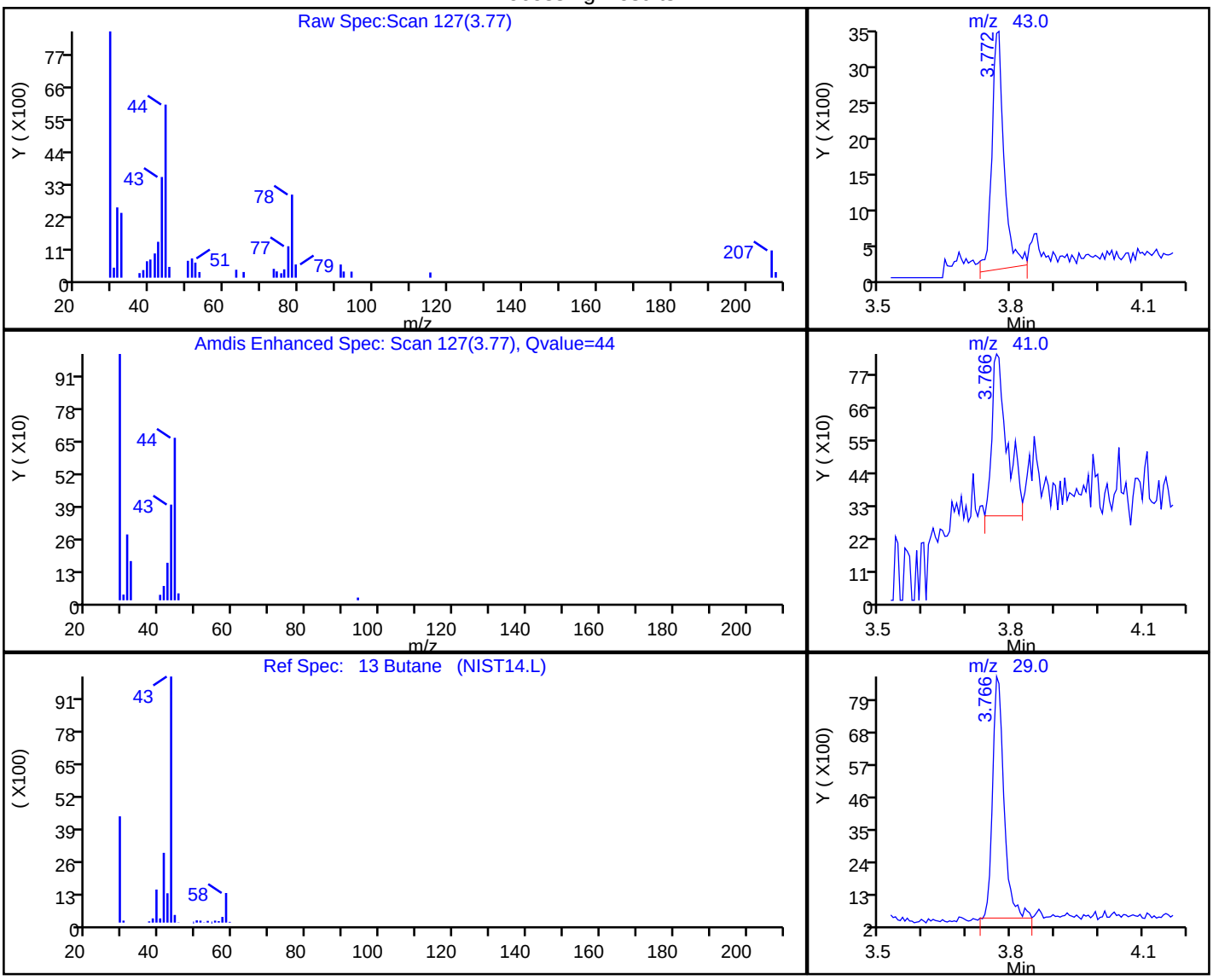
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK07.D				
Injection Date:	19-Mar-2018 20:46:30	Instrument ID:	MR		
Lims ID:	140-10985-A-7	Lab Sample ID:	140-10985-7		
Client ID:	09672				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.77	43.00	6409	0.076441
3.77	41.00	1338	
3.77	29.00	14872	

Reviewer: tajh, 20-Mar-2018 12:08:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 11040 | Lab Sample ID: 140-10985-8

Matrix: Air | Lab File ID: 10985BK08.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/19/2018 21:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	0.26		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	NC		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 11040
Lab Sample ID: 140-10985-8
Matrix: Air
Lab File ID: 10985BK08.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 21:37
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	NC		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 11040
Lab Sample ID: 140-10985-8
Matrix: Air
Lab File ID: 10985BK08.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 21:37
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 11040 Lab Sample ID: 140-10985-8
Matrix: Air Lab File ID: 10985BK08.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/19/2018 21:37
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D
Lims ID: 140-10985-A-8
Client ID: 11040
Sample Type: Client
Inject. Date: 19-Mar-2018 21:37:30 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007666-015
Misc. Info.: 11040
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 12:08:40 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 20-Mar-2018 12:08:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.676	-0.011	76	295879	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1770645	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.837	-0.006	87	1463203	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1149940	4.15	
9 Chloromethane	52	3.637	3.632	0.000	99	3609	0.1426	
17 Ethanol	31	4.278	4.283	-0.011	90	35803	1.61	
19 2-Methylbutane	43	4.473	4.466	0.000	77	3130	0.0534	
20 Acrolein	56	4.624	4.622	-0.005	94	3058	0.1872	
23 Acetone	58	4.715	4.709	0.000	100	44248	1.43	
24 Isopropyl alcohol	45	4.823	4.806	0.011	90	10214	0.0859	
35 2-Methylpentane	43	6.209	6.200	0.000	88	5263	NC	
44 Tetrahydrofuran	42	8.069	8.042	0.016	80	10194	0.1065	
56 Trichloroethene	130	10.571	10.560	0.000	93	4238	0.0265	
59 1,4-Dioxane	88	10.819	10.791	0.016	83	12927	0.2591	
61 Methylcyclohexane	83	11.418	11.406	0.000	77	422	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.844	11.820	0.011	91	35794	0.1888	
102 2,3-Dihydroindene	117	18.622	18.621	-0.006	1	343	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

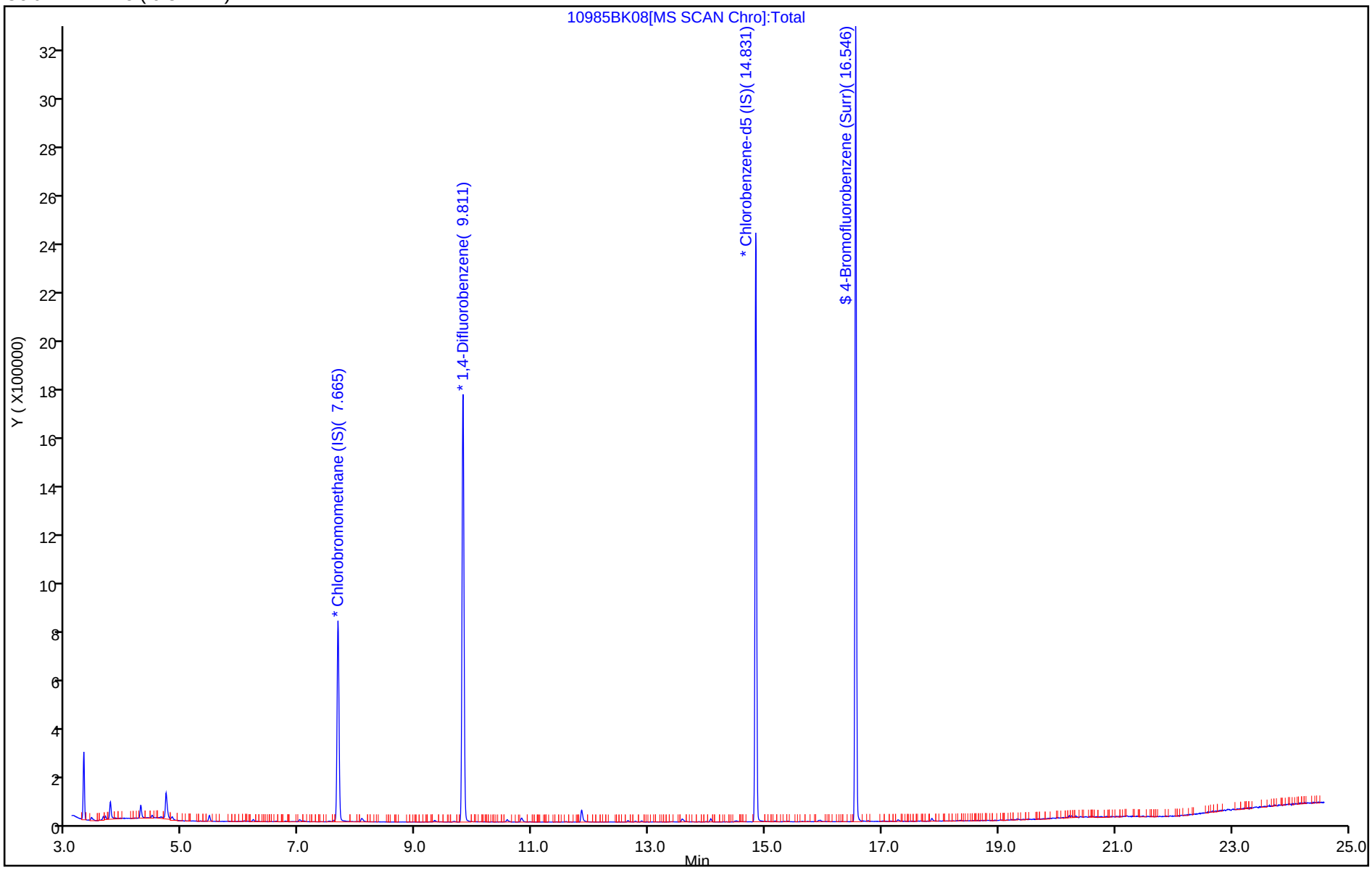
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:08:41 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8	Worklist Smp#:	15
Client ID:	11040				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

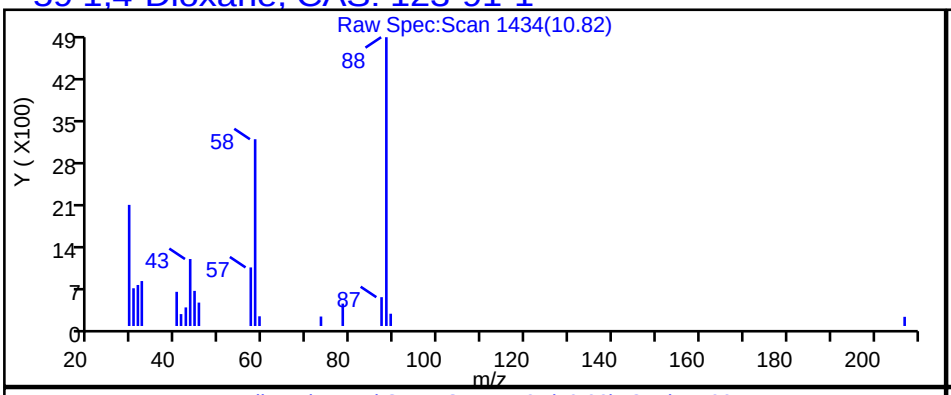


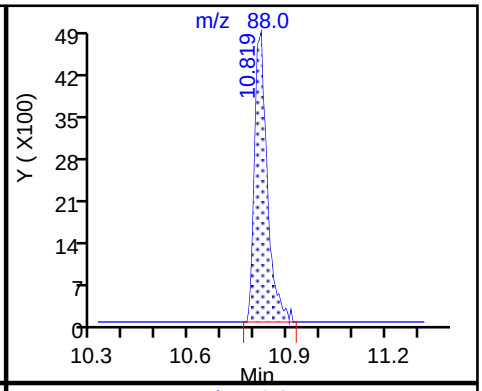
Report Date: 20-Mar-2018 12:08:41 Chrom Revision: 2.2 13-Mar-2018 08:45:20

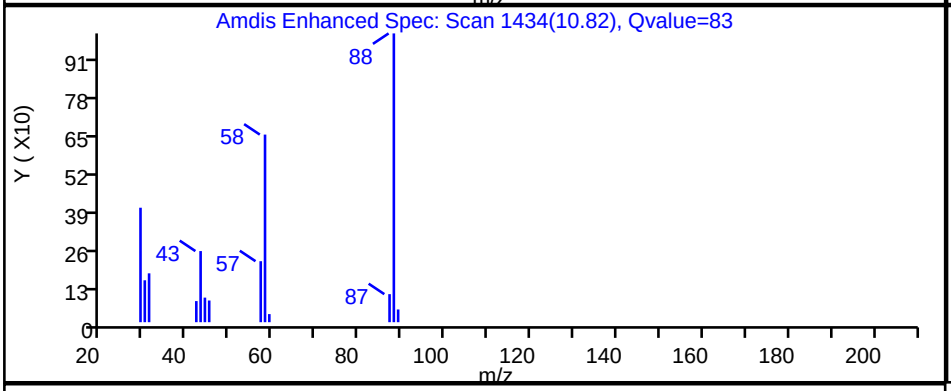
TestAmerica Knoxville

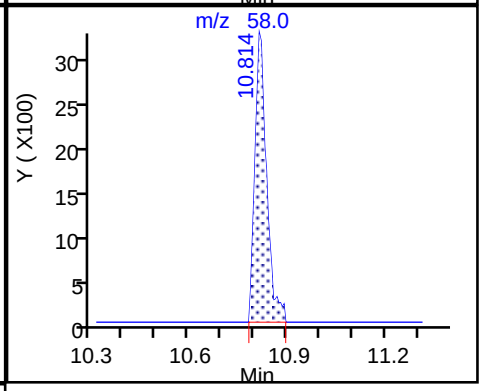
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR		
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8		
Client ID:	11040				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

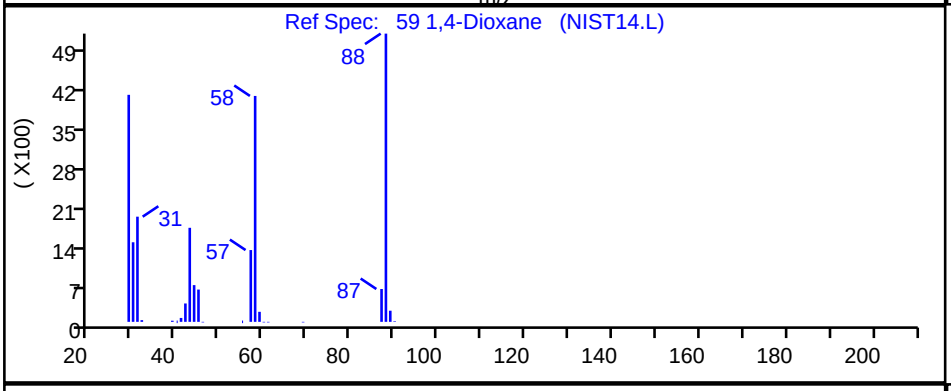
59 1,4-Dioxane, CAS: 123-91-1

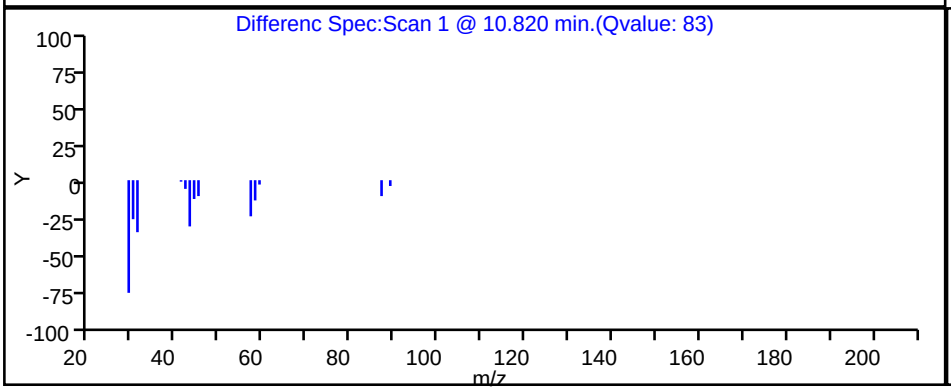


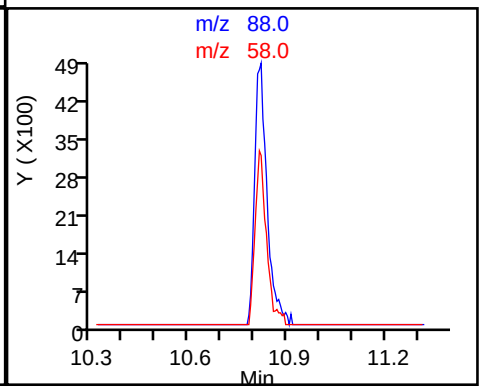










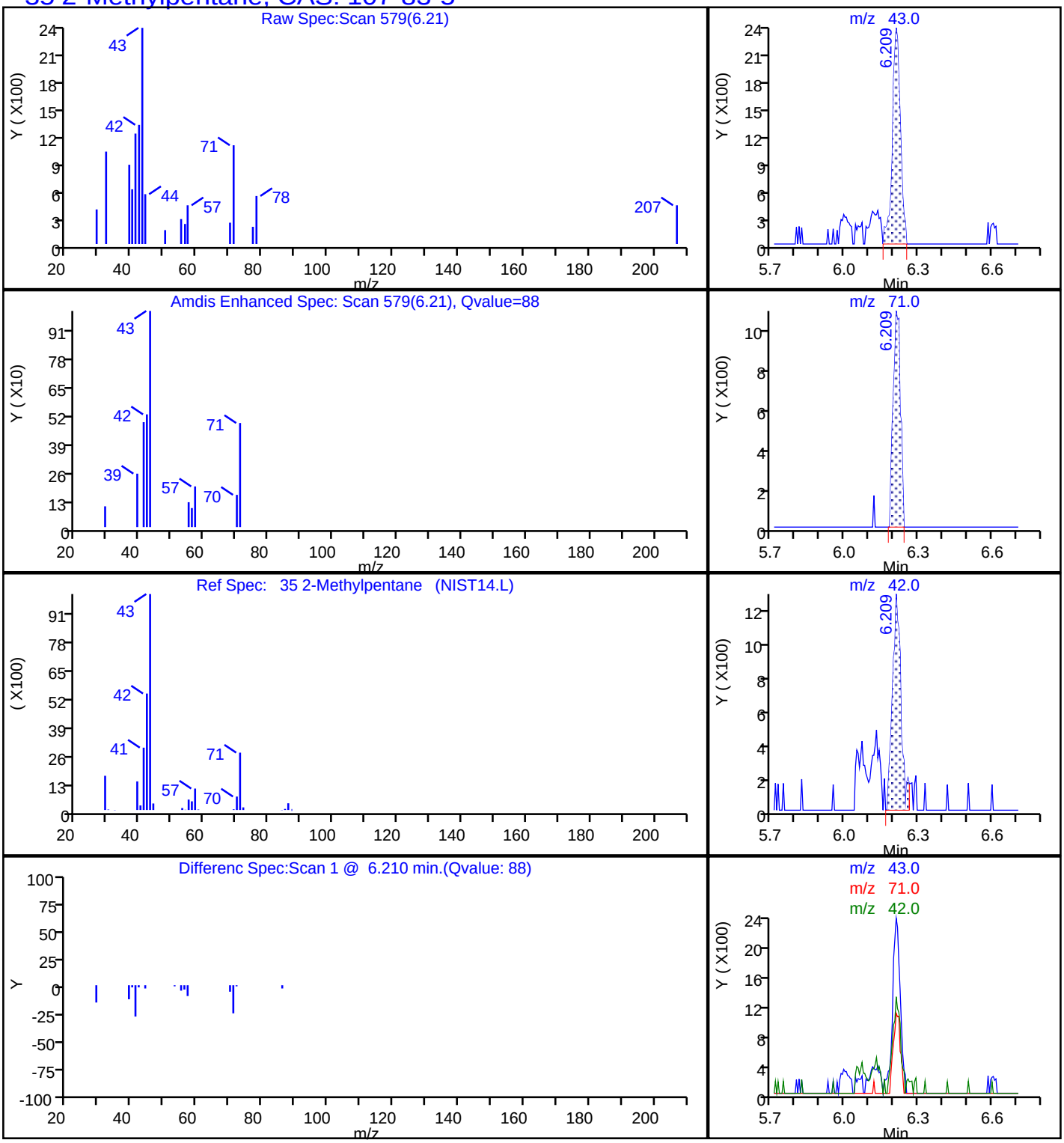


Report Date: 20-Mar-2018 12:08:41 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR		
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8		
Client ID:	11040				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

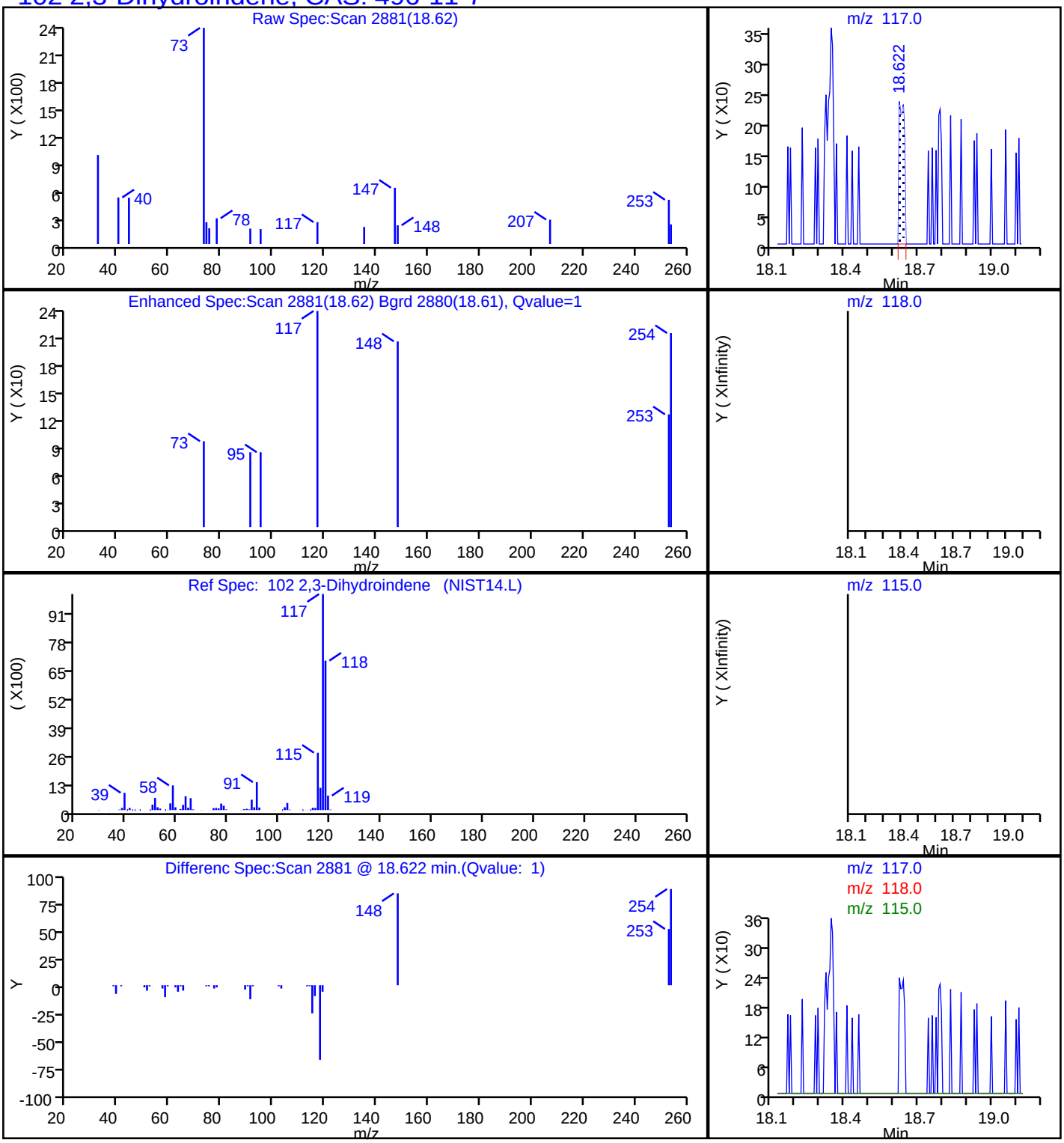


Report Date: 20-Mar-2018 12:08:41 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR		
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8		
Client ID:	11040				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7

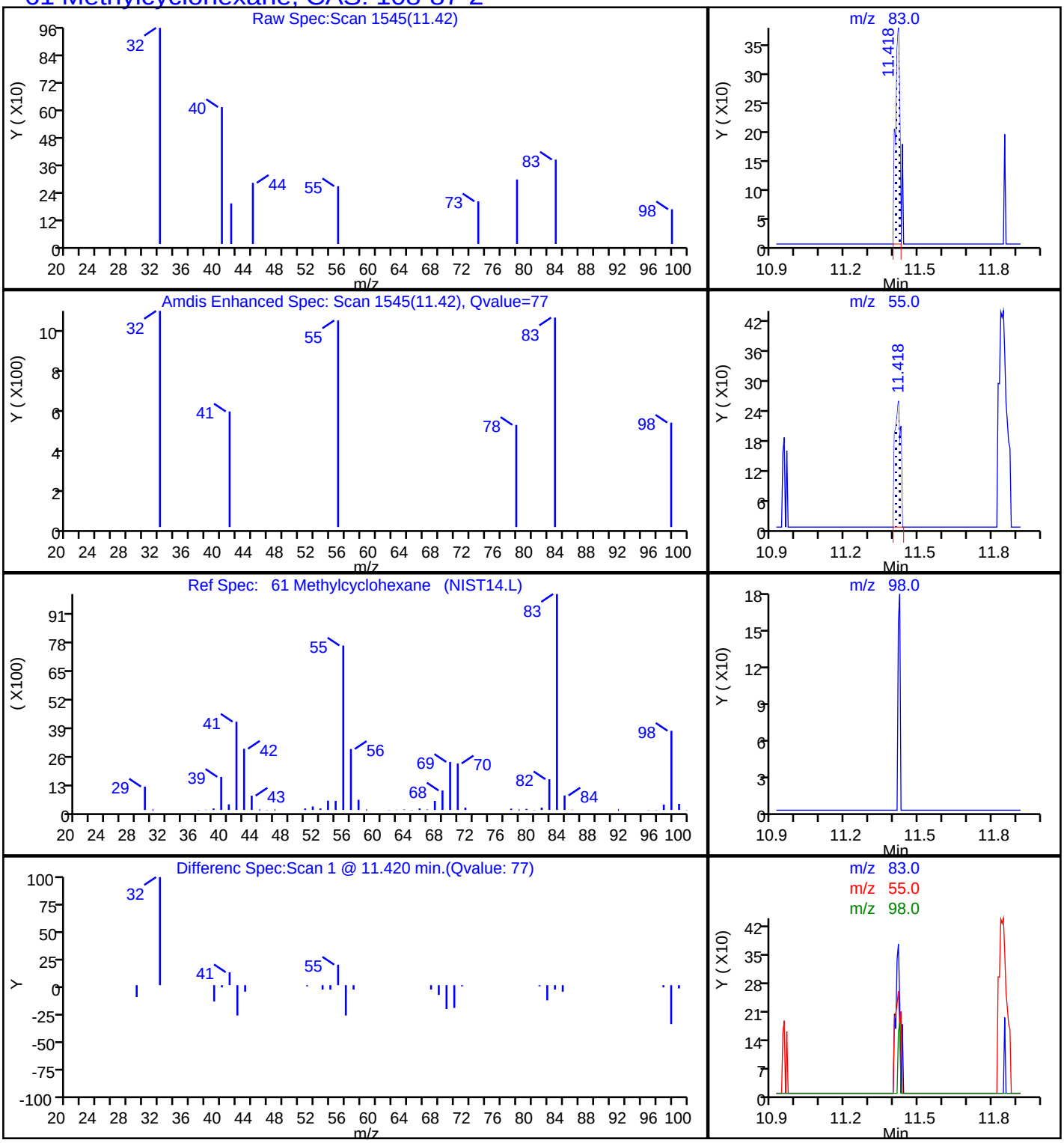


Report Date: 20-Mar-2018 12:08:41 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR		
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8		
Client ID:	11040				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

61 Methylcyclohexane, CAS: 108-87-2



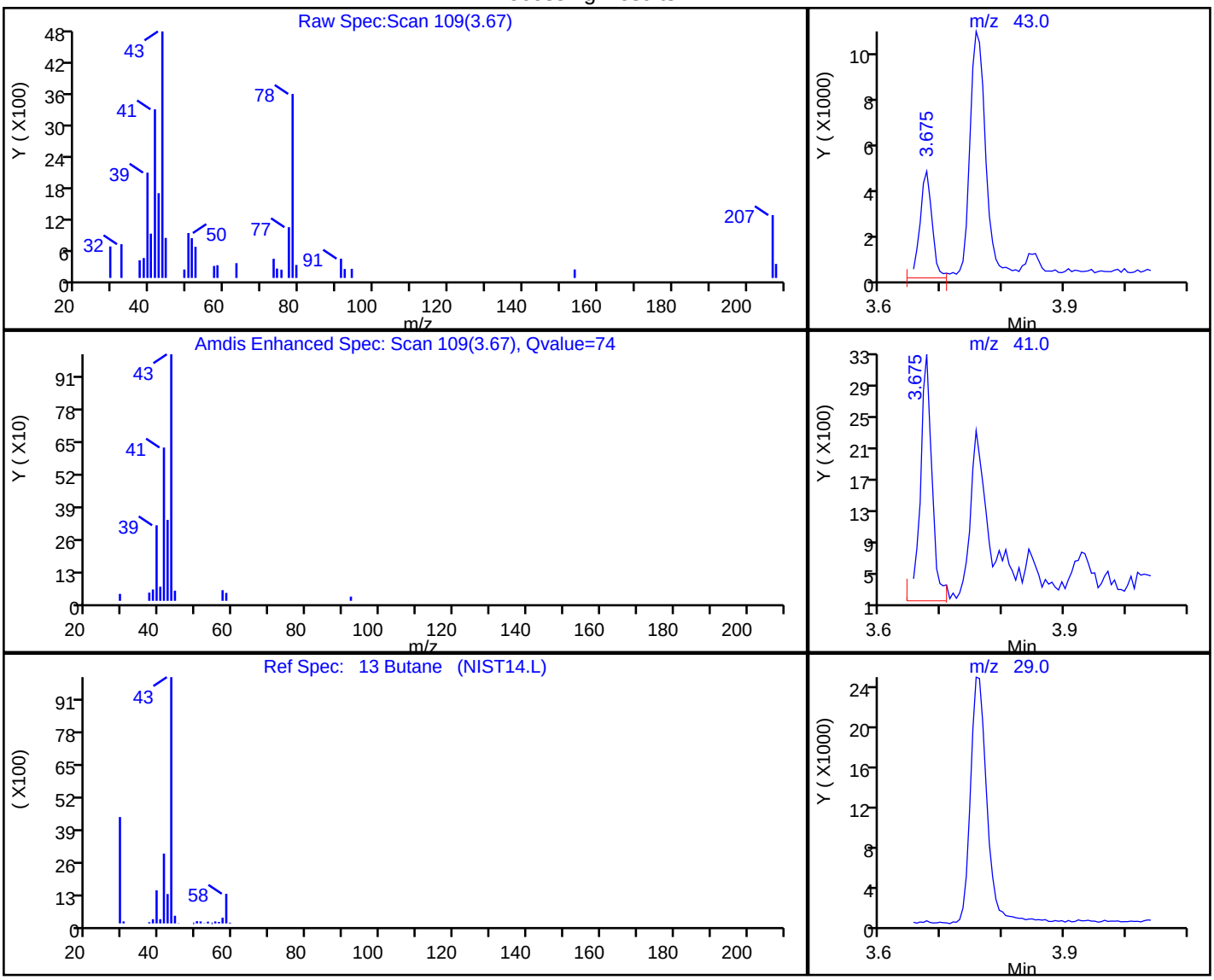
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR		
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8		
Client ID:	11040				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.67	43.00	6477	0.077901
3.67	41.00	3933	
3.85	29.00	0	

Reviewer: tajh, 20-Mar-2018 12:08:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

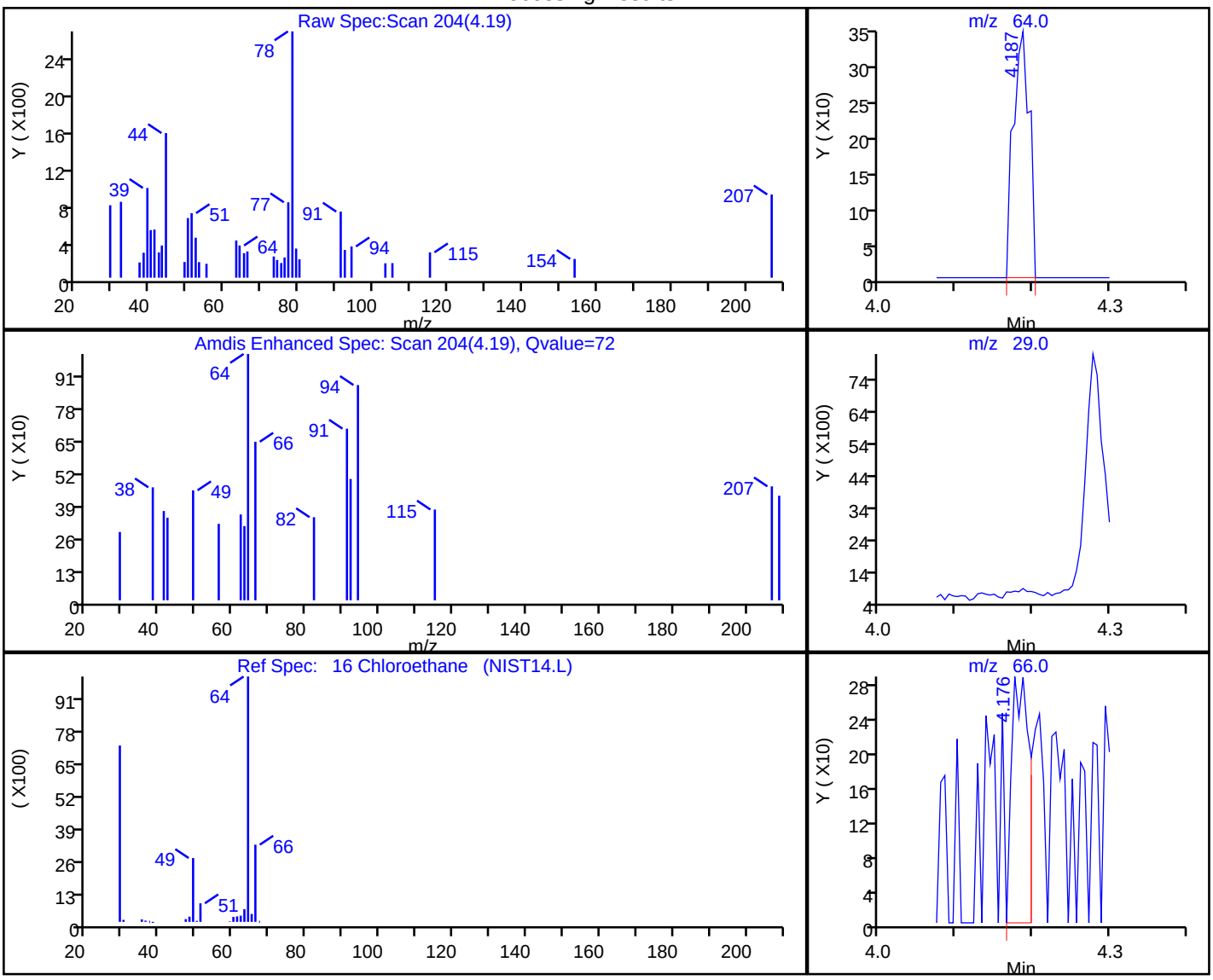
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK08.D				
Injection Date:	19-Mar-2018 21:37:30	Instrument ID:	MR		
Lims ID:	140-10985-A-8	Lab Sample ID:	140-10985-8		
Client ID:	11040				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.19	64.00	502	0.014277
4.18	66.00	447	
4.19	29.00	0	

Reviewer: tajh, 20-Mar-2018 12:08:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 10628 | Lab Sample ID: 140-10985-10

Matrix: Air | Lab File ID: 10985BK10.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/19/2018 23:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	NC		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10628
Lab Sample ID: 140-10985-10
Matrix: Air
Lab File ID: 10985BK10.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 23:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10628
Lab Sample ID: 140-10985-10
Matrix: Air
Lab File ID: 10985BK10.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/19/2018 23:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10628 Lab Sample ID: 140-10985-10
Matrix: Air Lab File ID: 10985BK10.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/19/2018 23:21
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK10.D
Lims ID: 140-10985-A-10
Client ID: 10628
Sample Type: Client
Inject. Date: 19-Mar-2018 23:21:30 ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007666-017
Misc. Info.: 10628
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 12:08:40 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 20-Mar-2018 12:08:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.676	-0.011	76	298701	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1779097	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.832	14.837	-0.005	87	1460774	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1137096	4.11	
33 Carbon disulfide	76	5.594	5.586	0.000	95	4903	0.0157	
35 2-Methylpentane	43	6.004	6.200	-0.205	1	185	NC	
102 2,3-Dihydroindene	117	18.628	18.621	0.000	1	138	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

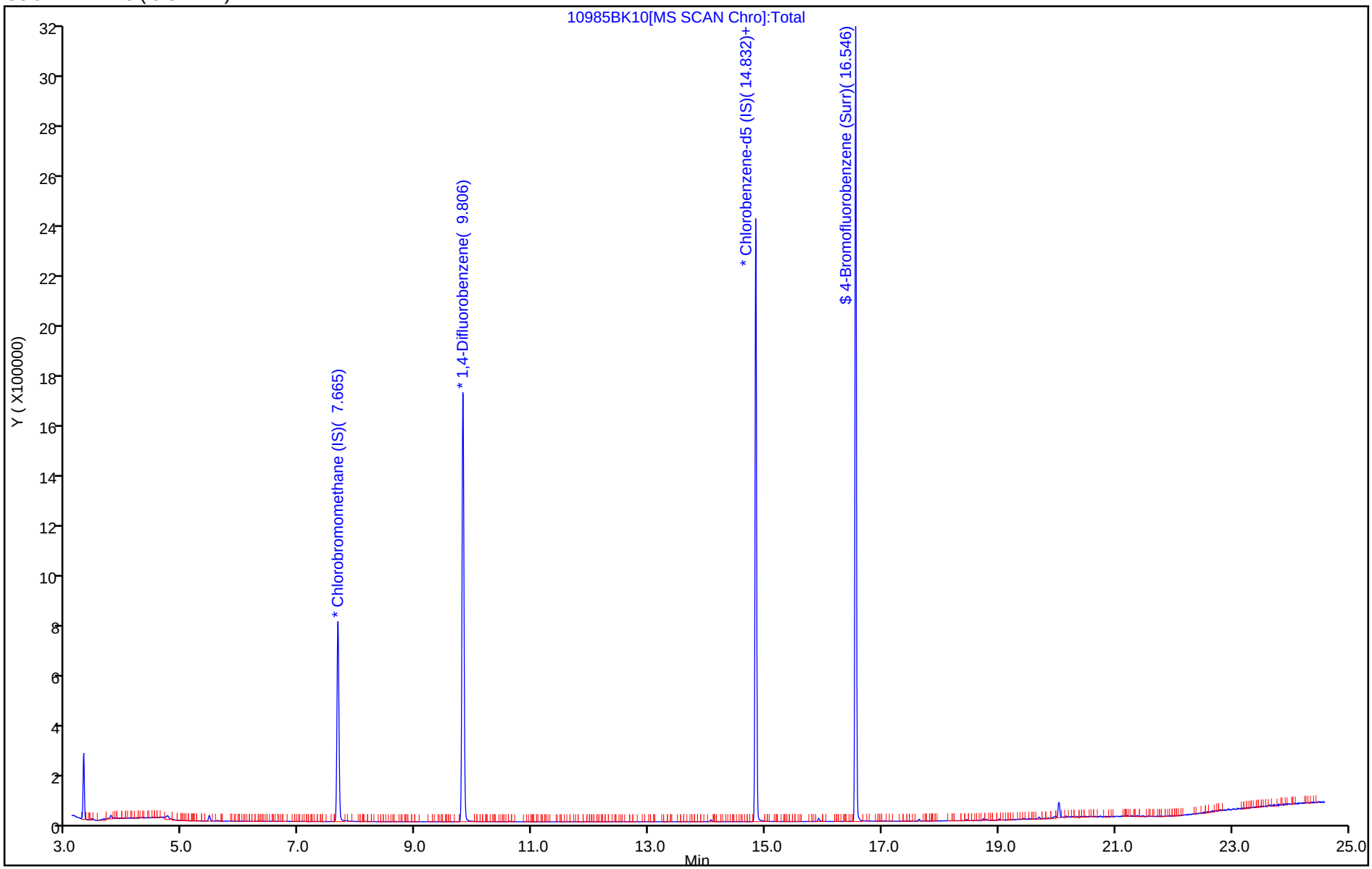
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:08:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK10.D				
Injection Date:	19-Mar-2018 23:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-10	Lab Sample ID:	140-10985-10	Worklist Smp#:	17
Client ID:	10628				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

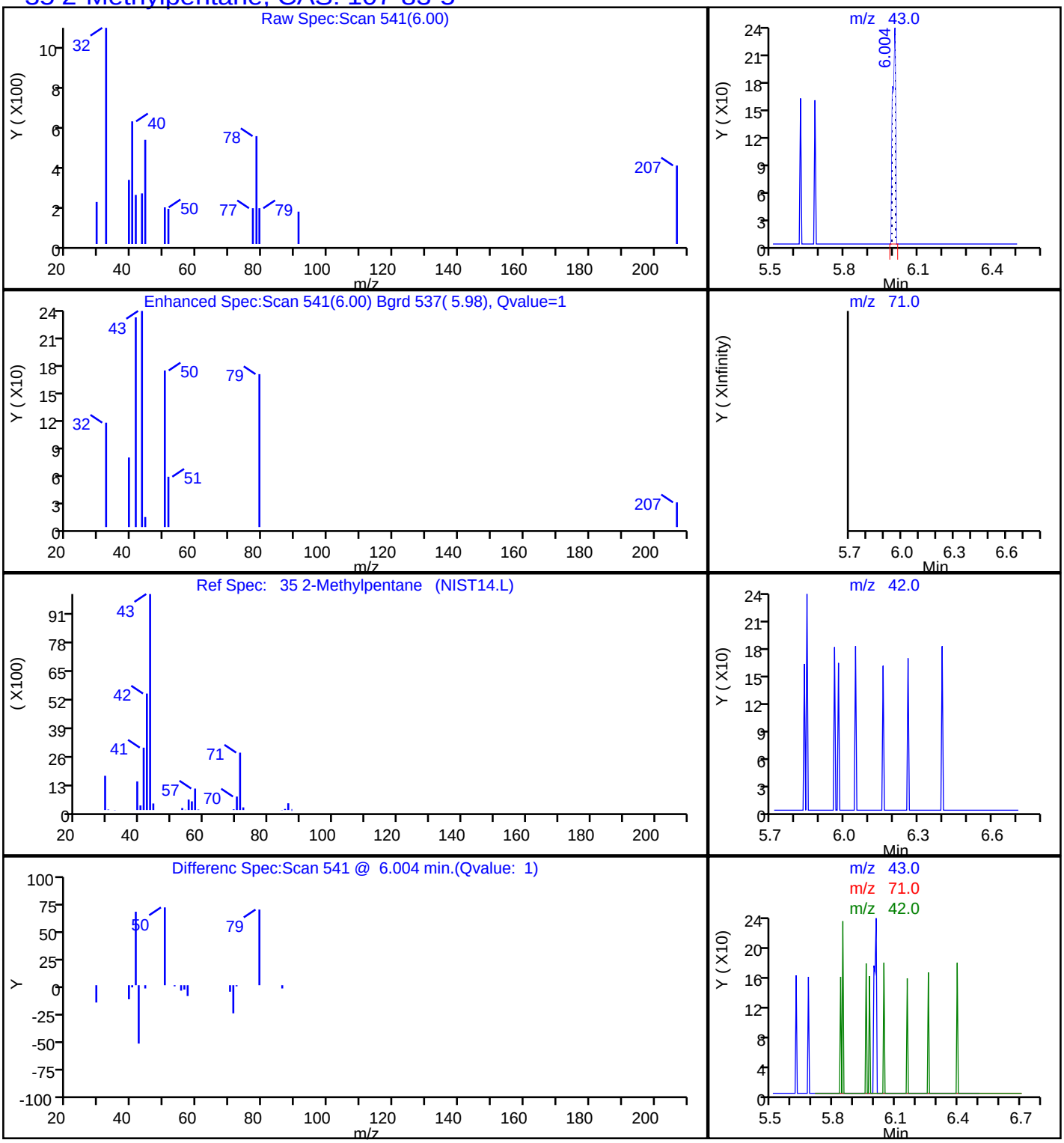


Report Date: 20-Mar-2018 12:08:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK10.D				
Injection Date:	19-Mar-2018 23:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-10	Lab Sample ID:	140-10985-10		
Client ID:	10628				
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

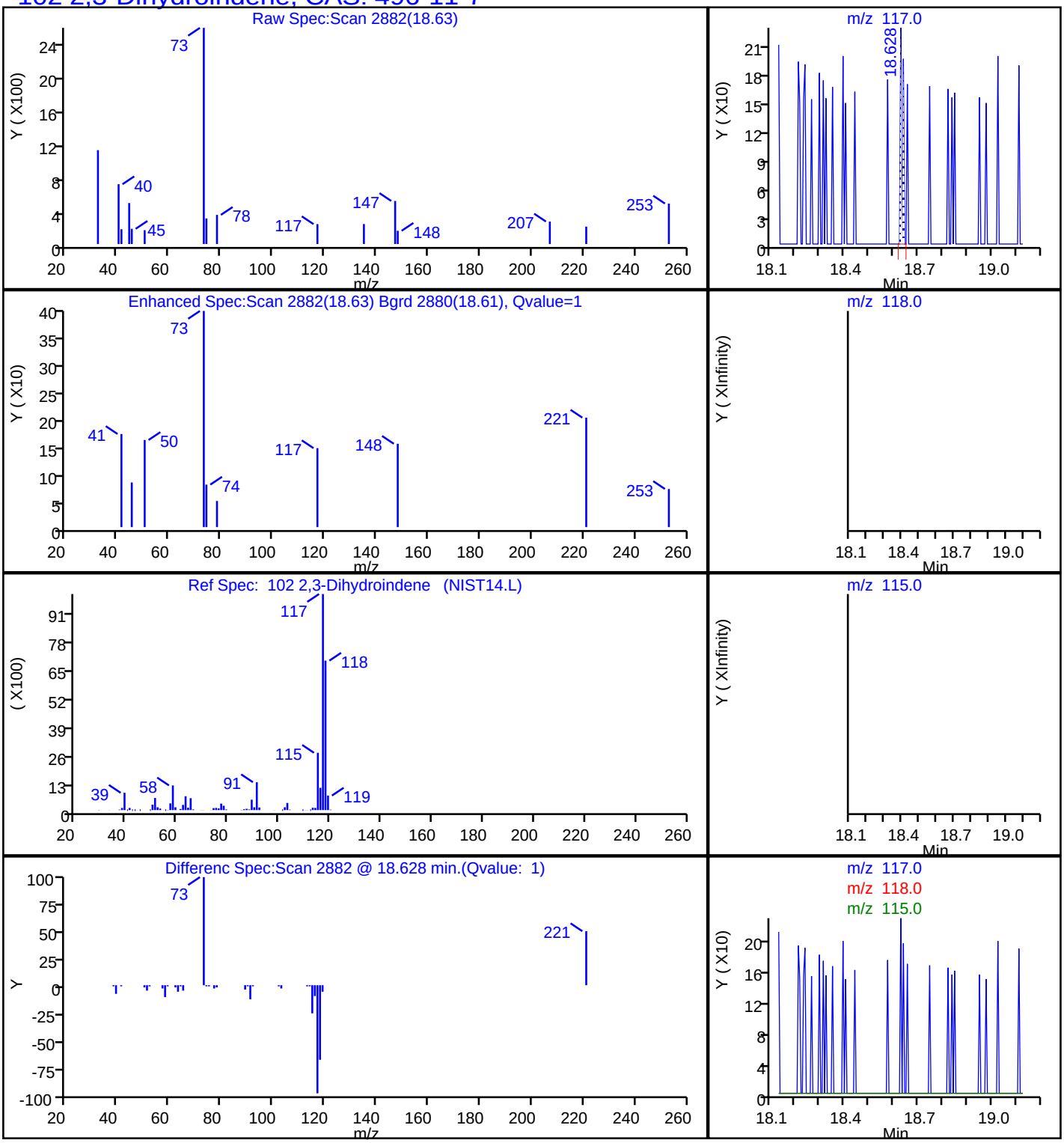


Report Date: 20-Mar-2018 12:08:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK10.D				
Injection Date:	19-Mar-2018 23:21:30	Instrument ID:	MR		
Lims ID:	140-10985-A-10	Lab Sample ID:	140-10985-10		
Client ID:	10628				
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 11196 | Lab Sample ID: 140-10985-11

Matrix: Air | Lab File ID: 10985BK11.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 00:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 11196
Lab Sample ID: 140-10985-11
Matrix: Air
Lab File ID: 10985BK11.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 00:12
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 11196
Lab Sample ID: 140-10985-11
Matrix: Air
Lab File ID: 10985BK11.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 00:12
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	0.070		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1

SDG No.:

Client Sample ID: 11196 Lab Sample ID: 140-10985-11

Matrix: Air Lab File ID: 10985BK11.D

Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 00:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK11.D
Lims ID: 140-10985-A-11
Client ID: 11196
Sample Type: Client
Inject. Date: 20-Mar-2018 00:12:30 ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007666-018
Misc. Info.: 11196
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 12:09:05 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 20-Mar-2018 12:09:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.676	-0.006	76	296229	4.00	
* 2 1,4-Difluorobenzene	114	9.817	9.816	0.001	94	1754901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1454825	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1108103	4.02	
45 1,1,1-Trichloroethane	97	8.668	8.656	0.000	94	6995	0.0243	
56 Trichloroethene	130	10.571	10.560	0.000	98	11018	0.0696	
102 2,3-Dihydroindene	117	18.676	18.621	0.048	1	53	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

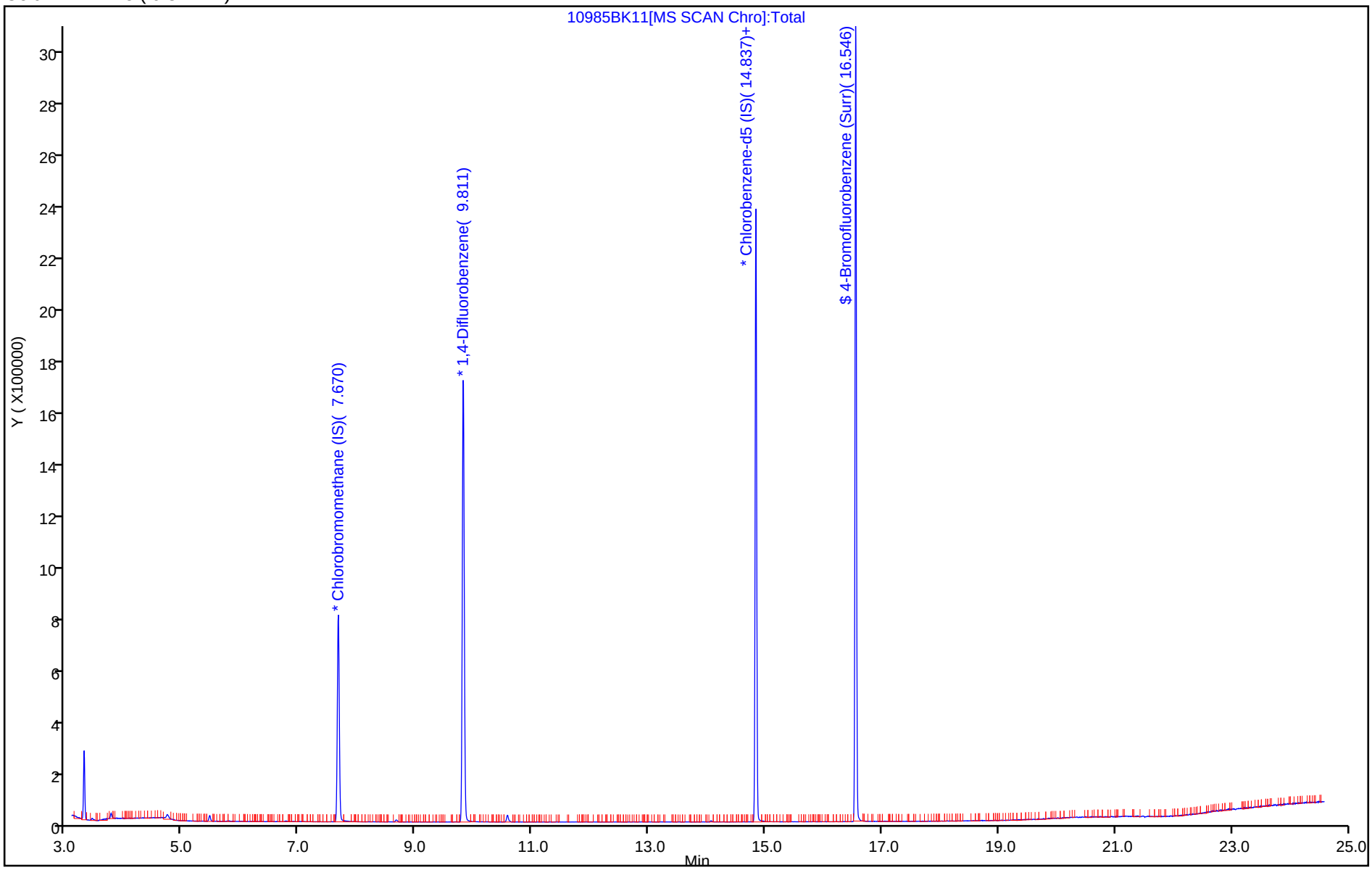
Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:09:06 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK11.D				
Injection Date:	20-Mar-2018 00:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-11	Lab Sample ID:	140-10985-11	Worklist Smp#:	18
Client ID:	11196				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column: RTX-5 (0.32 mm)					

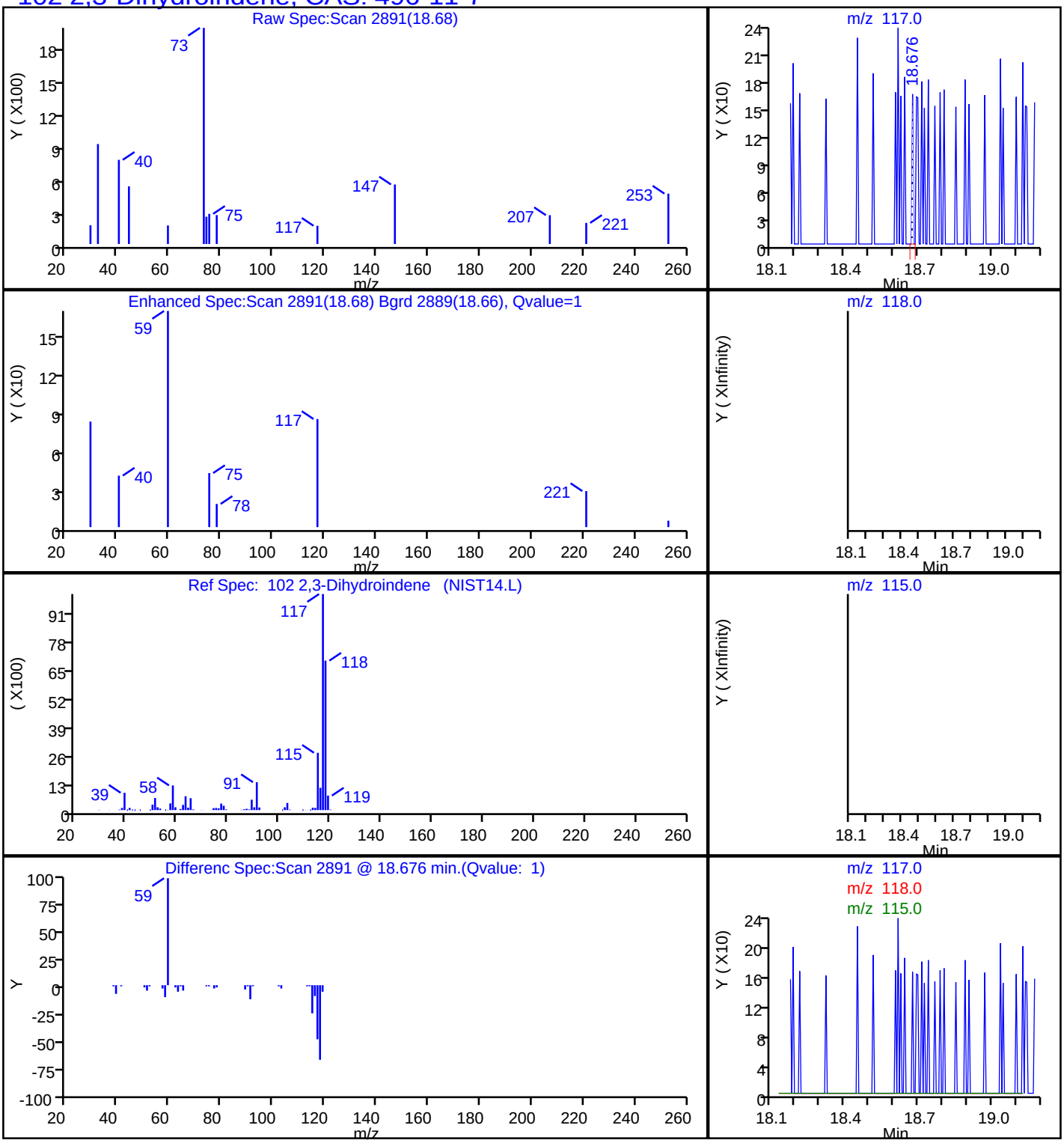


Report Date: 20-Mar-2018 12:09:06 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK11.D				
Injection Date:	20-Mar-2018 00:12:30	Instrument ID:	MR		
Lims ID:	140-10985-A-11	Lab Sample ID:	140-10985-11		
Client ID:	11196				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7

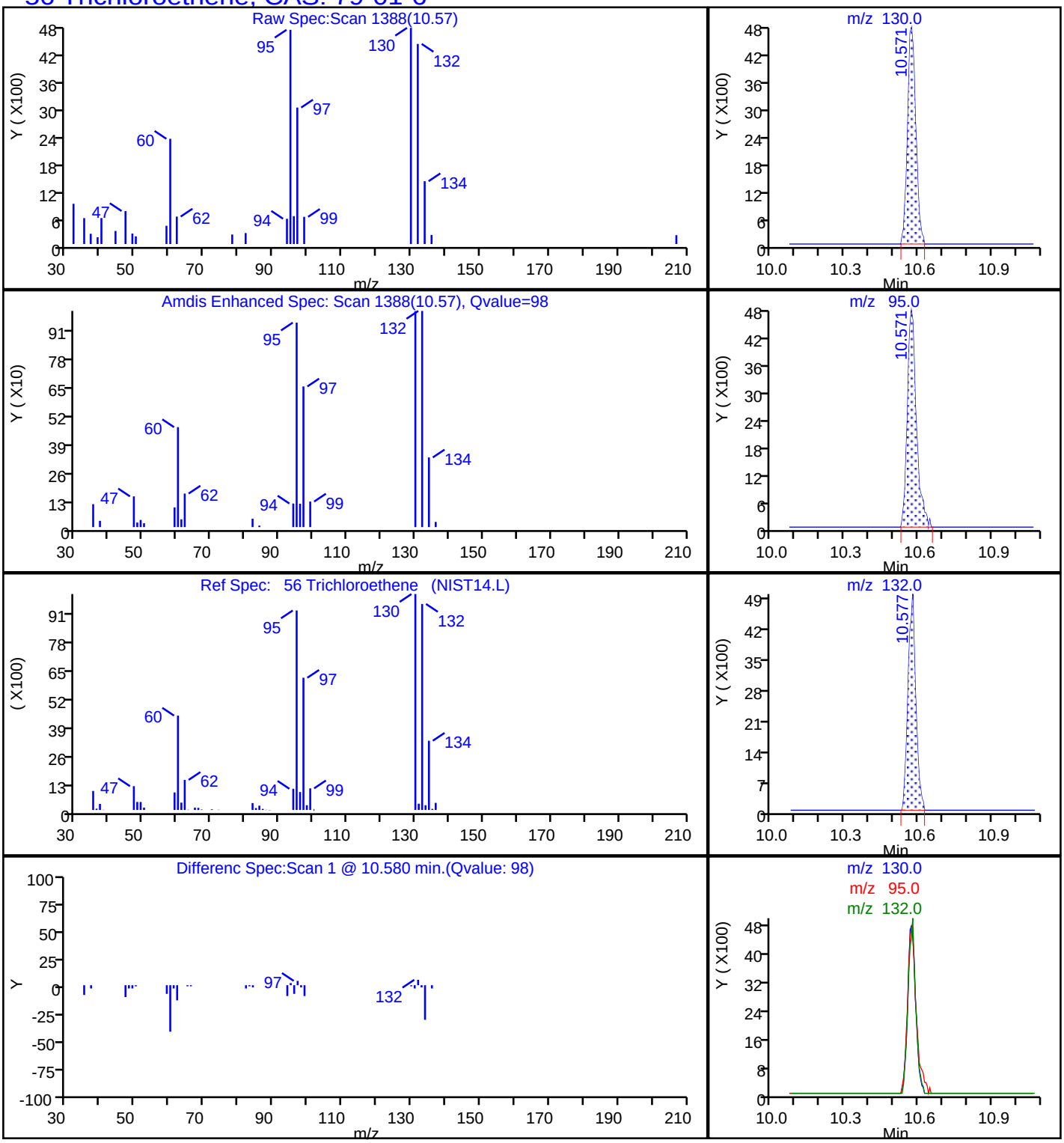


Report Date: 20-Mar-2018 12:09:06 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK11.D				
Injection Date:	20-Mar-2018 00:12:30	Instrument ID:	MR		
Lims ID:	140-10985-A-11	Lab Sample ID:	140-10985-11		
Client ID:	11196				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



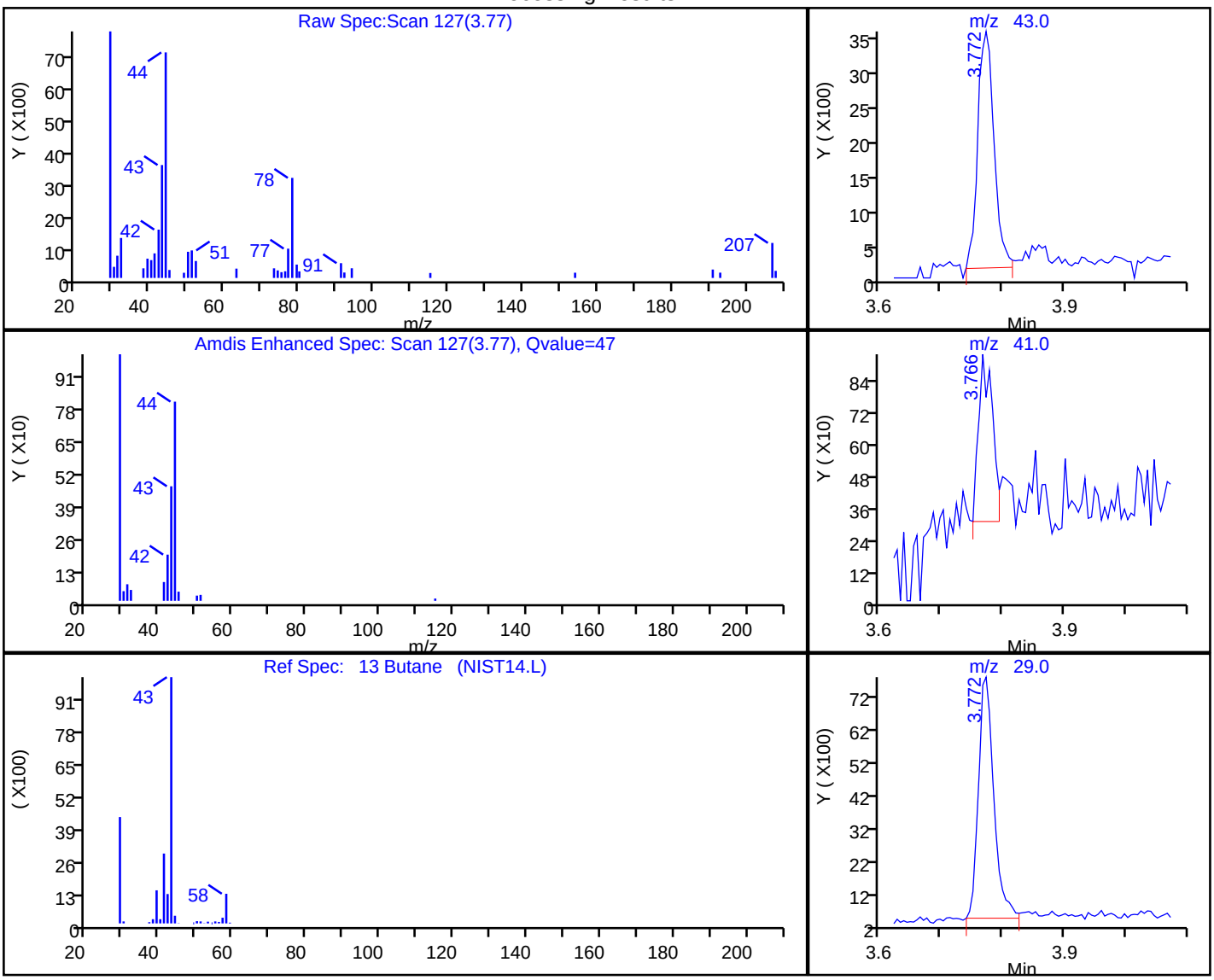
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK11.D				
Injection Date:	20-Mar-2018 00:12:30	Instrument ID:	MR		
Lims ID:	140-10985-A-11	Lab Sample ID:	140-10985-11		
Client ID:	11196				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.77	43.00	6318	0.075899
3.77	41.00	1011	
3.77	29.00	12959	

Reviewer: tajh, 20-Mar-2018 12:09:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 10373 | Lab Sample ID: 140-10985-12

Matrix: Air | Lab File ID: 10985BK12.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 01:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10373
Lab Sample ID: 140-10985-12
Matrix: Air
Lab File ID: 10985BK12.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 01:04
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10373
Lab Sample ID: 140-10985-12
Matrix: Air
Lab File ID: 10985BK12.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 01:04
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	0.093		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 10373 Lab Sample ID: 140-10985-12
Matrix: Air Lab File ID: 10985BK12.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 01:04
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK12.D				
Lims ID:	140-10985-A-12				
Client ID:	10373				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 01:04:30	ALS Bottle#:	15	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007666-019				
Misc. Info.:	10373				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 12:17:13	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

First Level Reviewer: tajh Date: 20-Mar-2018 12:09:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.659	7.676	-0.017	76	296805	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.816	-0.010	94	1755043	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1430813	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1115345	4.11	
33 Carbon disulfide	76	5.578	5.586	-0.016	98	3917	0.0126	
59 1,4-Dioxane	88	10.830	10.791	0.027	78	2313	0.0468	
73 Tetrachloroethene	129	13.979	13.974	0.000	96	13587	0.0925	
102 2,3-Dihydroindene	117	18.520	18.621	-0.108	1	55	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

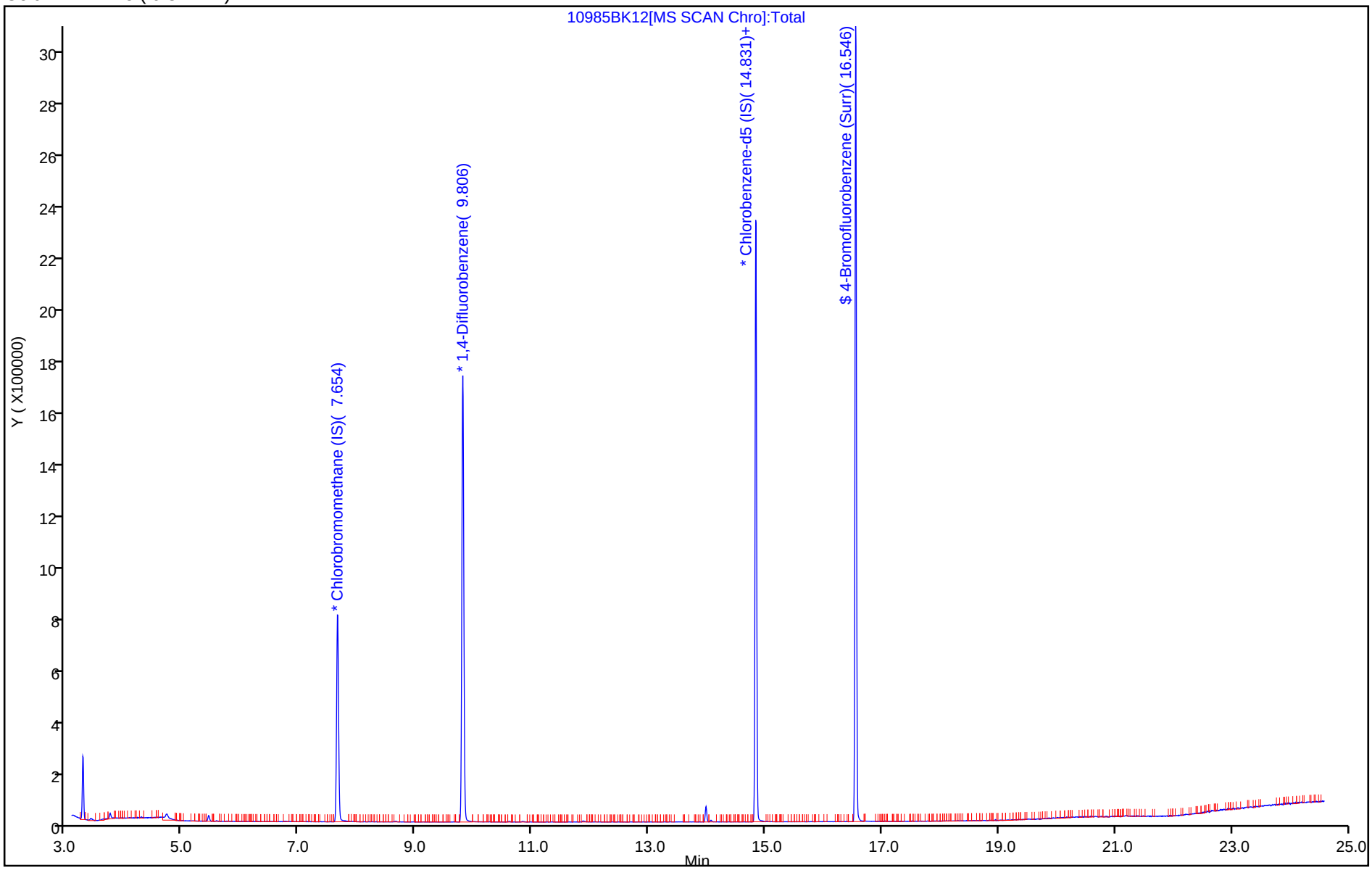
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:54:46 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK12.D				
Injection Date:	20-Mar-2018 01:04:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-12	Lab Sample ID:	140-10985-12	Worklist Smp#:	19
Client ID:	10373				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

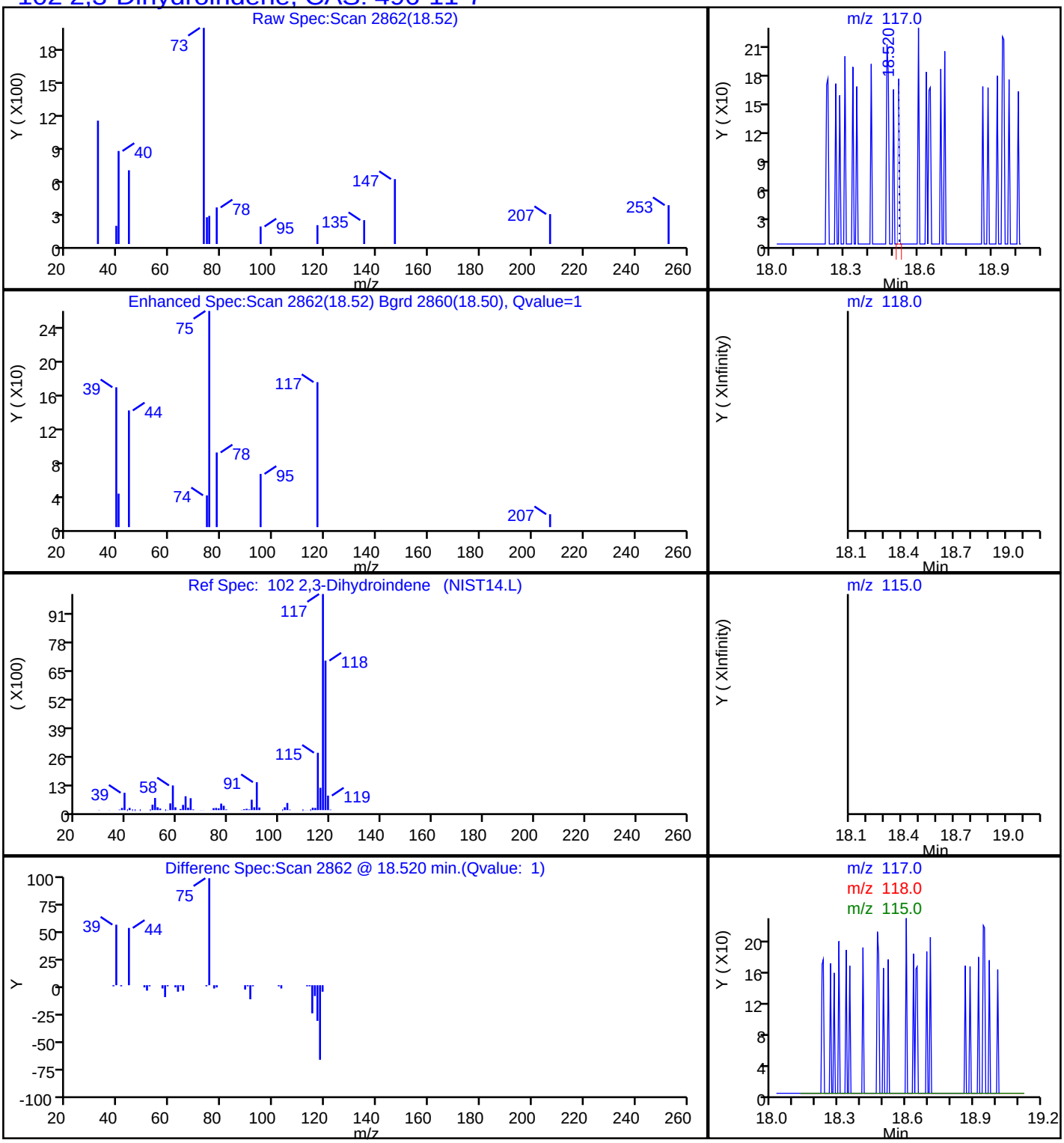


Report Date: 20-Mar-2018 12:54:46 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK12.D				
Injection Date:	20-Mar-2018 01:04:30	Instrument ID:	MR		
Lims ID:	140-10985-A-12	Lab Sample ID:	140-10985-12		
Client ID:	10373				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7

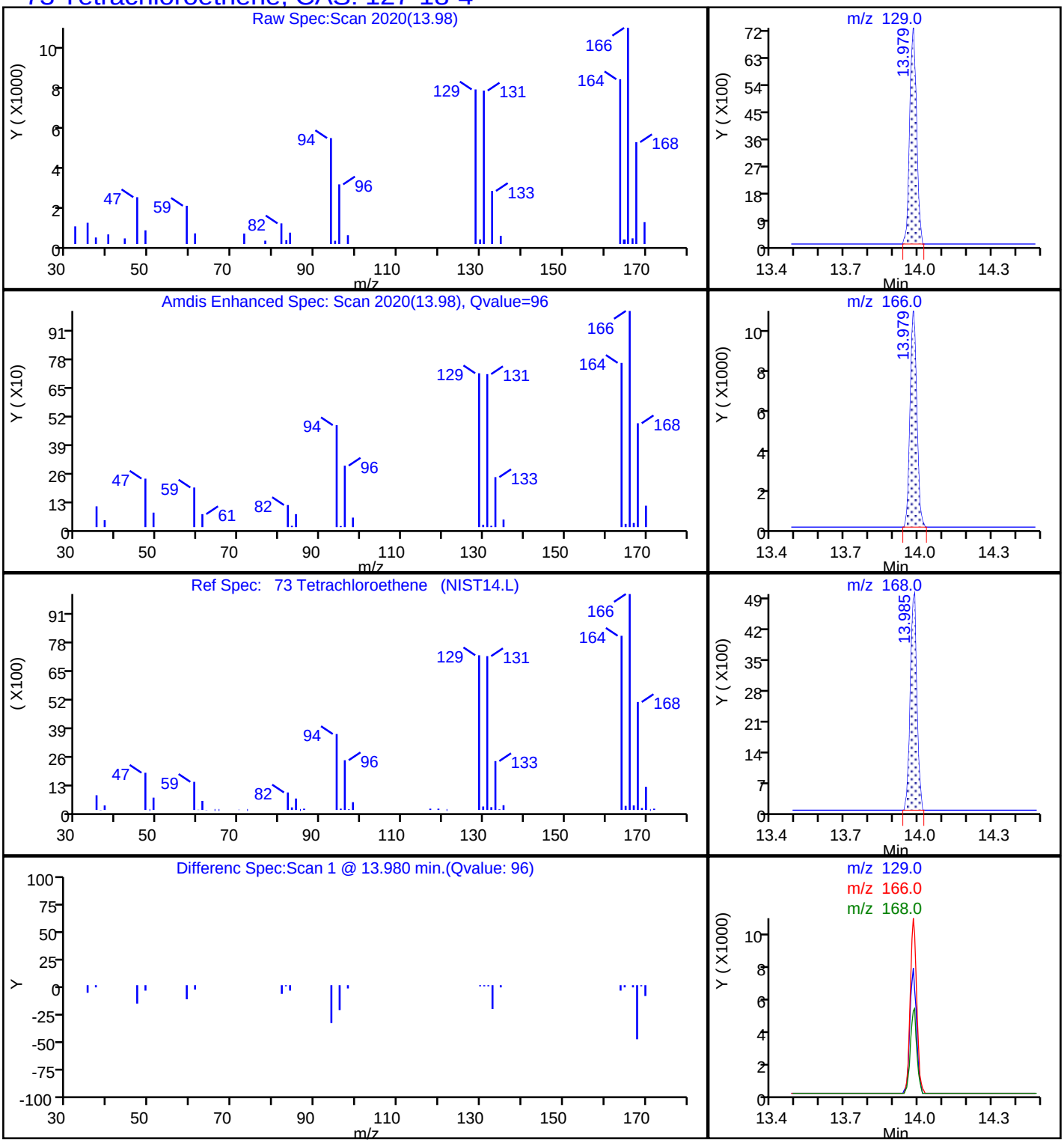


Report Date: 20-Mar-2018 12:54:46 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK12.D				
Injection Date:	20-Mar-2018 01:04:30	Instrument ID:	MR		
Lims ID:	140-10985-A-12	Lab Sample ID:	140-10985-12		
Client ID:	10373				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

73 Tetrachloroethene, CAS: 127-18-4



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 09592 | Lab Sample ID: 140-10985-15

Matrix: Air | Lab File ID: 10985BK15.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 03:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	0.92		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	NC		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09592
Lab Sample ID: 140-10985-15
Matrix: Air
Lab File ID: 10985BK15.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 03:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	0.36		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 09592 | Lab Sample ID: 140-10985-15

Matrix: Air | Lab File ID: 10985BK15.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 03:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09592 Lab Sample ID: 140-10985-15
Matrix: Air Lab File ID: 10985BK15.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 03:38
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK15.D
Lims ID: 140-10985-A-15
Client ID: 09592
Sample Type: Client
Inject. Date: 20-Mar-2018 03:38:30 ALS Bottle#: 18 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007666-022
Misc. Info.: 09592
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 12:59:43 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 20-Mar-2018 13:00:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.676	-0.011	77	291536	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1750676	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1422453	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1117762	4.14	
9 Chloromethane	52	3.642	3.632	0.005	98	1766	0.0708	
13 Butane	43	3.756	3.842	-0.091	49	29830	0.3641	
19 2-Methylbutane	43	4.295	4.466	-0.178	34	1579	0.0274	
20 Acrolein	56	4.635	4.622	0.006	87	2088	0.1297	
35 2-Methylpentane	43	6.134	6.200	-0.075	33	157	NC	
59 1,4-Dioxane	88	10.809	10.791	0.006	82	45292	0.9183	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

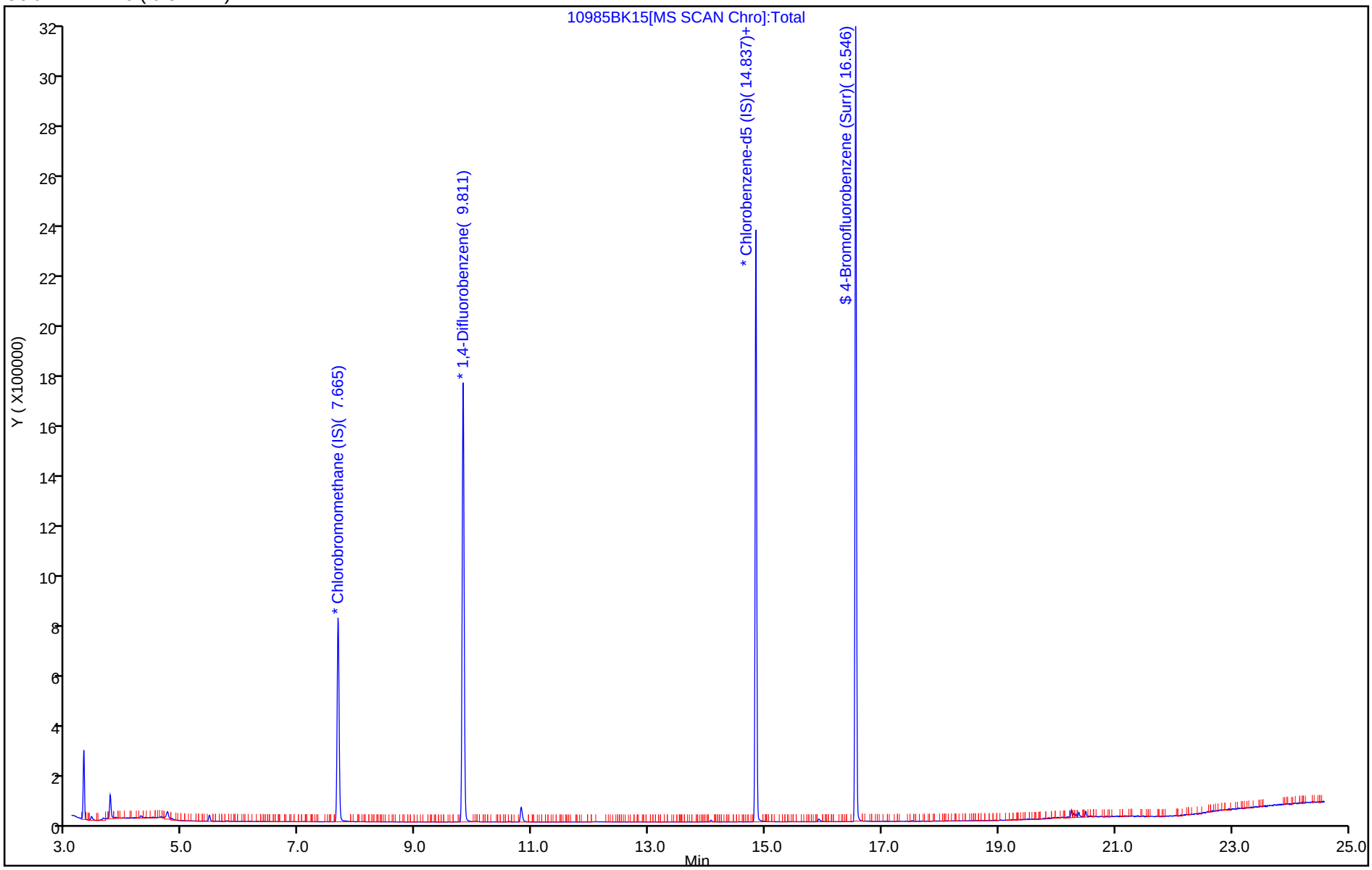
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 13:00:33 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK15.D				
Injection Date:	20-Mar-2018 03:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-15	Lab Sample ID:	140-10985-15	Worklist Smp#:	22
Client ID:	09592				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

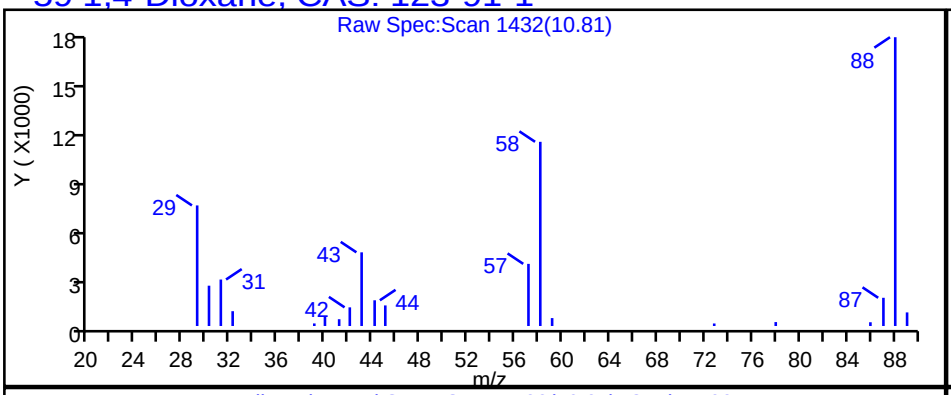


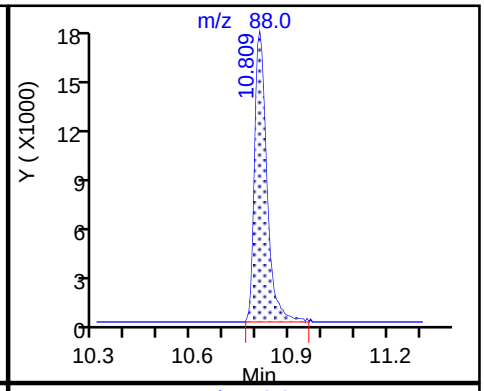
Report Date: 20-Mar-2018 13:00:34 Chrom Revision: 2.2 13-Mar-2018 08:45:20

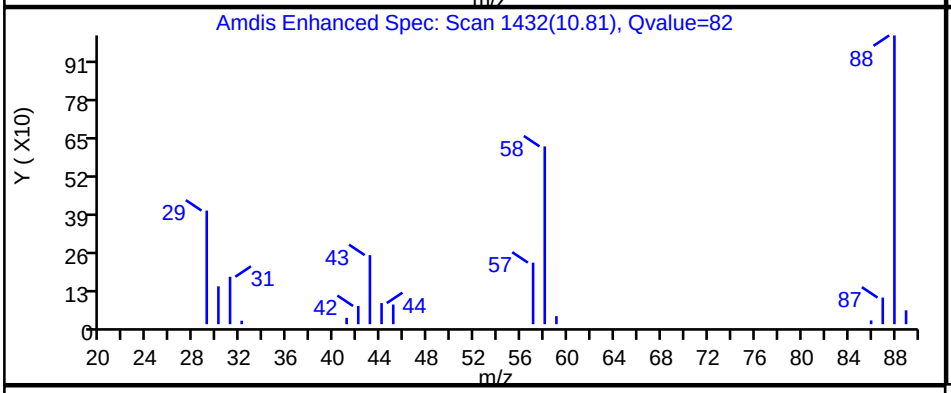
TestAmerica Knoxville

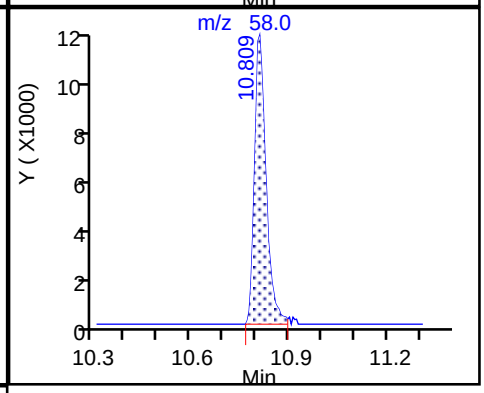
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK15.D				
Injection Date:	20-Mar-2018 03:38:30	Instrument ID:	MR		
Lims ID:	140-10985-A-15	Lab Sample ID:	140-10985-15		
Client ID:	09592				
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

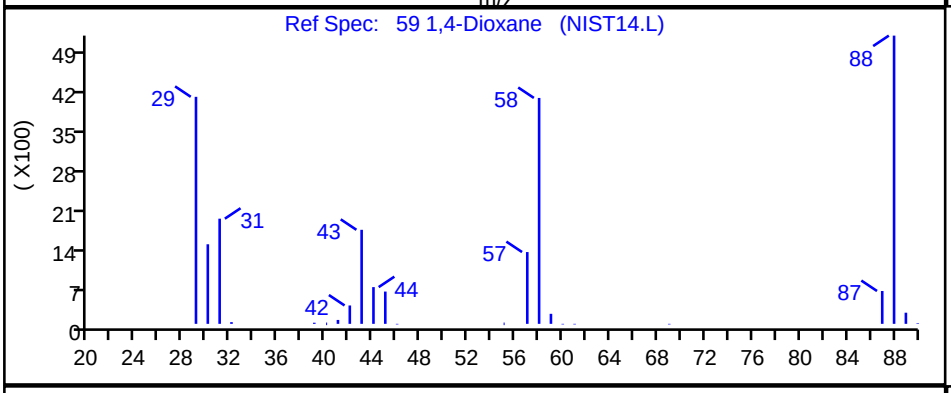
59 1,4-Dioxane, CAS: 123-91-1

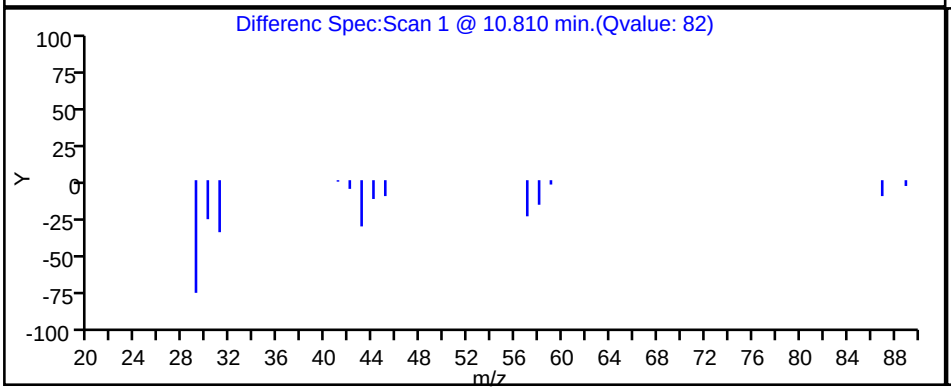


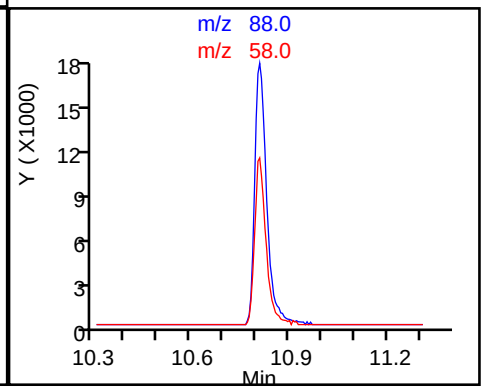










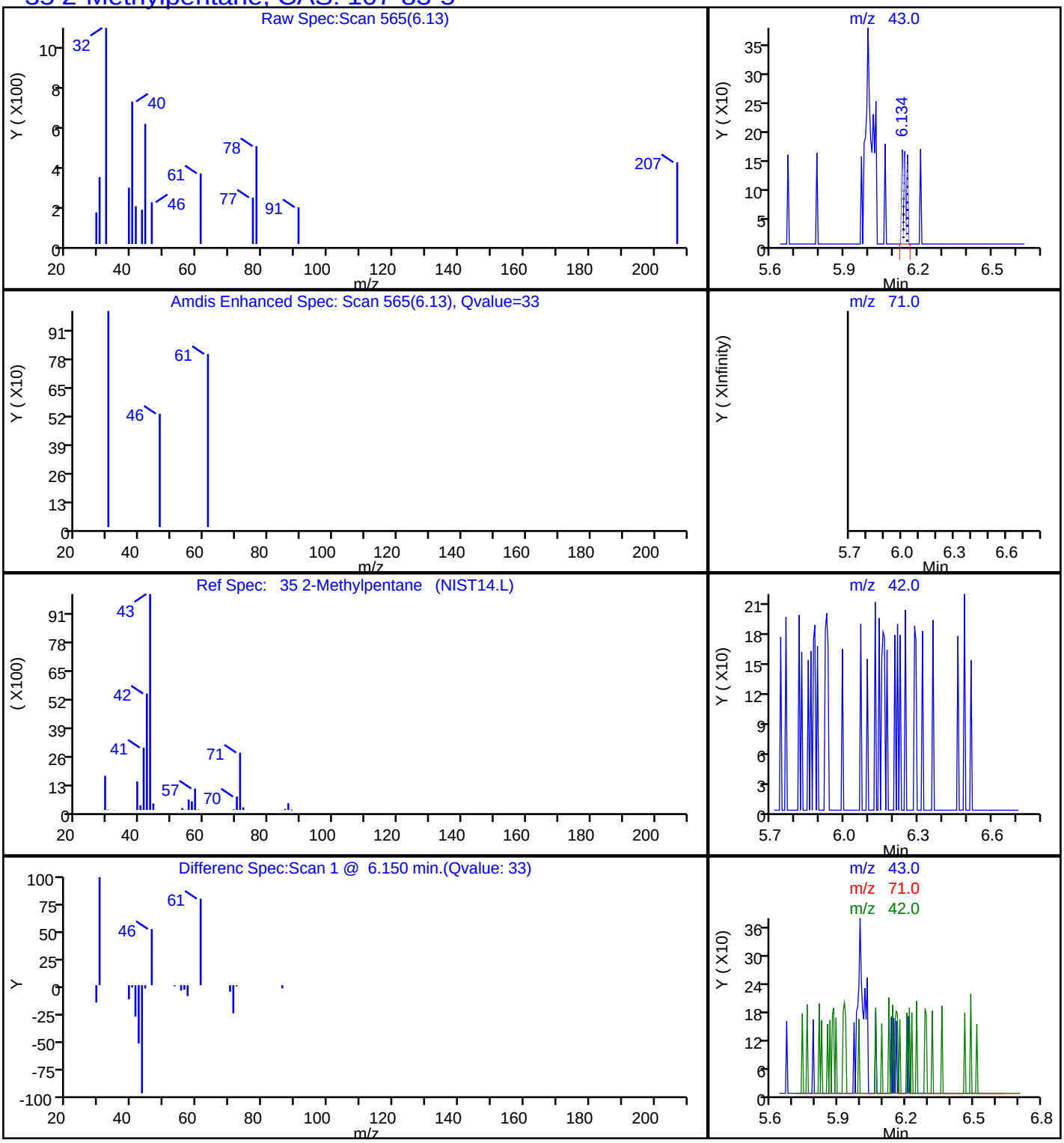


Report Date: 20-Mar-2018 13:00:34 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK15.D				
Injection Date:	20-Mar-2018 03:38:30	Instrument ID:	MR		
Lims ID:	140-10985-A-15	Lab Sample ID:	140-10985-15		
Client ID:	09592				
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

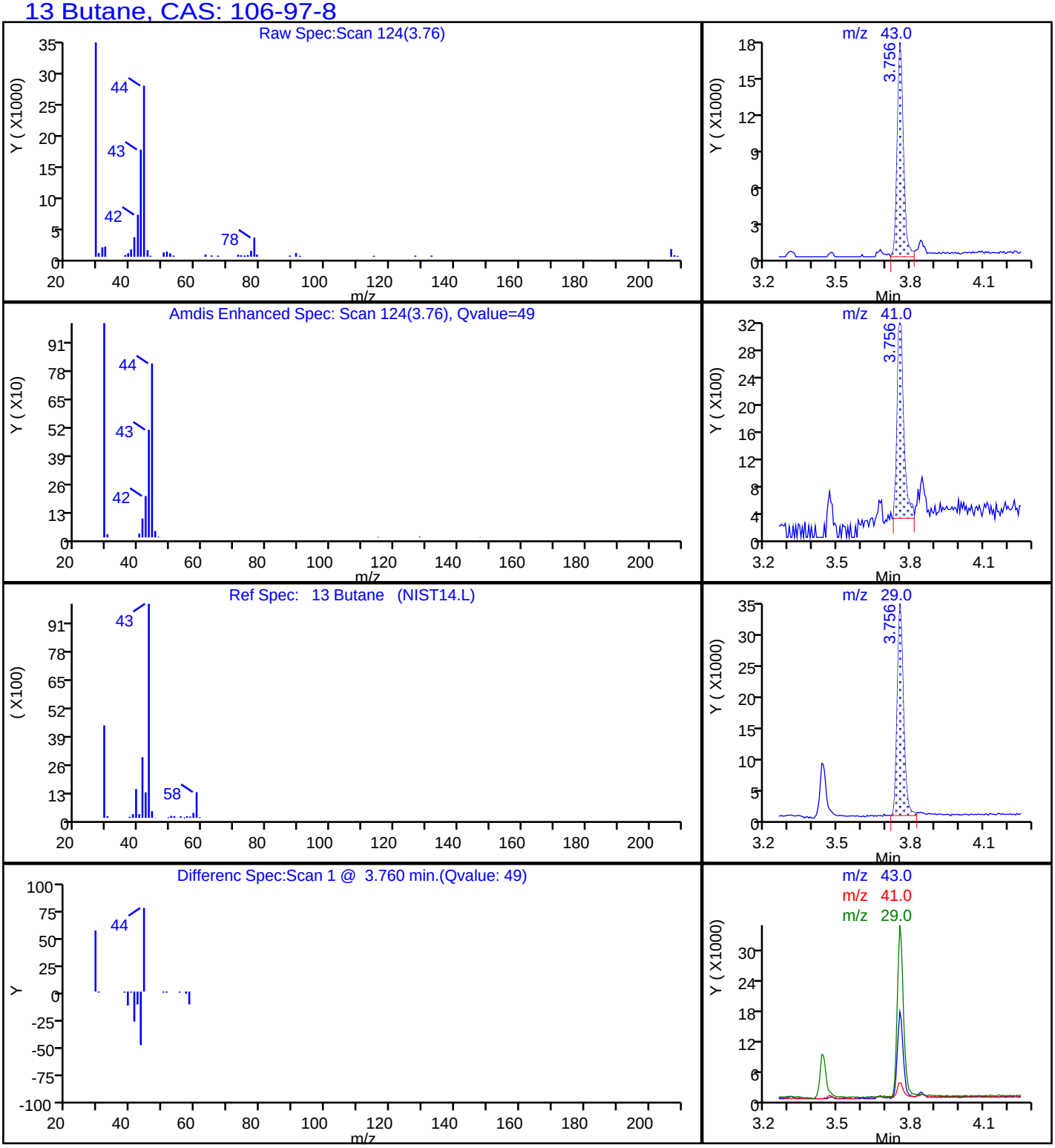


Report Date: 20-Mar-2018 13:00:34 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK15.D				
Injection Date:	20-Mar-2018 03:38:30	Instrument ID:	MR		
Lims ID:	140-10985-A-15	Lab Sample ID:	140-10985-15		
Client ID:	09592				
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10985-1

SDG No.:

Client Sample ID: 09533 | Lab Sample ID: 140-10985-16

Matrix: Air | Lab File ID: 10985BK16.D

Analysis Method: TO 15 LL | Date Collected: 03/18/2018 10:45

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18867 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09533
Lab Sample ID: 140-10985-16
Matrix: Air
Lab File ID: 10985BK16.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 04:30
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09533
Lab Sample ID: 140-10985-16
Matrix: Air
Lab File ID: 10985BK16.D
Analysis Method: TO 15 LL
Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 04:30
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18867
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10985-1
SDG No.:
Client Sample ID: 09533 Lab Sample ID: 140-10985-16
Matrix: Air Lab File ID: 10985BK16.D
Analysis Method: TO 15 LL Date Collected: 03/18/2018 10:45
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 04:30
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18867 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK16.D				
Lims ID:	140-10985-A-16				
Client ID:	09533				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 04:30:30	ALS Bottle#:	19	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007666-023				
Misc. Info.:	09533				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 12:10:08	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK027				

First Level Reviewer: tajh Date: 20-Mar-2018 12:10:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.676	-0.011	76	299311	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1776648	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1442413	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1108989	4.06	
33 Carbon disulfide	76	5.583	5.586	-0.011	99	14857	0.0474	
102 2,3-Dihydroindene	117	18.649	18.621	0.021	1	153	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

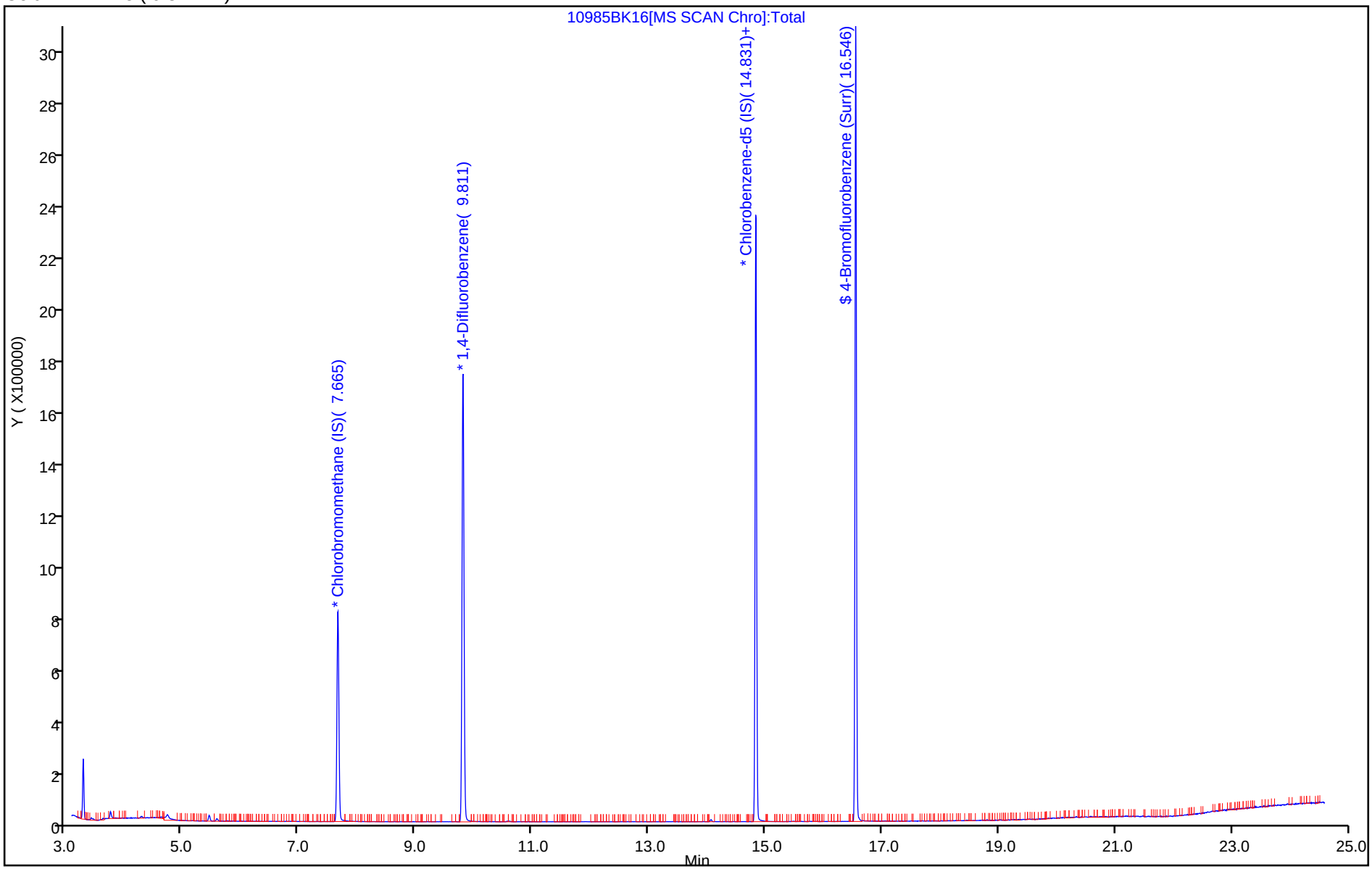
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 12:10:57 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK16.D				
Injection Date:	20-Mar-2018 04:30:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10985-A-16	Lab Sample ID:	140-10985-16	Worklist Smp#:	23
Client ID:	09533				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

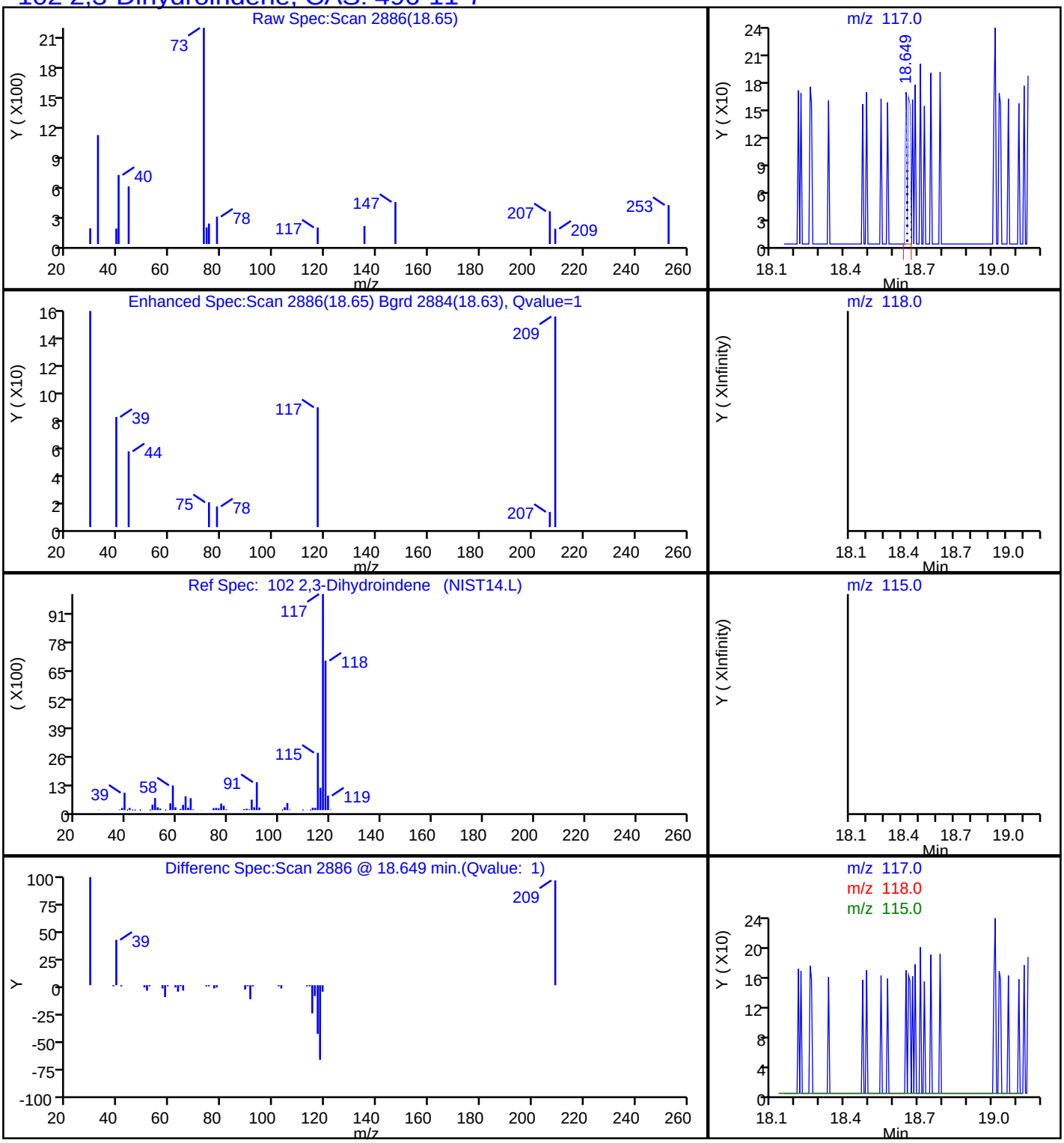


Report Date: 20-Mar-2018 12:10:57 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK16.D				
Injection Date:	20-Mar-2018 04:30:30	Instrument ID:	MR		
Lims ID:	140-10985-A-16	Lab Sample ID:	140-10985-16		
Client ID:	09533				
Operator ID:		ALS Bottle#:	19	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7



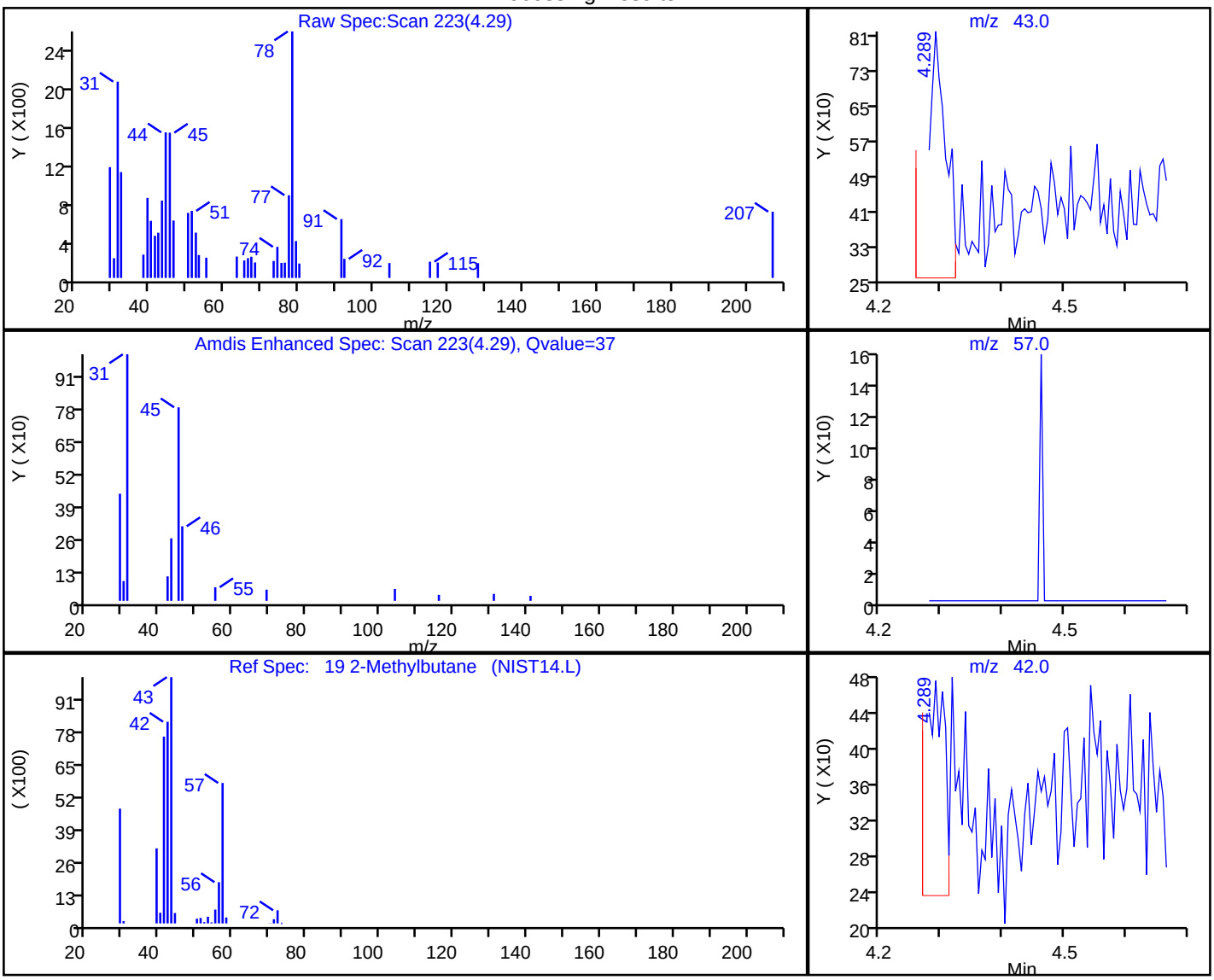
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK16.D				
Injection Date:	20-Mar-2018 04:30:30	Instrument ID:	MR		
Lims ID:	140-10985-A-16	Lab Sample ID:	140-10985-16		
Client ID:	09533				
Operator ID:		ALS Bottle#:	19	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.29	43.00	1064	0.017952
4.29	42.00	426	
4.47	57.00	0	

Reviewer: tajh, 20-Mar-2018 12:10:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

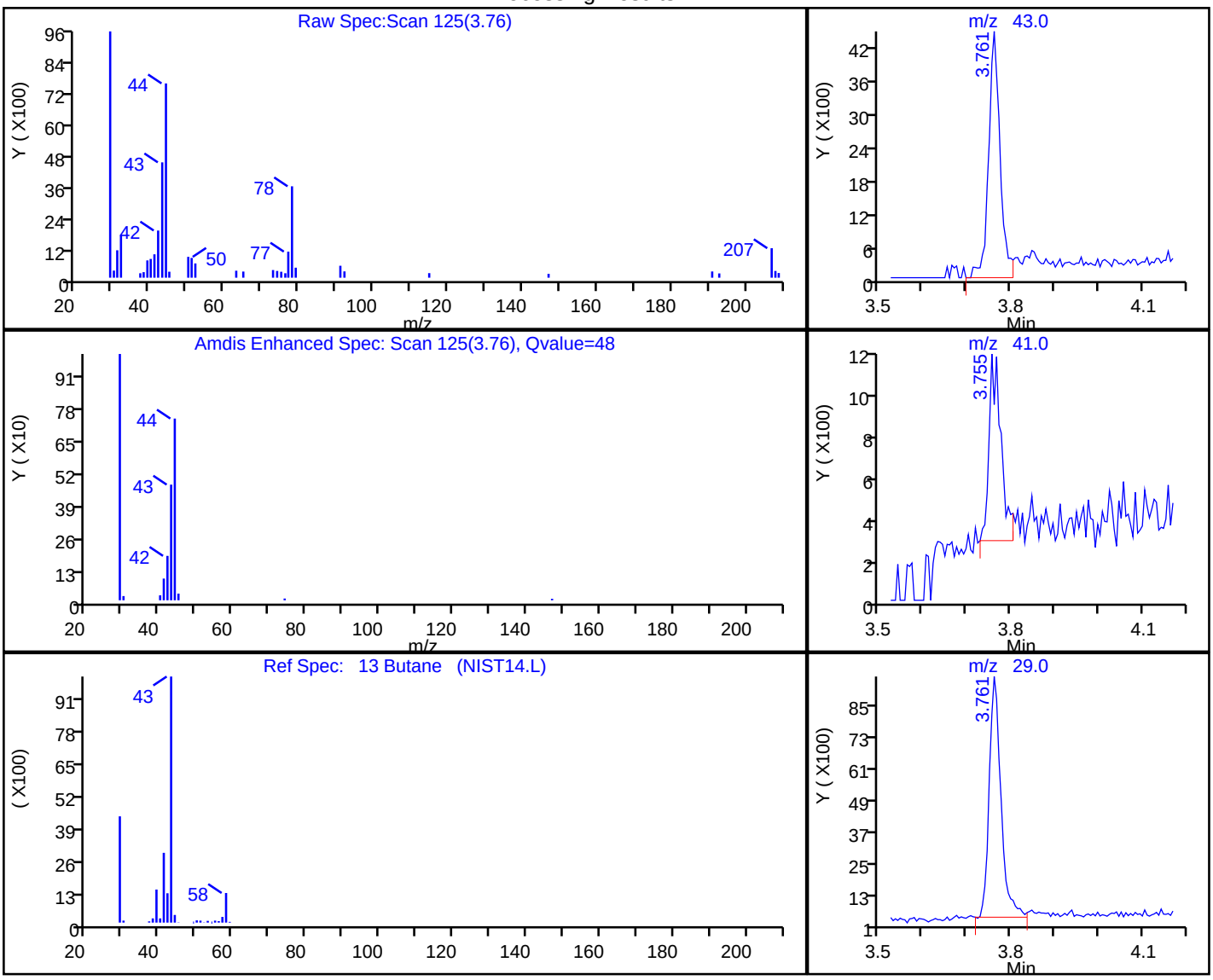
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180316-7666.b\10985BK16.D				
Injection Date:	20-Mar-2018 04:30:30	Instrument ID:	MR		
Lims ID:	140-10985-A-16	Lab Sample ID:	140-10985-16		
Client ID:	09533				
Operator ID:		ALS Bottle#:	19	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.76	43.00	8180	0.097256
3.76	41.00	1647	
3.76	29.00	17247	

Reviewer: tajh, 20-Mar-2018 12:10:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 11221
Lab Sample ID: 140-10994-2
Matrix: Air
Lab File ID: JC20bk10994-02.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 15:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 11221
Lab Sample ID: 140-10994-2
Matrix: Air
Lab File ID: JC20bk10994-02.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 15:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 11221
Lab Sample ID: 140-10994-2
Matrix: Air
Lab File ID: JC20bk10994-02.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 15:41
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 11221 Lab Sample ID: 140-10994-2
Matrix: Air Lab File ID: JC20bk10994-02.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 15:41
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-02.D				
Lims ID:	140-10994-A-2				
Client ID:	11221				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 15:41:30	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-005				
Misc. Info.:	11221				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 16:29:09	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK002				
First Level Reviewer: barlozhetskayaa		Date:	20-Mar-2018 16:29:09		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.679	9.680	-0.001	91	187696	4.00	
* 2 1,4-Difluorobenzene	114	11.777	11.778	-0.001	95	1003066	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.378	-0.002	92	839160	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.979	-0.002	94	598514	3.95	

Reagents:

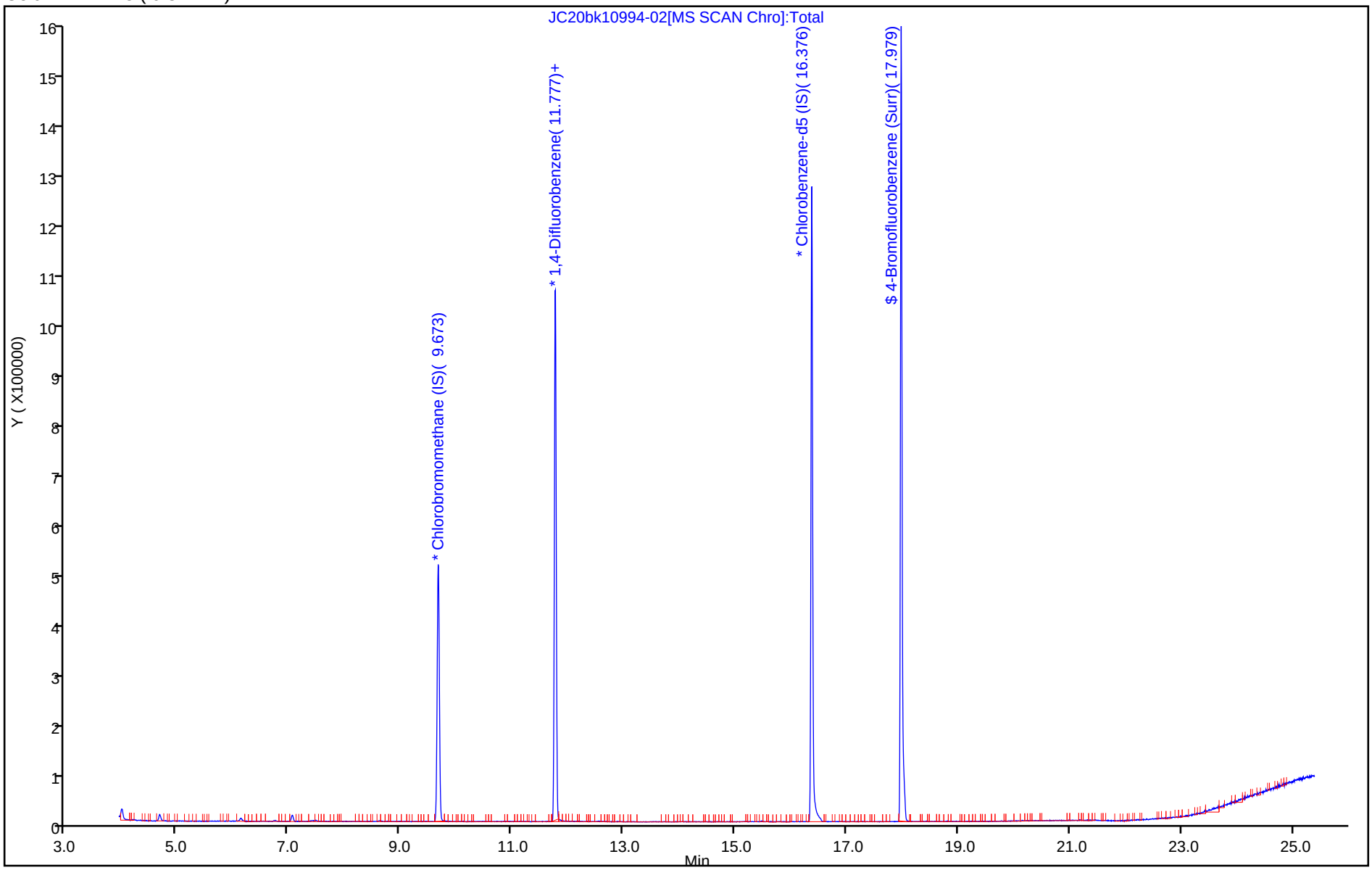
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 16:29:10 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-02.D				
Injection Date:	20-Mar-2018 15:41:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-2	Lab Sample ID:	140-10994-2	Worklist Smp#:	5
Client ID:	11221				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



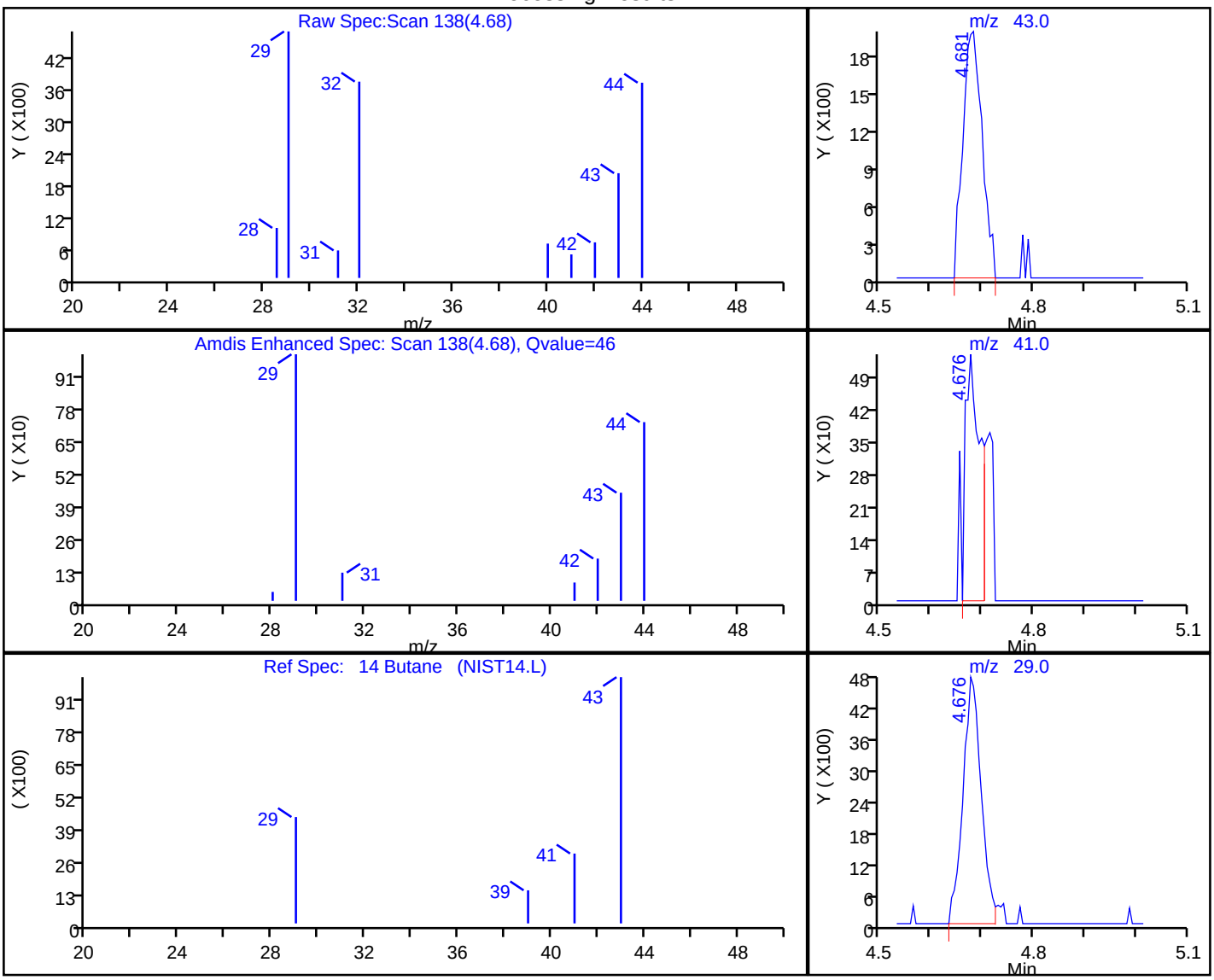
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-02.D				
Injection Date:	20-Mar-2018 15:41:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-2	Lab Sample ID:	140-10994-2		
Client ID:	11221				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	5136	0.054609
4.68	41.00	1053	
4.68	29.00	11937	

Reviewer: barlozhetskayaa, 20-Mar-2018 16:29:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

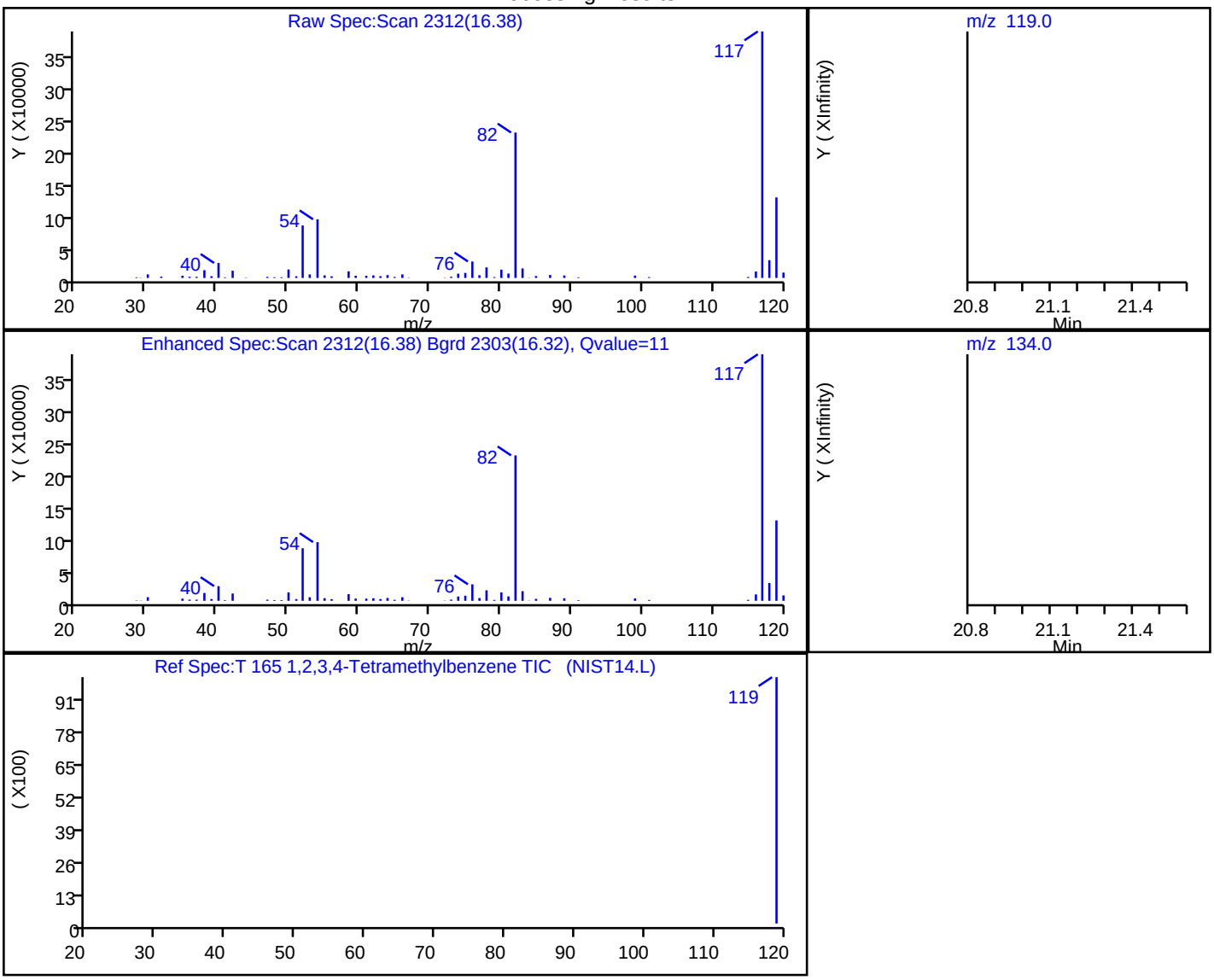
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-02.D				
Injection Date:	20-Mar-2018 15:41:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-2	Lab Sample ID:	140-10994-2		
Client ID:	11221				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	265653	1.266281
23.97	134.00	100	

Reviewer: barlozhetskayaa, 20-Mar-2018 16:29:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

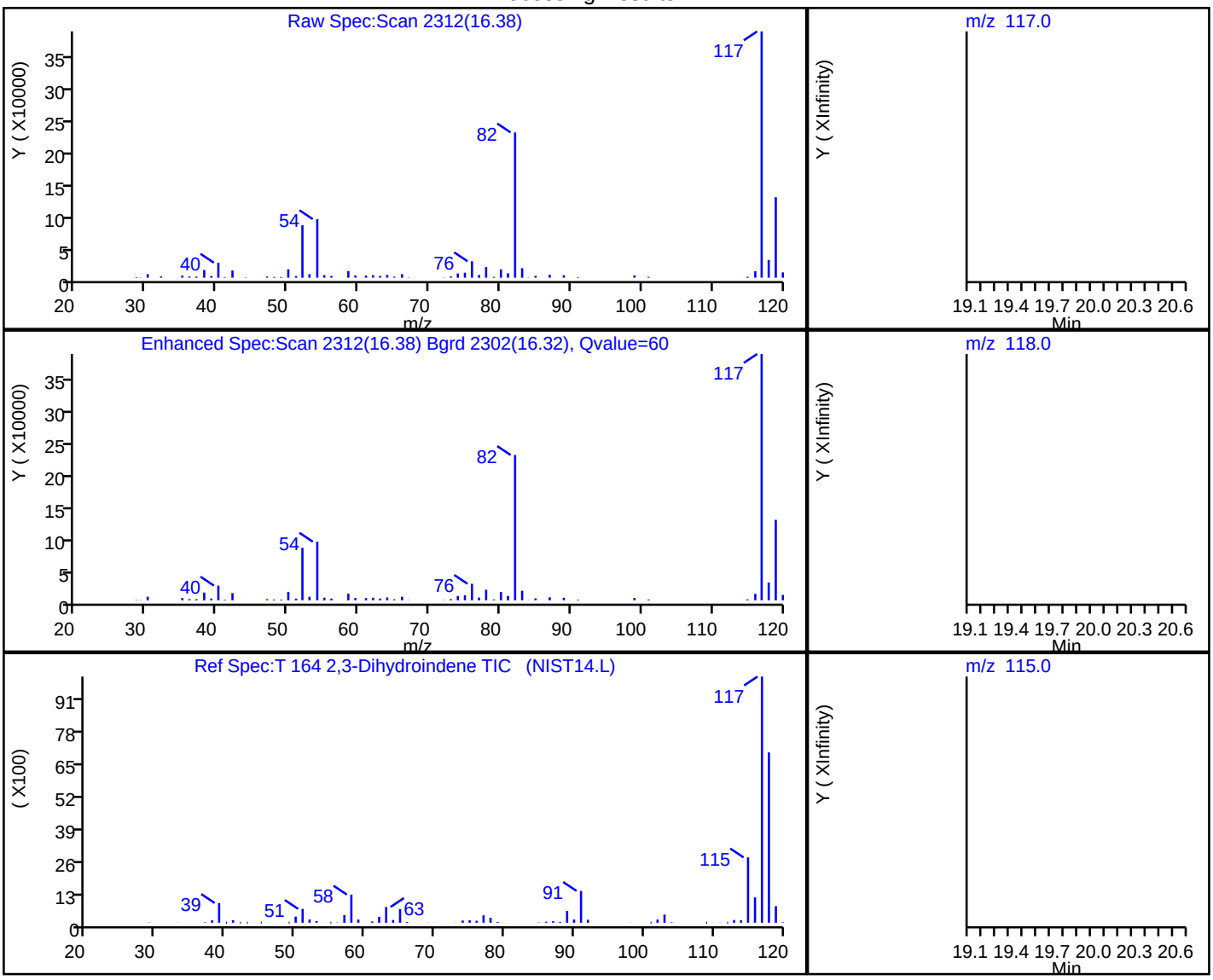
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-02.D				
Injection Date:	20-Mar-2018 15:41:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-2	Lab Sample ID:	140-10994-2		
Client ID:	11221				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	839160	4.000000
16.38	118.00	59865	
16.38	115.00	3053	

Reviewer: barlozhetskayaa, 20-Mar-2018 16:29:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10119 | Lab Sample ID: 140-10994-3
Matrix: Air | Lab File ID: JC20bk10994-03.D
Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 16:28
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10119
Lab Sample ID: 140-10994-3
Matrix: Air
Lab File ID: JC20bk10994-03.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 16:28
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10119
Lab Sample ID: 140-10994-3
Matrix: Air
Lab File ID: JC20bk10994-03.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 16:28
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10119 Lab Sample ID: 140-10994-3
Matrix: Air Lab File ID: JC20bk10994-03.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 16:28
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-03.D
Lims ID: 140-10994-A-3
Client ID: 10119
Sample Type: Client
Inject. Date: 20-Mar-2018 16:28:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007671-006
Misc. Info.: 10119
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Mar-2018 17:06:45 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 20-Mar-2018 17:06:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.672	9.680	-0.008	91	176845	4.00	
* 2 1,4-Difluorobenzene	114	11.775	11.778	-0.003	95	998266	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.378	-0.003	88	887430	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.978	-0.003	95	669633	4.17	
62 1,4-Dioxane	88	12.771	12.705	0.057	79	1345	0.0774	

Reagents:

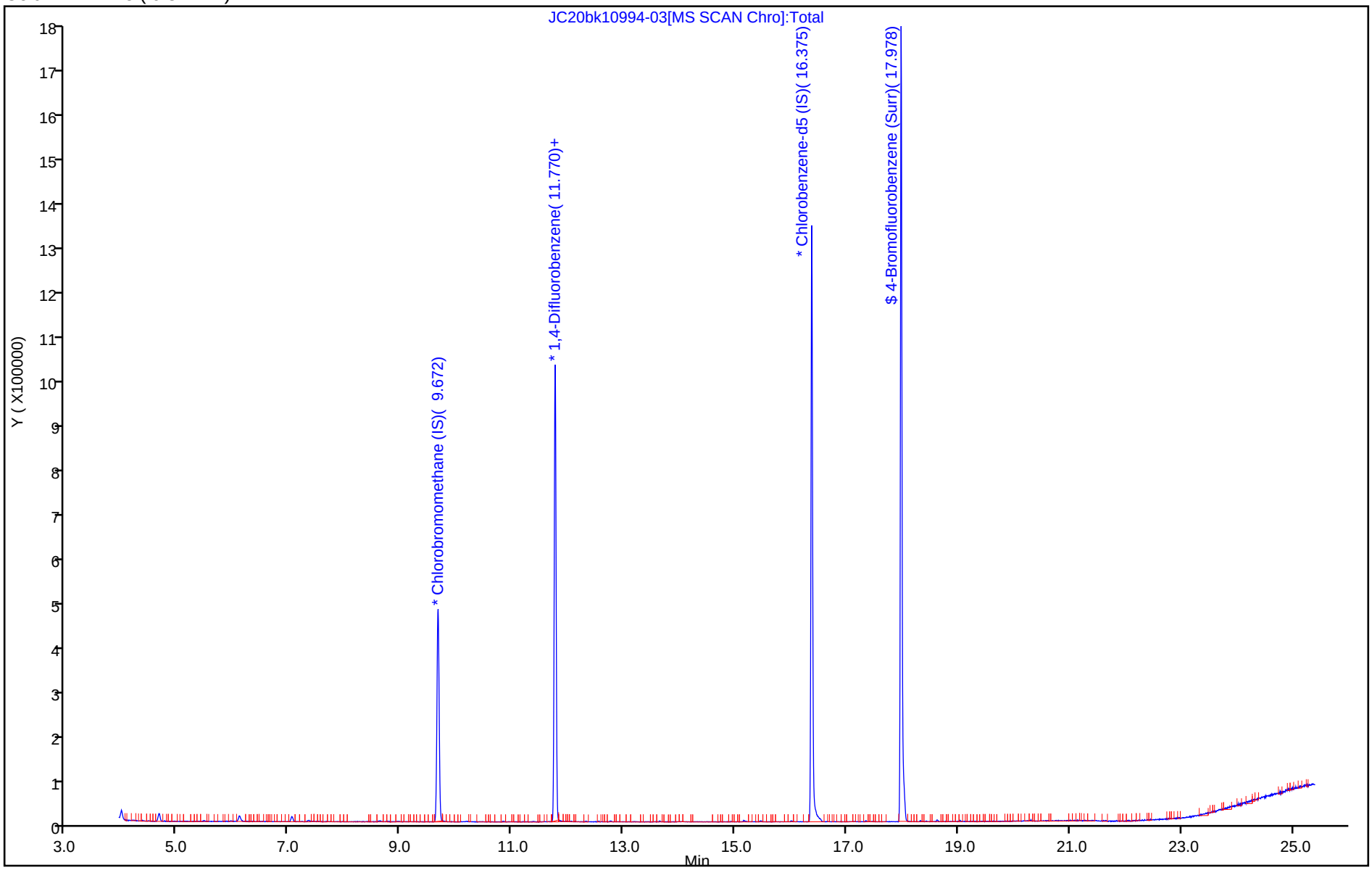
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 17:06:46 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-03.D				
Injection Date:	20-Mar-2018 16:28:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-3	Lab Sample ID:	140-10994-3	Worklist Smp#:	6
Client ID:	10119				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



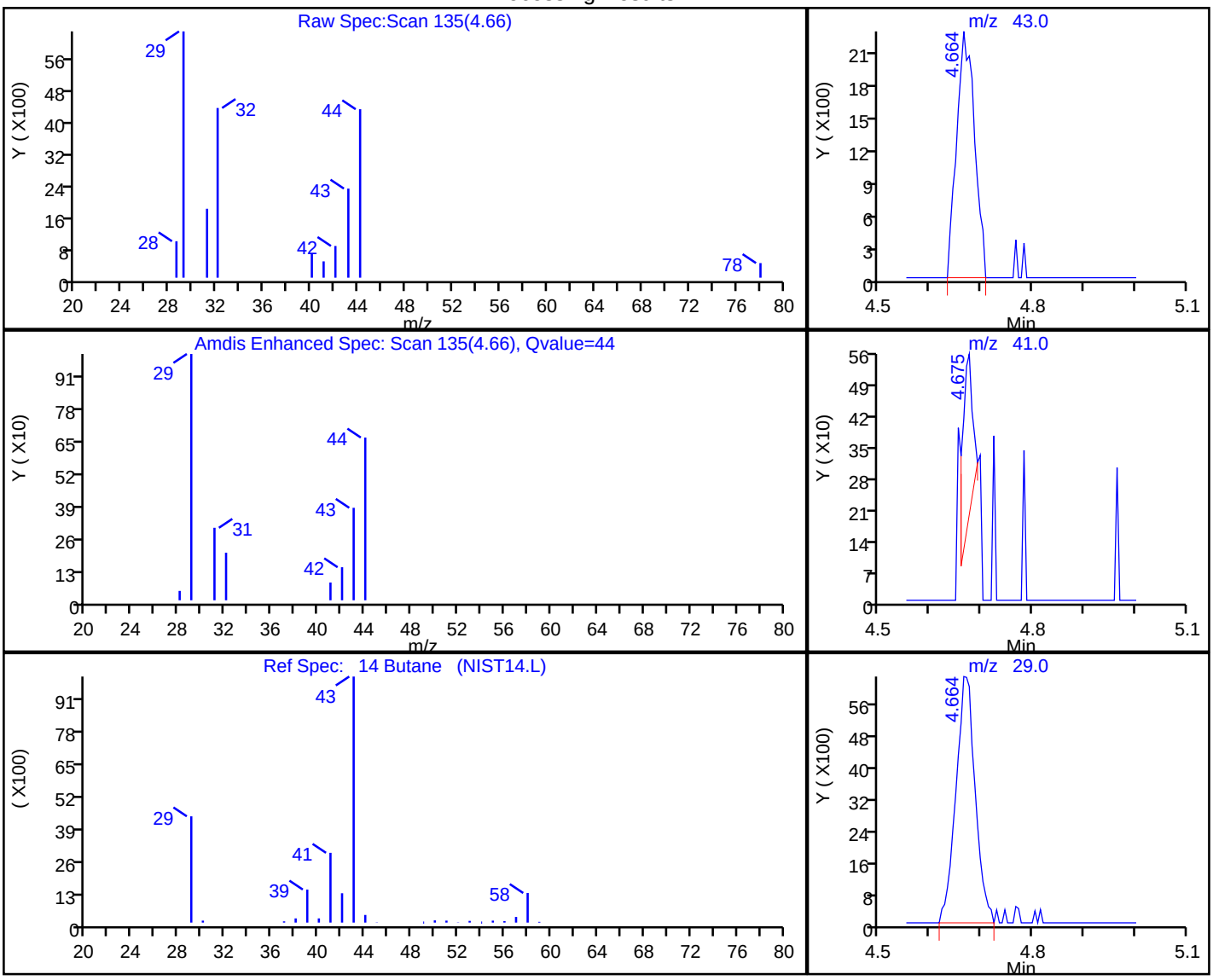
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-03.D				
Injection Date:	20-Mar-2018 16:28:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-3	Lab Sample ID:	140-10994-3		
Client ID:	10119				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.66	43.00	5463	0.061650
4.67	41.00	508	
4.66	29.00	16404	

Reviewer: barlozhetskayaa, 20-Mar-2018 17:06:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

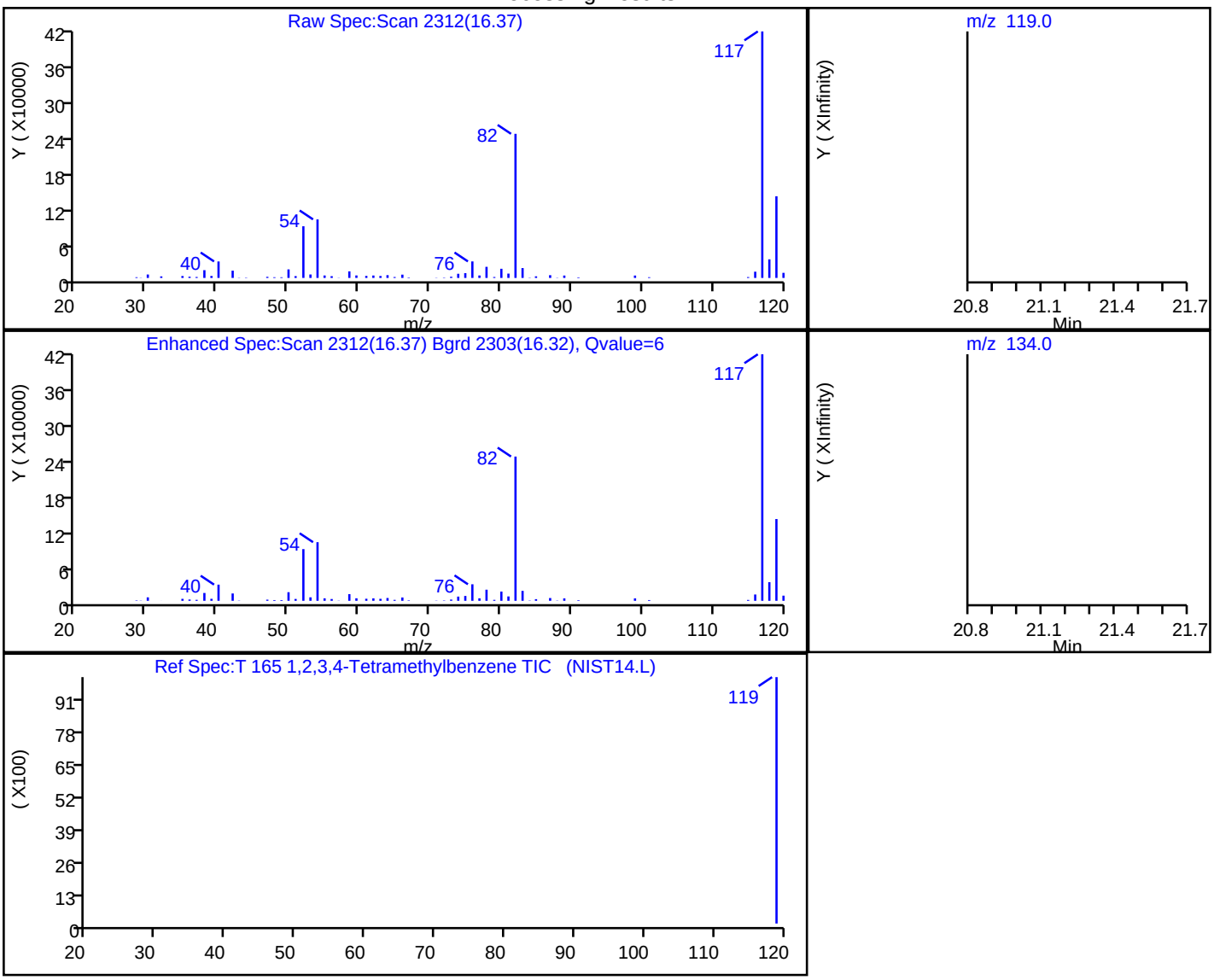
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-03.D				
Injection Date:	20-Mar-2018 16:28:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-3	Lab Sample ID:	140-10994-3		
Client ID:	10119				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	285150	1.285284
24.19	134.00	123	

Reviewer: barlozhetskayaa, 20-Mar-2018 17:06:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

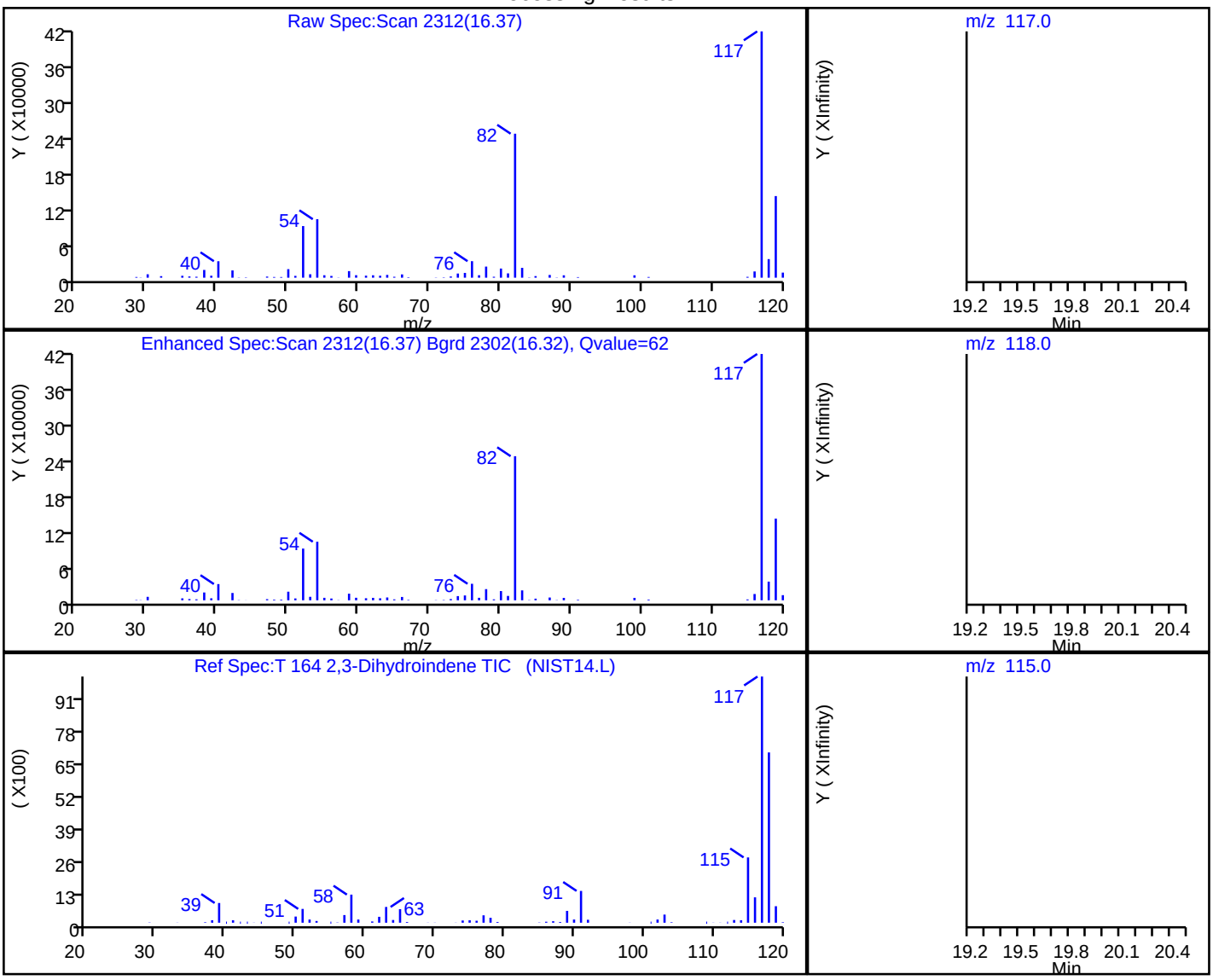
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-03.D				
Injection Date:	20-Mar-2018 16:28:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-3	Lab Sample ID:	140-10994-3		
Client ID:	10119				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	887430	4.000000
16.37	118.00	66267	
16.38	115.00	3235	

Reviewer: barlozhetskayaa, 20-Mar-2018 17:06:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10069 | Lab Sample ID: 140-10994-4
Matrix: Air | Lab File ID: JC20bk10994-04.D
Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 17:15
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10069
Lab Sample ID: 140-10994-4
Matrix: Air
Lab File ID: JC20bk10994-04.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 17:15
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10069
Lab Sample ID: 140-10994-4
Matrix: Air
Lab File ID: JC20bk10994-04.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 17:15
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10069 Lab Sample ID: 140-10994-4

Matrix: Air Lab File ID: JC20bk10994-04.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 17:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-04.D				
Lims ID:	140-10994-A-4				
Client ID:	10069				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 17:15:30	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-007				
Misc. Info.:	10069				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 17:56:33	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: barlozhetskayaa		Date:	20-Mar-2018 17:56:33		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.675	9.680	-0.005	91	184285	4.00	
* 2 1,4-Difluorobenzene	114	11.773	11.778	-0.005	95	1014107	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.378	16.378	0.000	88	907019	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.981	17.981	0.000	95	643611	3.93	

Reagents:

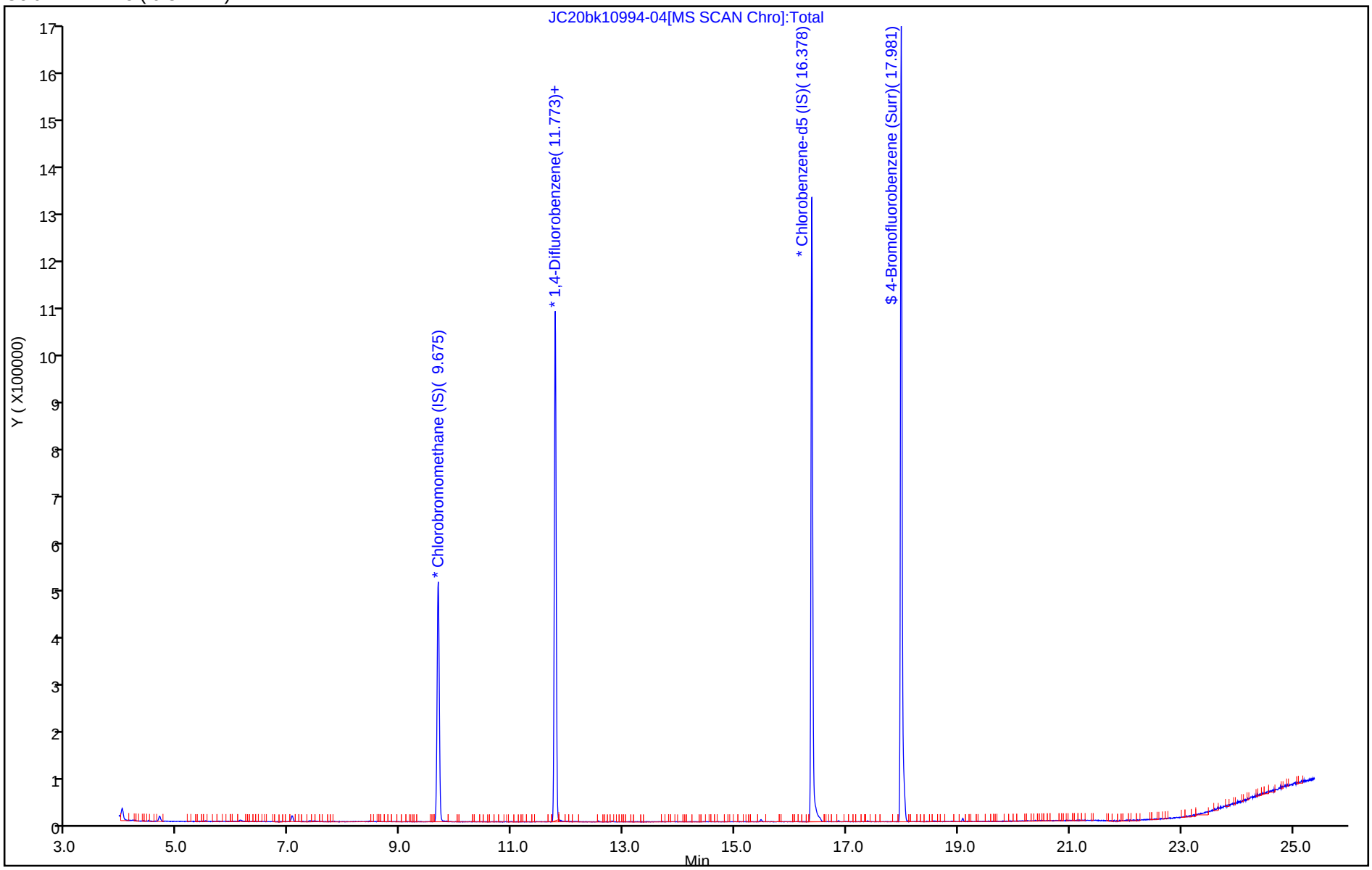
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 17:56:34 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-04.D				
Injection Date:	20-Mar-2018 17:15:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-4	Lab Sample ID:	140-10994-4	Worklist Smp#:	7
Client ID:	10069				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



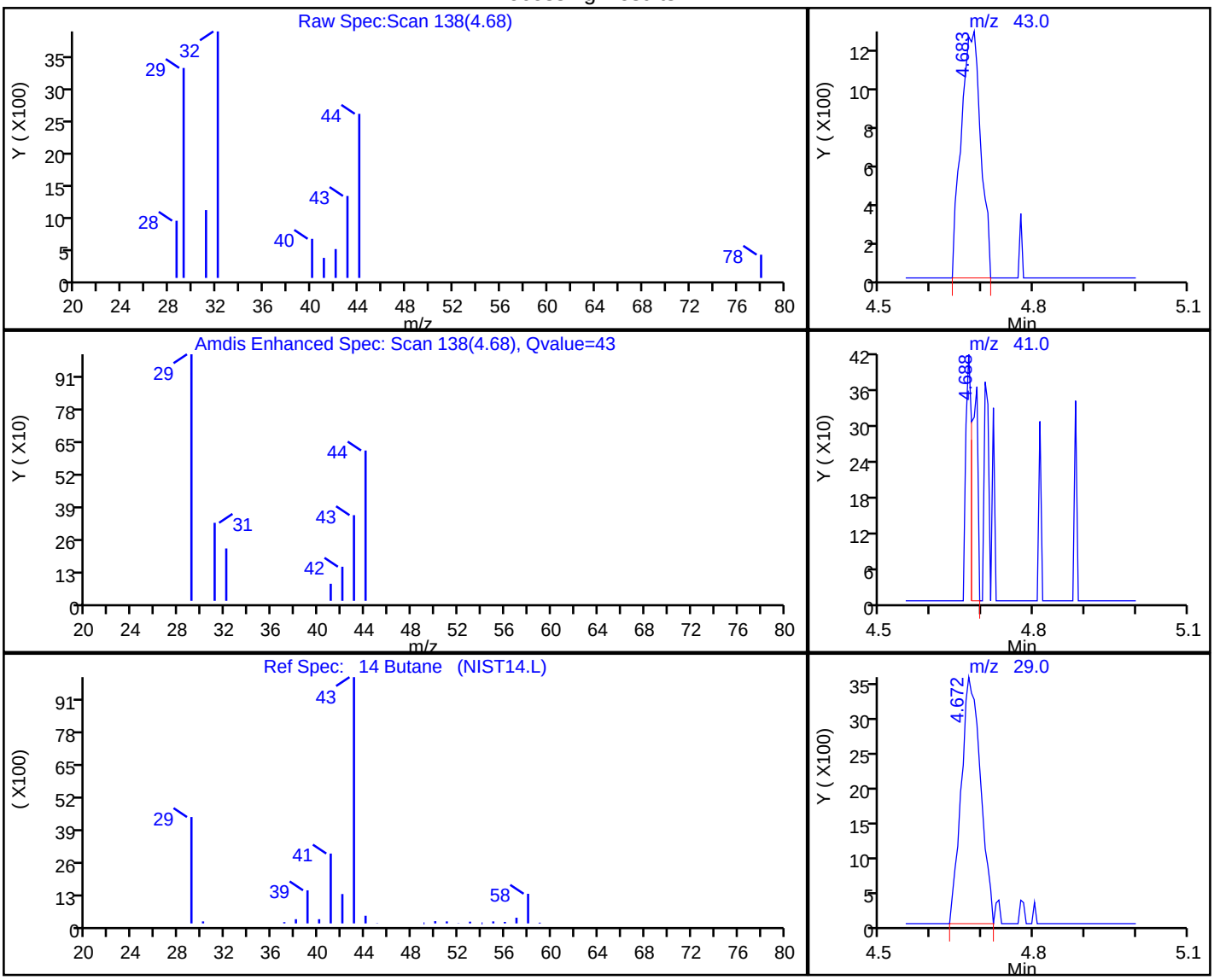
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-04.D				
Injection Date:	20-Mar-2018 17:15:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-4	Lab Sample ID:	140-10994-4		
Client ID:	10069				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	3382	0.036625
4.69	41.00	316	
4.67	29.00	9466	

Reviewer: barlozhetskayaa, 20-Mar-2018 17:56:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

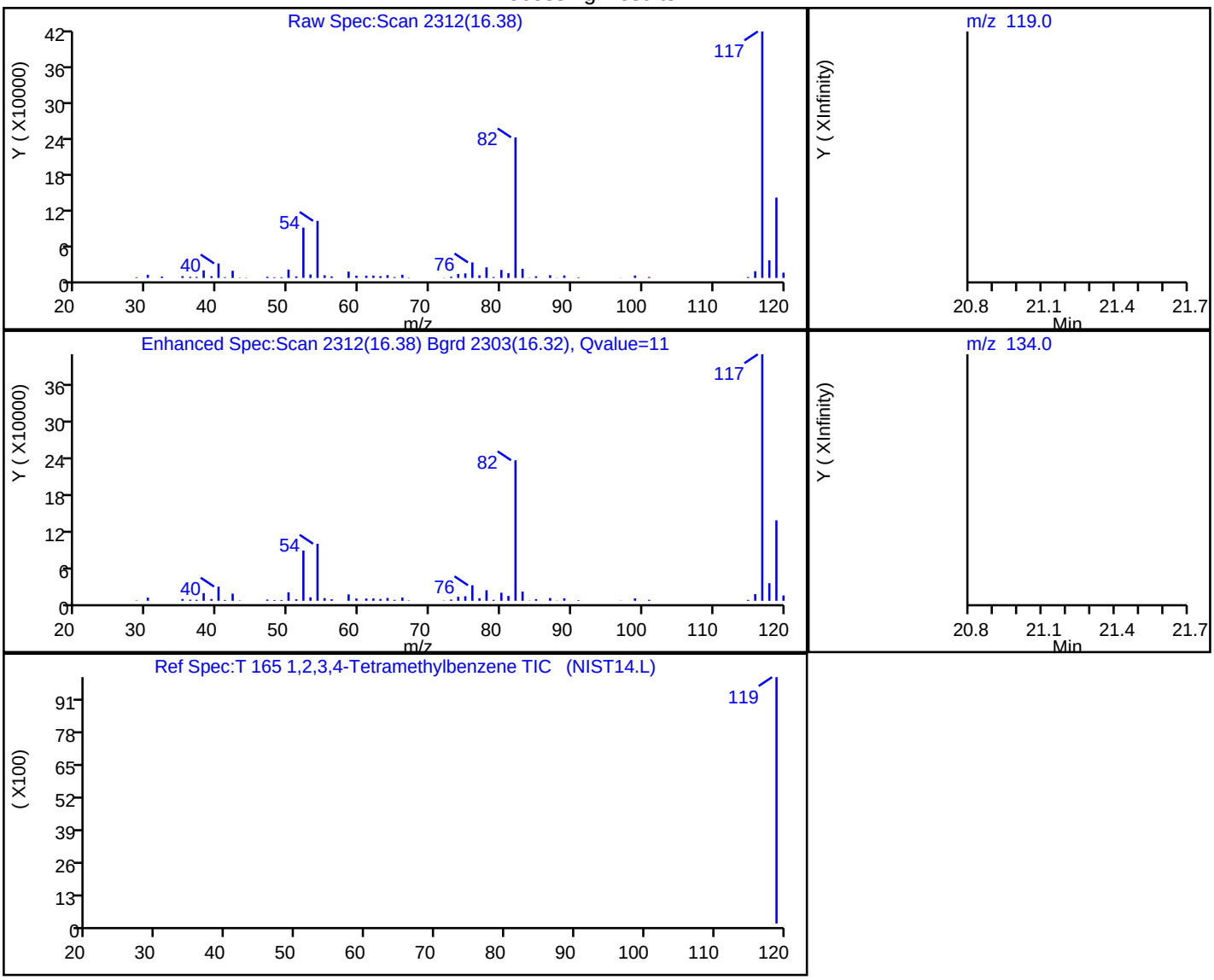
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-04.D				
Injection Date:	20-Mar-2018 17:15:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-4	Lab Sample ID:	140-10994-4		
Client ID:	10069				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	285321	1.258280
24.15	134.00	231	

Reviewer: barlozhetskayaa, 20-Mar-2018 17:56:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

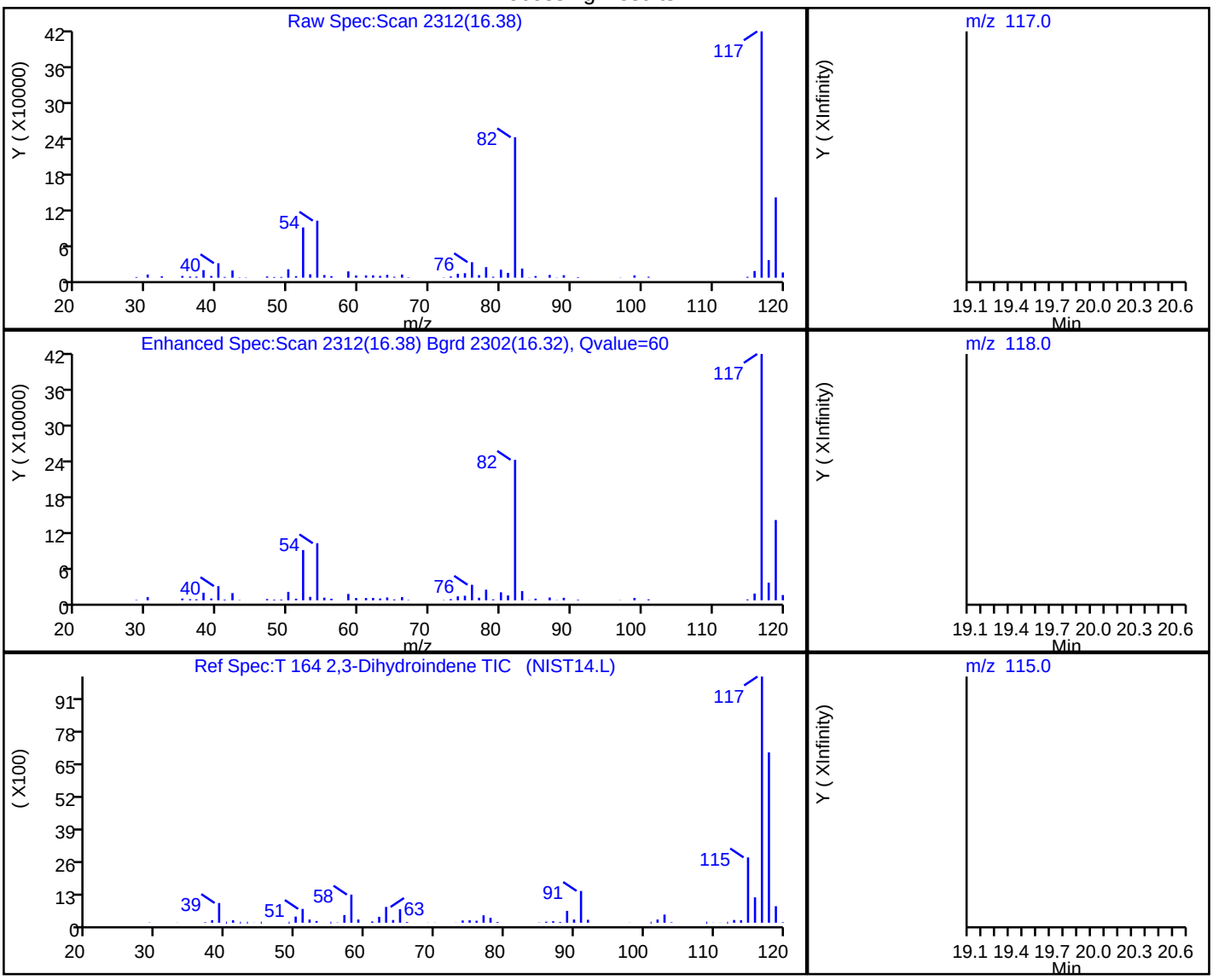
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-04.D				
Injection Date:	20-Mar-2018 17:15:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-4	Lab Sample ID:	140-10994-4		
Client ID:	10069				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	907019	4.000000
16.38	118.00	65150	
16.37	115.00	3106	

Reviewer: barlozhetskayaa, 20-Mar-2018 17:56:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10307
Lab Sample ID: 140-10994-5
Matrix: Air
Lab File ID: JC20bk10994-05.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 18:02
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10307
Lab Sample ID: 140-10994-5
Matrix: Air
Lab File ID: JC20bk10994-05.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 18:02
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10307
Lab Sample ID: 140-10994-5
Matrix: Air
Lab File ID: JC20bk10994-05.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 18:02
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10307 Lab Sample ID: 140-10994-5
Matrix: Air Lab File ID: JC20bk10994-05.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 18:02
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-05.D				
Lims ID:	140-10994-A-5				
Client ID:	10307				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 18:02:30	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-008				
Misc. Info.:	10307				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 18:44:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: barlozhetskayaa		Date:	20-Mar-2018 18:44:16		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.668	9.680	-0.012	91	174766	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.778	-0.007	95	984410	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.378	-0.002	88	881687	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.973	-0.002	95	644176	4.04	

Reagents:

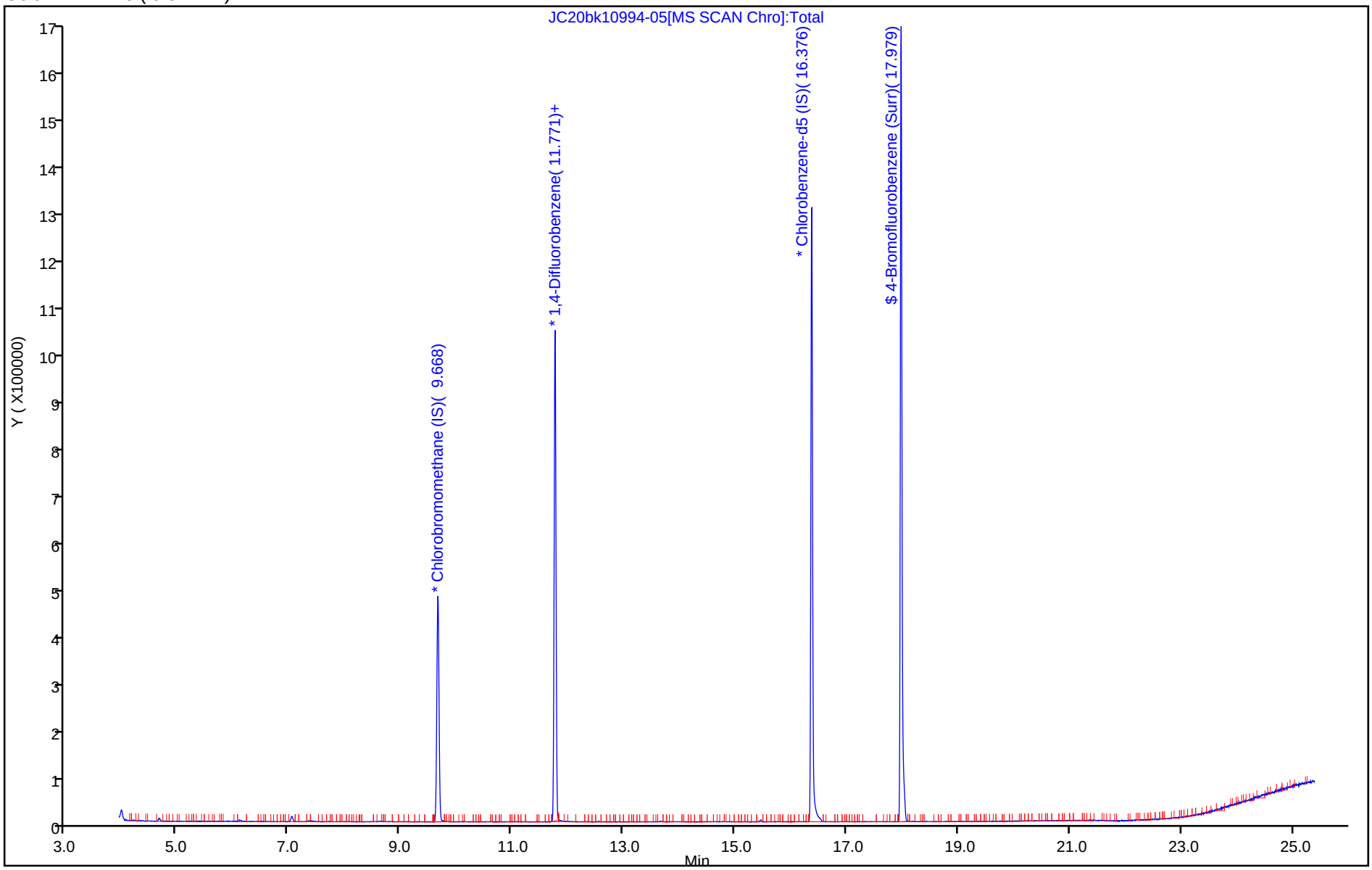
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 18:44:16 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-05.D				
Injection Date:	20-Mar-2018 18:02:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-5	Lab Sample ID:	140-10994-5	Worklist Smp#:	8
Client ID:	10307				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



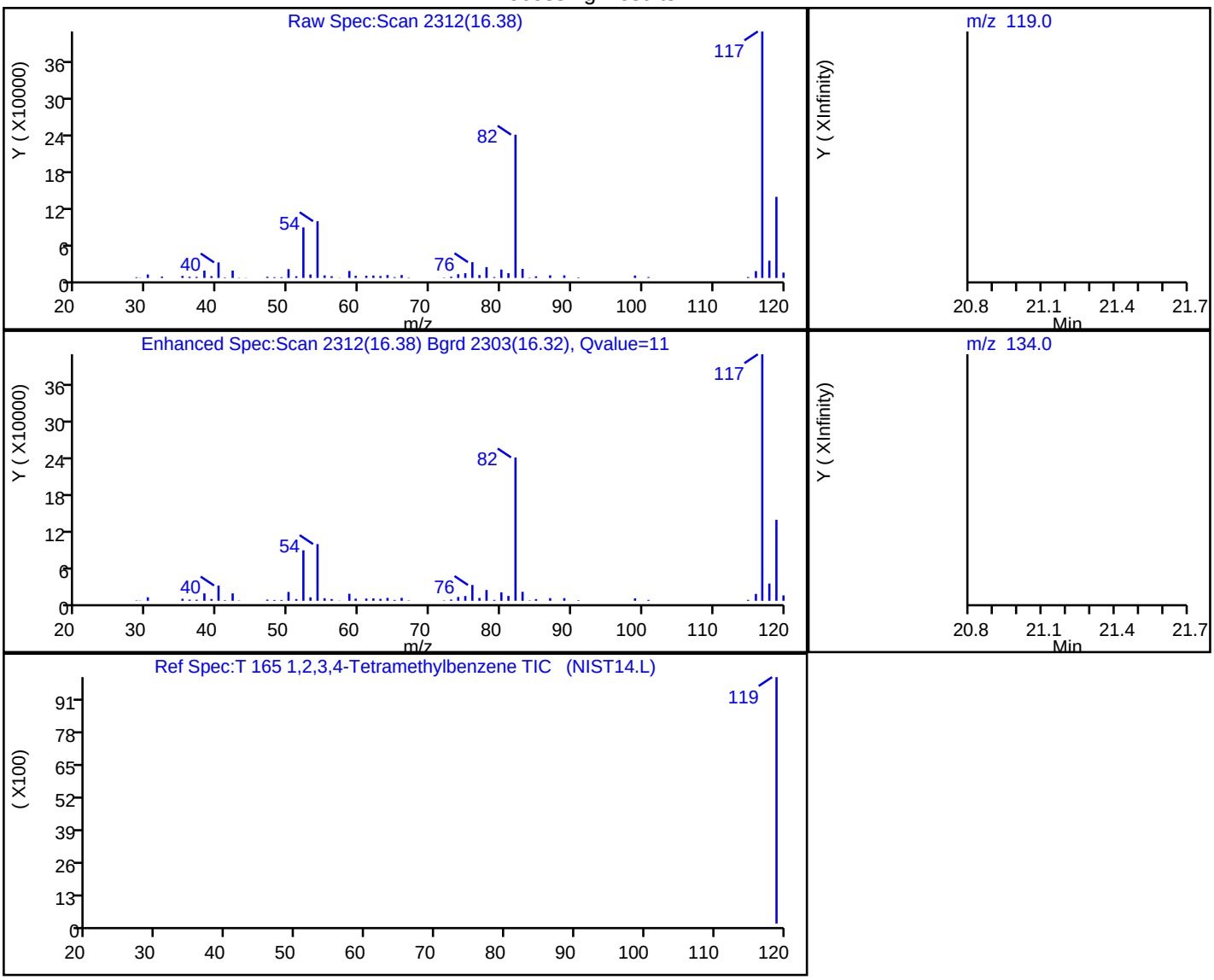
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-05.D				
Injection Date:	20-Mar-2018 18:02:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-5	Lab Sample ID:	140-10994-5		
Client ID:	10307				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	281128	1.275410
24.14	134.00	100	

Reviewer: barlozhetskayaa, 20-Mar-2018 18:44:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

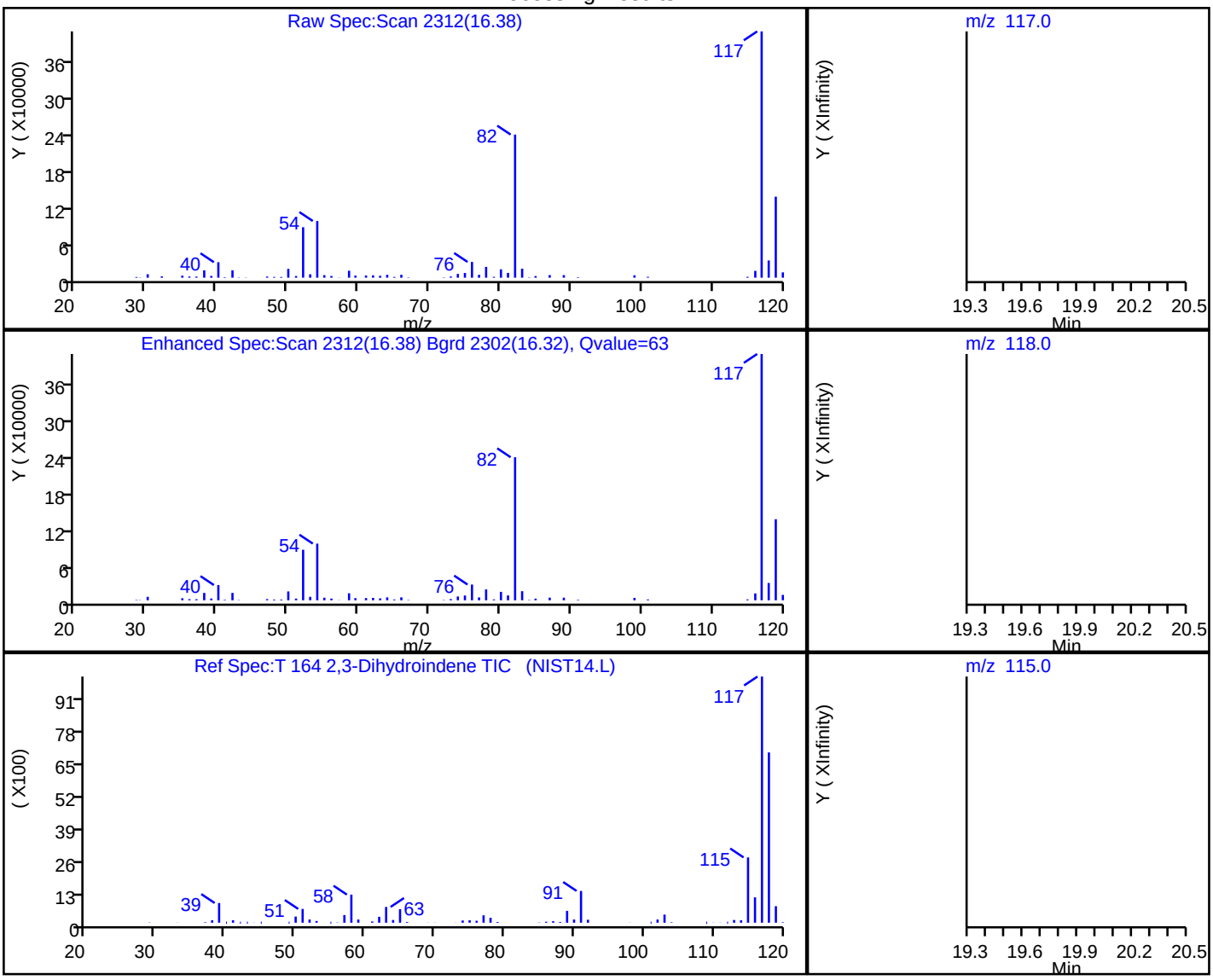
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-05.D				
Injection Date:	20-Mar-2018 18:02:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-5	Lab Sample ID:	140-10994-5		
Client ID:	10307				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	881687	4.000000
16.37	118.00	64516	
16.38	115.00	3068	

Reviewer: barlozhetskayaa, 20-Mar-2018 18:44:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09506 | Lab Sample ID: 140-10994-6
Matrix: Air | Lab File ID: JC20bk10994-06.D
Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 18:49
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.58		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09506
Lab Sample ID: 140-10994-6
Matrix: Air
Lab File ID: JC20bk10994-06.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 18:49
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09506 | Lab Sample ID: 140-10994-6

Matrix: Air | Lab File ID: JC20bk10994-06.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 18:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09506 Lab Sample ID: 140-10994-6

Matrix: Air Lab File ID: JC20bk10994-06.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 18:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-06.D				
Lims ID:	140-10994-A-6				
Client ID:	09506				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 18:49:30	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-009				
Misc. Info.:	09506				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 19:43:23	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

First Level Reviewer: barlozhetskayaa Date: 20-Mar-2018 19:43:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.680	-0.007	91	170468	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.778	-0.007	95	971248	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.378	-0.003	88	876668	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.978	-0.002	94	625197	3.94	
33 Carbon disulfide	76	7.236	7.227	0.003	96	2791	0.0171	
65 4-Methyl-2-pentanone (MIBK	43	13.616	13.582	0.025	98	51488	0.5783	

Reagents:

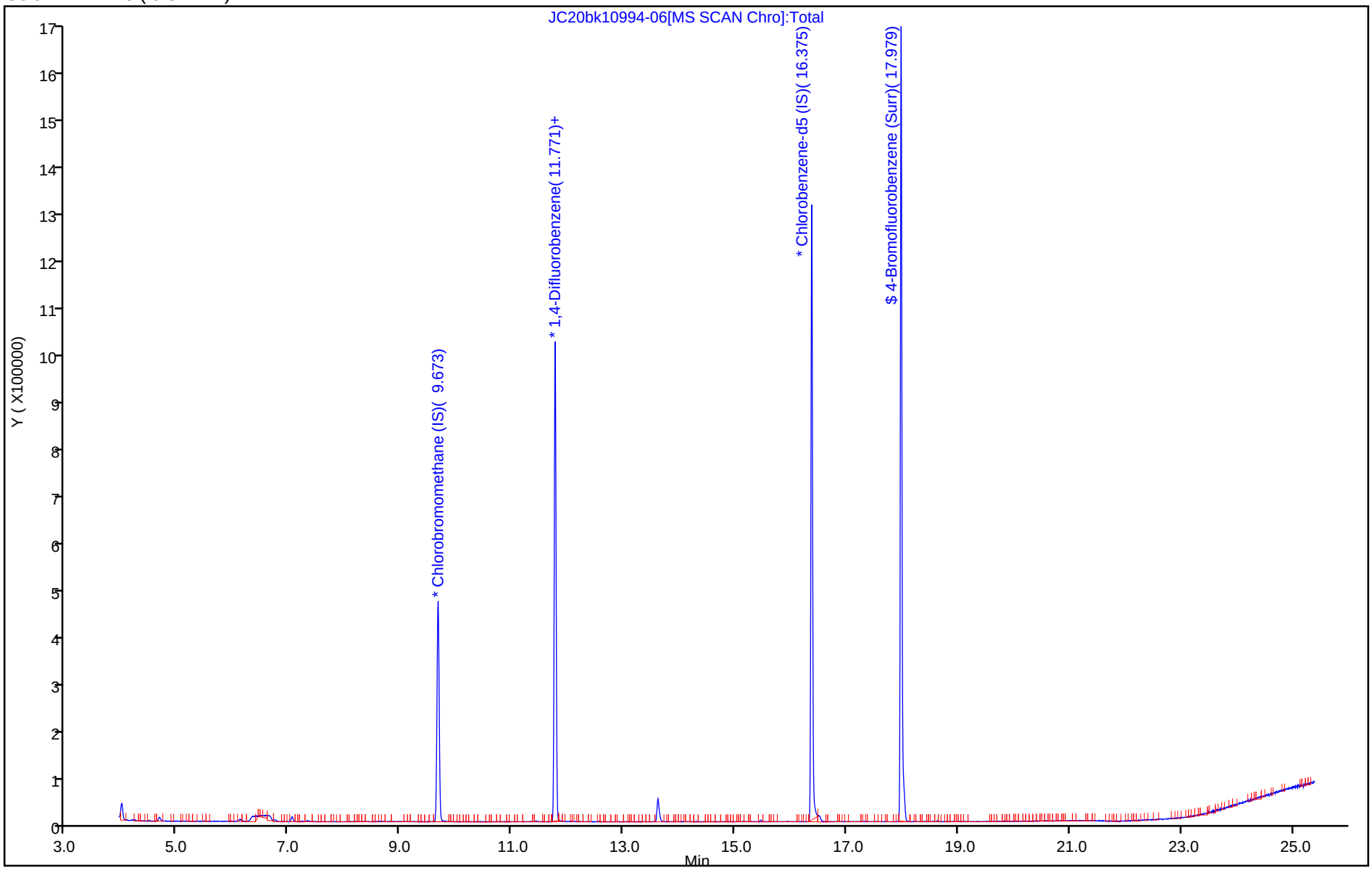
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 19:43:24 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-06.D				
Injection Date:	20-Mar-2018 18:49:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-6	Lab Sample ID:	140-10994-6	Worklist Smp#:	9
Client ID:	09506				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

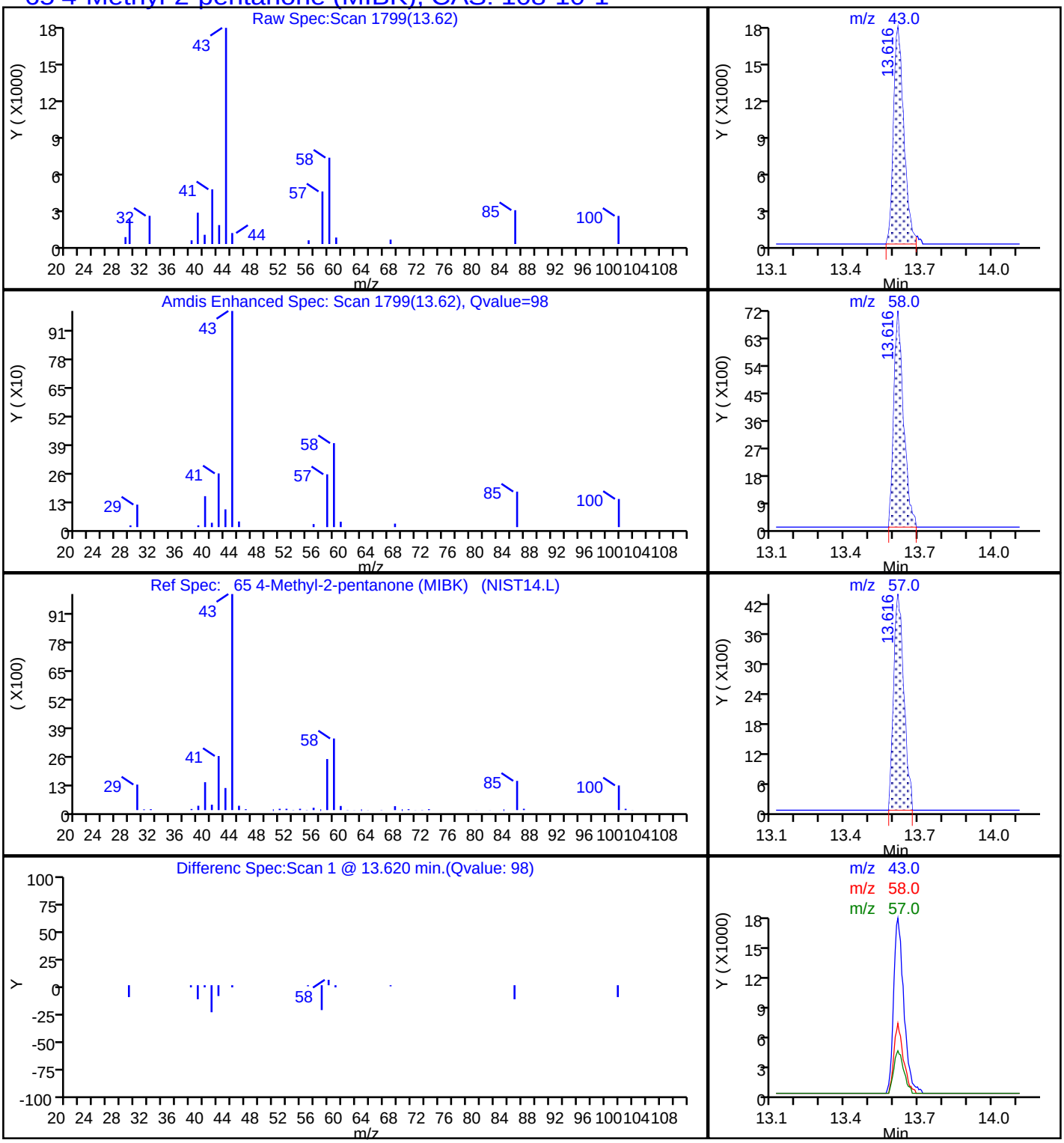


Report Date: 20-Mar-2018 19:43:24 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-06.D				
Injection Date:	20-Mar-2018 18:49:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-6	Lab Sample ID:	140-10994-6		
Client ID:	09506				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

65 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1



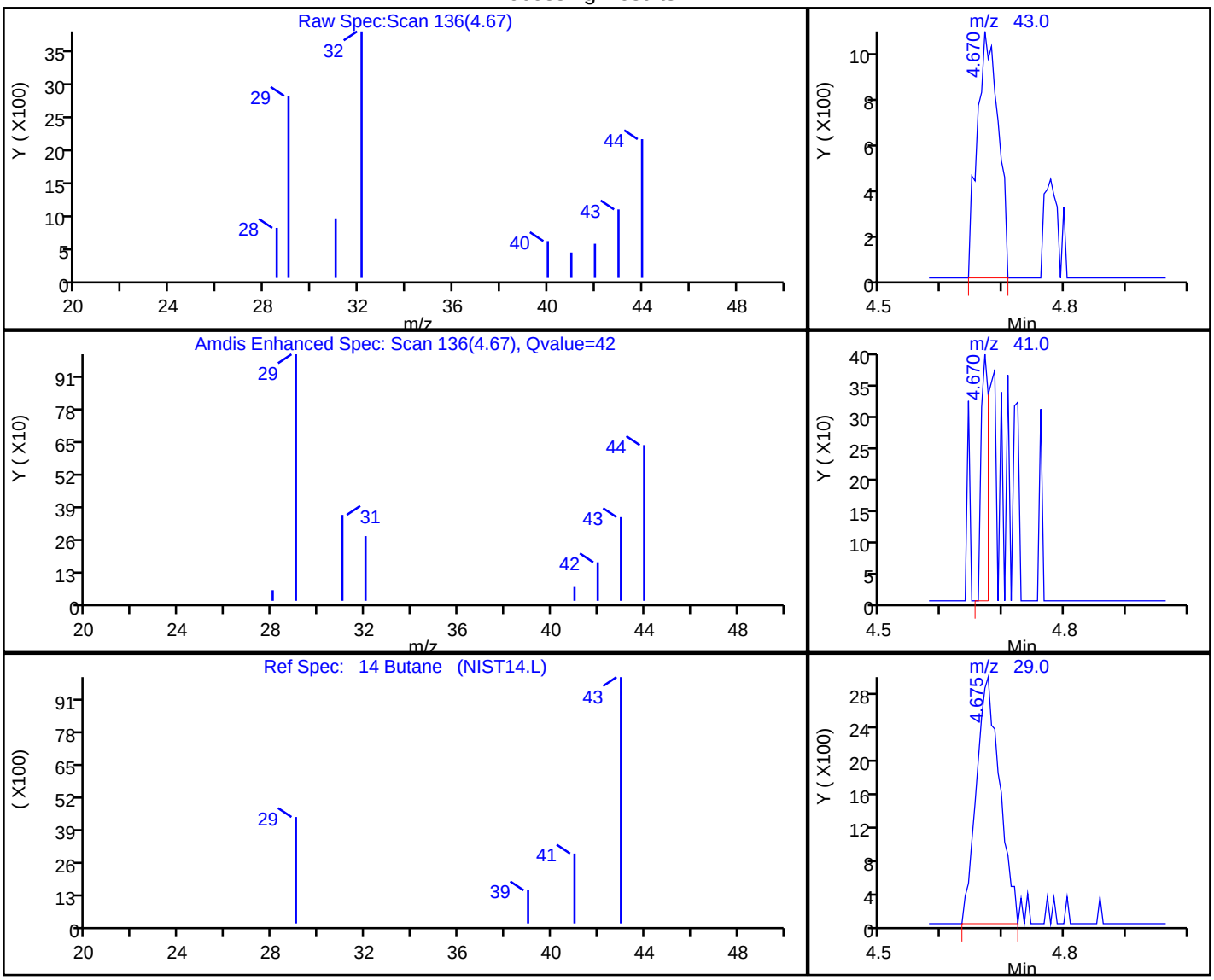
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-06.D				
Injection Date:	20-Mar-2018 18:49:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-6	Lab Sample ID:	140-10994-6		
Client ID:	09506				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	2502	0.029291
4.67	41.00	331	
4.68	29.00	7762	

Reviewer: barlozhetskayaa, 20-Mar-2018 19:43:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

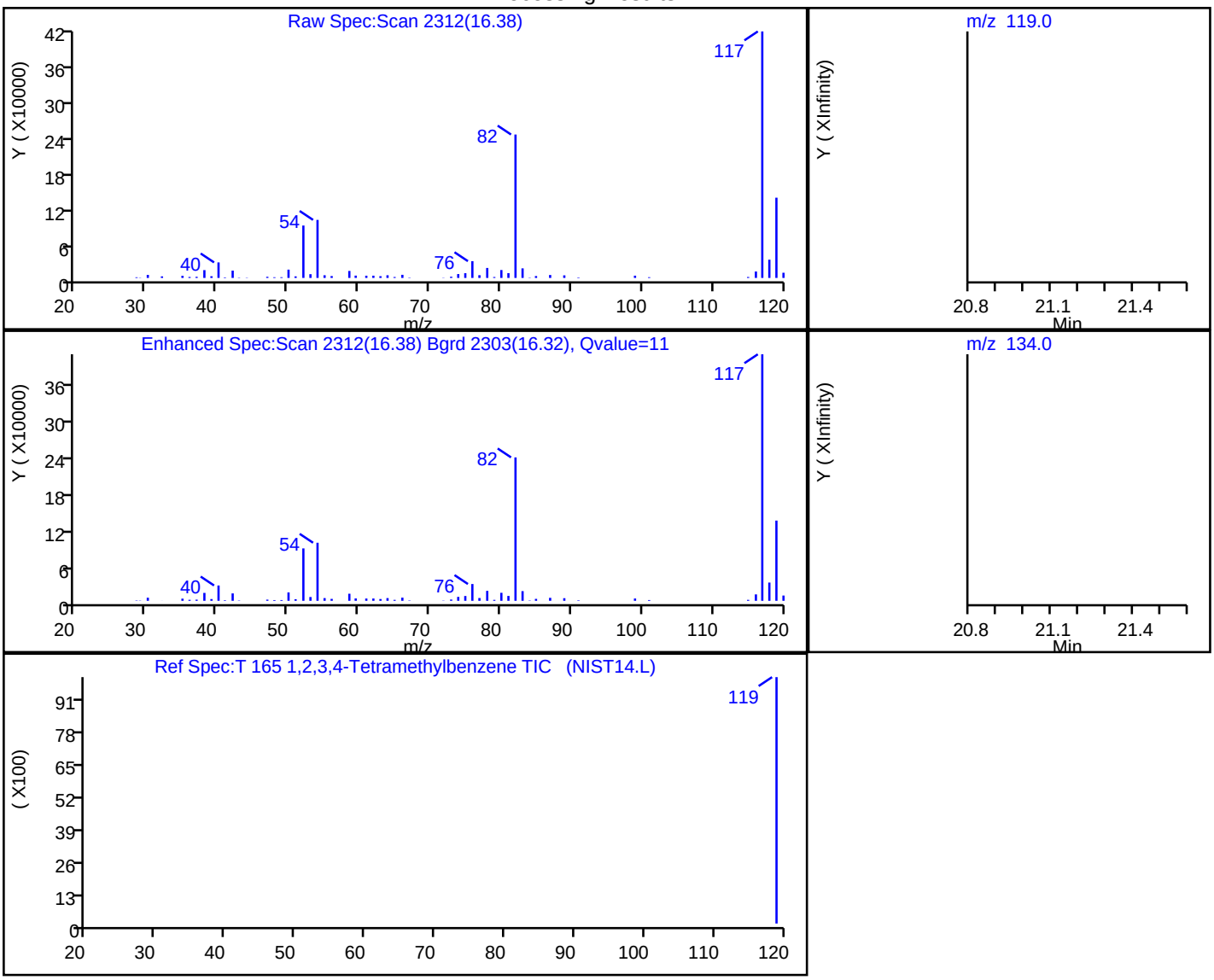
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-06.D				
Injection Date:	20-Mar-2018 18:49:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-6	Lab Sample ID:	140-10994-6		
Client ID:	09506				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	276959	1.263689
24.27	134.00	329	

Reviewer: barlozhetskayaa, 20-Mar-2018 19:43:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

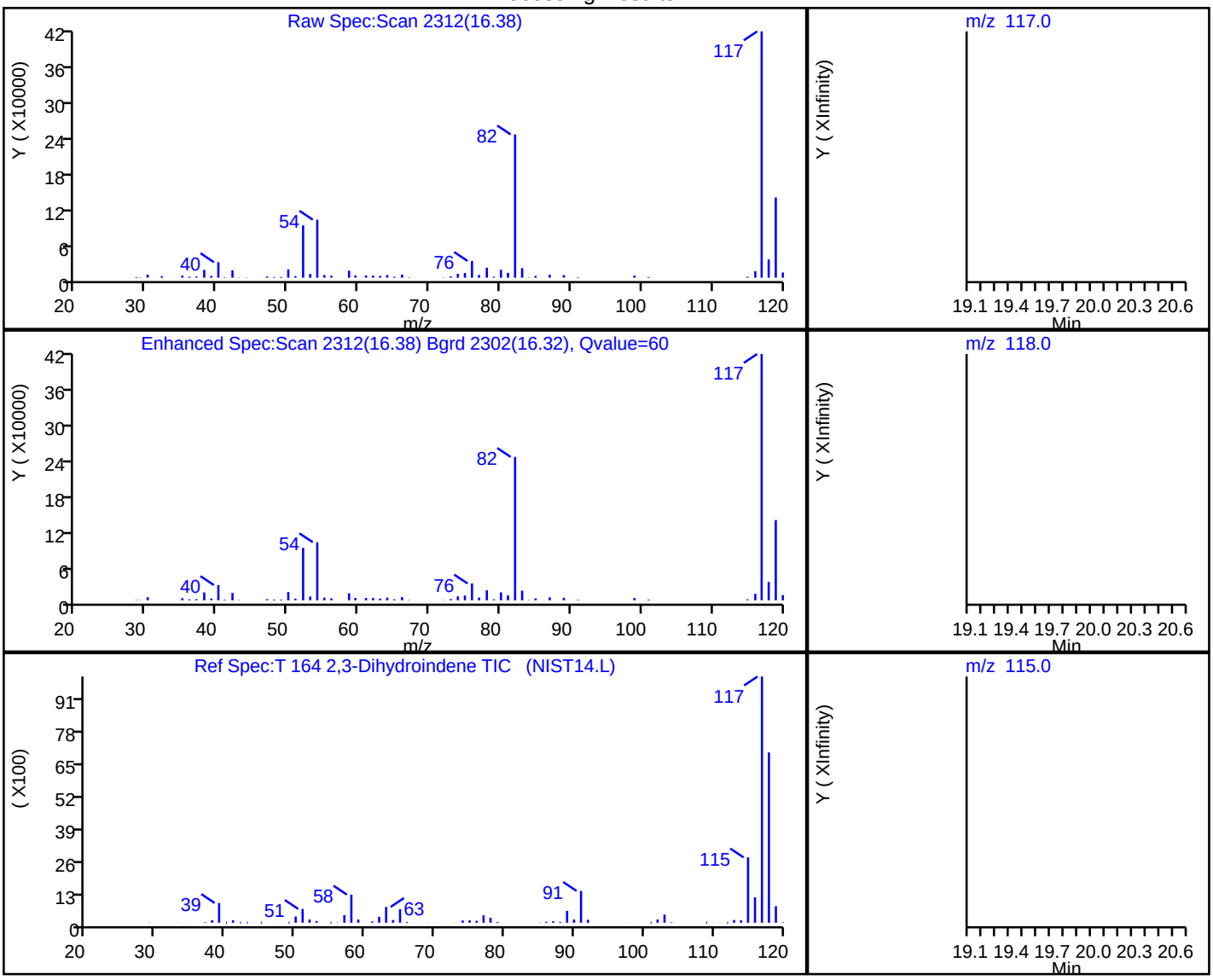
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-06.D				
Injection Date:	20-Mar-2018 18:49:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-6	Lab Sample ID:	140-10994-6		
Client ID:	09506				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	876668	4.000000
16.38	118.00	64668	
16.38	115.00	3217	

Reviewer: barlozhetskayaa, 20-Mar-2018 19:43:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09679 | Lab Sample ID: 140-10994-7

Matrix: Air | Lab File ID: JC20bk10994-07.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 19:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09679
Lab Sample ID: 140-10994-7
Matrix: Air
Lab File ID: JC20bk10994-07.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 19:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09679
Lab Sample ID: 140-10994-7
Matrix: Air
Lab File ID: JC20bk10994-07.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 19:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09679 Lab Sample ID: 140-10994-7

Matrix: Air Lab File ID: JC20bk10994-07.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 19:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-07.D				
Lims ID:	140-10994-A-7				
Client ID:	09679				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 19:36:30	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-010				
Misc. Info.:	09679				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Mar-2018 20:16:21	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: barlozhetskayaa		Date:	20-Mar-2018 20:16:20		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.665	9.680	-0.015	92	170089	4.00	
* 2 1,4-Difluorobenzene	114	11.768	11.778	-0.010	95	959732	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.373	16.378	-0.005	88	870371	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.976	17.976	-0.005	95	621083	3.95	

Reagents:

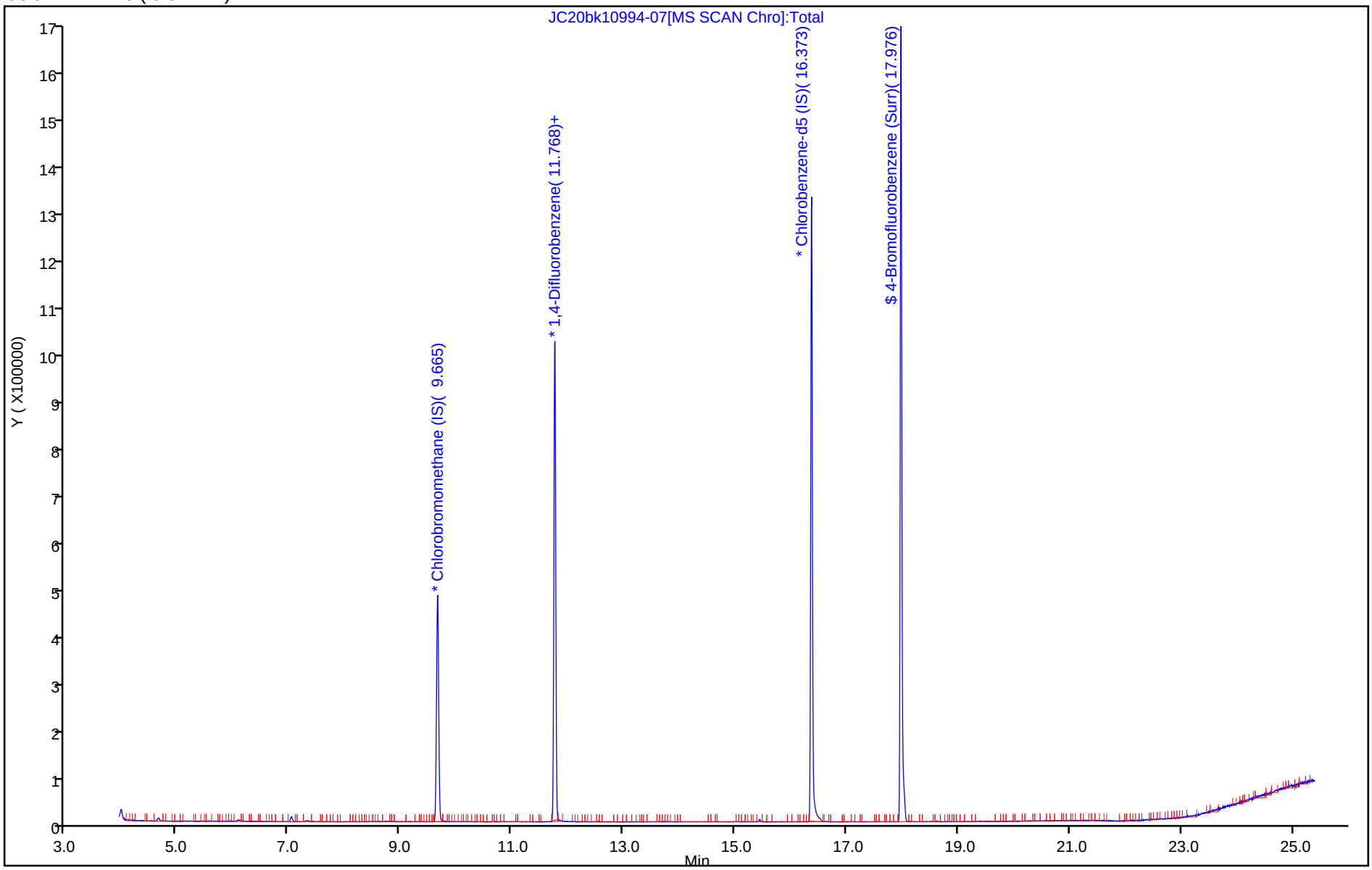
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-Mar-2018 20:16:21 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-07.D				
Injection Date:	20-Mar-2018 19:36:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-7	Lab Sample ID:	140-10994-7	Worklist Smp#:	10
Client ID:	09679				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



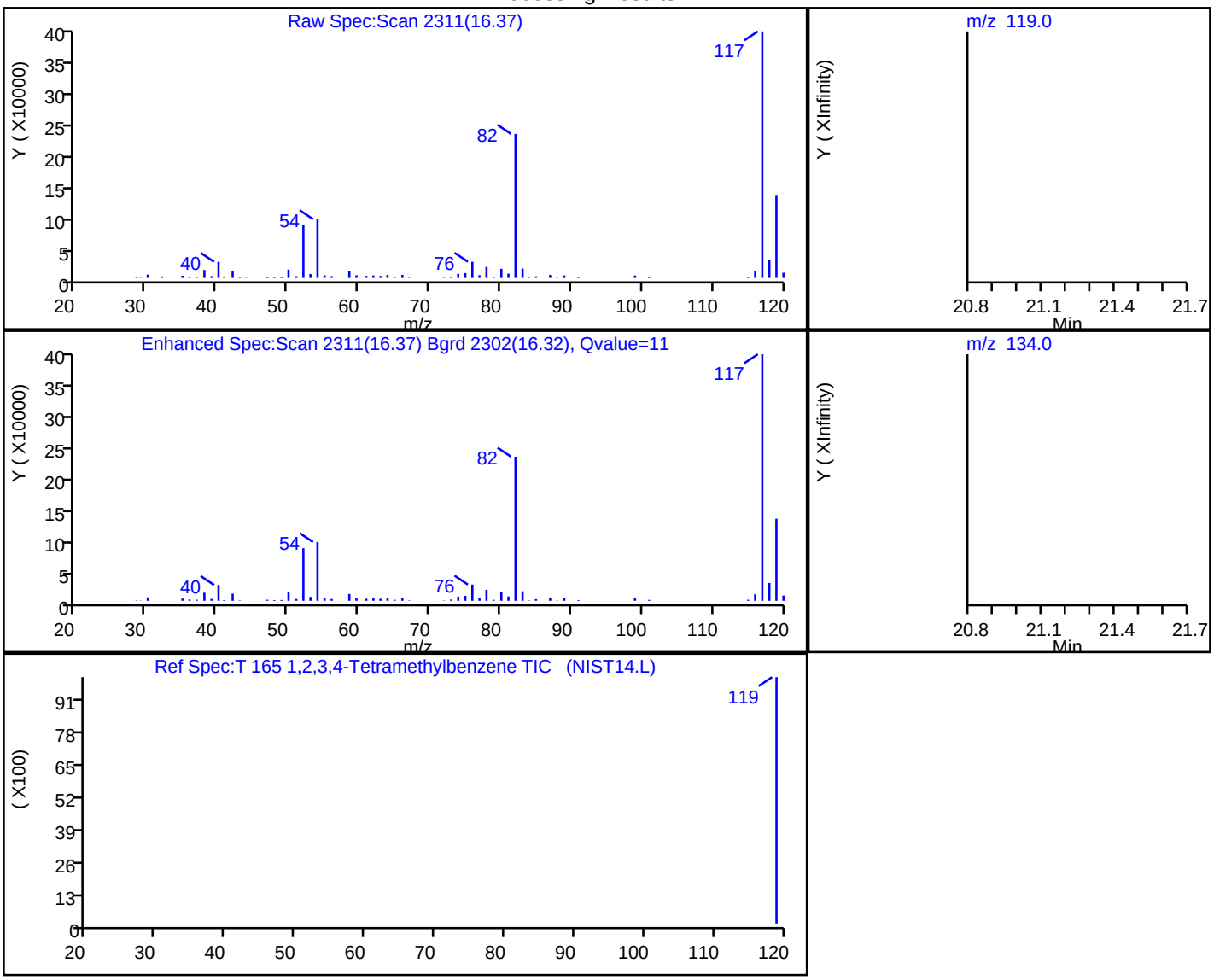
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-07.D				
Injection Date:	20-Mar-2018 19:36:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-7	Lab Sample ID:	140-10994-7		
Client ID:	09679				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	277319	1.274486
24.08	134.00	104	

Reviewer: barlozhetskayaa, 20-Mar-2018 20:16:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

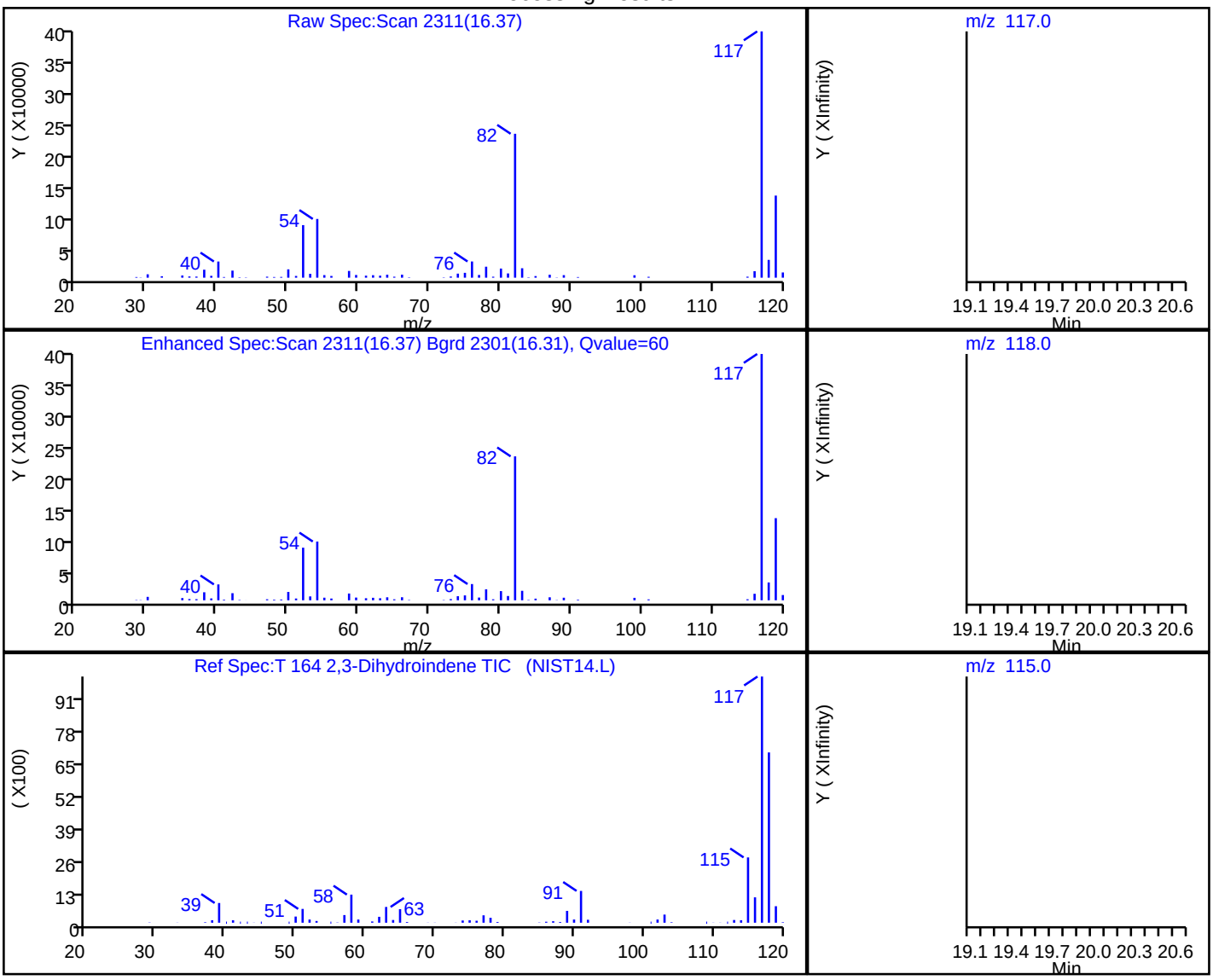
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-07.D				
Injection Date:	20-Mar-2018 19:36:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-7	Lab Sample ID:	140-10994-7		
Client ID:	09679				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	870371	4.000000
16.37	118.00	62943	
16.37	115.00	2985	

Reviewer: barlozhetskayaa, 20-Mar-2018 20:16:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10720 | Lab Sample ID: 140-10994-8

Matrix: Air | Lab File ID: JC20bk10994-08.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 20:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	1.2		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10720
Lab Sample ID: 140-10994-8
Matrix: Air
Lab File ID: JC20bk10994-08.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 20:23
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10720 | Lab Sample ID: 140-10994-8

Matrix: Air | Lab File ID: JC20bk10994-08.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 20:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10720 Lab Sample ID: 140-10994-8
Matrix: Air Lab File ID: JC20bk10994-08.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 20:23
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

Report Date: 21-Mar-2018 09:54:48 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Lims ID:	140-10994-A-8				
Client ID:	10720				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 20:23:30	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-011				
Misc. Info.:	10720				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:54:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:47:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.680	-0.007	91	177059	4.00	
* 2 1,4-Difluorobenzene	114	11.771	11.778	-0.007	95	974422	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.378	-0.003	88	835138	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.975	-0.003	96	602746	3.99	
22 Acetone	58	6.117	6.064	0.046	23	26929	1.34	
62 1,4-Dioxane	88	12.717	12.702	0.003	91	20878	1.23	

Reagents:

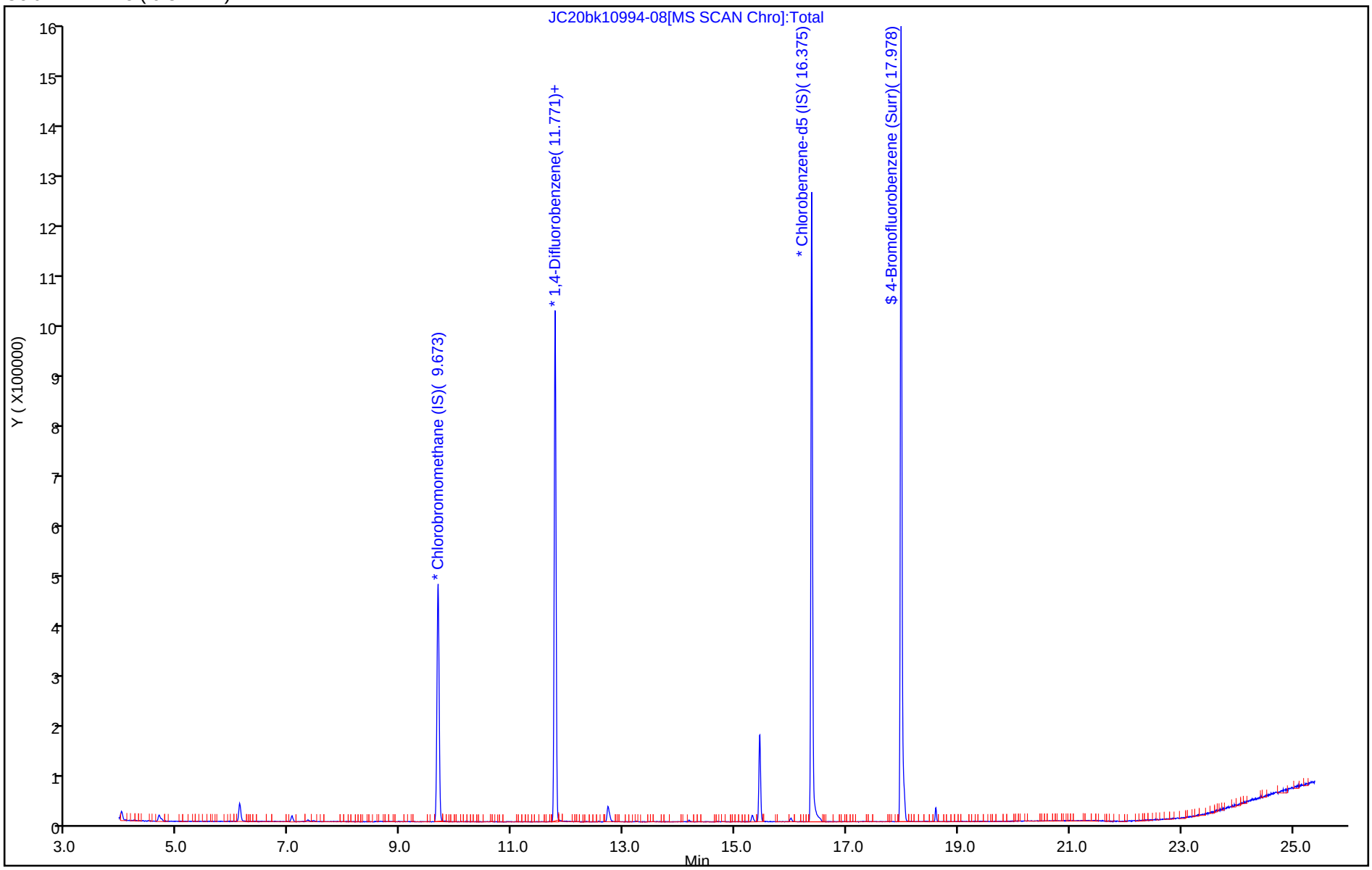
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:48 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Injection Date:	20-Mar-2018 20:23:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-8	Lab Sample ID:	140-10994-8	Worklist Smp#:	11
Client ID:	10720				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

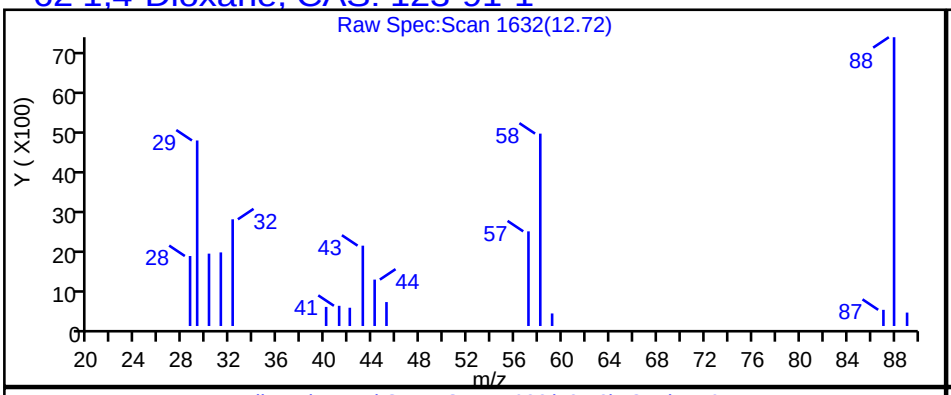


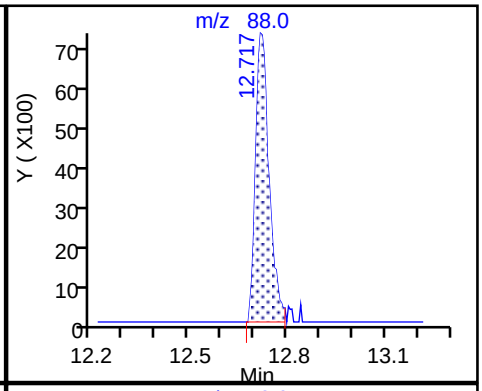
Report Date: 21-Mar-2018 09:54:48 Chrom Revision: 2.2 13-Mar-2018 08:45:20

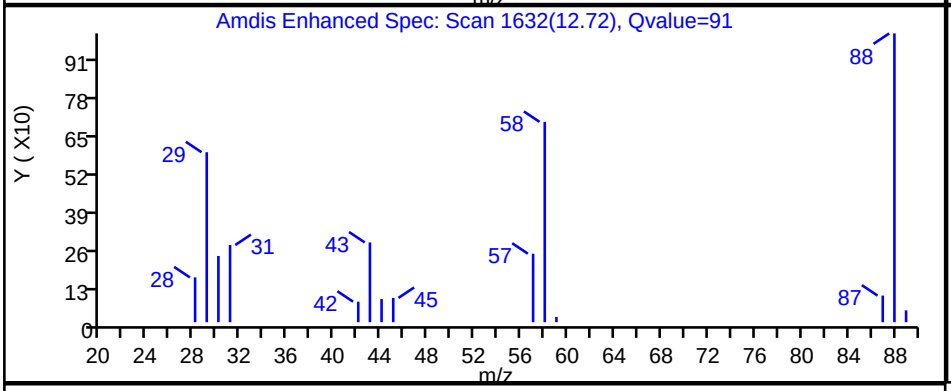
TestAmerica Knoxville

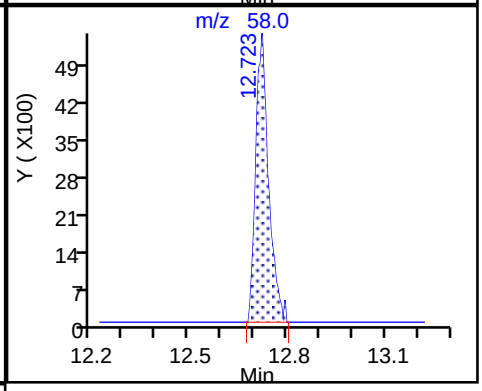
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Injection Date:	20-Mar-2018 20:23:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-8	Lab Sample ID:	140-10994-8		
Client ID:	10720				
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

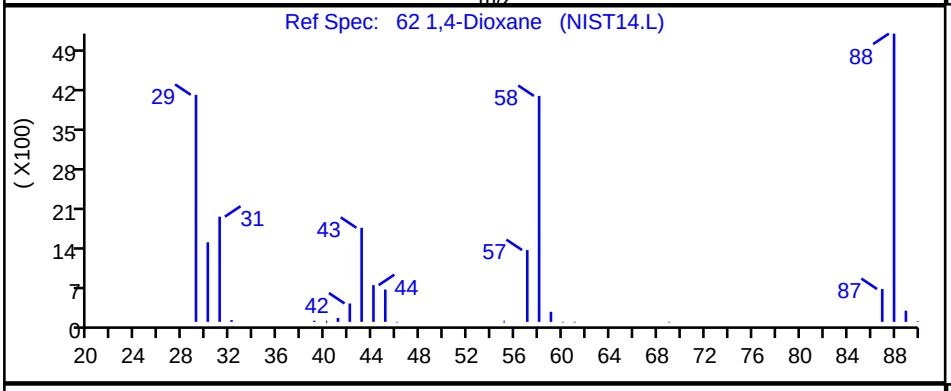
62 1,4-Dioxane, CAS: 123-91-1

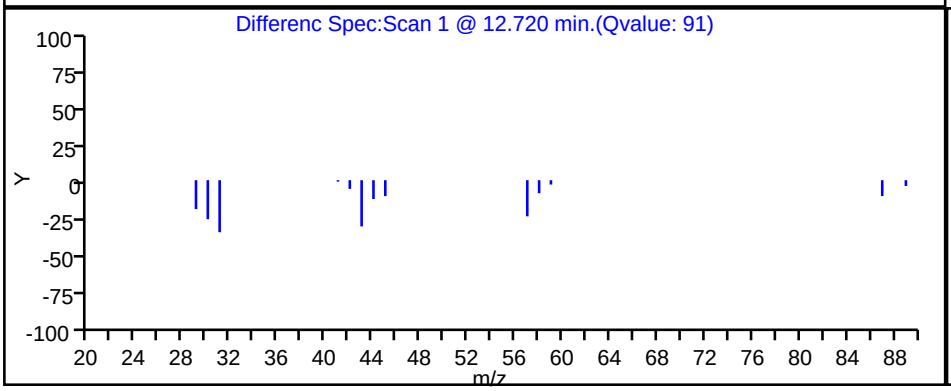


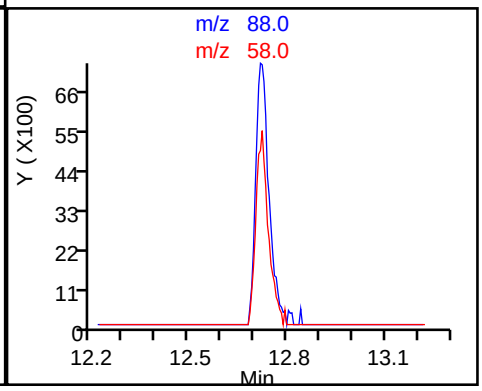












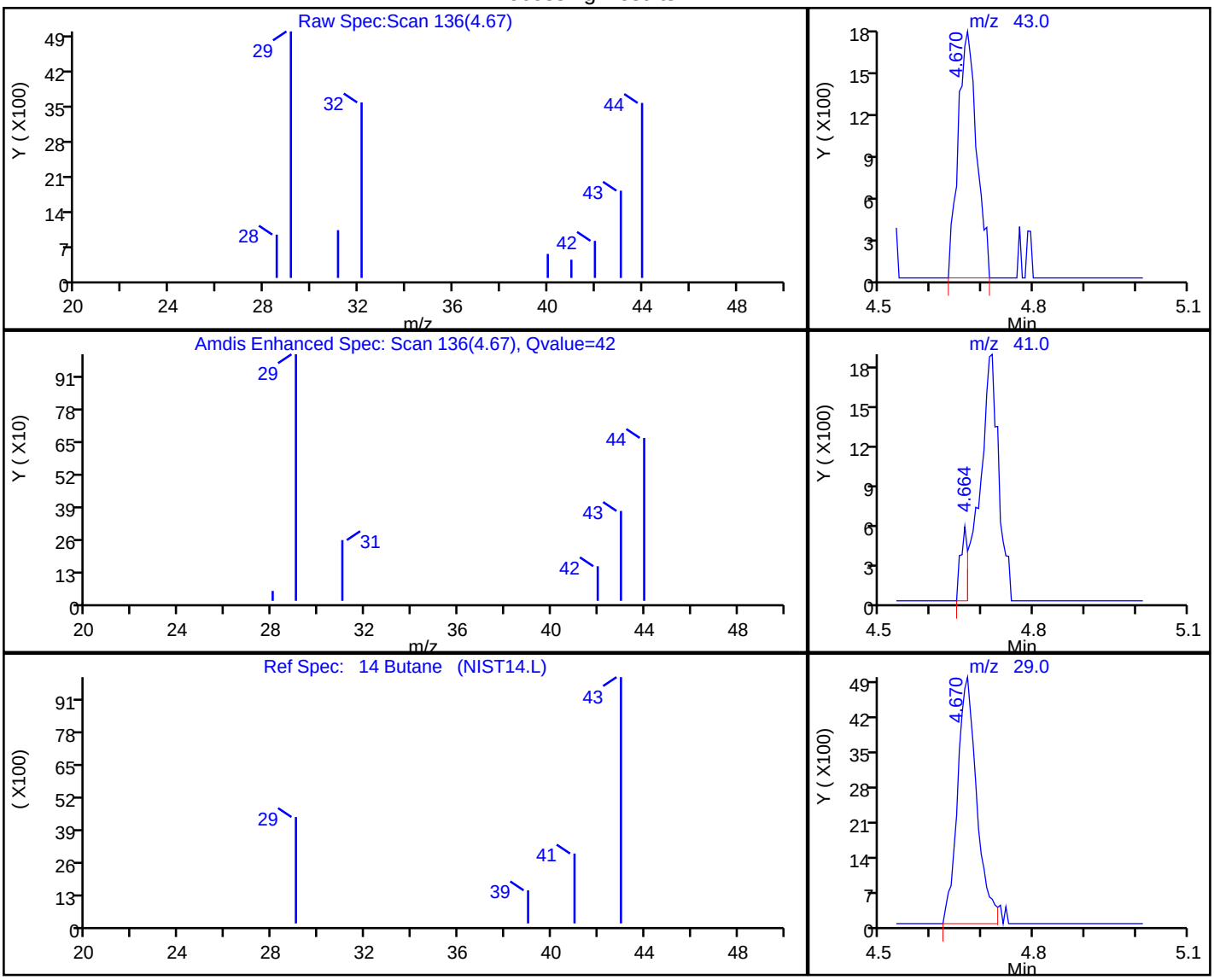
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Injection Date:	20-Mar-2018 20:23:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-8	Lab Sample ID:	140-10994-8		
Client ID:	10720				
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	4351	0.049042
4.66	41.00	509	
4.67	29.00	12894	

Reviewer: tajh, 21-Mar-2018 09:47:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

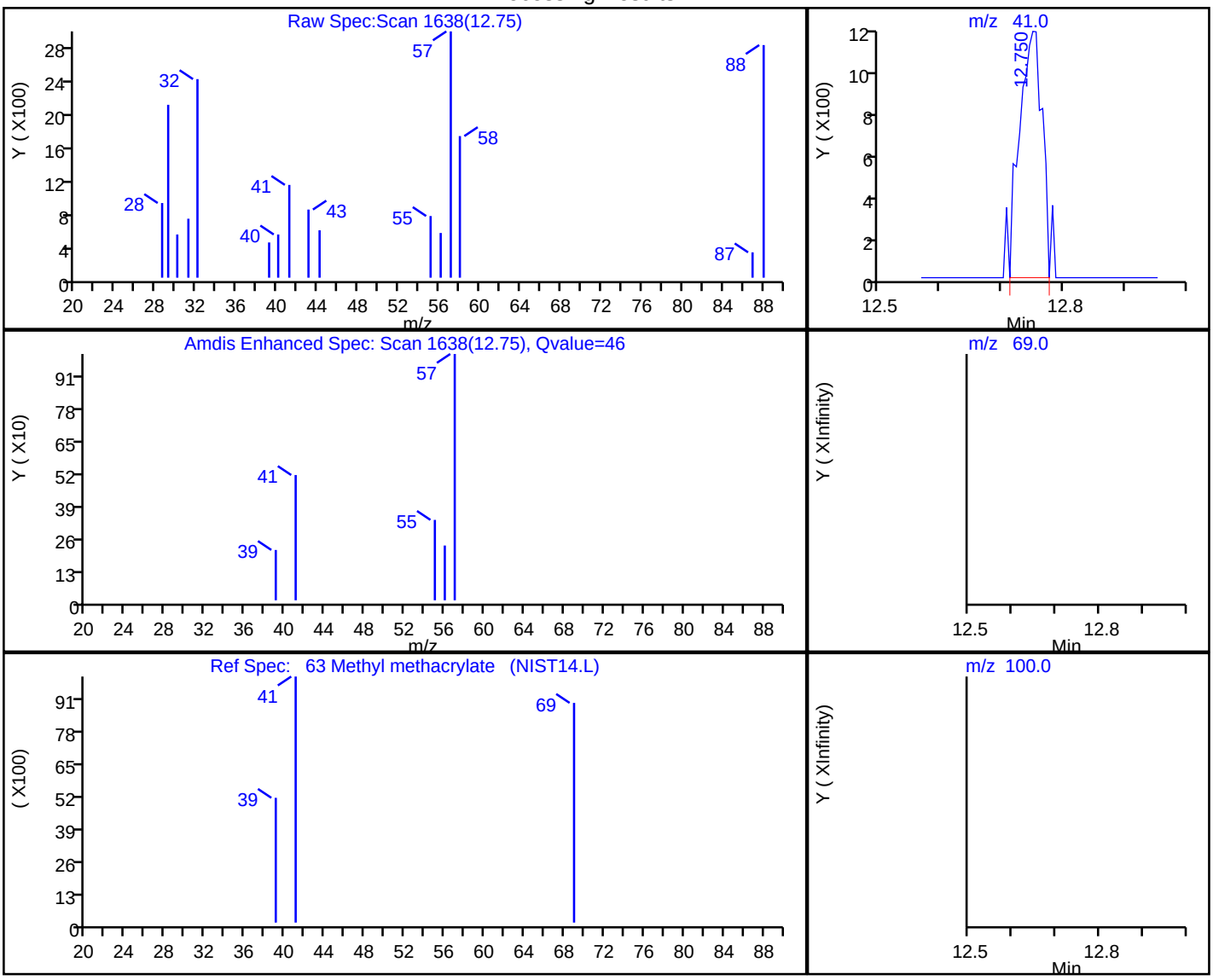
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Injection Date:	20-Mar-2018 20:23:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-8	Lab Sample ID:	140-10994-8		
Client ID:	10720				
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

63 Methyl methacrylate, CAS: 80-62-6

Processing Results



RT	Mass	Response	Amount
12.75	41.00	2808	0.047438
12.76	69.00	0	
12.76	100.00	0	

Reviewer: tajh, 21-Mar-2018 09:47:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

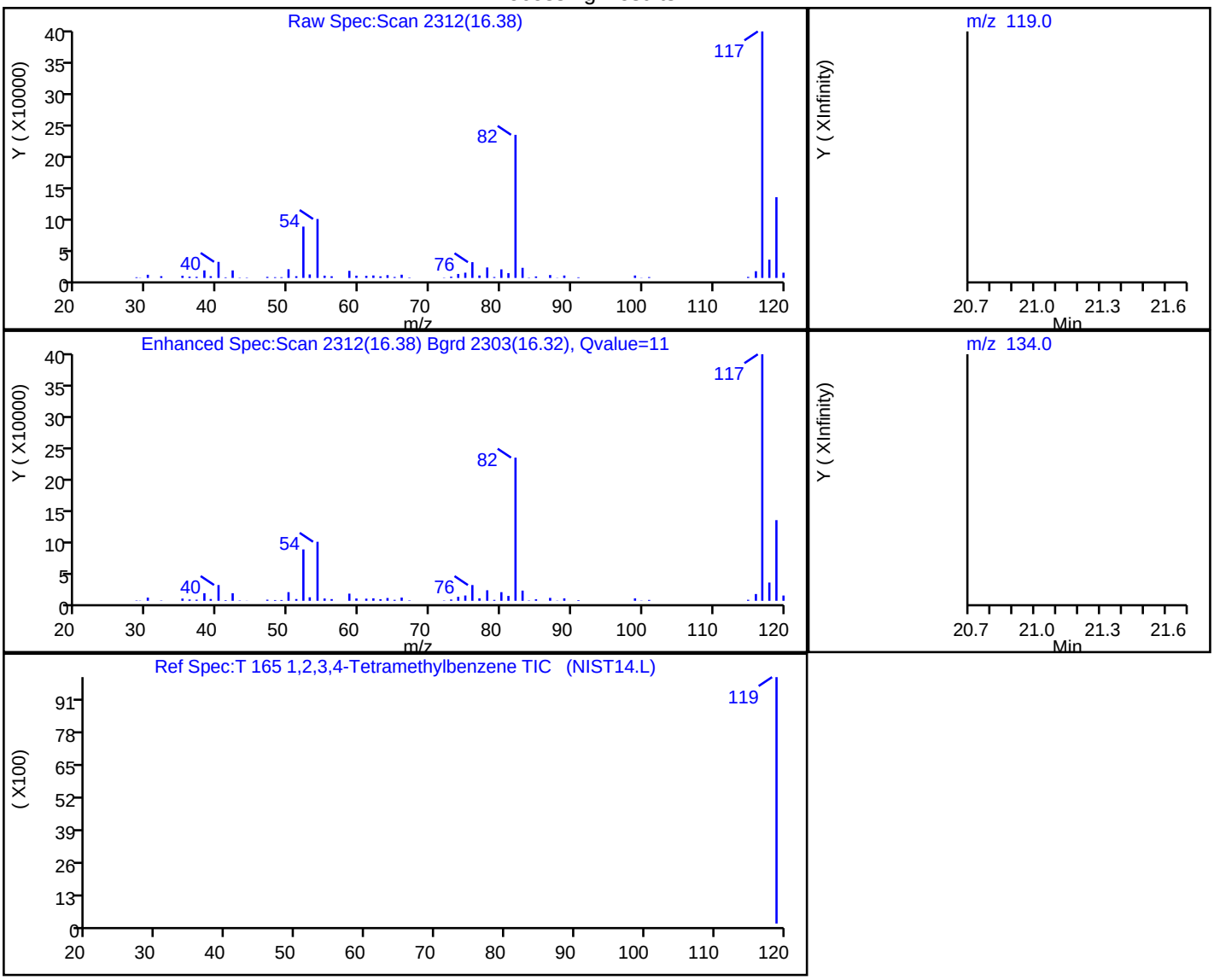
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Injection Date:	20-Mar-2018 20:23:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-8	Lab Sample ID:	140-10994-8		
Client ID:	10720				
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	272068	1.303104
15.44	134.00	1537	

Reviewer: tajh, 21-Mar-2018 09:47:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

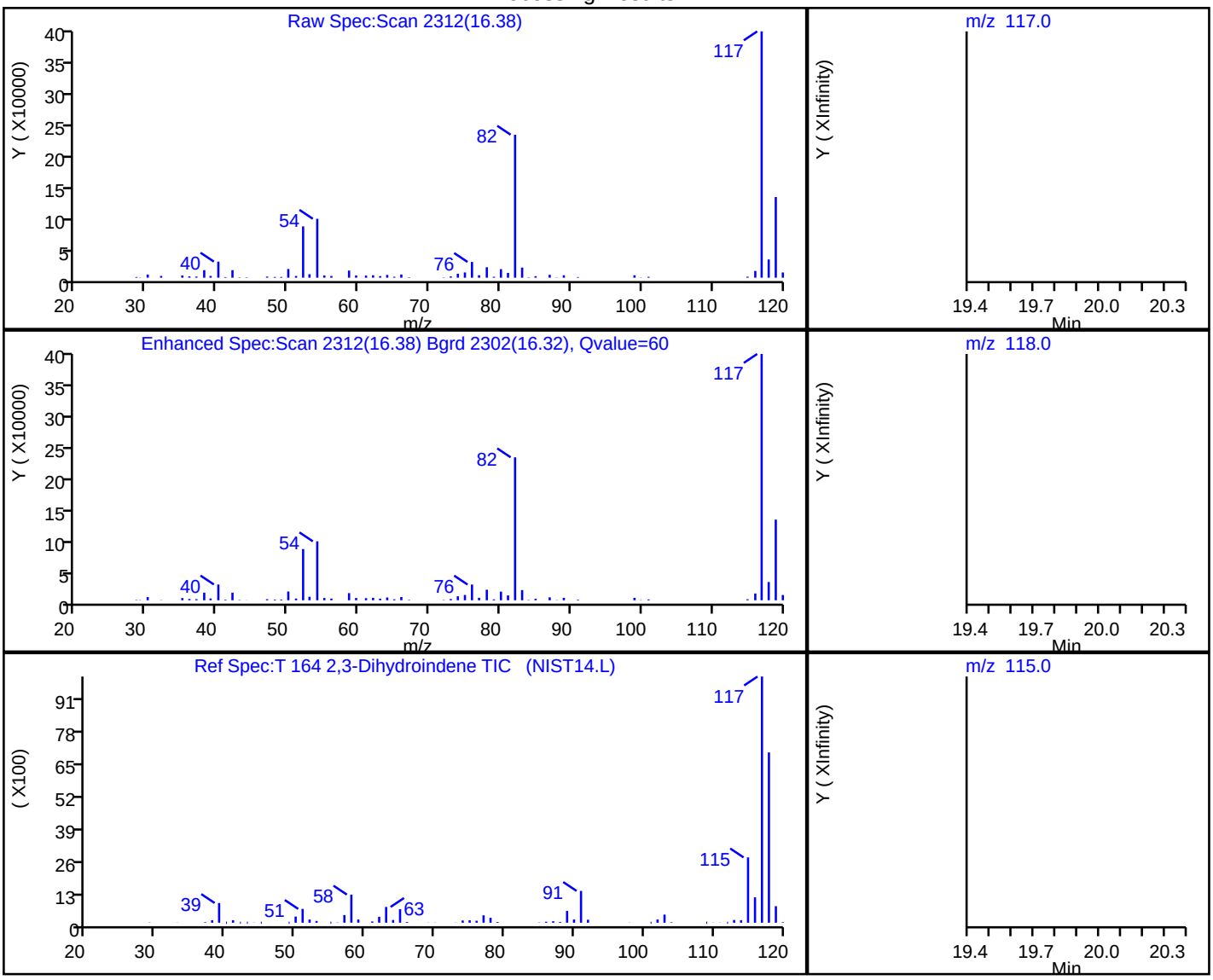
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-08.D				
Injection Date:	20-Mar-2018 20:23:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-8	Lab Sample ID:	140-10994-8		
Client ID:	10720				
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	835138	4.000000
16.38	118.00	63176	
16.38	115.00	2712	

Reviewer: tajh, 21-Mar-2018 09:47:17

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10816 | Lab Sample ID: 140-10994-9

Matrix: Air | Lab File ID: JC20bk10994-09.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 21:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10816 | Lab Sample ID: 140-10994-9
Matrix: Air | Lab File ID: JC20bk10994-09.D
Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 21:11
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10816
Lab Sample ID: 140-10994-9
Matrix: Air
Lab File ID: JC20bk10994-09.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 21:11
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10816 Lab Sample ID: 140-10994-9
Matrix: Air Lab File ID: JC20bk10994-09.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 21:11
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-09.D				
Lims ID:	140-10994-A-9				
Client ID:	10816				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 21:11:30	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-012				
Misc. Info.:	10816				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:54:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	21-Mar-2018 09:48:03		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.667	9.680	-0.013	91	165458	4.00	
* 2 1,4-Difluorobenzene	114	11.765	11.778	-0.013	95	900417	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.370	16.378	-0.008	88	804082	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.975	-0.002	95	583432	4.01	

Reagents:

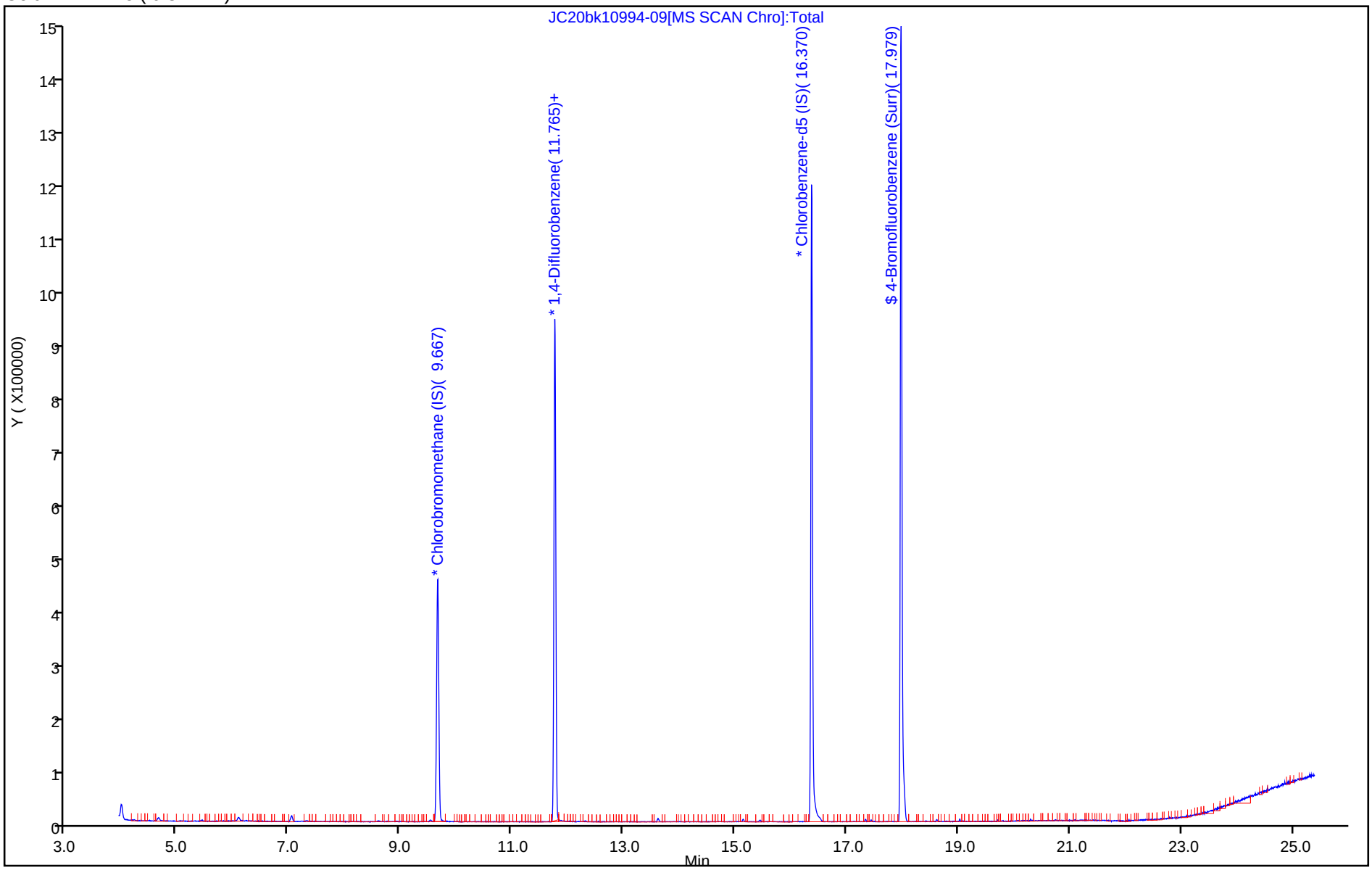
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:50 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-09.D				
Injection Date:	20-Mar-2018 21:11:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-9	Lab Sample ID:	140-10994-9	Worklist Smp#:	12
Client ID:	10816				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Report Date: 21-Mar-2018 09:54:50 Chrom Revision: 2.2 13-Mar-2018 08:45:20

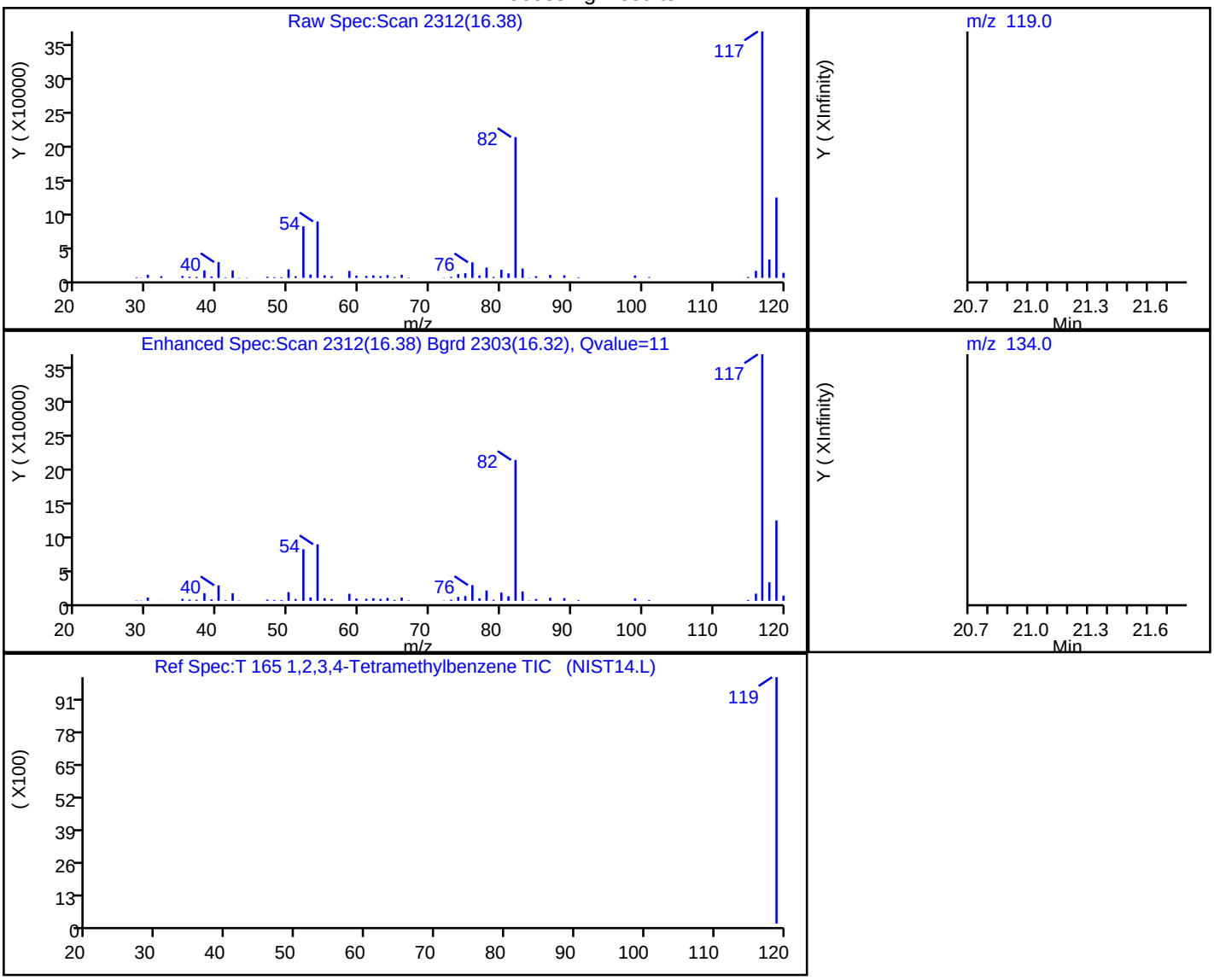
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-09.D				
Injection Date:	20-Mar-2018 21:11:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-9	Lab Sample ID:	140-10994-9		
Client ID:	10816				
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	260184	1.294316
23.85	134.00	211	

Reviewer: tajh, 21-Mar-2018 09:48:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

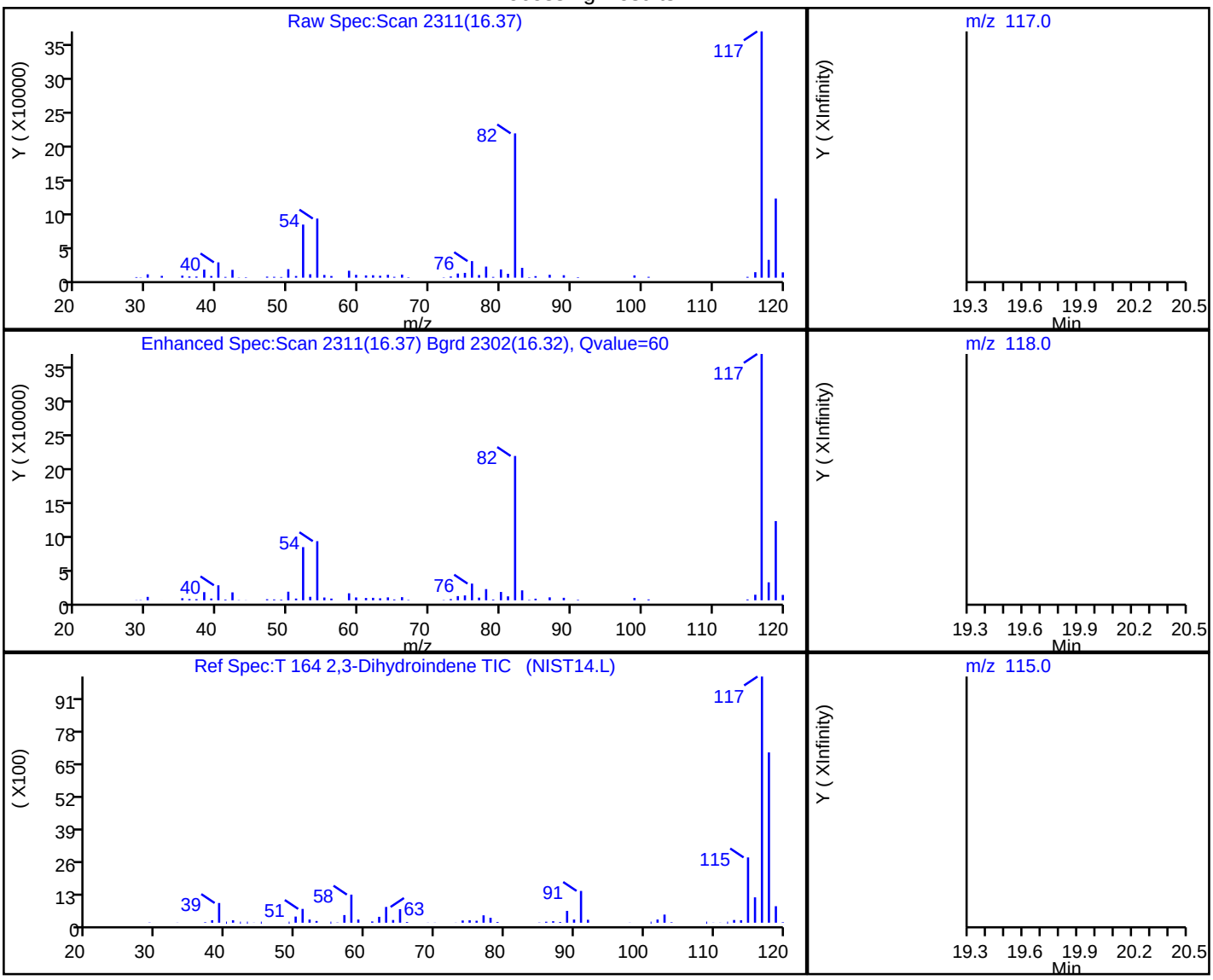
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-09.D				
Injection Date:	20-Mar-2018 21:11:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-9	Lab Sample ID:	140-10994-9		
Client ID:	10816				
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	804082	4.000000
16.38	118.00	58959	
16.36	115.00	1223	

Reviewer: tajh, 21-Mar-2018 09:48:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10882 | Lab Sample ID: 140-10994-10

Matrix: Air | Lab File ID: JC20bk10994-10.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 21:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10882
Lab Sample ID: 140-10994-10
Matrix: Air
Lab File ID: JC20bk10994-10.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 21:59
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10882 | Lab Sample ID: 140-10994-10

Matrix: Air | Lab File ID: JC20bk10994-10.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 21:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10882 Lab Sample ID: 140-10994-10
Matrix: Air Lab File ID: JC20bk10994-10.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 21:59
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-10.D				
Lims ID:	140-10994-A-10				
Client ID:	10882				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 21:59:30	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-013				
Misc. Info.:	10882				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:54:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:48:44

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.673	9.680	-0.007	91	171950	4.00	
*	2 1,4-Difluorobenzene	114	11.771	11.778	-0.007	95	926174	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.376	16.378	-0.002	89	802933	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.979	17.975	-0.002	95	581371	4.01	

Reagents:

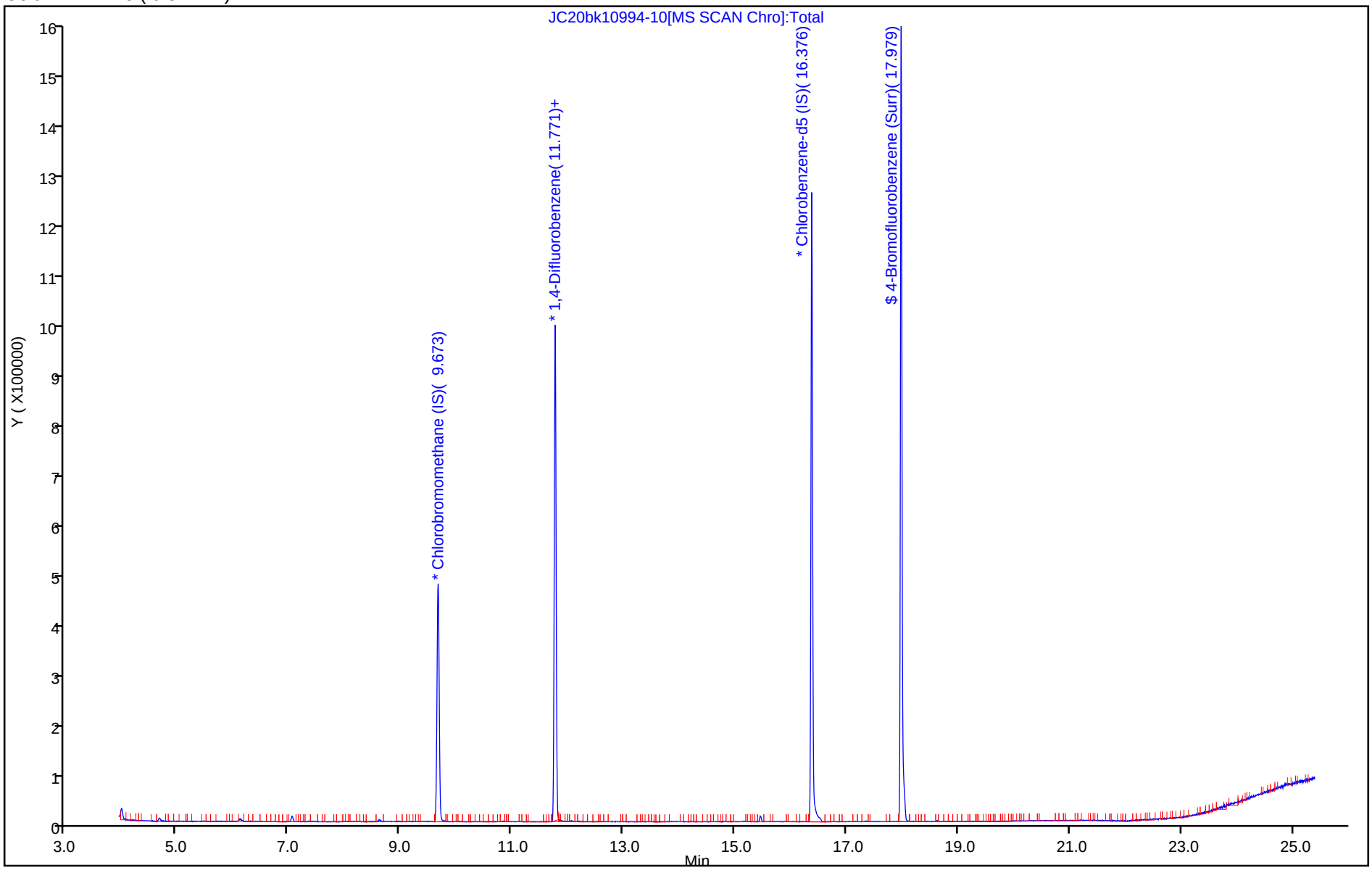
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:51 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-10.D				
Injection Date:	20-Mar-2018 21:59:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-10	Lab Sample ID:	140-10994-10	Worklist Smp#:	13
Client ID:	10882				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



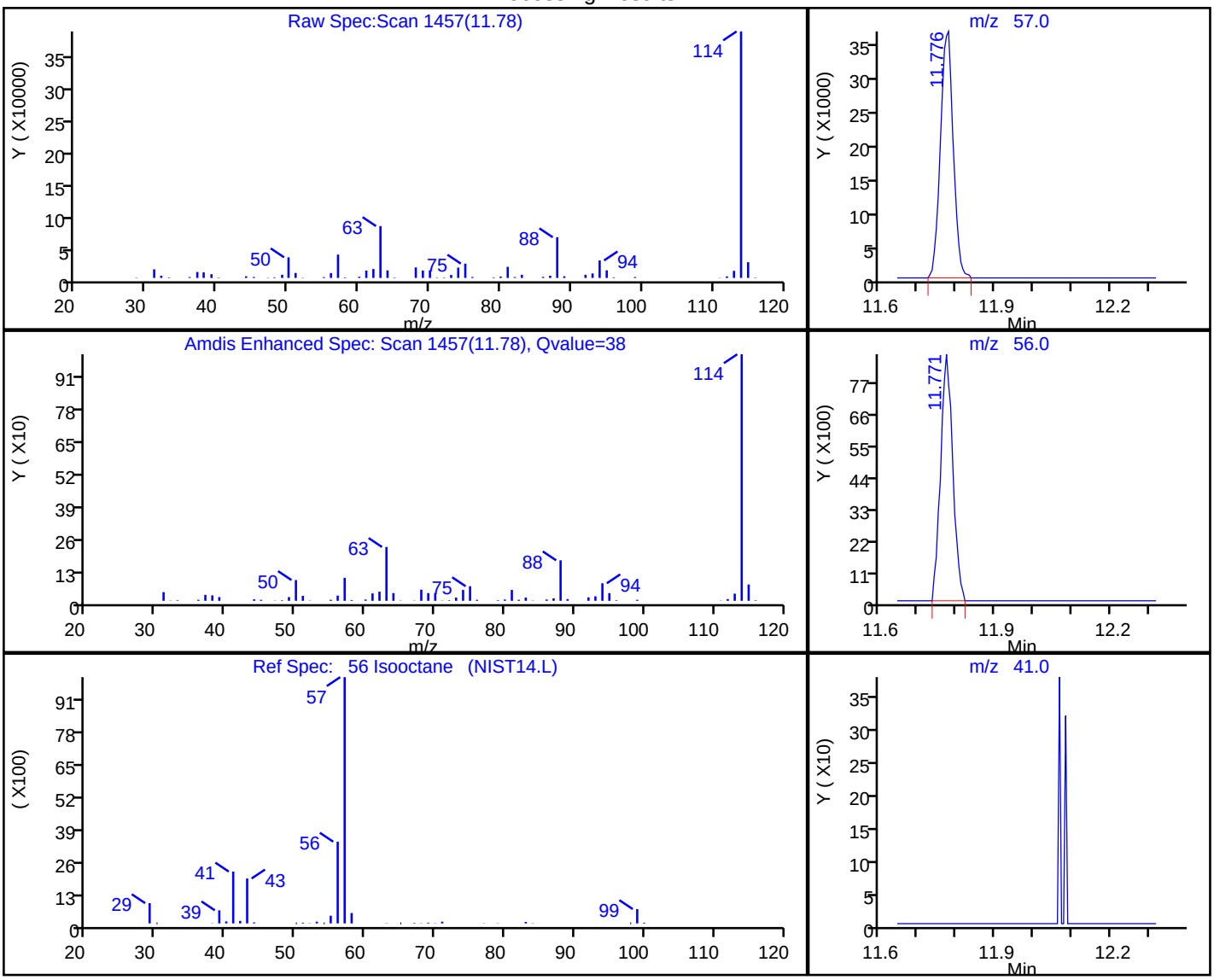
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-10.D				
Injection Date:	20-Mar-2018 21:59:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-10	Lab Sample ID:	140-10994-10		
Client ID:	10882				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Isooctane, CAS: 540-84-1

Processing Results



RT	Mass	Response	Amount
11.78	57.00	84914	0.322148
11.77	56.00	19116	
11.98	41.00	0	

Reviewer: tajh, 21-Mar-2018 09:48:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

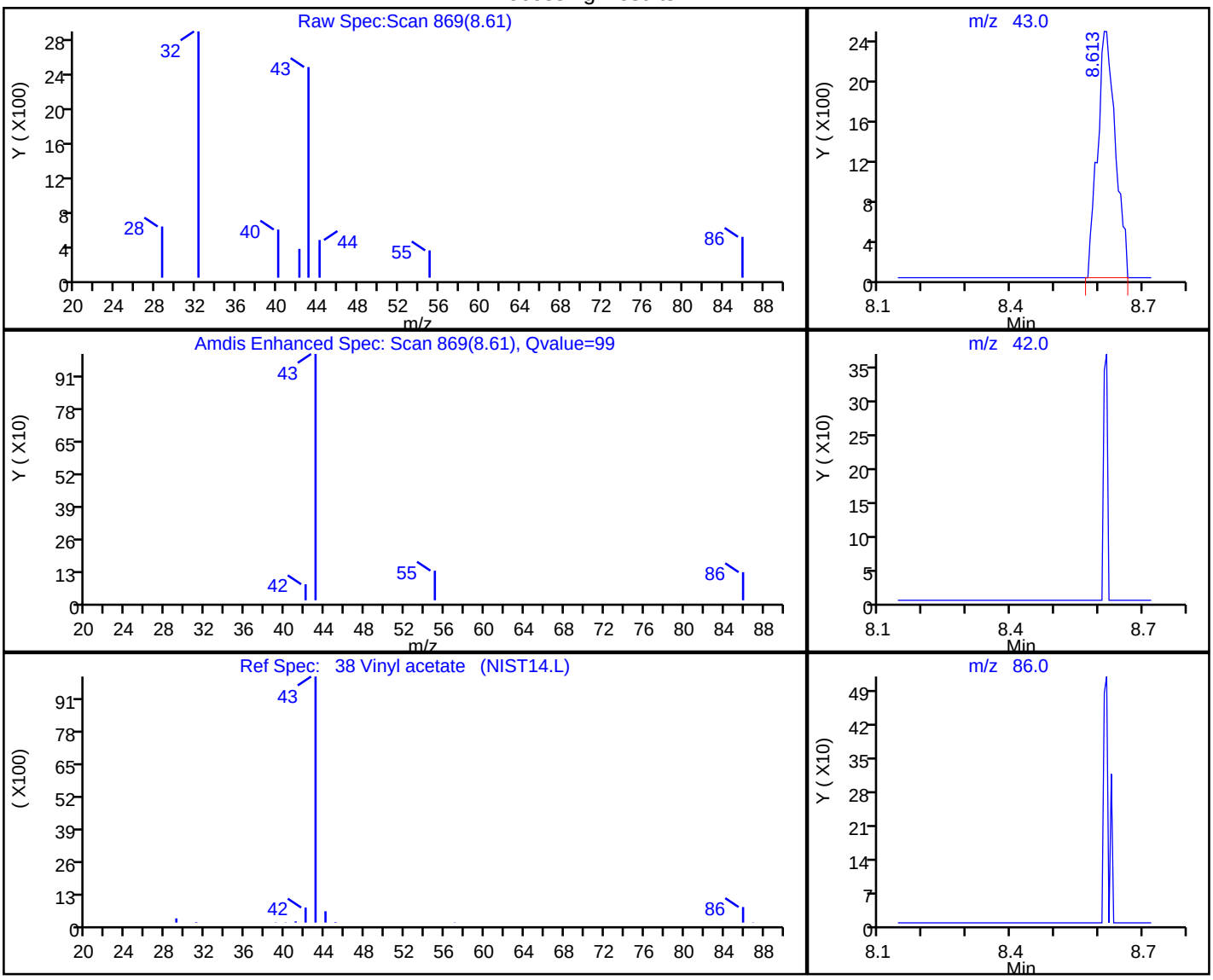
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-10.D				
Injection Date:	20-Mar-2018 21:59:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-10	Lab Sample ID:	140-10994-10		
Client ID:	10882				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.61	43.00	7029	0.057625
8.43	42.00	0	
8.43	86.00	0	

Reviewer: tajh, 21-Mar-2018 09:48:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

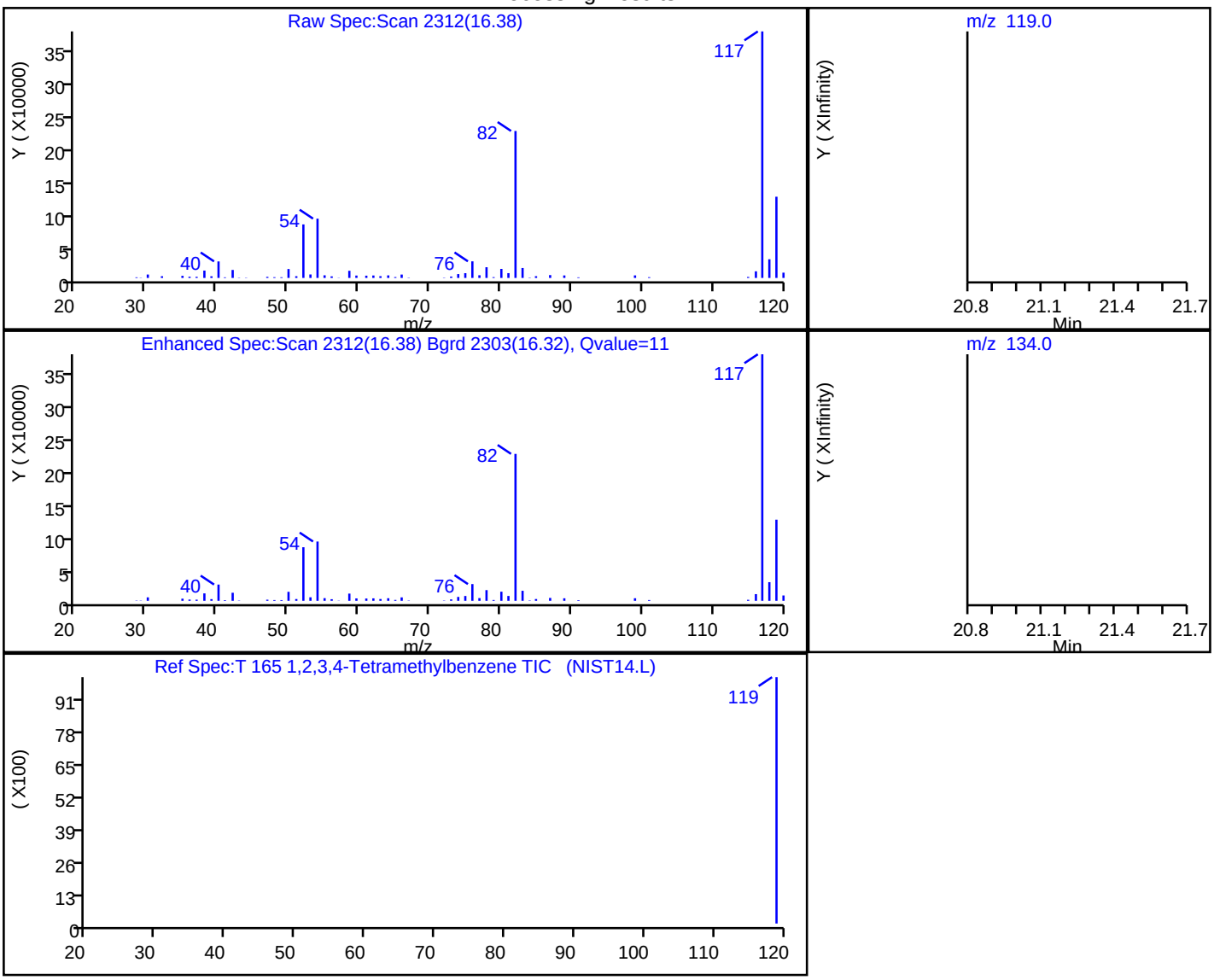
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-10.D				
Injection Date:	20-Mar-2018 21:59:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-10	Lab Sample ID:	140-10994-10		
Client ID:	10882				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	258192	1.286244
24.21	134.00	208	

Reviewer: tajh, 21-Mar-2018 09:48:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

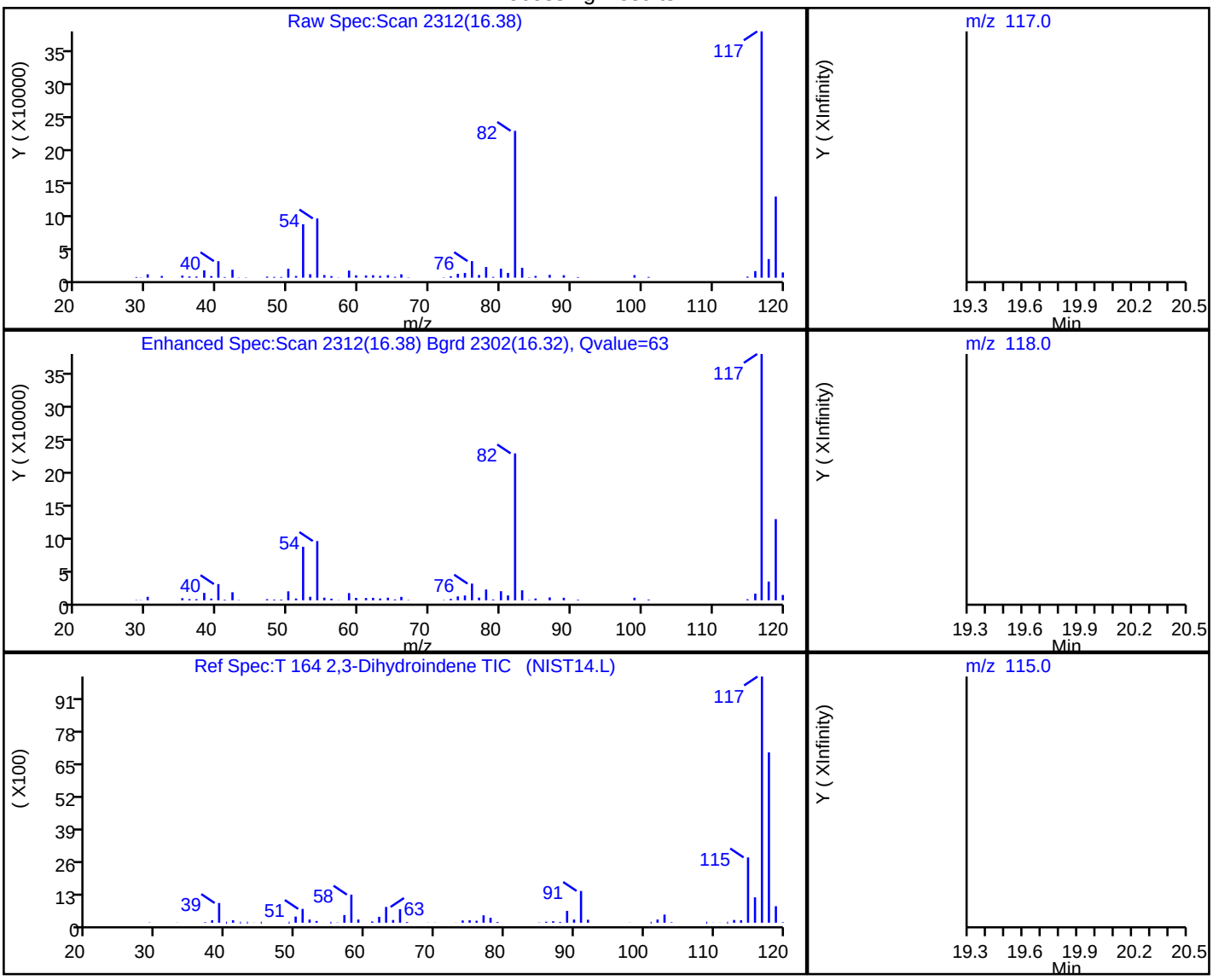
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-10.D				
Injection Date:	20-Mar-2018 21:59:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-10	Lab Sample ID:	140-10994-10		
Client ID:	10882				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	802933	4.000000
16.38	118.00	59103	
16.38	115.00	3078	

Reviewer: tajh, 21-Mar-2018 09:48:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09734 | Lab Sample ID: 140-10994-11

Matrix: Air | Lab File ID: JC20bk10994-11.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 22:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09734 | Lab Sample ID: 140-10994-11

Matrix: Air | Lab File ID: JC20bk10994-11.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 22:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09734 | Lab Sample ID: 140-10994-11

Matrix: Air | Lab File ID: JC20bk10994-11.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 22:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09734 Lab Sample ID: 140-10994-11

Matrix: Air Lab File ID: JC20bk10994-11.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 22:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-11.D				
Lims ID:	140-10994-A-11				
Client ID:	09734				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 22:47:30	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-014				
Misc. Info.:	09734				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:54:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:49:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.680	-0.002	91	168444	4.00	
* 2 1,4-Difluorobenzene	114	11.776	11.778	-0.002	95	946944	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.378	-0.003	88	851647	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.975	-0.003	94	633480	4.11	
33 Carbon disulfide	76	7.235	7.224	0.002	91	2989	0.0185	
65 4-Methyl-2-pentanone (MIBK	43	13.632	13.578	0.041	96	11185	0.1289	

Reagents:

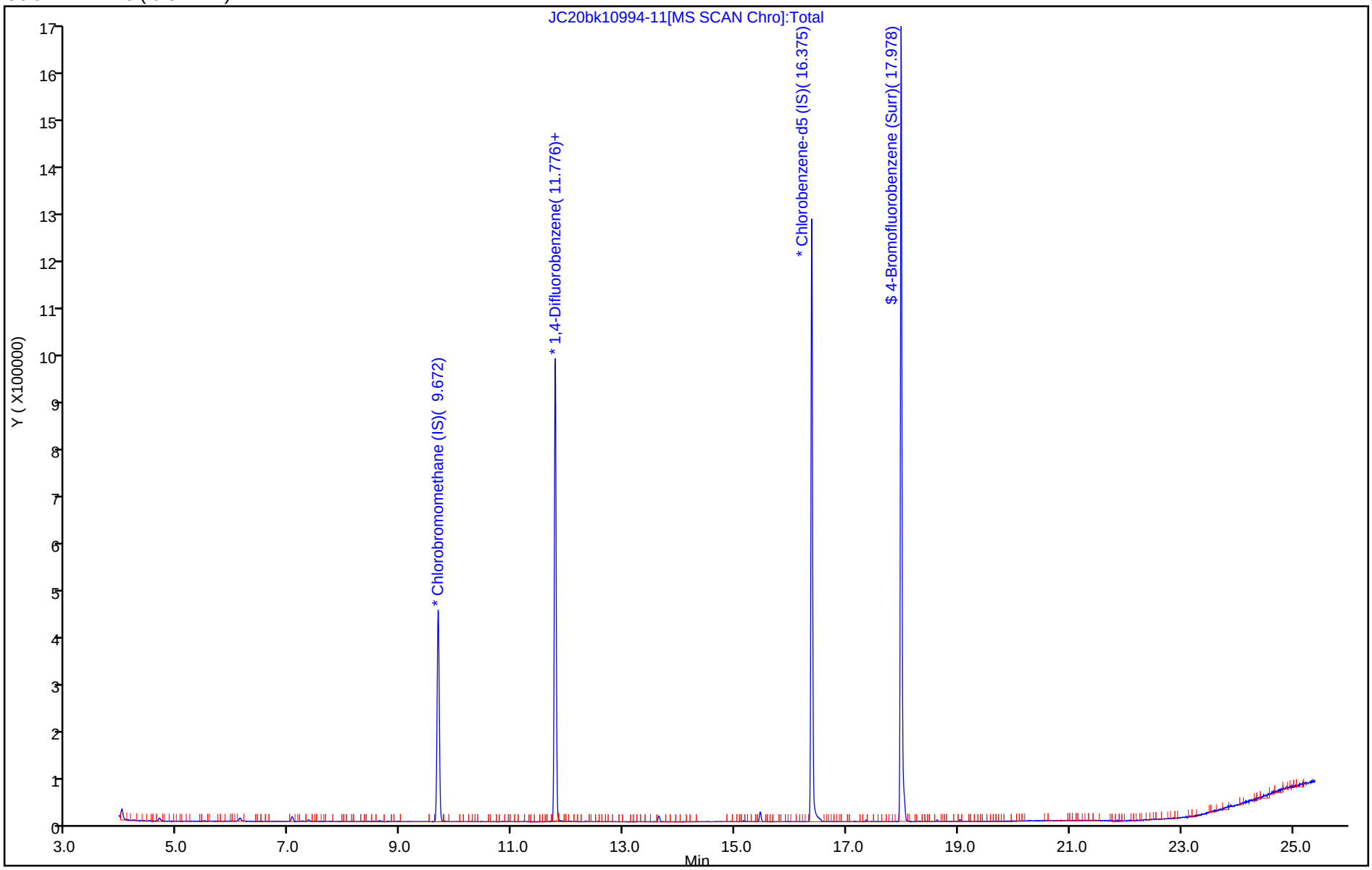
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:52 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-11.D				
Injection Date:	20-Mar-2018 22:47:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-11	Lab Sample ID:	140-10994-11	Worklist Smp#:	14
Client ID:	09734				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



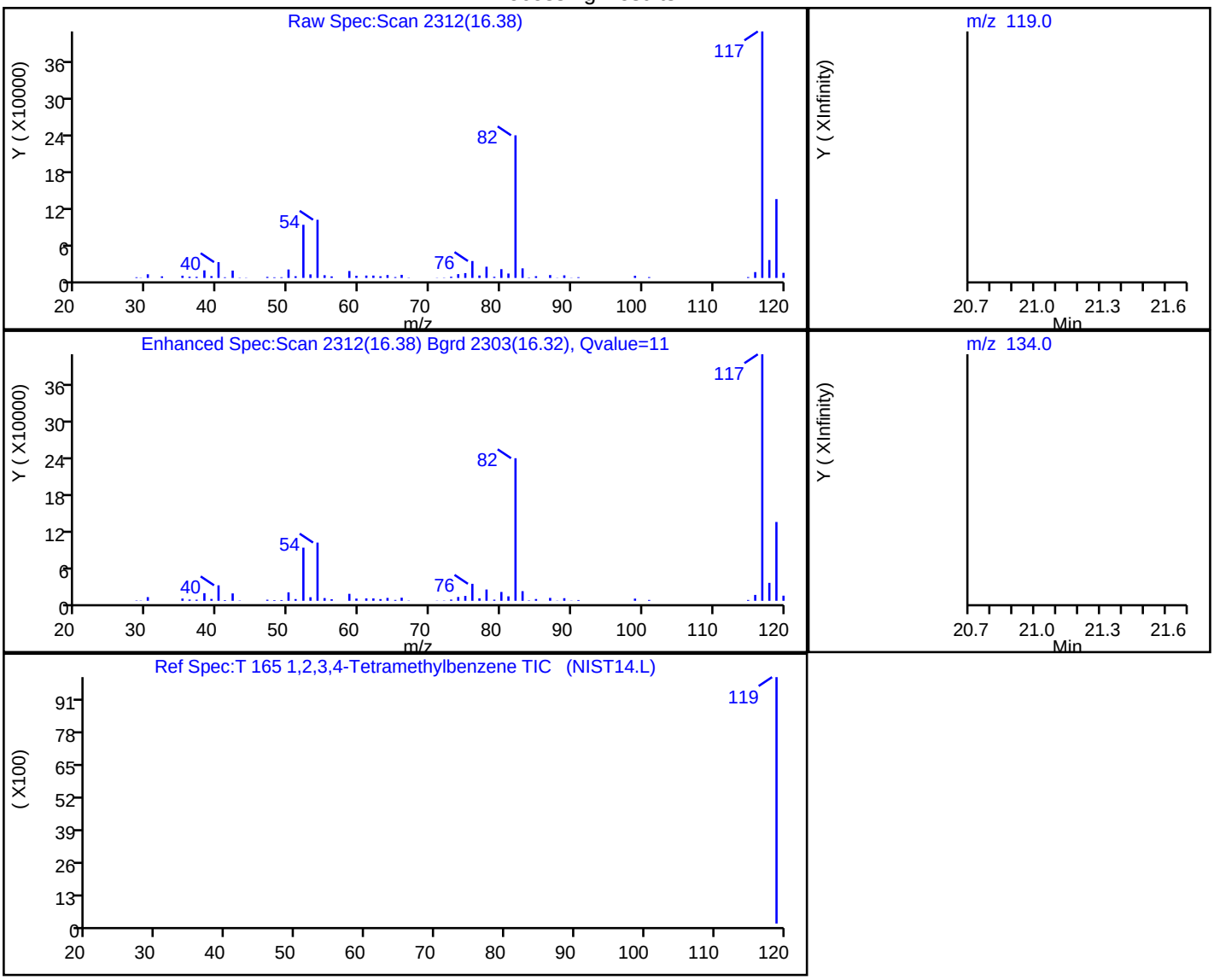
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-11.D				
Injection Date:	20-Mar-2018 22:47:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-11	Lab Sample ID:	140-10994-11		
Client ID:	09734				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	273459	1.284377
24.14	134.00	302	

Reviewer: tajh, 21-Mar-2018 09:49:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

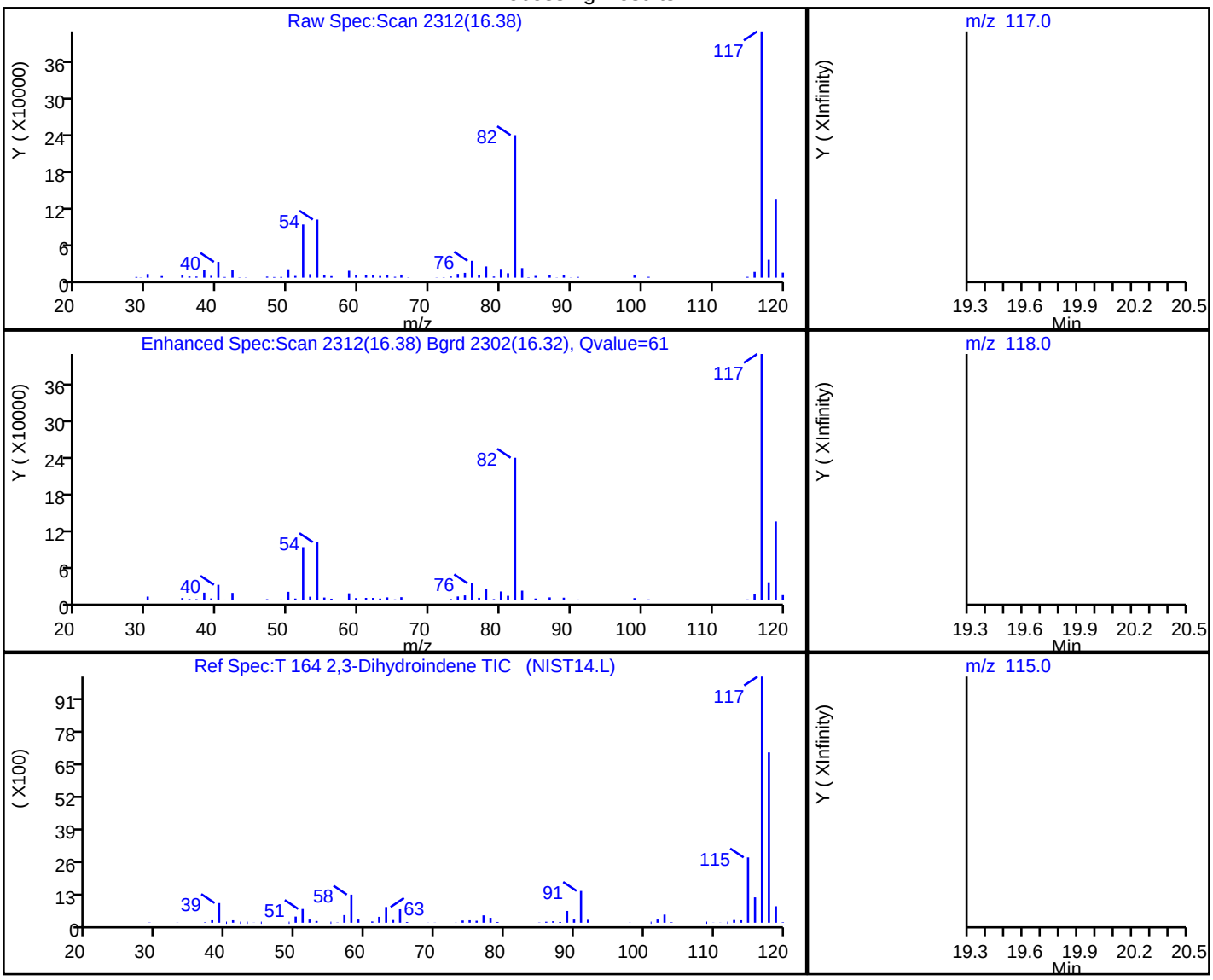
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-11.D				
Injection Date:	20-Mar-2018 22:47:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-11	Lab Sample ID:	140-10994-11		
Client ID:	09734				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	851647	4.000000
16.38	118.00	62682	
16.37	115.00	2909	

Reviewer: tajh, 21-Mar-2018 09:49:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09675 | Lab Sample ID: 140-10994-12

Matrix: Air | Lab File ID: JC20bk10994-12.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/20/2018 23:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09675
Lab Sample ID: 140-10994-12
Matrix: Air
Lab File ID: JC20bk10994-12.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 23:34
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09675
Lab Sample ID: 140-10994-12
Matrix: Air
Lab File ID: JC20bk10994-12.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/20/2018 23:34
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09675 Lab Sample ID: 140-10994-12
Matrix: Air Lab File ID: JC20bk10994-12.D
Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL) Date Analyzed: 03/20/2018 23:34
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

Report Date: 21-Mar-2018 09:54:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-12.D				
Lims ID:	140-10994-A-12				
Client ID:	09675				
Sample Type:	Client				
Inject. Date:	20-Mar-2018 23:34:30	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-015				
Misc. Info.:	09675				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:54:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:50:21

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.678	9.680	-0.002	91	181290	4.00	
*	2 1,4-Difluorobenzene	114	11.776	11.778	-0.002	95	1006228	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.375	16.378	-0.003	88	877655	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.978	17.975	-0.003	95	642705	4.05	

Reagents:

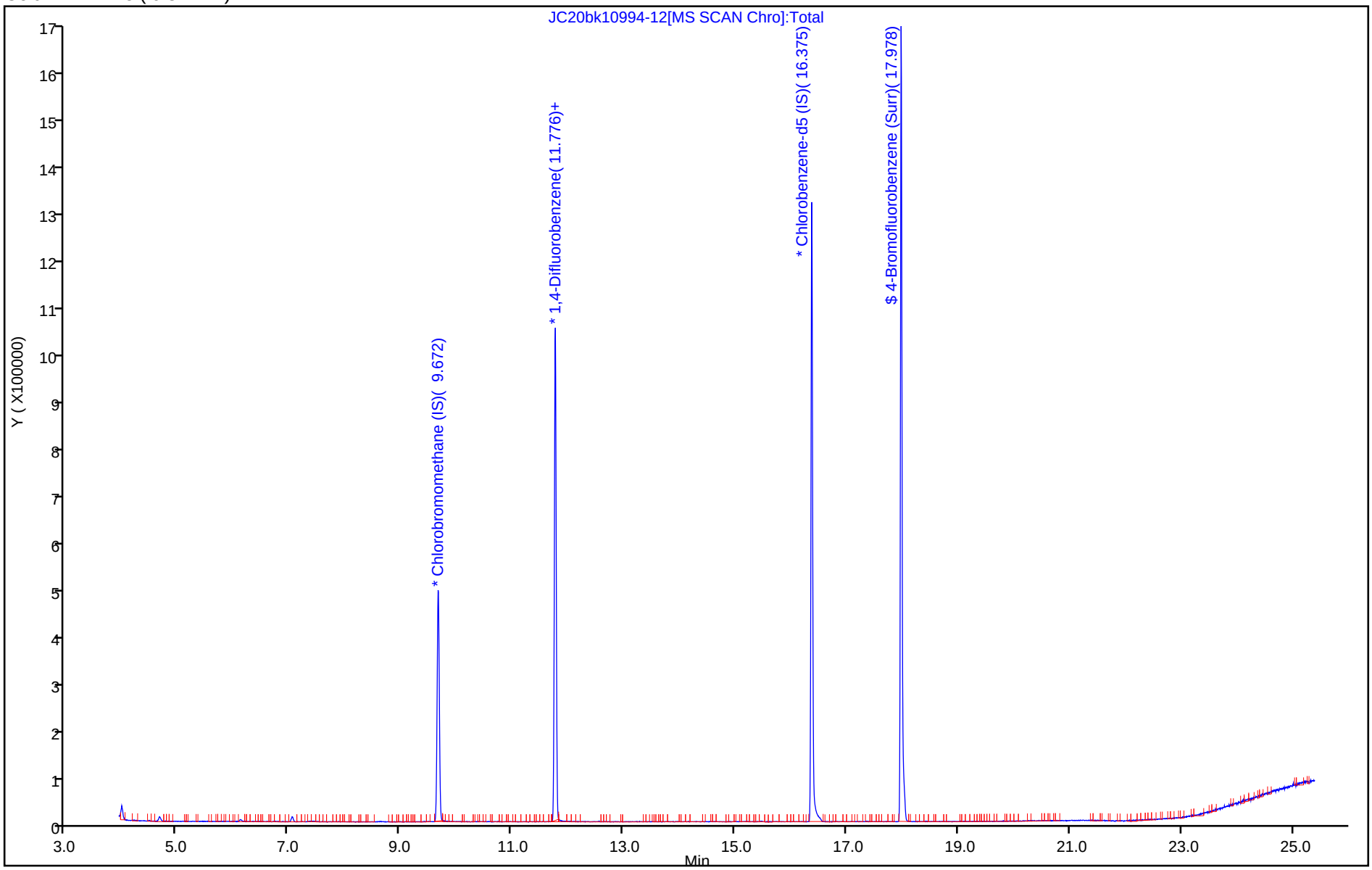
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:54 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-12.D				
Injection Date:	20-Mar-2018 23:34:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-12	Lab Sample ID:	140-10994-12	Worklist Smp#:	15
Client ID:	09675				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



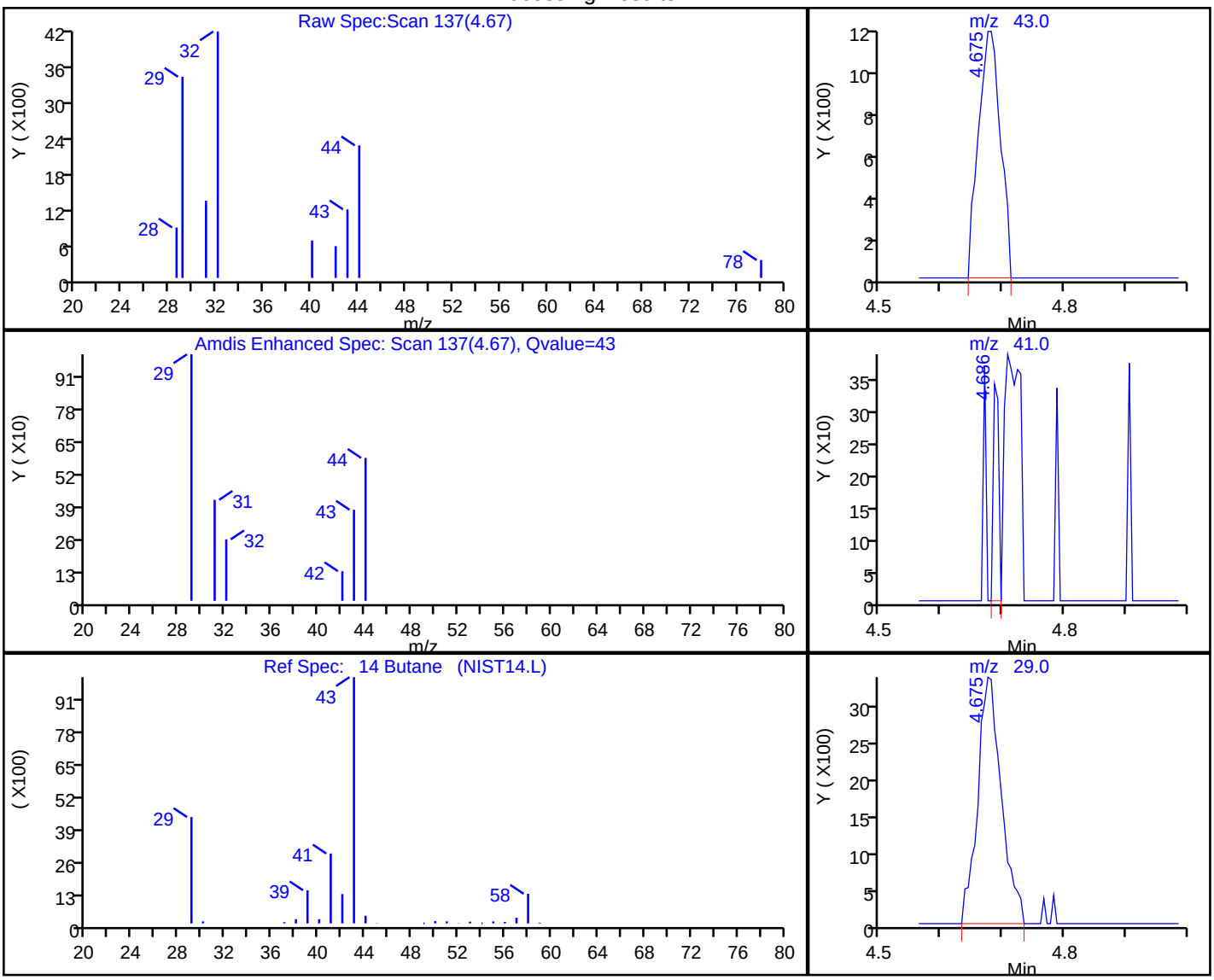
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-12.D				
Injection Date:	20-Mar-2018 23:34:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-12	Lab Sample ID:	140-10994-12		
Client ID:	09675				
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	2868	0.031572
4.69	41.00	212	
4.67	29.00	9082	

Reviewer: tajh, 21-Mar-2018 09:50:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

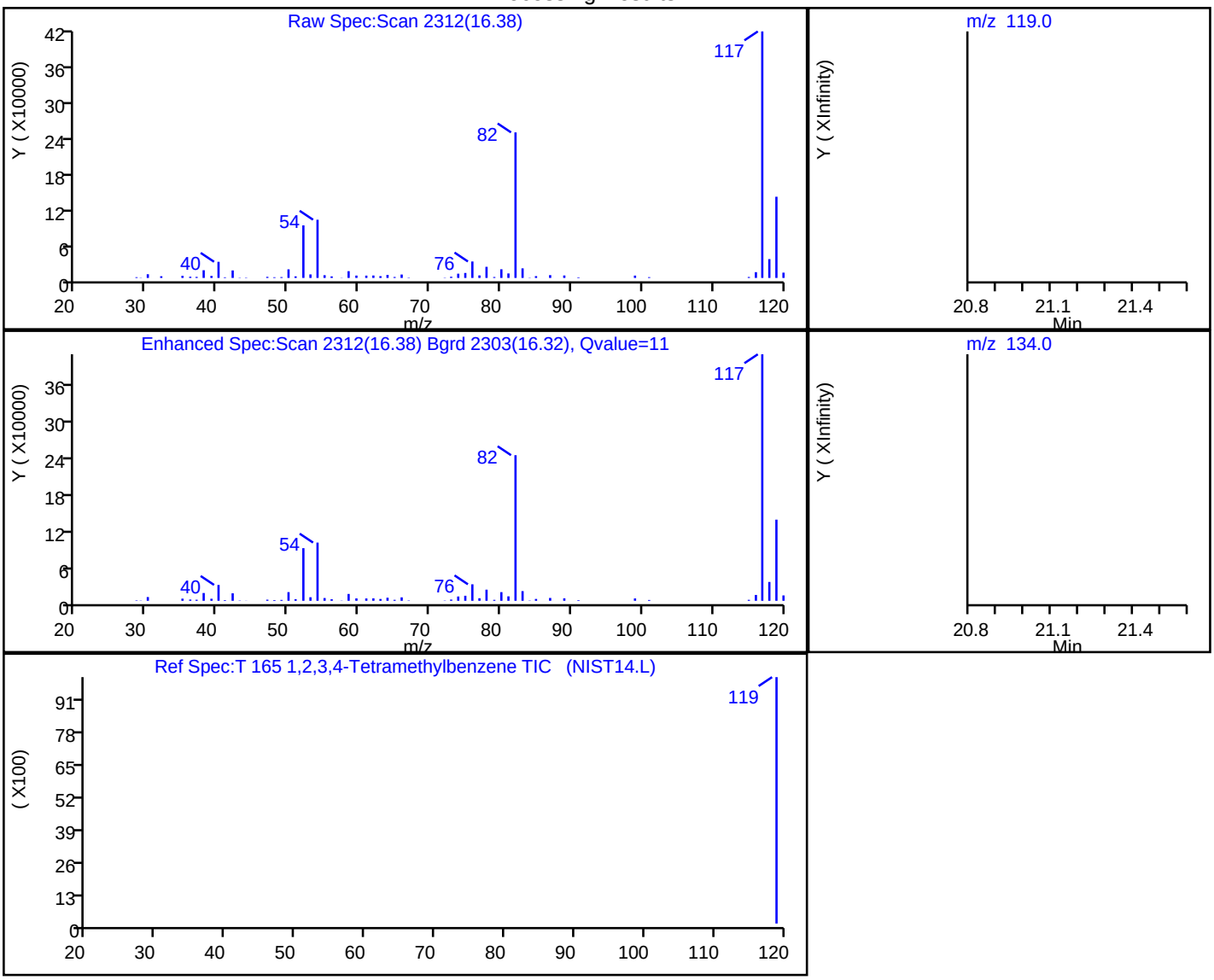
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-12.D				
Injection Date:	20-Mar-2018 23:34:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-12	Lab Sample ID:	140-10994-12		
Client ID:	09675				
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	282226	1.286273
24.21	134.00	103	

Reviewer: tajh, 21-Mar-2018 09:50:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

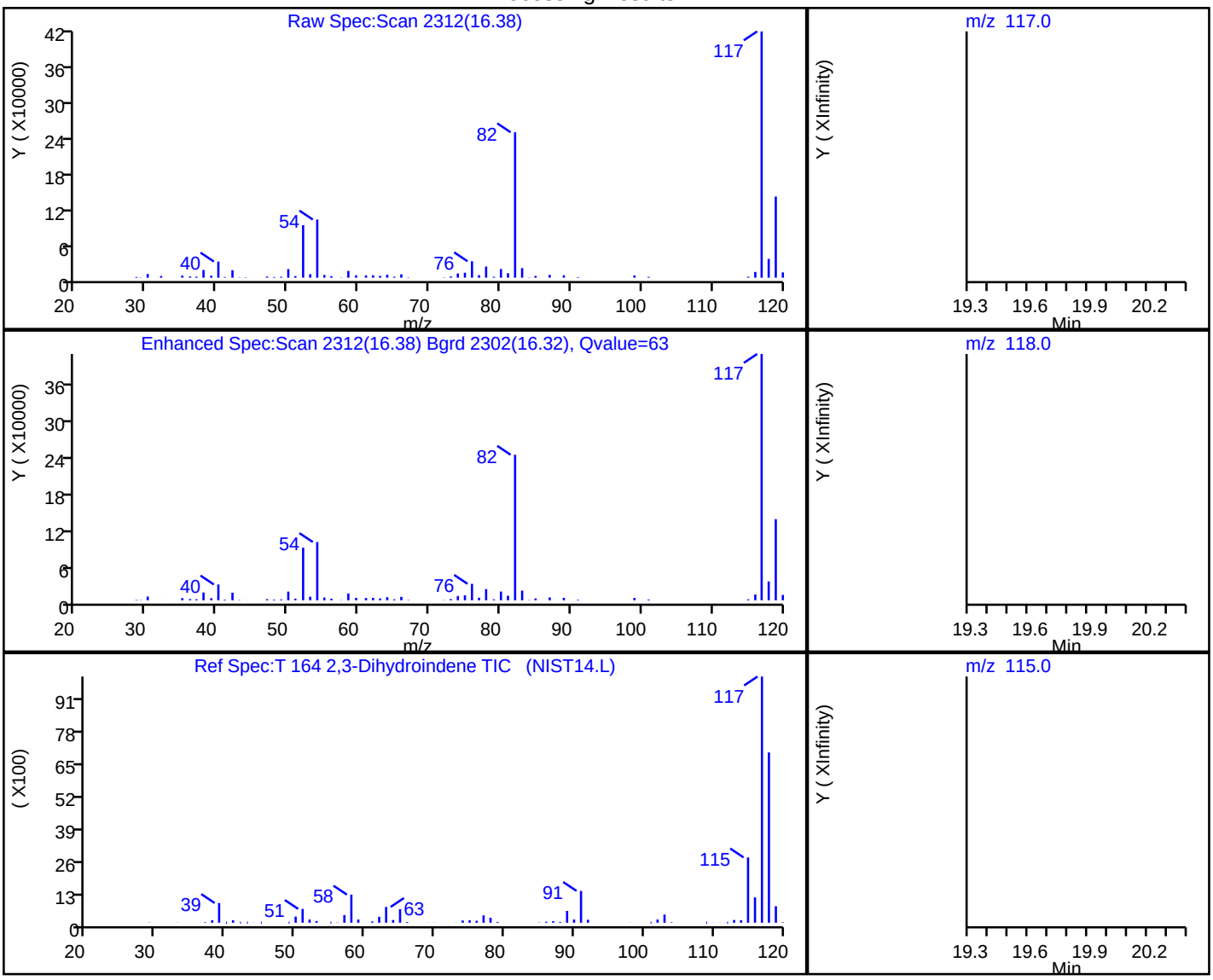
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-12.D				
Injection Date:	20-Mar-2018 23:34:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-12	Lab Sample ID:	140-10994-12		
Client ID:	09675				
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	877655	4.000000
16.38	118.00	66694	
16.38	115.00	3413	

Reviewer: tajh, 21-Mar-2018 09:50:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10574 | Lab Sample ID: 140-10994-13

Matrix: Air | Lab File ID: JC20bk10994-13.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 00:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10574
Lab Sample ID: 140-10994-13
Matrix: Air
Lab File ID: JC20bk10994-13.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 00:22
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10574
Lab Sample ID: 140-10994-13
Matrix: Air
Lab File ID: JC20bk10994-13.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 00:22
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	0.047		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10574 Lab Sample ID: 140-10994-13

Matrix: Air Lab File ID: JC20bk10994-13.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 00:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-13.D
Lims ID: 140-10994-A-13
Client ID: 10574
Sample Type: Client
Inject. Date: 21-Mar-2018 00:22:30 ALS Bottle#: 13 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007671-016
Misc. Info.: 10574
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 09:54:16 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 21-Mar-2018 09:51:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.669	9.680	-0.011	91	170967	4.00	
* 2 1,4-Difluorobenzene	114	11.772	11.778	-0.006	95	948198	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.372	16.378	-0.006	88	855000	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.975	17.975	-0.006	95	640004	4.14	
25 Isopropyl alcohol	45	6.242	6.166	0.069	94	7272	0.1303	
53 n-Butanol	31	11.326	11.257	0.059	90	5178	0.3157	
76 Tetrachloroethene	129	15.560	15.560	-0.005	90	3343	0.0467	

Reagents:

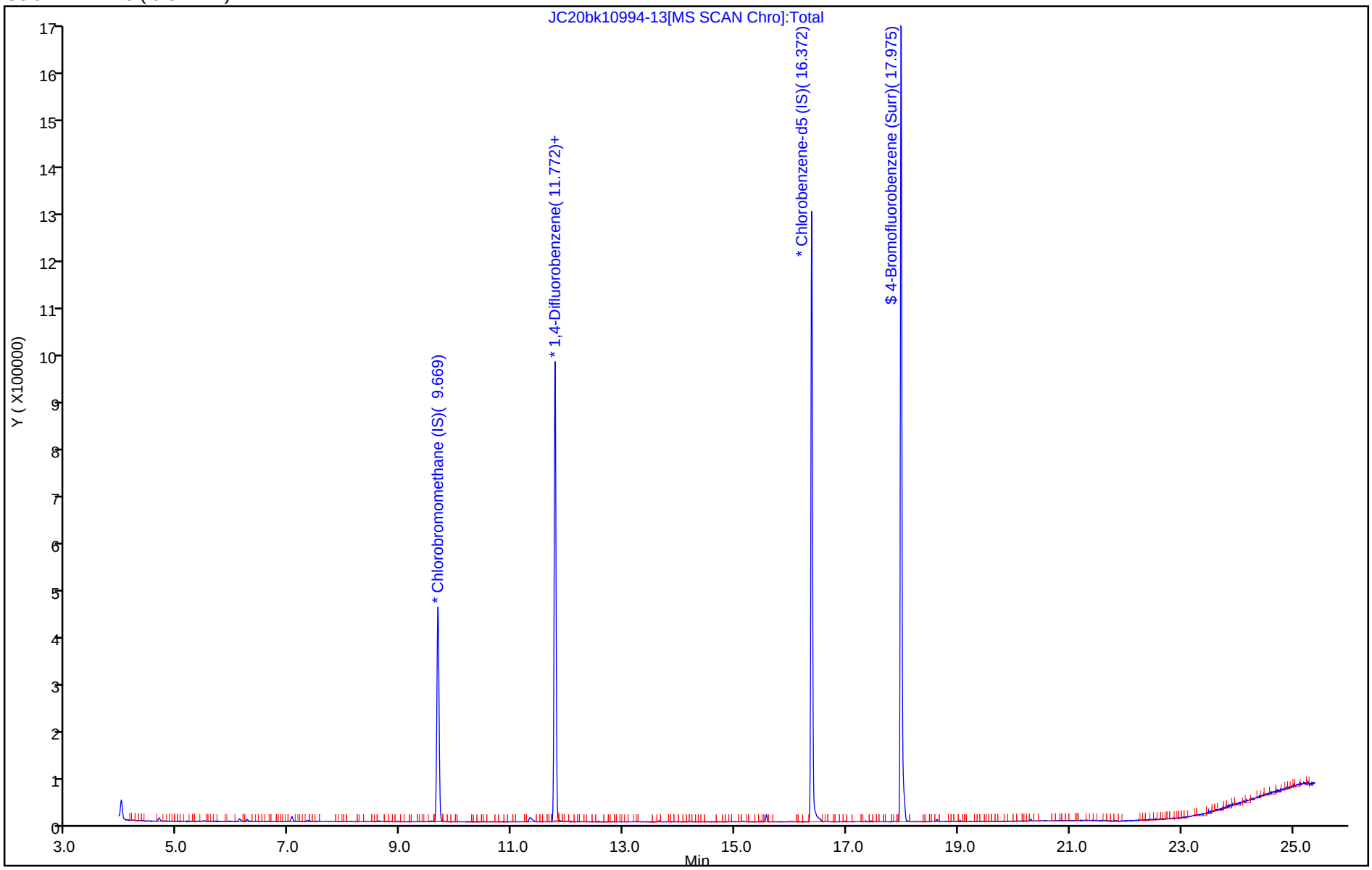
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-13.D				
Injection Date:	21-Mar-2018 00:22:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-13	Lab Sample ID:	140-10994-13	Worklist Smp#:	16
Client ID:	10574				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

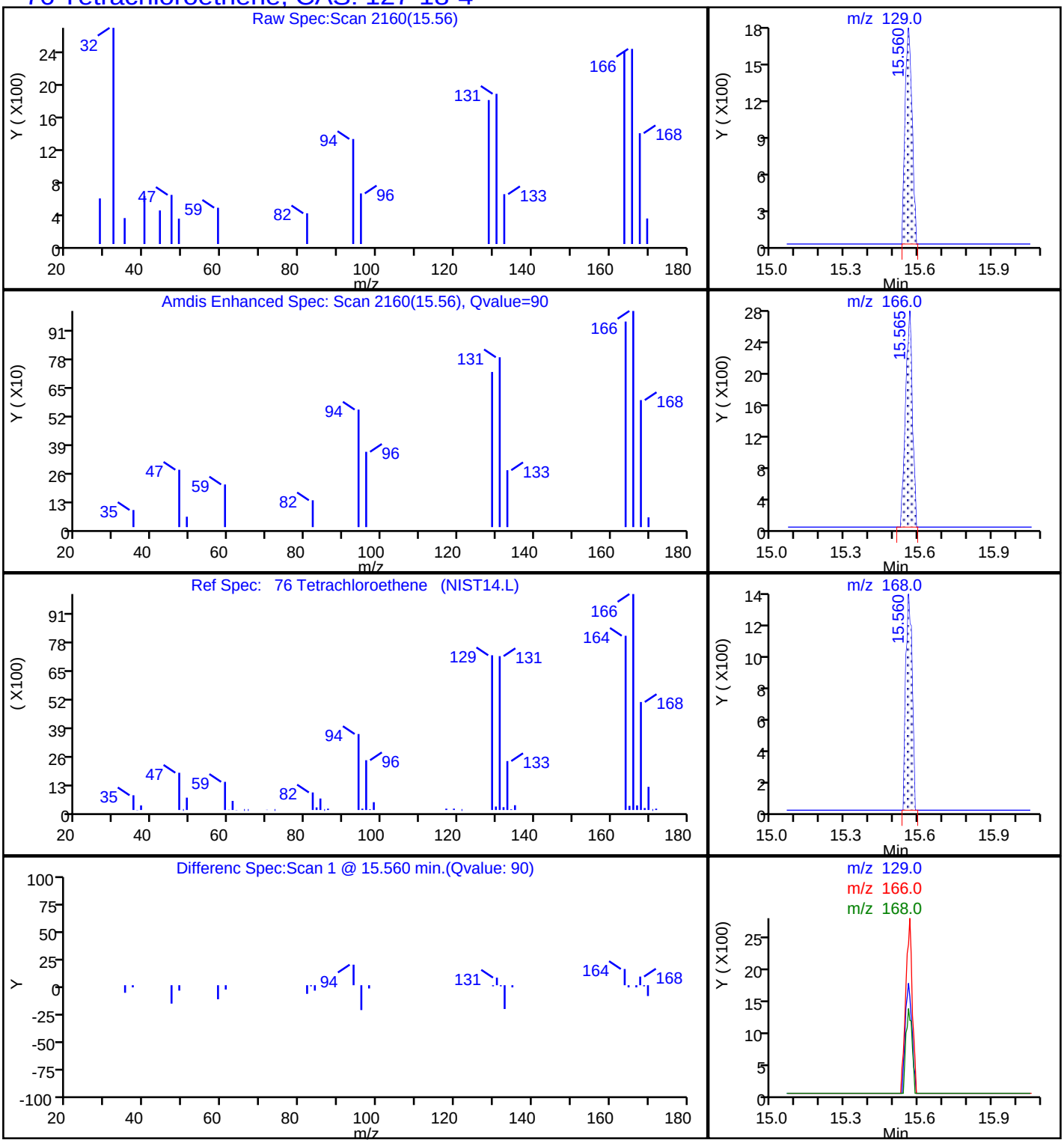


Report Date: 21-Mar-2018 09:54:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-13.D				
Injection Date:	21-Mar-2018 00:22:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-13	Lab Sample ID:	140-10994-13		
Client ID:	10574				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

76 Tetrachloroethene, CAS: 127-18-4



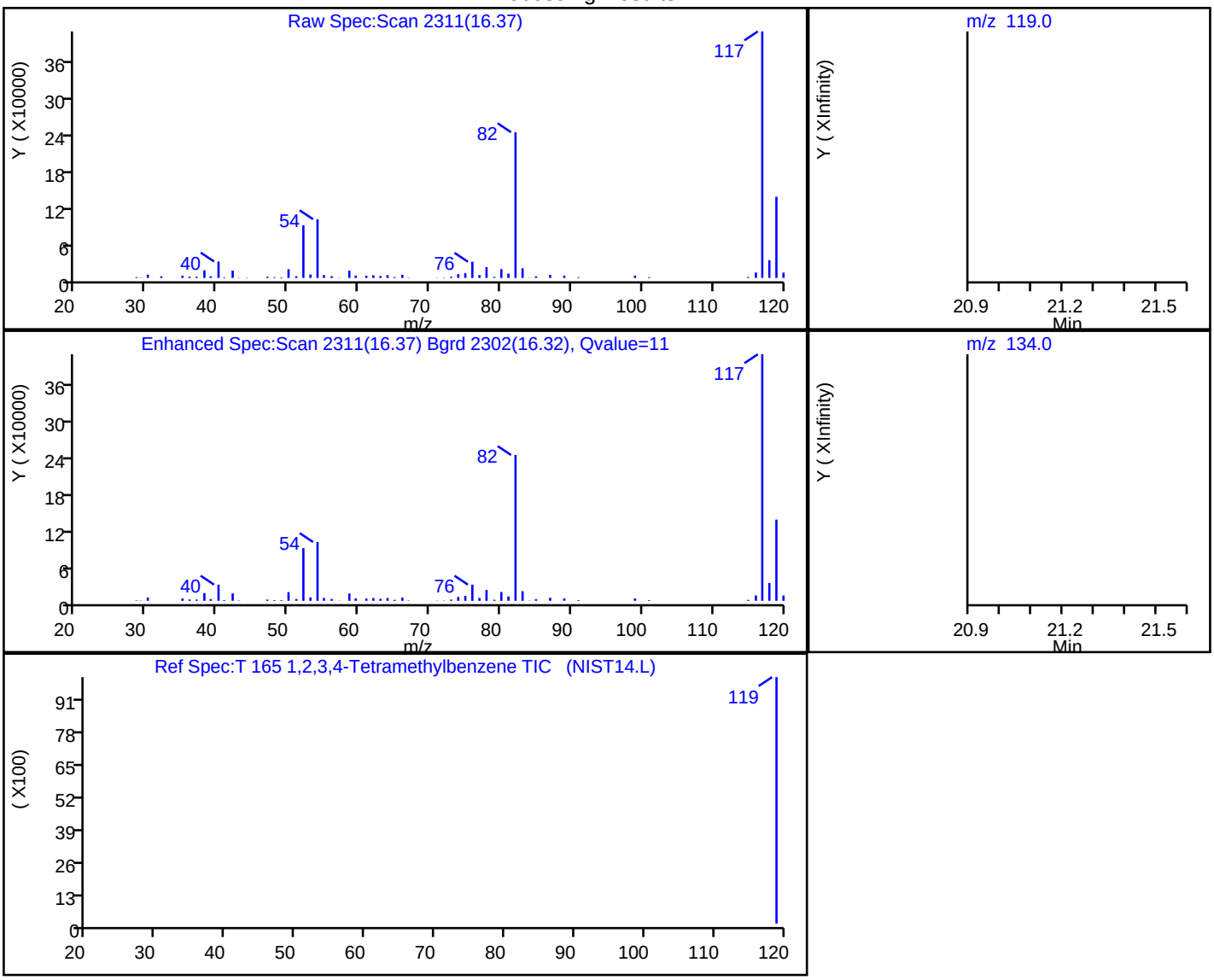
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-13.D				
Injection Date:	21-Mar-2018 00:22:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-13	Lab Sample ID:	140-10994-13		
Client ID:	10574				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	272852	1.276501
24.14	134.00	213	

Reviewer: tajh, 21-Mar-2018 09:51:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

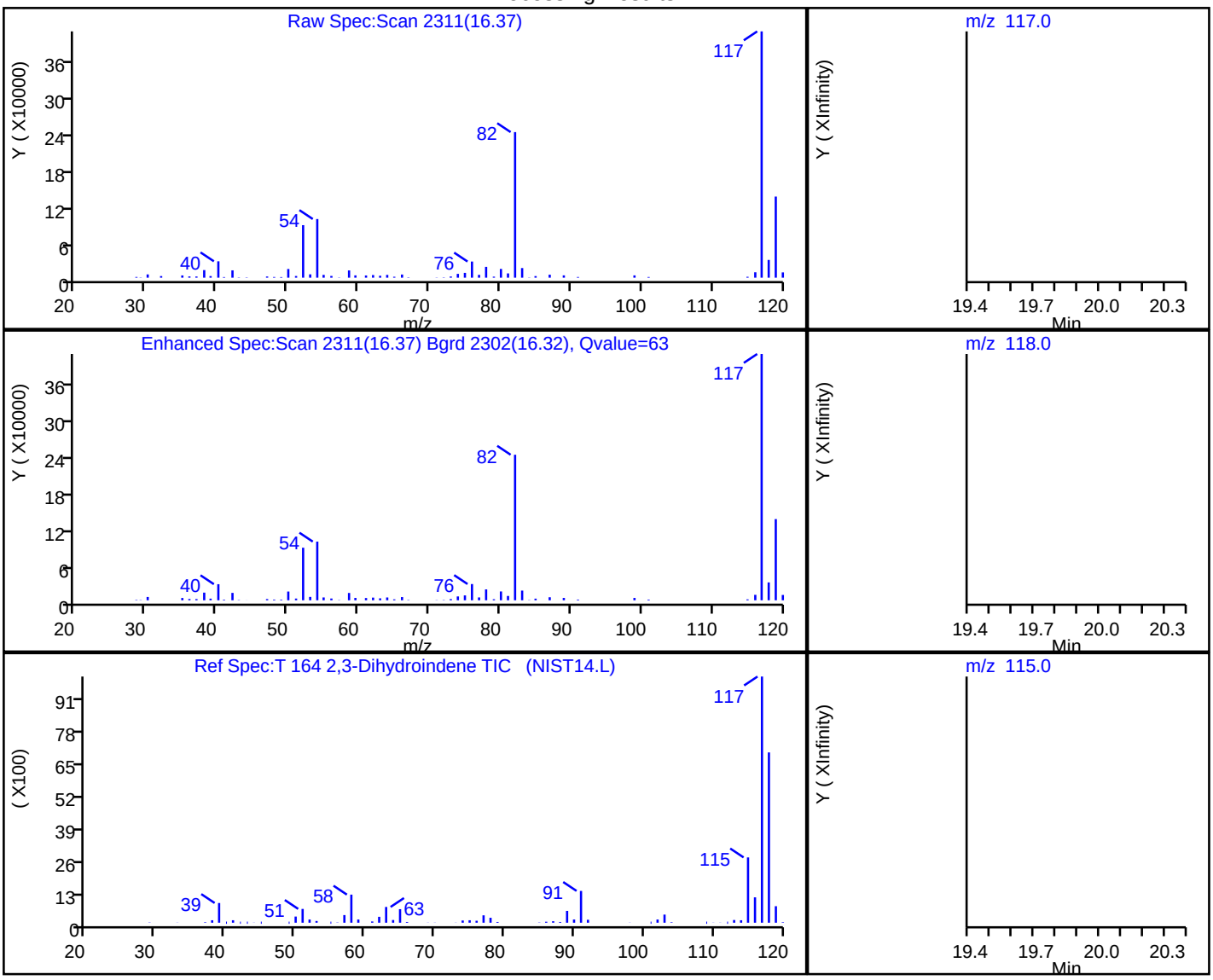
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-13.D				
Injection Date:	21-Mar-2018 00:22:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-13	Lab Sample ID:	140-10994-13		
Client ID:	10574				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	855000	4.000000
16.38	118.00	63803	
16.38	115.00	3117	

Reviewer: tajh, 21-Mar-2018 09:51:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10326 | Lab Sample ID: 140-10994-14

Matrix: Air | Lab File ID: JC20bk10994-14.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 01:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.23		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 10326
Lab Sample ID: 140-10994-14
Matrix: Air
Lab File ID: JC20bk10994-14.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 01:10
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10326 | Lab Sample ID: 140-10994-14

Matrix: Air | Lab File ID: JC20bk10994-14.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 01:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 10326 Lab Sample ID: 140-10994-14

Matrix: Air Lab File ID: JC20bk10994-14.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 01:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-14.D
Lims ID: 140-10994-A-14
Client ID: 10326
Sample Type: Client
Inject. Date: 21-Mar-2018 01:10:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007671-017
Misc. Info.: 10326
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 09:54:16 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 21-Mar-2018 09:51:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.680	-0.007	90	161584	4.00	
* 2 1,4-Difluorobenzene	114	11.777	11.778	-0.001	95	905802	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.378	-0.002	89	807724	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.975	-0.002	94	595046	4.07	
33 Carbon disulfide	76	7.236	7.224	0.003	95	3838	0.0247	
65 4-Methyl-2-pentanone (MIBK	43	13.622	13.578	0.031	98	19165	0.2308	

Reagents:

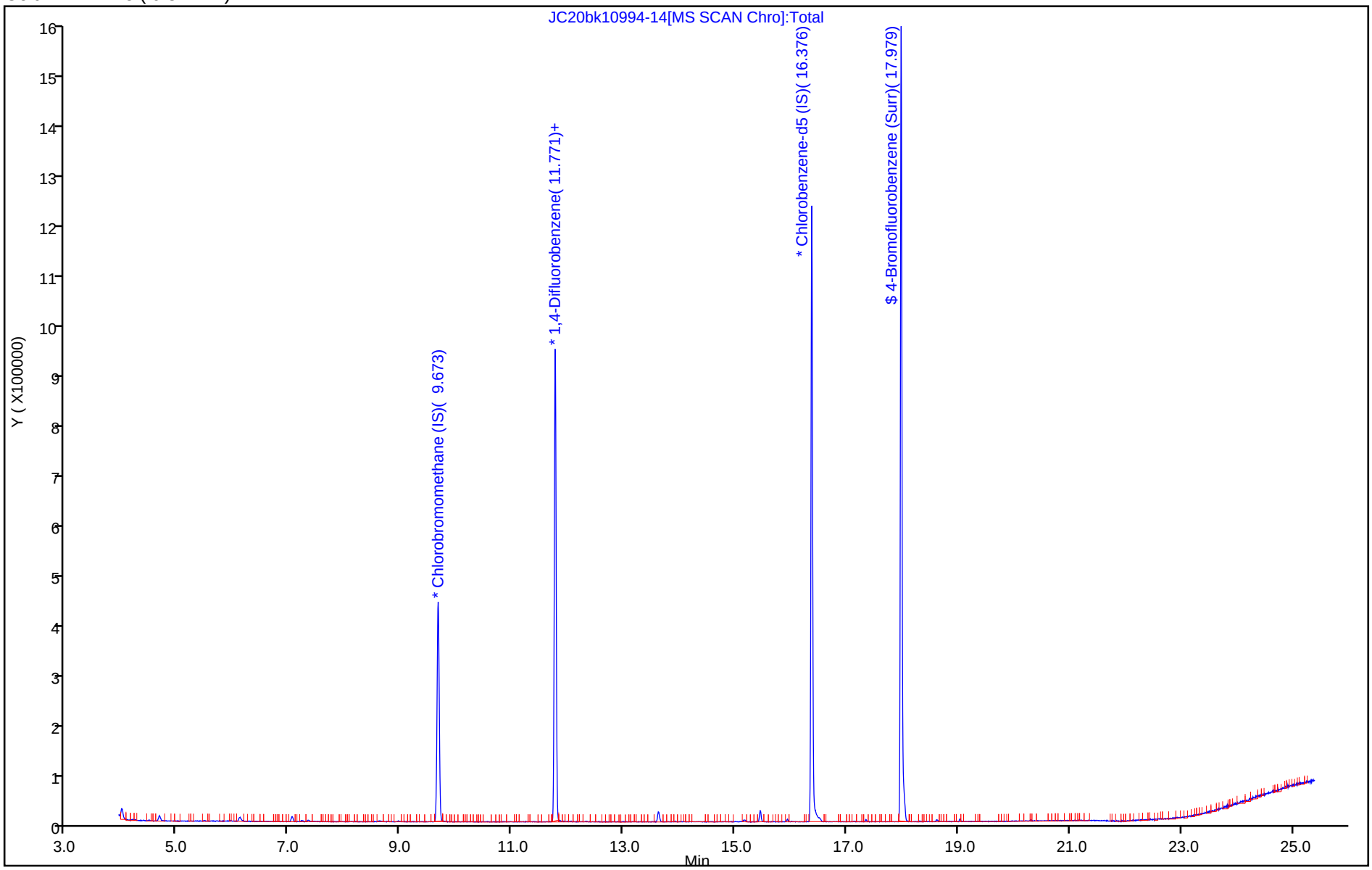
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:56 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-14.D				
Injection Date:	21-Mar-2018 01:10:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-14	Lab Sample ID:	140-10994-14	Worklist Smp#:	17
Client ID:	10326				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

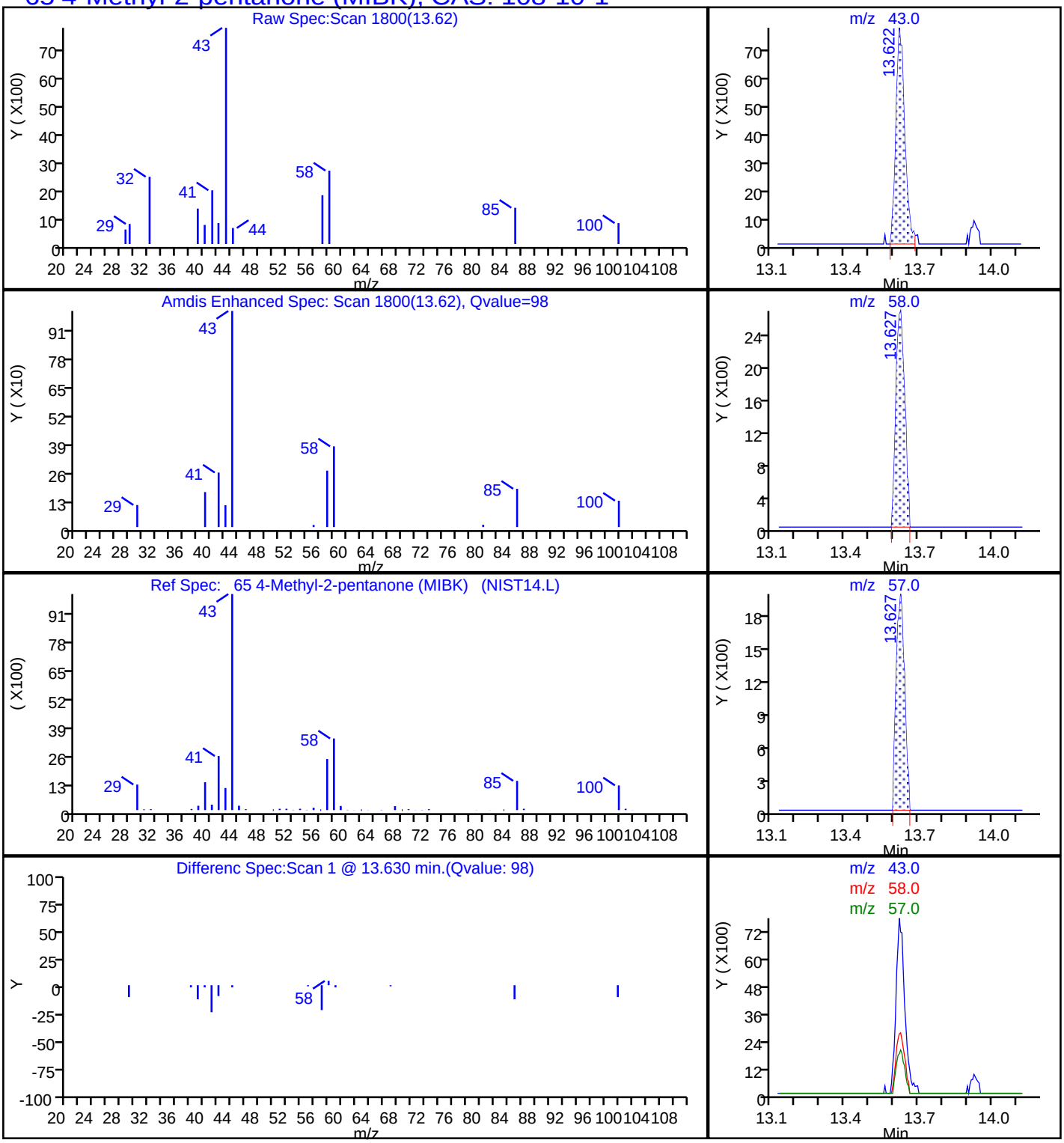


Report Date: 21-Mar-2018 09:54:56 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-14.D				
Injection Date:	21-Mar-2018 01:10:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-14	Lab Sample ID:	140-10994-14		
Client ID:	10326				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

65 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1



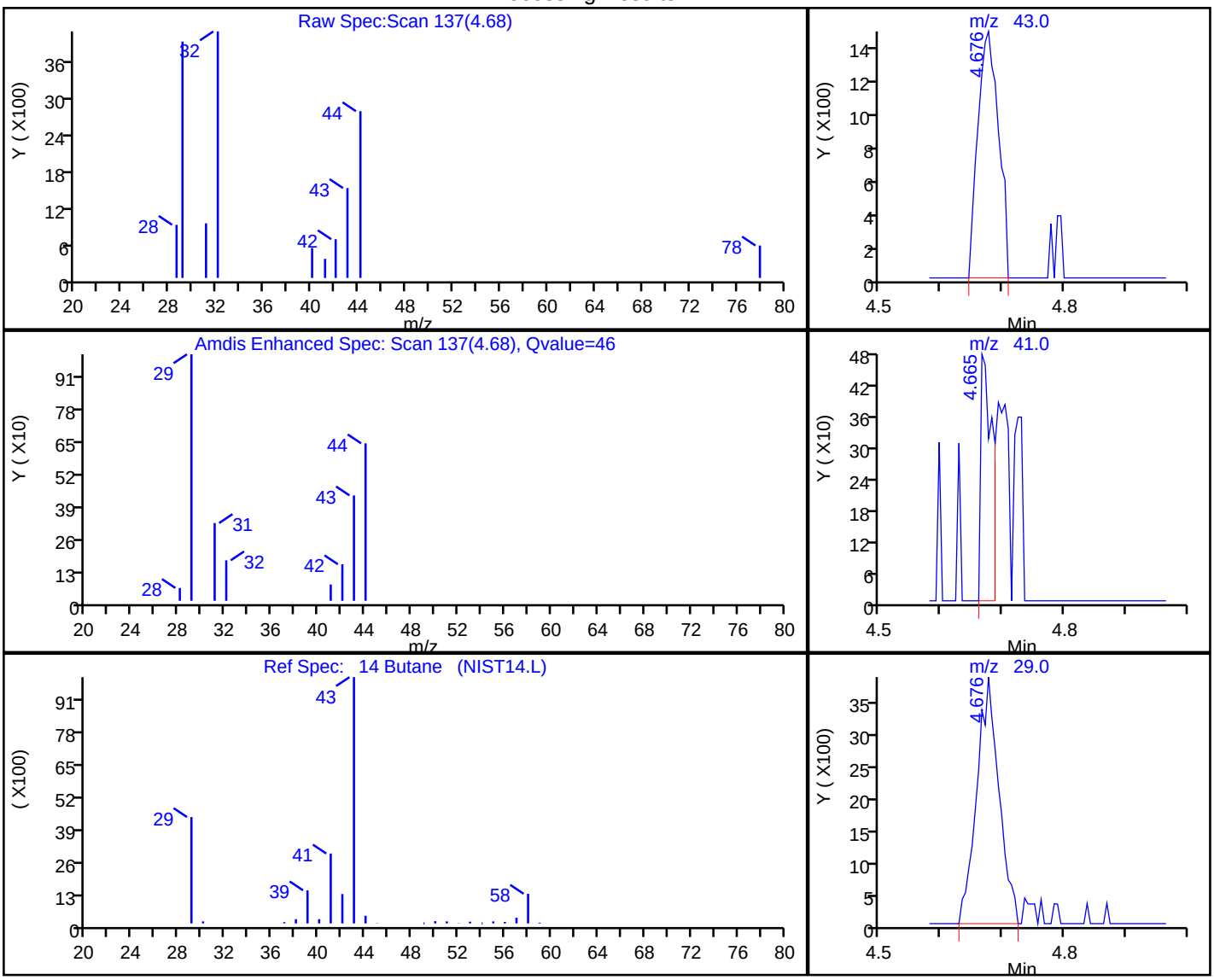
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-14.D				
Injection Date:	21-Mar-2018 01:10:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-14	Lab Sample ID:	140-10994-14		
Client ID:	10326				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	3423	0.042277
4.66	41.00	607	
4.68	29.00	9682	

Reviewer: tajh, 21-Mar-2018 09:51:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

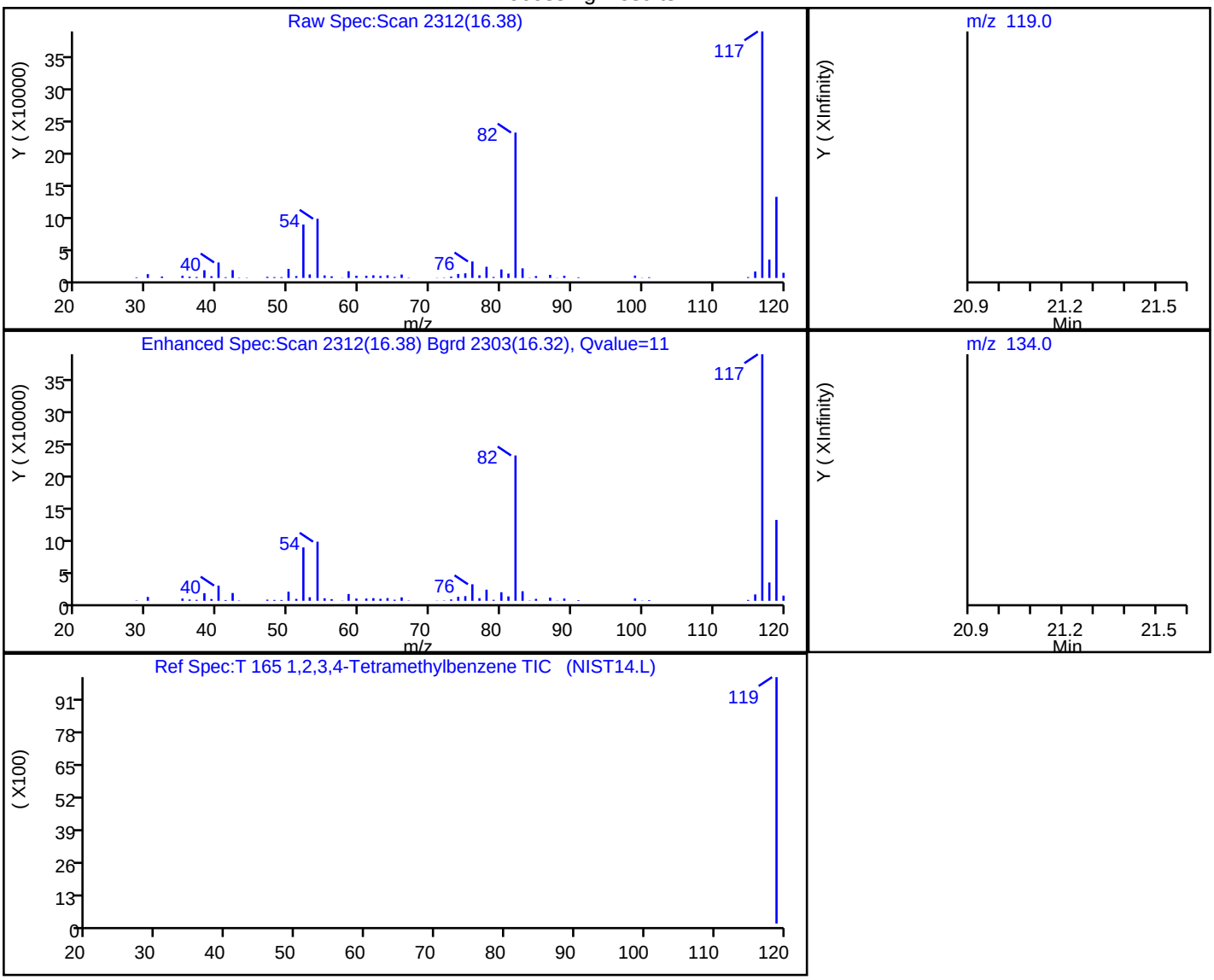
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-14.D				
Injection Date:	21-Mar-2018 01:10:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-14	Lab Sample ID:	140-10994-14		
Client ID:	10326				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	255061	1.263110
24.09	134.00	204	

Reviewer: tajh, 21-Mar-2018 09:51:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

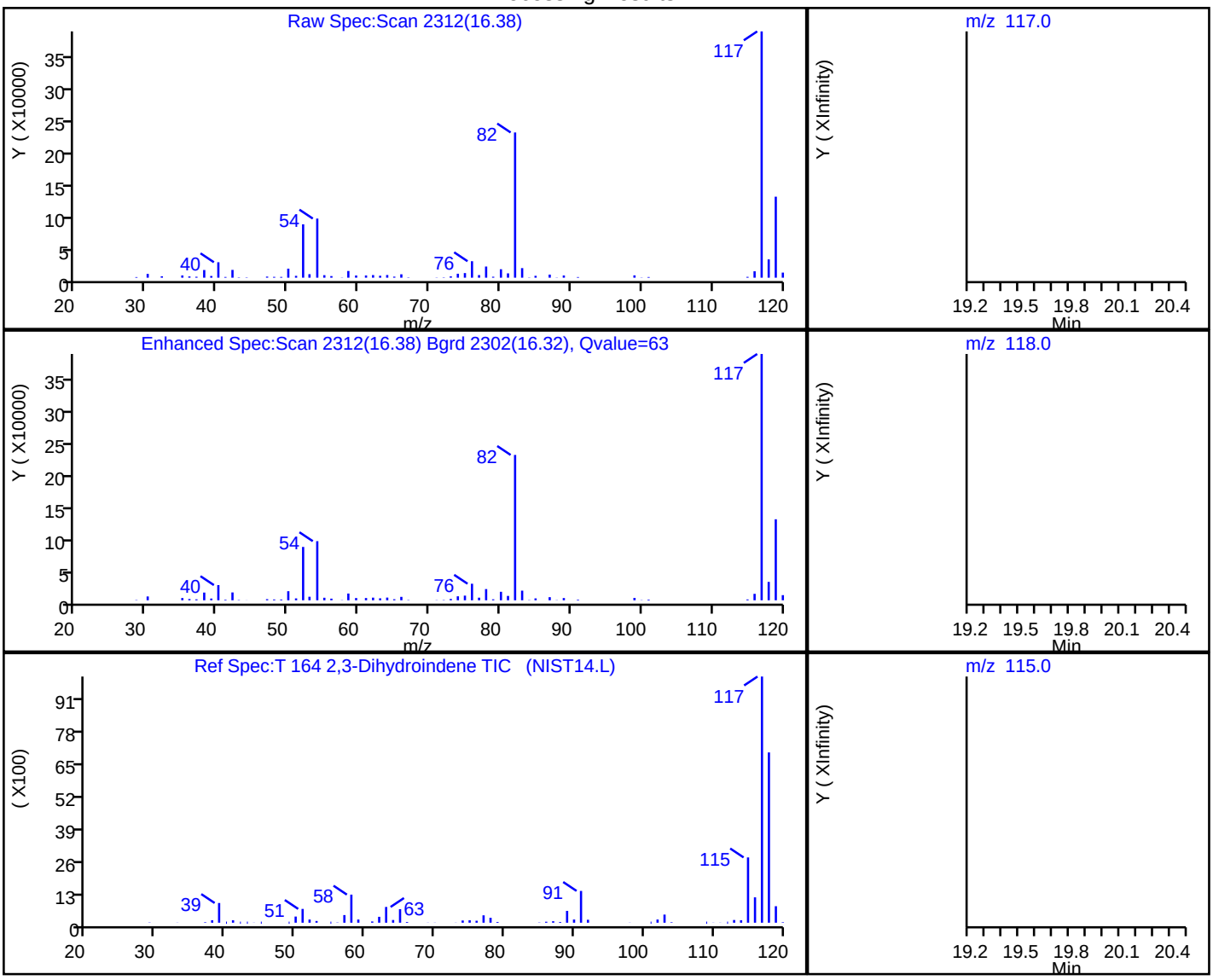
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-14.D				
Injection Date:	21-Mar-2018 01:10:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-14	Lab Sample ID:	140-10994-14		
Client ID:	10326				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	807724	4.000000
16.38	118.00	60002	
16.37	115.00	1708	

Reviewer: tajh, 21-Mar-2018 09:51:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09869
Lab Sample ID: 140-10994-15
Matrix: Air
Lab File ID: JC20bk10994-15.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 01:57
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10994-1
SDG No.:
Client Sample ID: 09869
Lab Sample ID: 140-10994-15
Matrix: Air
Lab File ID: JC20bk10994-15.D
Analysis Method: TO 15 LL
Date Collected: 03/19/2018 13:25
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 01:57
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18893
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09869 | Lab Sample ID: 140-10994-15

Matrix: Air | Lab File ID: JC20bk10994-15.D

Analysis Method: TO 15 LL | Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 01:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10994-1

SDG No.:

Client Sample ID: 09869 Lab Sample ID: 140-10994-15

Matrix: Air Lab File ID: JC20bk10994-15.D

Analysis Method: TO 15 LL Date Collected: 03/19/2018 13:25

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 01:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18893 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

Report Date: 21-Mar-2018 09:54:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-15.D				
Lims ID:	140-10994-A-15				
Client ID:	09869				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 01:57:30	ALS Bottle#:	15	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007671-018				
Misc. Info.:	09869				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 09:54:16	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 21-Mar-2018 09:52:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.673	9.680	-0.007	91	161505	4.00	
* 2 1,4-Difluorobenzene	114	11.776	11.778	-0.002	95	913034	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.376	16.378	-0.002	89	823284	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.979	17.975	-0.002	94	621445	4.18	
33 Carbon disulfide	76	7.236	7.224	0.003	97	9852	0.0635	
65 4-Methyl-2-pentanone (MIBK	43	13.638	13.578	0.047	96	12763	0.1525	

Reagents:

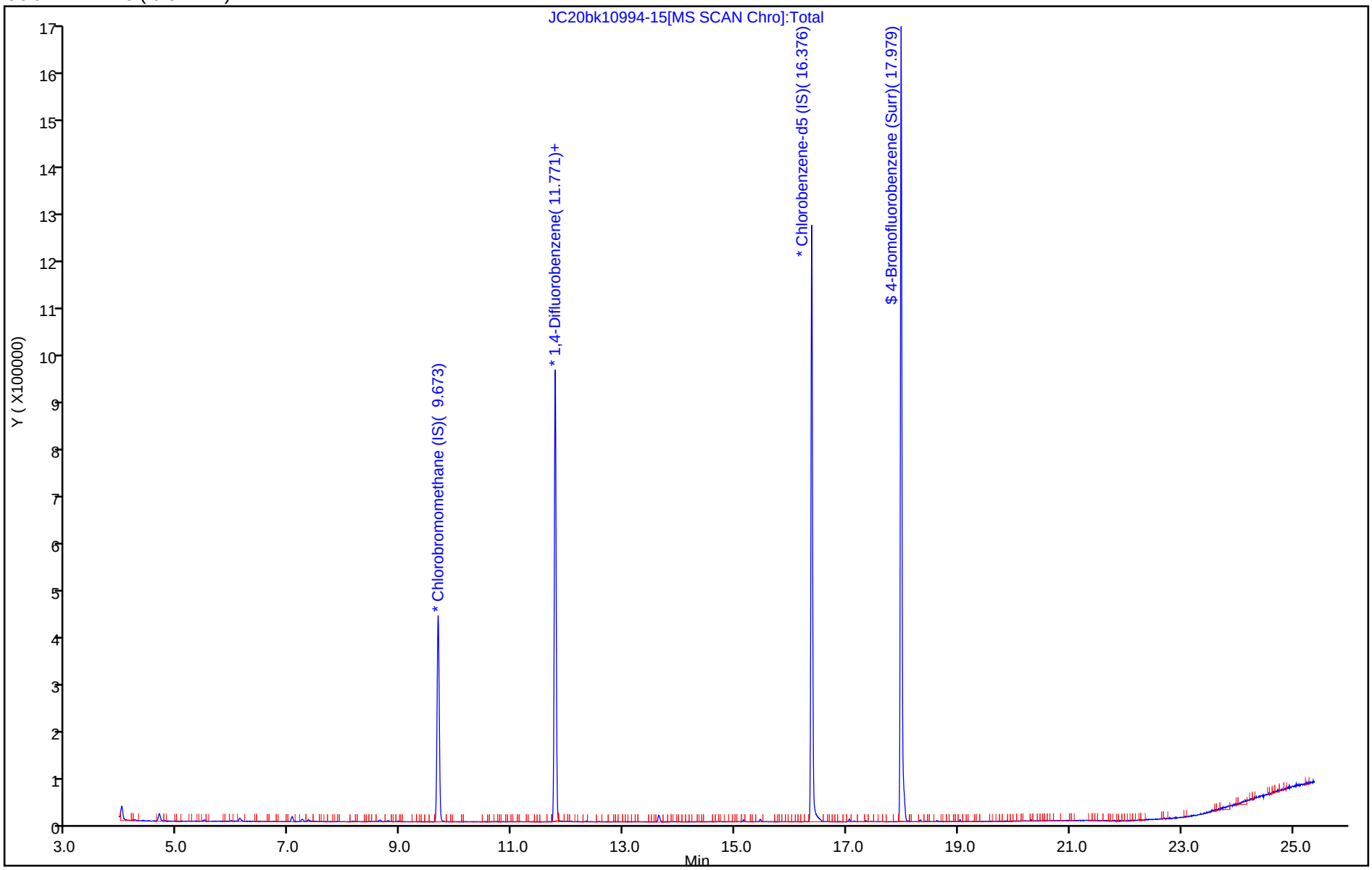
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 09:54:58 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-15.D				
Injection Date:	21-Mar-2018 01:57:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-10994-A-15	Lab Sample ID:	140-10994-15	Worklist Smp#:	18
Client ID:	09869				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



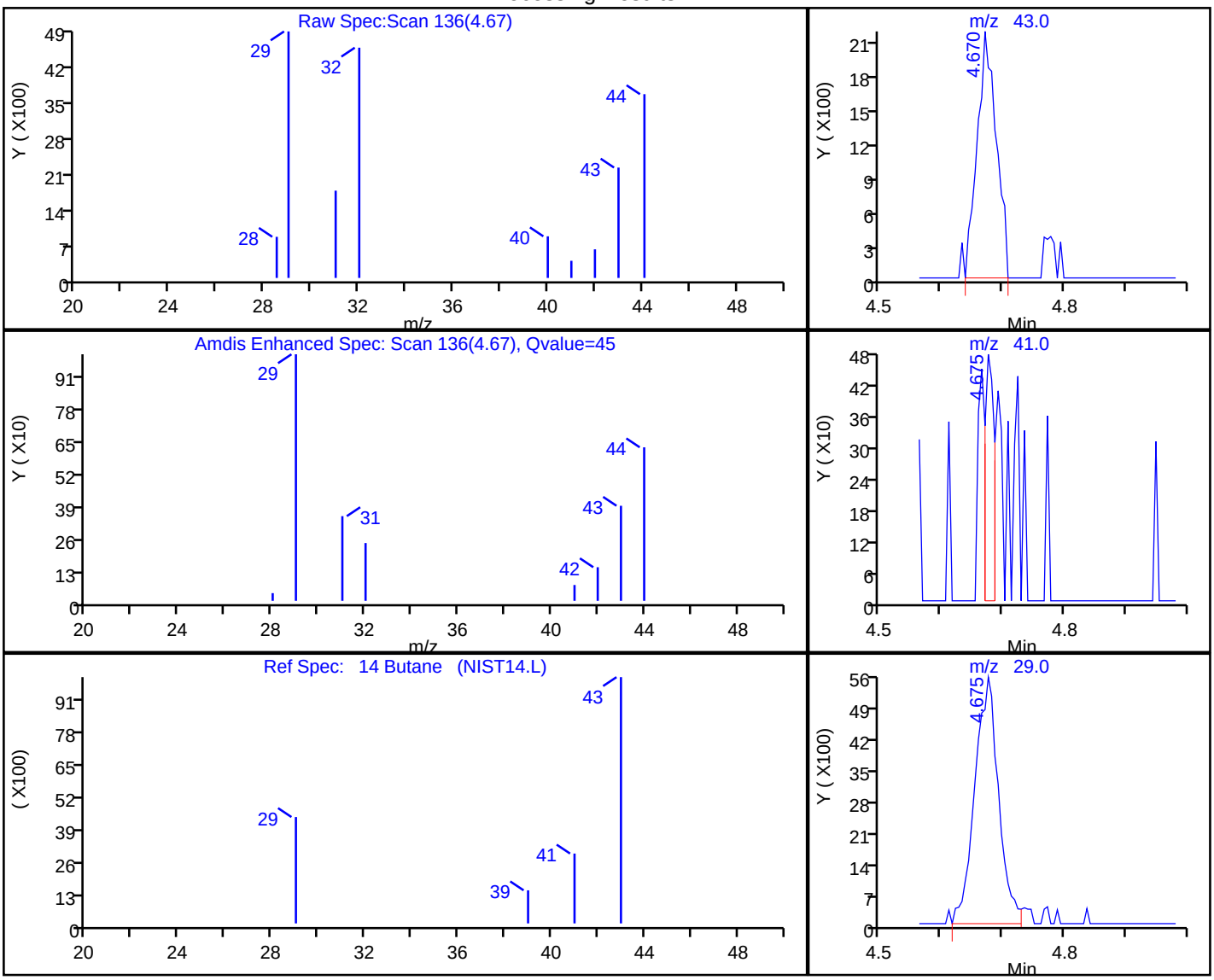
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-15.D				
Injection Date:	21-Mar-2018 01:57:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-15	Lab Sample ID:	140-10994-15		
Client ID:	09869				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.67	43.00	4663	0.057620
4.68	41.00	495	
4.68	29.00	15026	

Reviewer: tajh, 21-Mar-2018 09:52:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

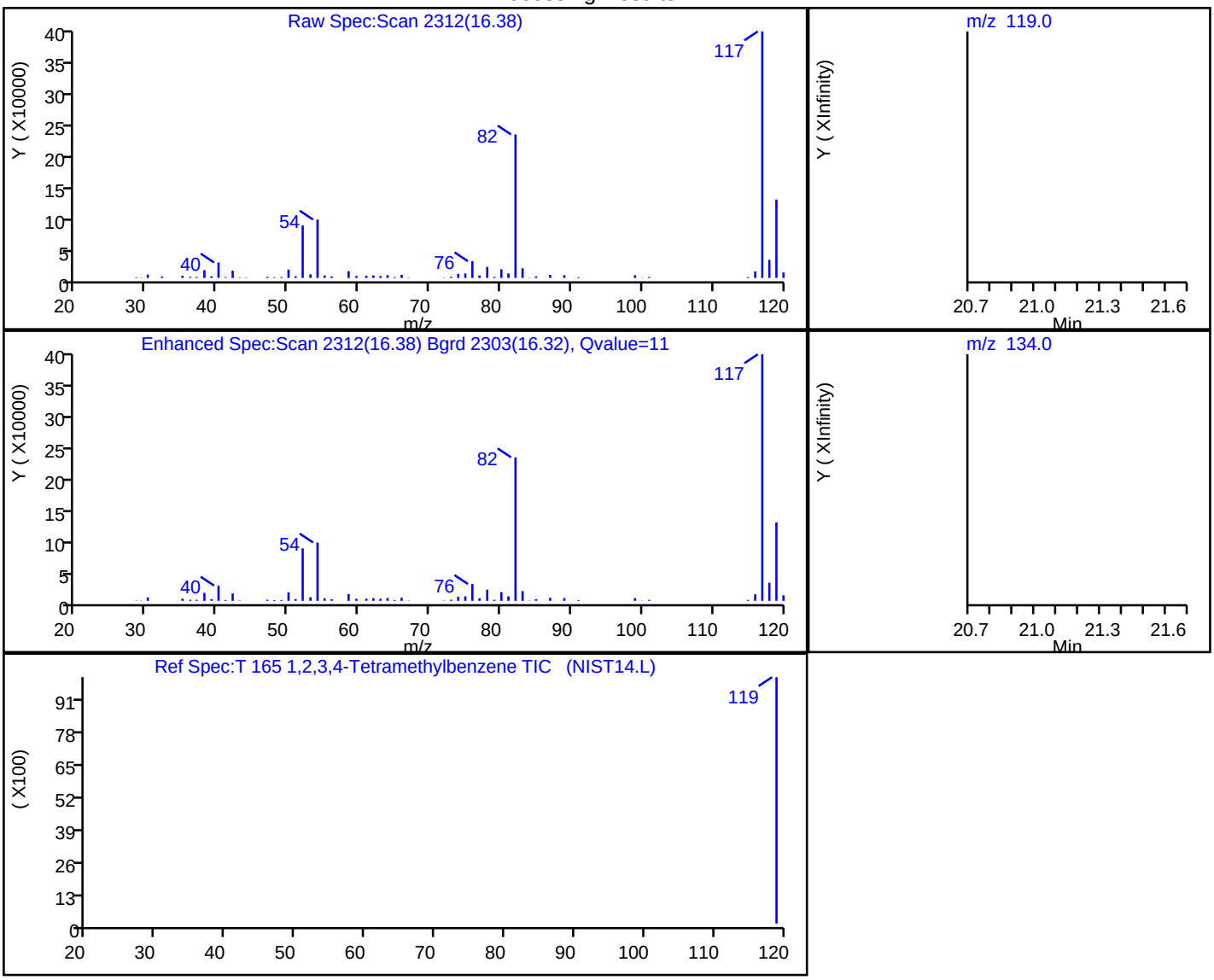
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-15.D				
Injection Date:	21-Mar-2018 01:57:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-15	Lab Sample ID:	140-10994-15		
Client ID:	09869				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.38	119.00	266617	1.295383
24.11	134.00	226	

Reviewer: tajh, 21-Mar-2018 09:52:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

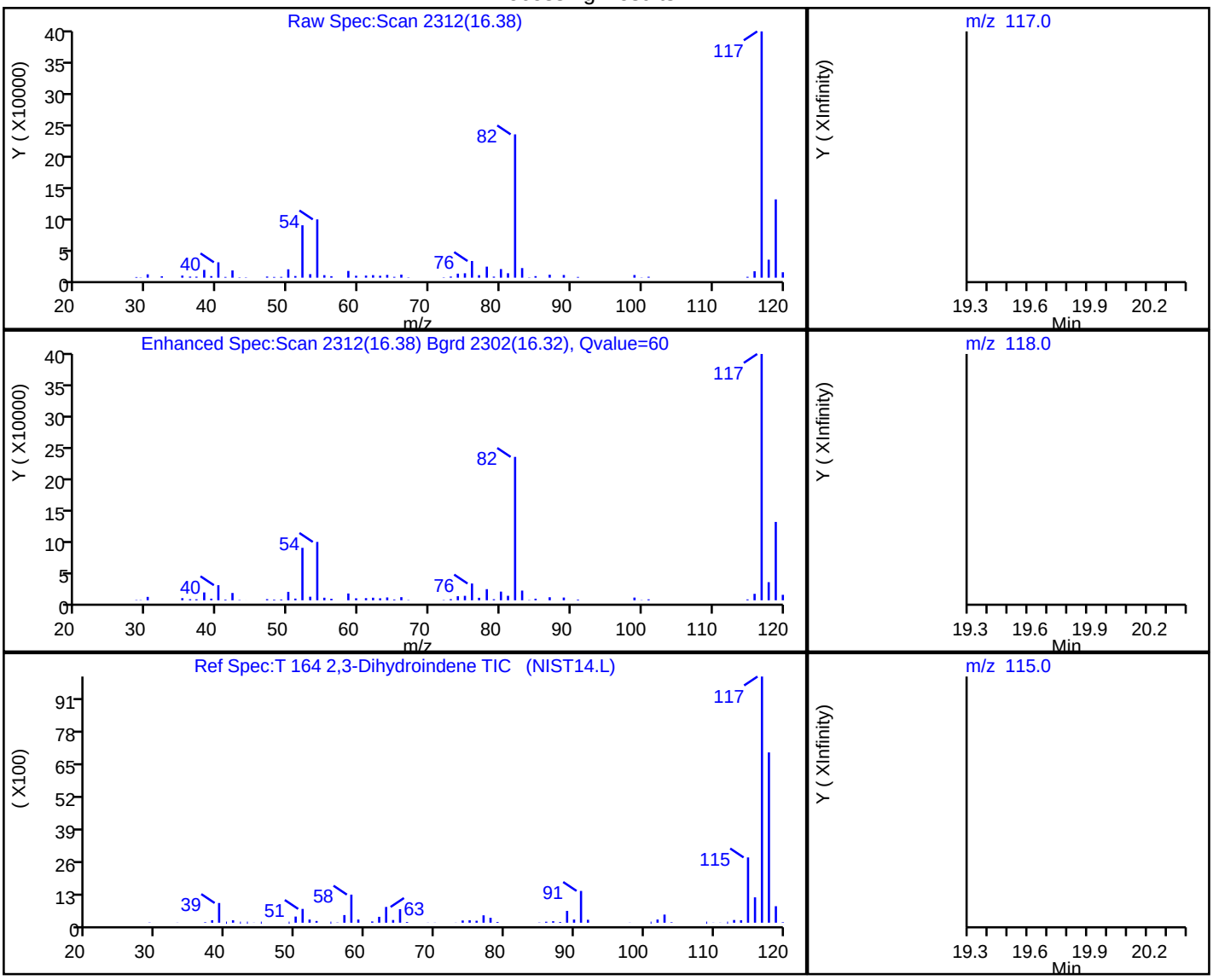
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7671.b\JC20bk10994-15.D				
Injection Date:	21-Mar-2018 01:57:30	Instrument ID:	MJ		
Lims ID:	140-10994-A-15	Lab Sample ID:	140-10994-15		
Client ID:	09869				
Operator ID:	403648	ALS Bottle#:	15	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.38	117.00	823284	4.000000
16.38	118.00	61510	
16.37	115.00	2878	

Reviewer: tajh, 21-Mar-2018 09:52:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11170 | Lab Sample ID: 140-10998-1

Matrix: Air | Lab File ID: 10998BK01.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 13:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11170
Lab Sample ID: 140-10998-1
Matrix: Air
Lab File ID: 10998BK01.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 13:13
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11170 Lab Sample ID: 140-10998-1

Matrix: Air Lab File ID: 10998BK01.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 13:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11170 Lab Sample ID: 140-10998-1

Matrix: Air Lab File ID: 10998BK01.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 13:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK01.D				
Lims ID:	140-10998-A-1				
Client ID:	11170				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 13:13:30	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007695-004				
Misc. Info.:	11170				
Operator ID:	007126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2018 13:17:08	Calib Date:	20-Mar-2018 22:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: tajh		Date:	21-Mar-2018 14:06:32		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.560	7.571	-0.011	95	330279	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1899504	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.640	14.646	-0.006	88	1729004	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	96	1239233	4.06	

Reagents:

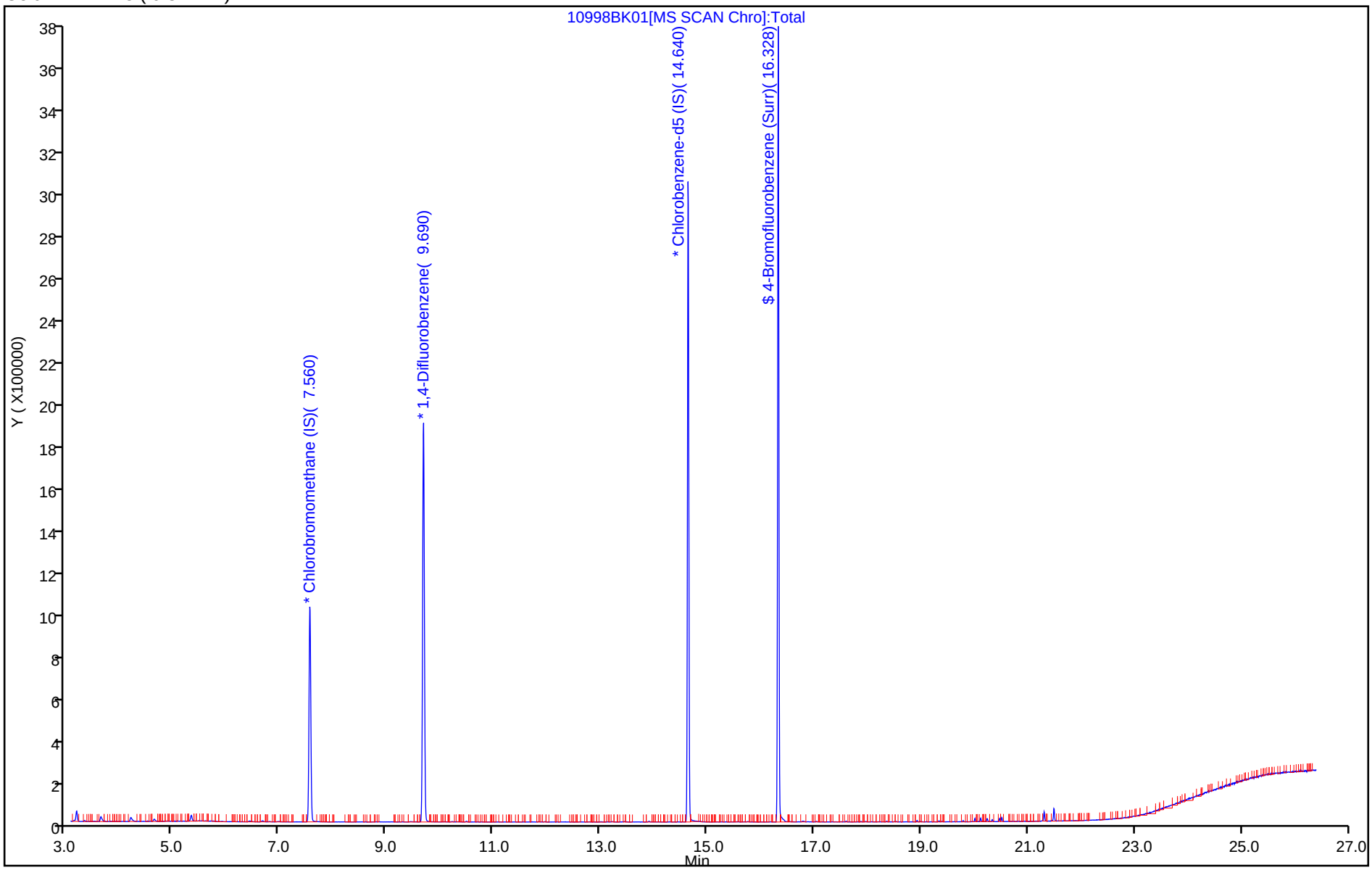
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:12 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK01.D				
Injection Date:	21-Mar-2018 13:13:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-1	Lab Sample ID:	140-10998-1	Worklist Smp#:	4
Client ID:	11170				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



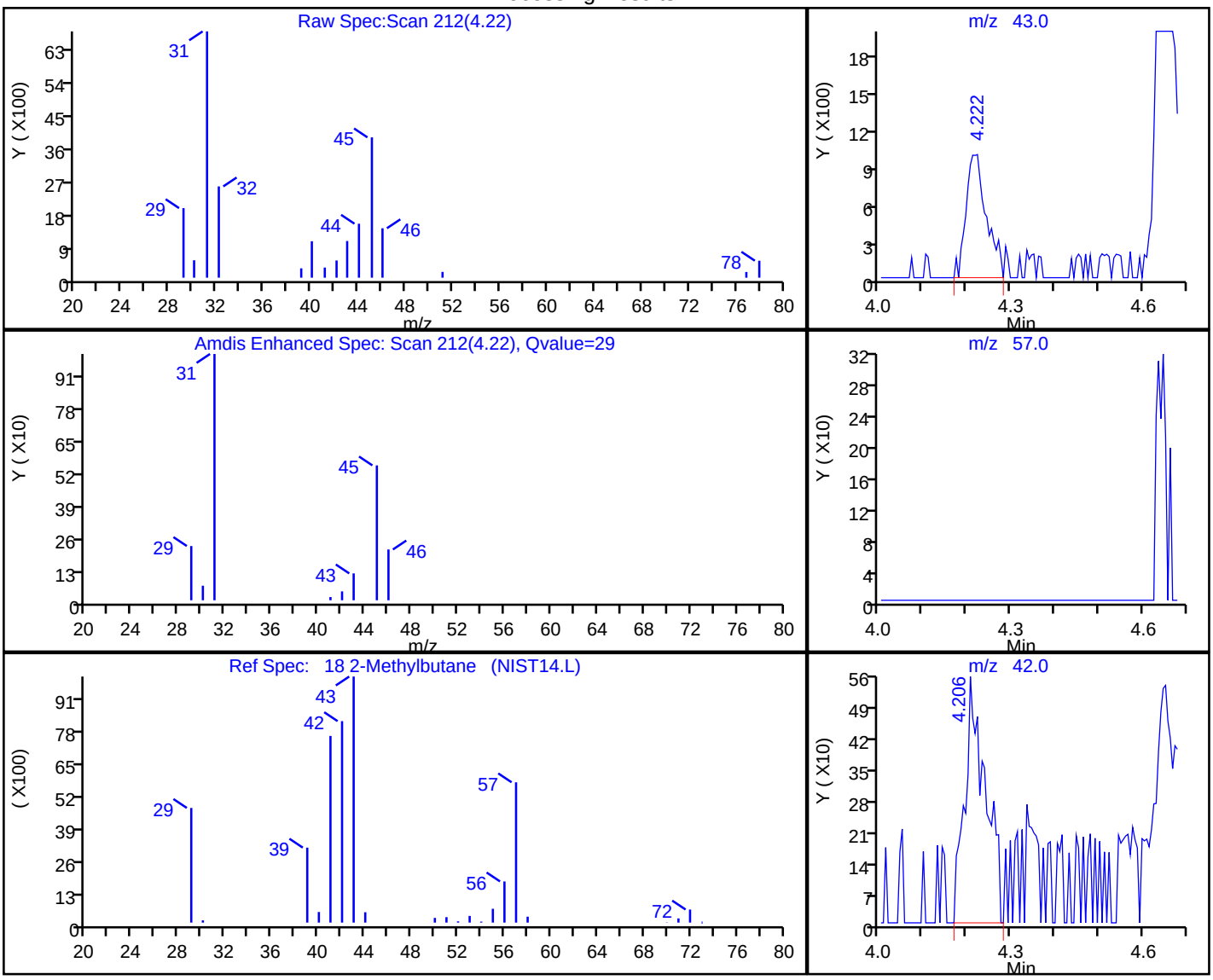
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK01.D				
Injection Date:	21-Mar-2018 13:13:30	Instrument ID:	MG		
Lims ID:	140-10998-A-1	Lab Sample ID:	140-10998-1		
Client ID:	11170				
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.22	43.00	3266	0.024004
4.21	42.00	1844	
4.34	57.00	0	

Reviewer: tajh, 21-Mar-2018 14:06:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

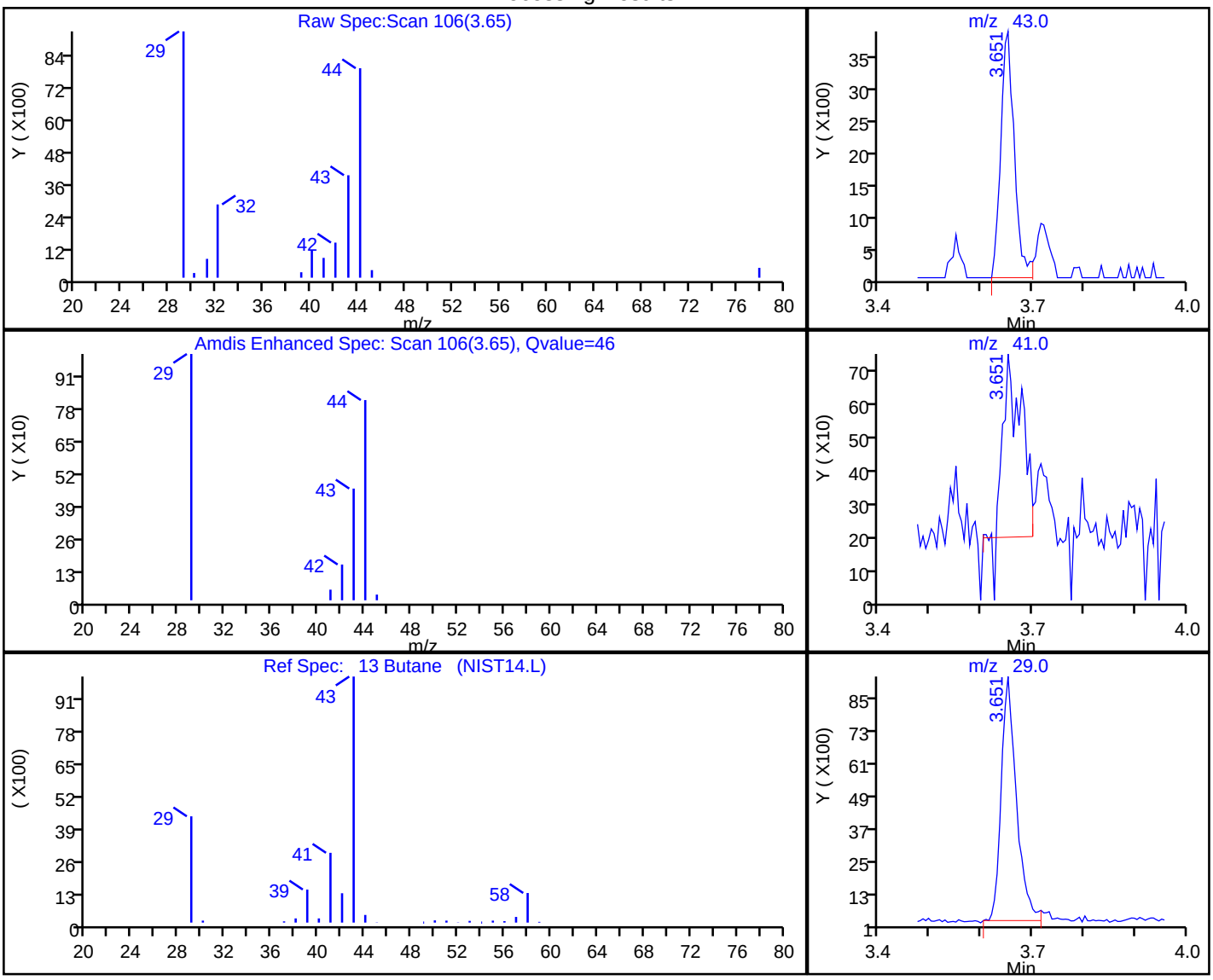
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK01.D				
Injection Date:	21-Mar-2018 13:13:30	Instrument ID:	MG		
Lims ID:	140-10998-A-1	Lab Sample ID:	140-10998-1		
Client ID:	11170				
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	7121	0.040454
3.65	41.00	1375	
3.65	29.00	18579	

Reviewer: tajh, 21-Mar-2018 14:06:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11047 | Lab Sample ID: 140-10998-2

Matrix: Air | Lab File ID: 10998BK02.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 13:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11047
Lab Sample ID: 140-10998-2
Matrix: Air
Lab File ID: 10998BK02.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 13:59
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11047
Lab Sample ID: 140-10998-2
Matrix: Air
Lab File ID: 10998BK02.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 13:59
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11047 Lab Sample ID: 140-10998-2

Matrix: Air Lab File ID: 10998BK02.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 13:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK02.D
Lims ID: 140-10998-A-2
Client ID: 11047
Sample Type: Client
Inject. Date: 21-Mar-2018 13:59:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-005
Misc. Info.: 11047
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 21-Mar-2018 14:36:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.571	0.000	95	326260	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.696	0.000	95	1869182	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	87	1691418	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	95	1183096	3.96	
16 Ethanol	31	4.217	4.168	0.049	97	45571	0.9795	

Reagents:

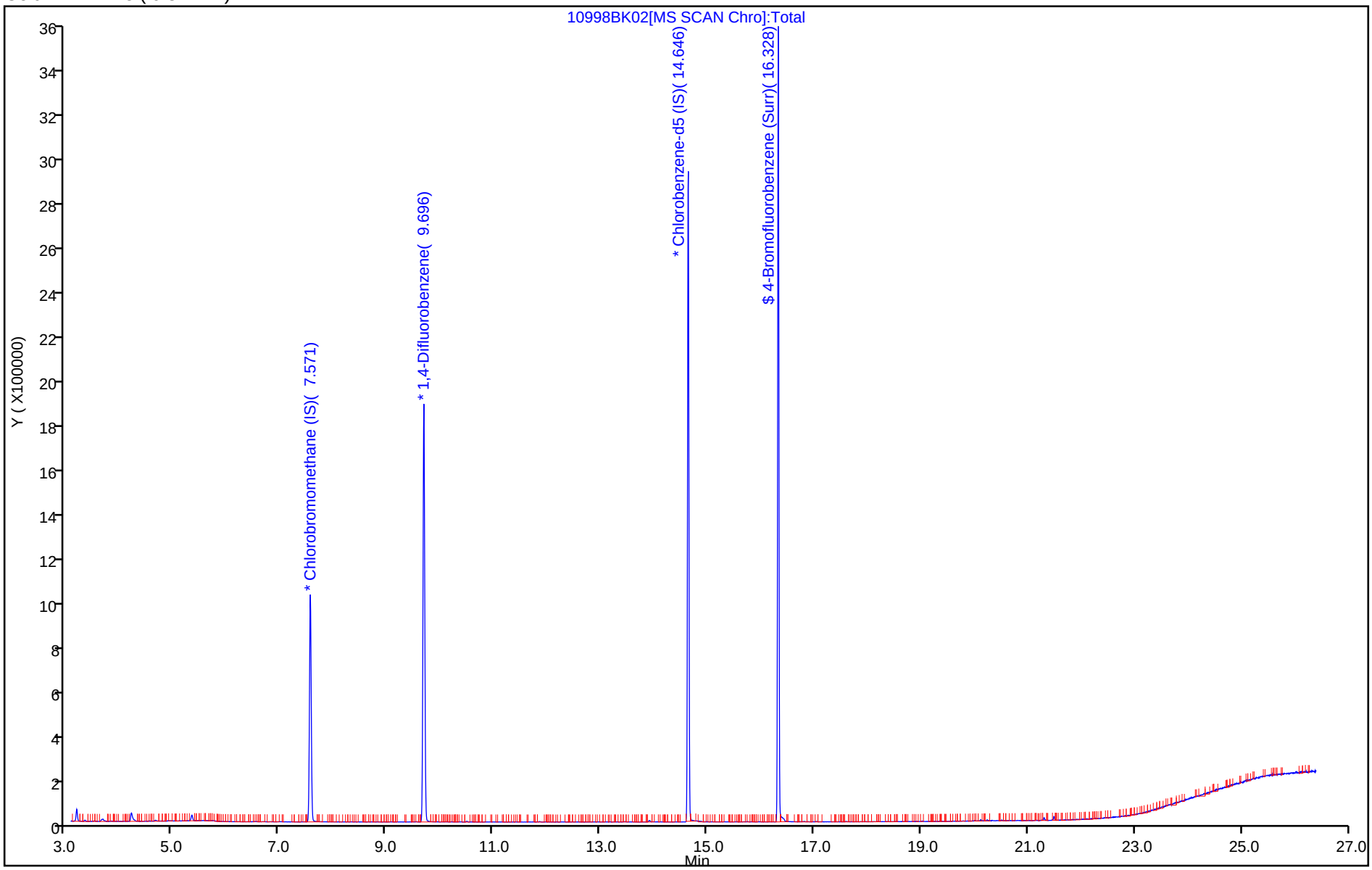
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:16 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK02.D				
Injection Date:	21-Mar-2018 13:59:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-2	Lab Sample ID:	140-10998-2	Worklist Smp#:	5
Client ID:	11047				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



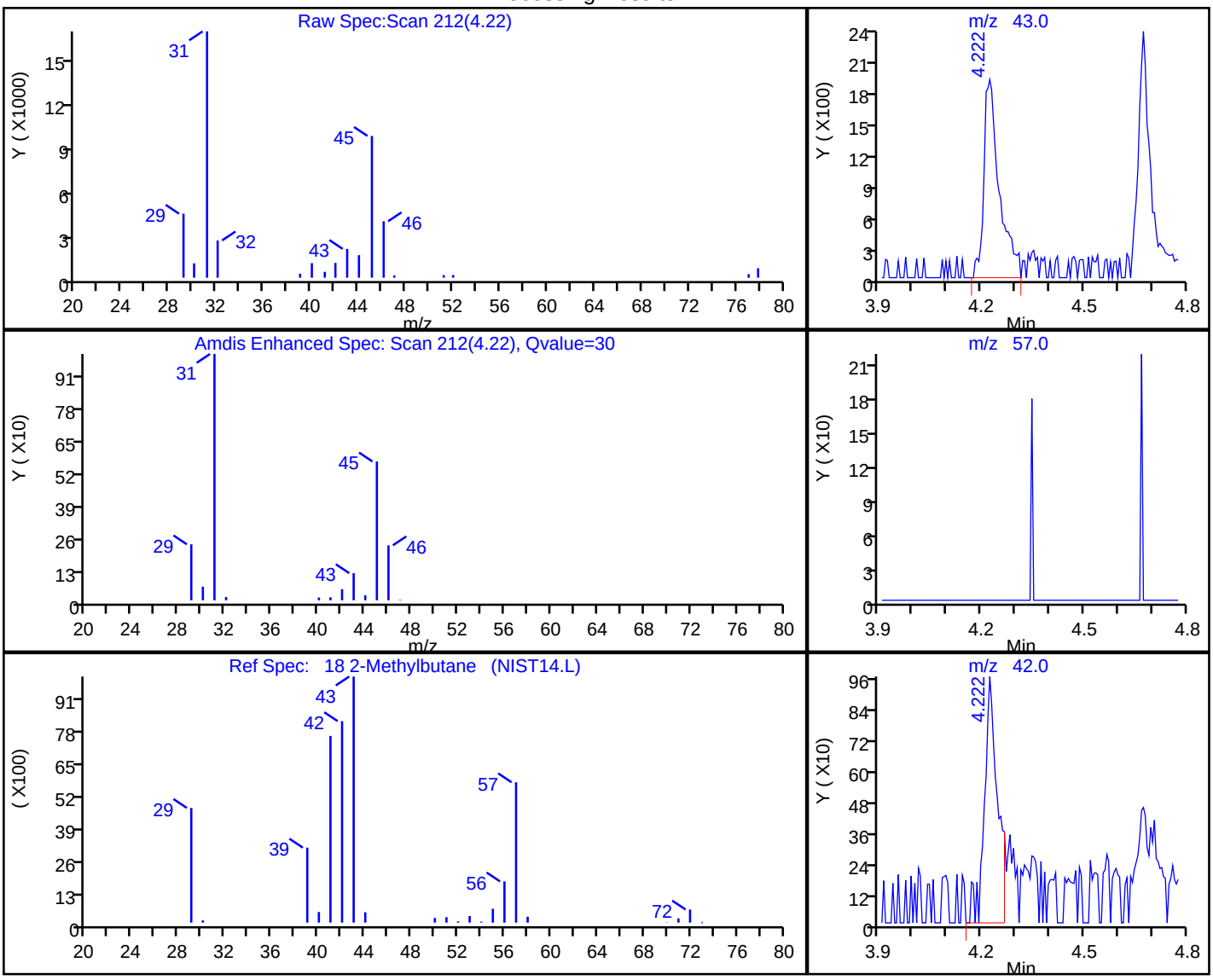
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK02.D				
Injection Date:	21-Mar-2018 13:59:30	Instrument ID:	MG		
Lims ID:	140-10998-A-2	Lab Sample ID:	140-10998-2		
Client ID:	11047				
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.22	43.00	5939	0.044187
4.22	42.00	2586	
4.34	57.00	0	

Reviewer: tajh, 21-Mar-2018 14:36:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10996 | Lab Sample ID: 140-10998-3

Matrix: Air | Lab File ID: 10998BK03.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 14:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10996
Lab Sample ID: 140-10998-3
Matrix: Air
Lab File ID: 10998BK03.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 14:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	2.1		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10996
Lab Sample ID: 140-10998-3
Matrix: Air
Lab File ID: 10998BK03.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 14:42
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	0.40		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10996 Lab Sample ID: 140-10998-3
Matrix: Air Lab File ID: 10998BK03.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 14:42
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK03.D
Lims ID: 140-10998-A-3
Client ID: 10996
Sample Type: Client
Inject. Date: 21-Mar-2018 14:42:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-006
Misc. Info.: 10996
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 21-Mar-2018 15:40:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	313804	4.00	
* 2 1,4-Difluorobenzene	114	9.695	9.696	-0.001	95	1799361	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	88	1619169	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1130475	3.95	
6 Chlorodifluoromethane	67	3.343	3.333	0.010	96	649	0.0263	
8 Dichlorodifluoromethane	85	3.386	3.381	0.005	99	6749	0.0279	
9 Chloromethane	52	3.521	3.516	0.005	99	2495	0.0820	
13 Butane	43	3.721	3.716	0.005	93	5867	0.0351	
14 Bromomethane	94	3.958	3.953	0.005	98	6265	0.0651	
16 Ethanol	31	4.201	4.168	0.033	96	93142	2.08	
18 2-Methylbutane	43	4.346	4.341	0.005	93	1995	0.0154	
20 Trichlorofluoromethane	101	4.508	4.503	0.005	99	10262	0.0414	
25 Isopropyl alcohol	45	4.821	4.708	0.113	99	18243	0.1566	
31 Methylene Chloride	84	5.344	5.344	0.000	96	41956	0.3998	
39 Hexane	56	6.962	6.956	0.006	93	8019	0.0909	

Reagents:

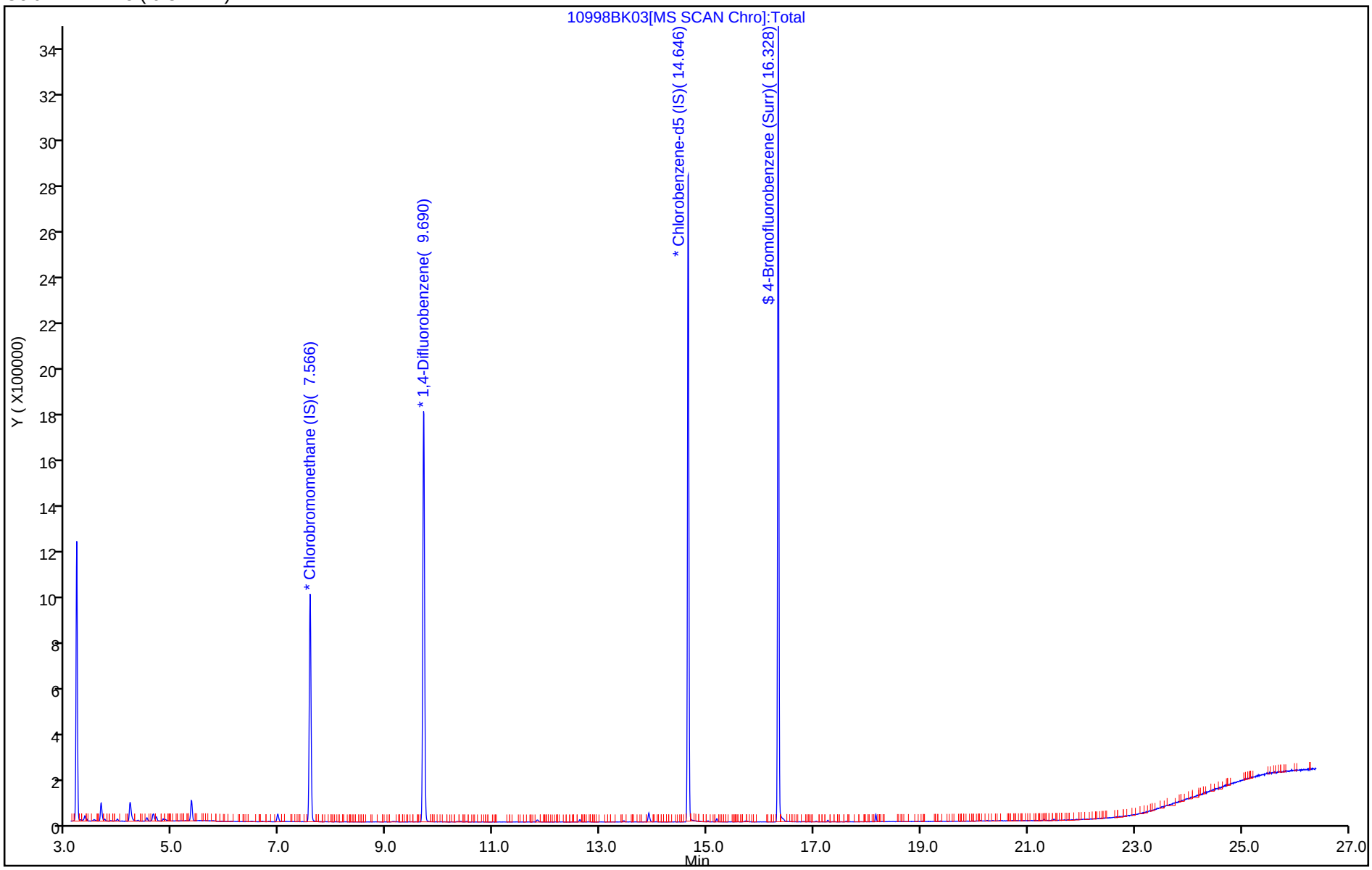
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:19 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK03.D				
Injection Date:	21-Mar-2018 14:42:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-3	Lab Sample ID:	140-10998-3	Worklist Smp#:	6
Client ID:	10996				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

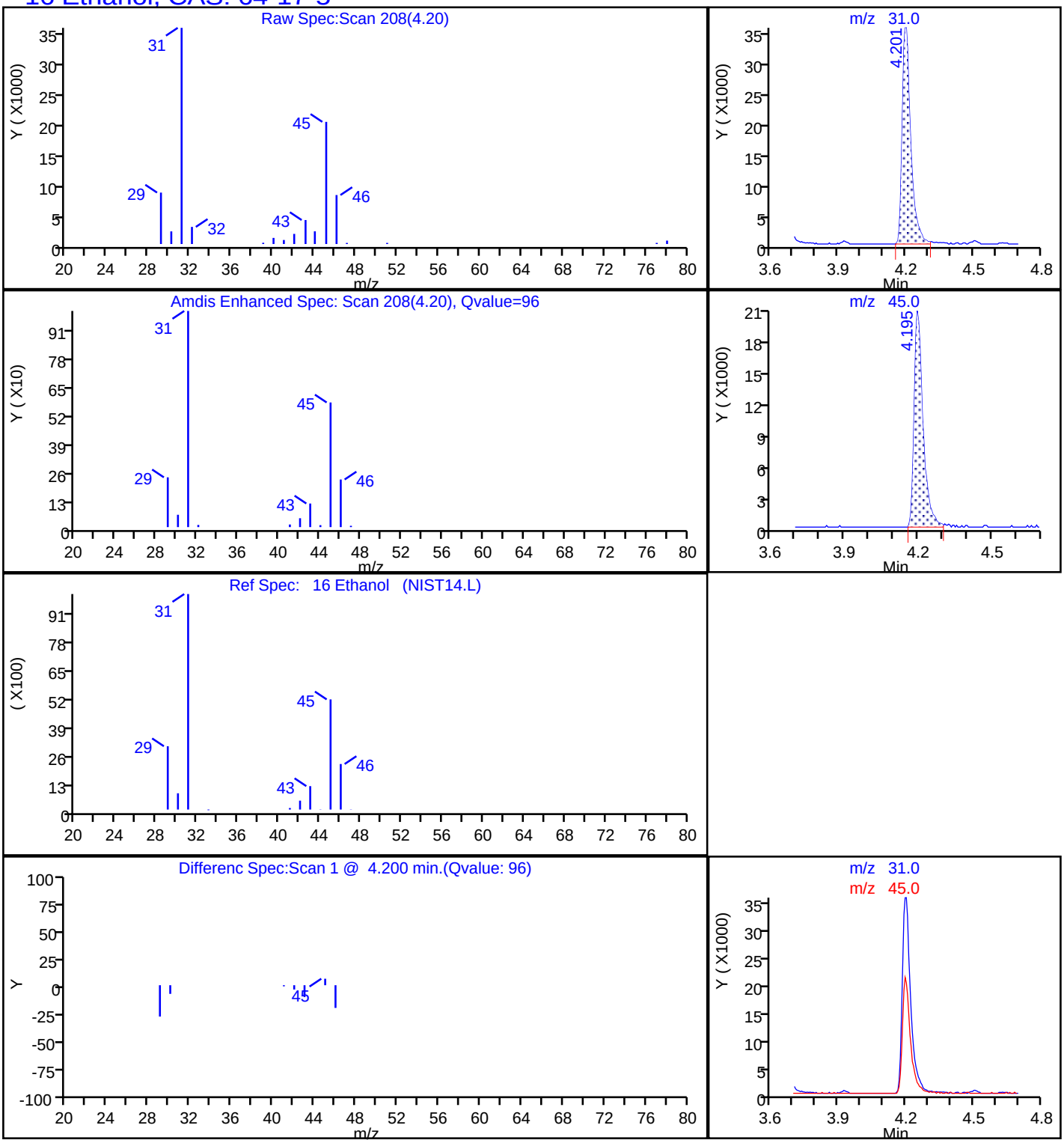


Report Date: 22-Mar-2018 13:17:20 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK03.D				
Injection Date:	21-Mar-2018 14:42:30	Instrument ID:	MG		
Lims ID:	140-10998-A-3	Lab Sample ID:	140-10998-3		
Client ID:	10996				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Ethanol, CAS: 64-17-5

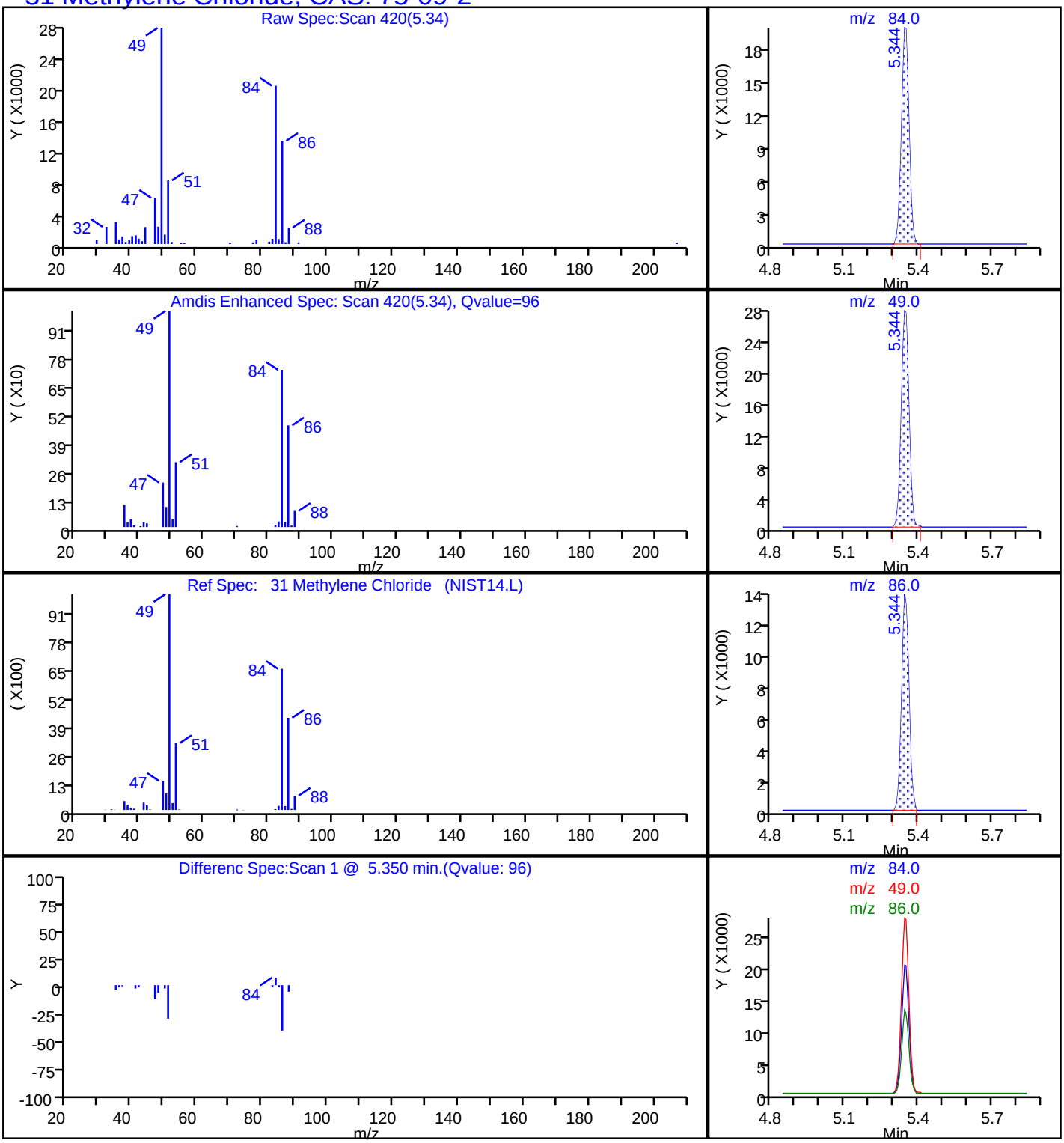


Report Date: 22-Mar-2018 13:17:20 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK03.D				
Injection Date:	21-Mar-2018 14:42:30	Instrument ID:	MG		
Lims ID:	140-10998-A-3	Lab Sample ID:	140-10998-3		
Client ID:	10996				
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11304 | Lab Sample ID: 140-10998-4
Matrix: Air | Lab File ID: 10998BK04.D
Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:58
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11304 | Lab Sample ID: 140-10998-4

Matrix: Air | Lab File ID: 10998BK04.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND	*	0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11304 | Lab Sample ID: 140-10998-4

Matrix: Air | Lab File ID: 10998BK04.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND	*	0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11304 Lab Sample ID: 140-10998-4
Matrix: Air Lab File ID: 10998BK04.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 18:58
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18894 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK04.D
Lims ID: 140-10998-A-4
Client ID: 11304
Sample Type: Client
Inject. Date: 21-Mar-2018 18:58:30 ALS Bottle#: 15 Worklist Smp#: 29
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007672-029
Misc. Info.: 11304
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Mar-2018 19:41:48 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 19:47:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.667	9.673	-0.006	90	228809	4.00	
* 2 1,4-Difluorobenzene	114	11.770	11.777	-0.007	95	1201702	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.376	-0.001	88	1043738	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.972	-0.001	95	778388	4.13	
25 Isopropyl alcohol	45	6.299	6.167	0.128	18	3791	0.0508	

Reagents:

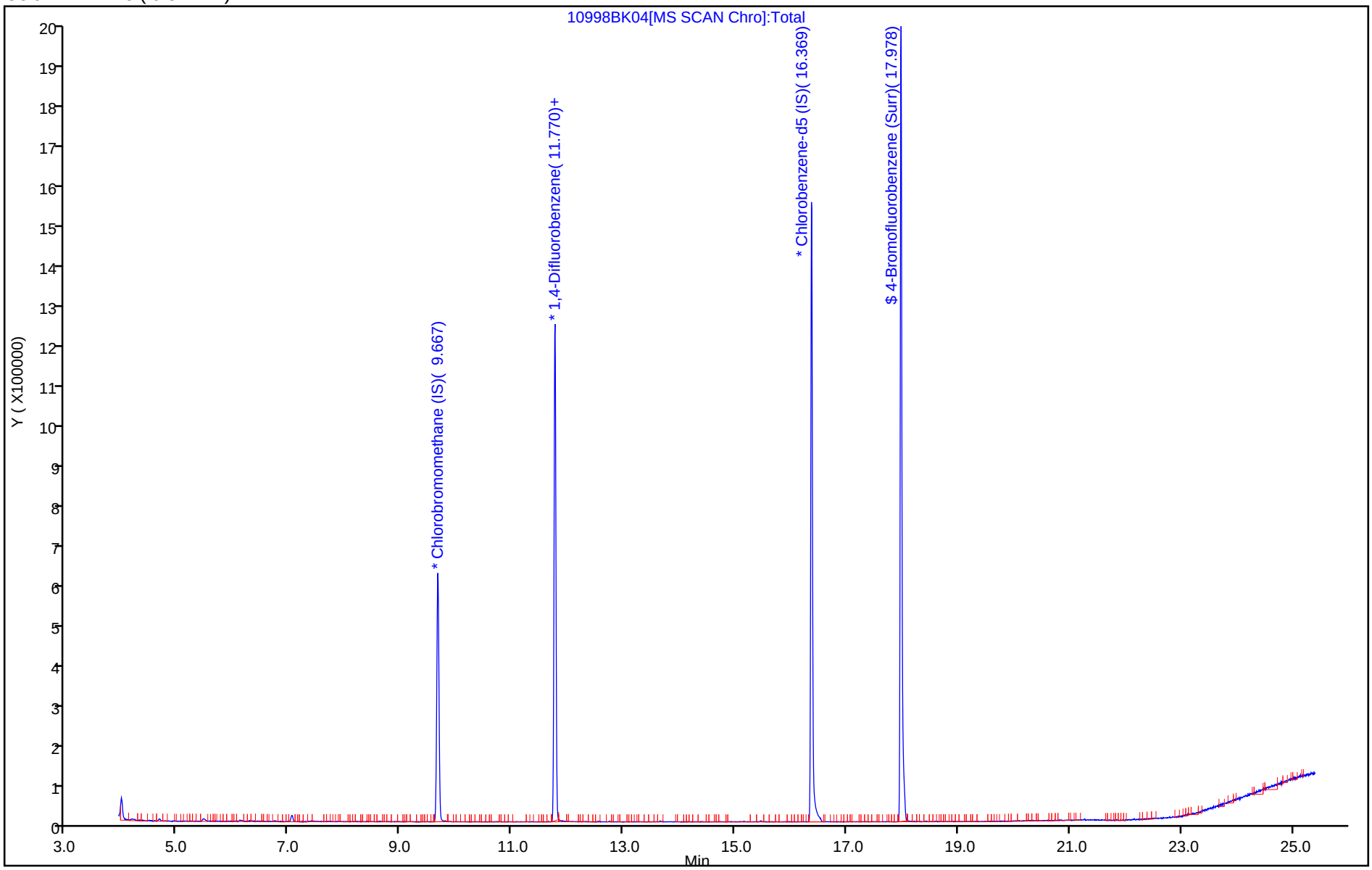
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 19:47:31 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK04.D				
Injection Date:	21-Mar-2018 18:58:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10998-A-4	Lab Sample ID:	140-10998-4	Worklist Smp#:	29
Client ID:	11304				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



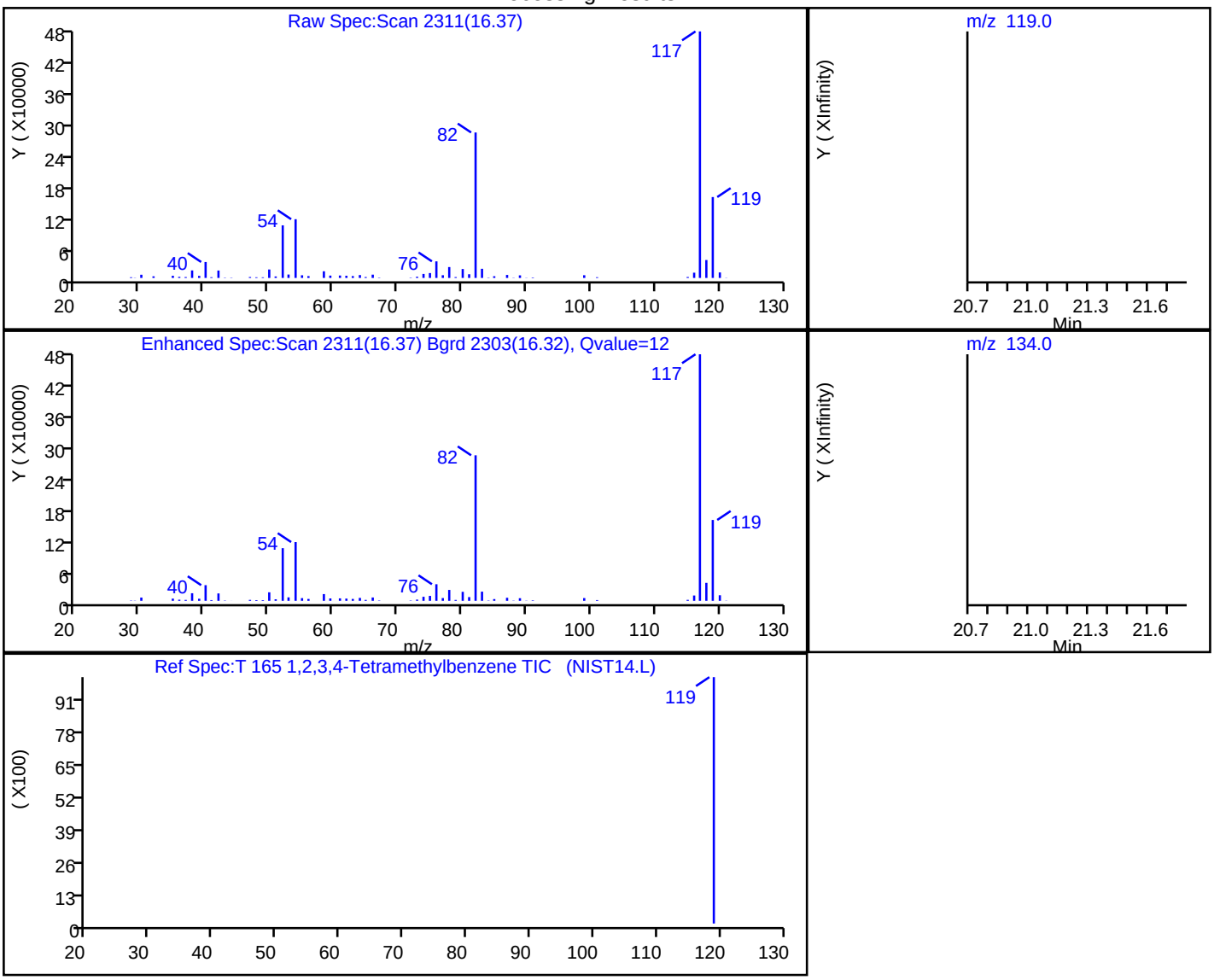
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK04.D				
Injection Date:	21-Mar-2018 18:58:30	Instrument ID:	MJ		
Lims ID:	140-10998-A-4	Lab Sample ID:	140-10998-4		
Client ID:	11304				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	342871	1.314012
23.66	134.00	205	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:41:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

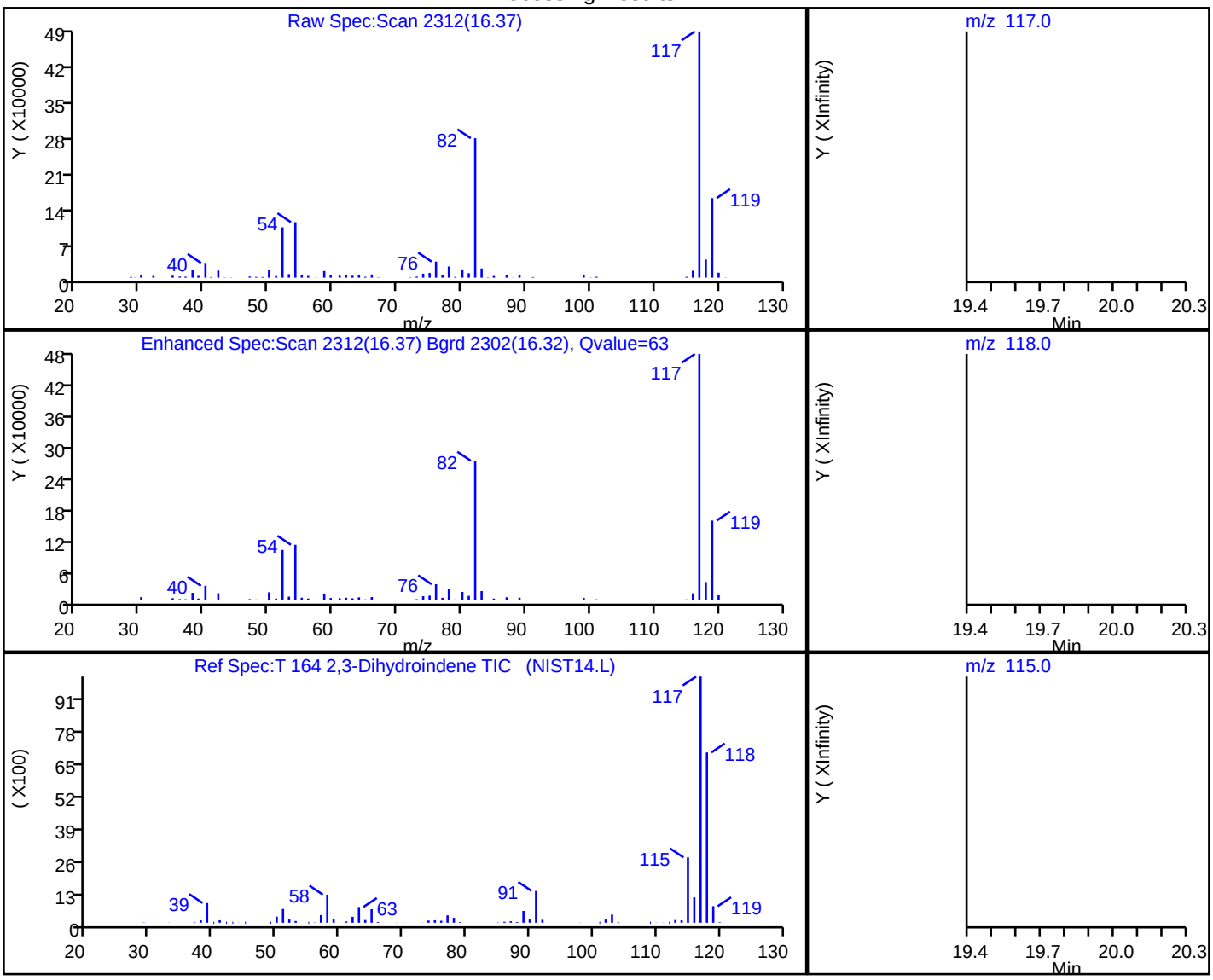
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK04.D				
Injection Date:	21-Mar-2018 18:58:30	Instrument ID:	MJ		
Lims ID:	140-10998-A-4	Lab Sample ID:	140-10998-4		
Client ID:	11304				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	29
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	1043738	4.000000
16.37	118.00	78908	
16.37	115.00	3919	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:41:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09594 | Lab Sample ID: 140-10998-5
Matrix: Air | Lab File ID: 10998BK05.D
Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 20:31
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09594
Lab Sample ID: 140-10998-5
Matrix: Air
Lab File ID: 10998BK05.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 20:31
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	6.1		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09594 | Lab Sample ID: 140-10998-5

Matrix: Air | Lab File ID: 10998BK05.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09594 Lab Sample ID: 140-10998-5
Matrix: Air Lab File ID: 10998BK05.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 20:31
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK05.D
Lims ID: 140-10998-A-5
Client ID: 09594
Sample Type: Client
Inject. Date: 21-Mar-2018 20:31:30 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-019
Misc. Info.: 09594
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 22-Mar-2018 10:24:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.571	0.000	96	317140	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.696	0.000	95	1766934	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	88	1600409	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1119520	3.96	
16 Ethanol	31	4.195	4.168	0.027	97	277737	6.14	

Reagents:

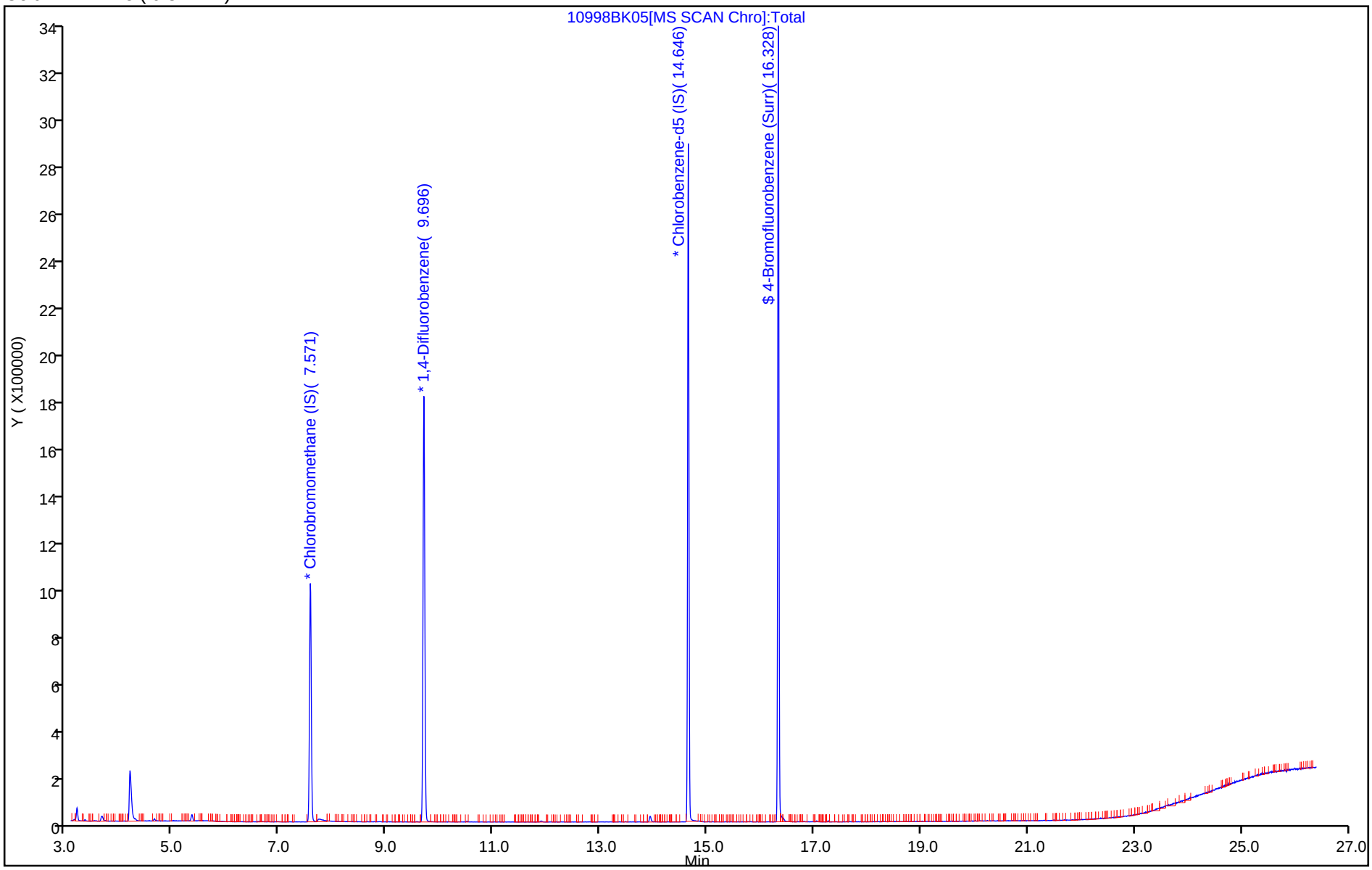
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:46 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK05.D				
Injection Date:	21-Mar-2018 20:31:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-5	Lab Sample ID:	140-10998-5	Worklist Smp#:	19
Client ID:	09594				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

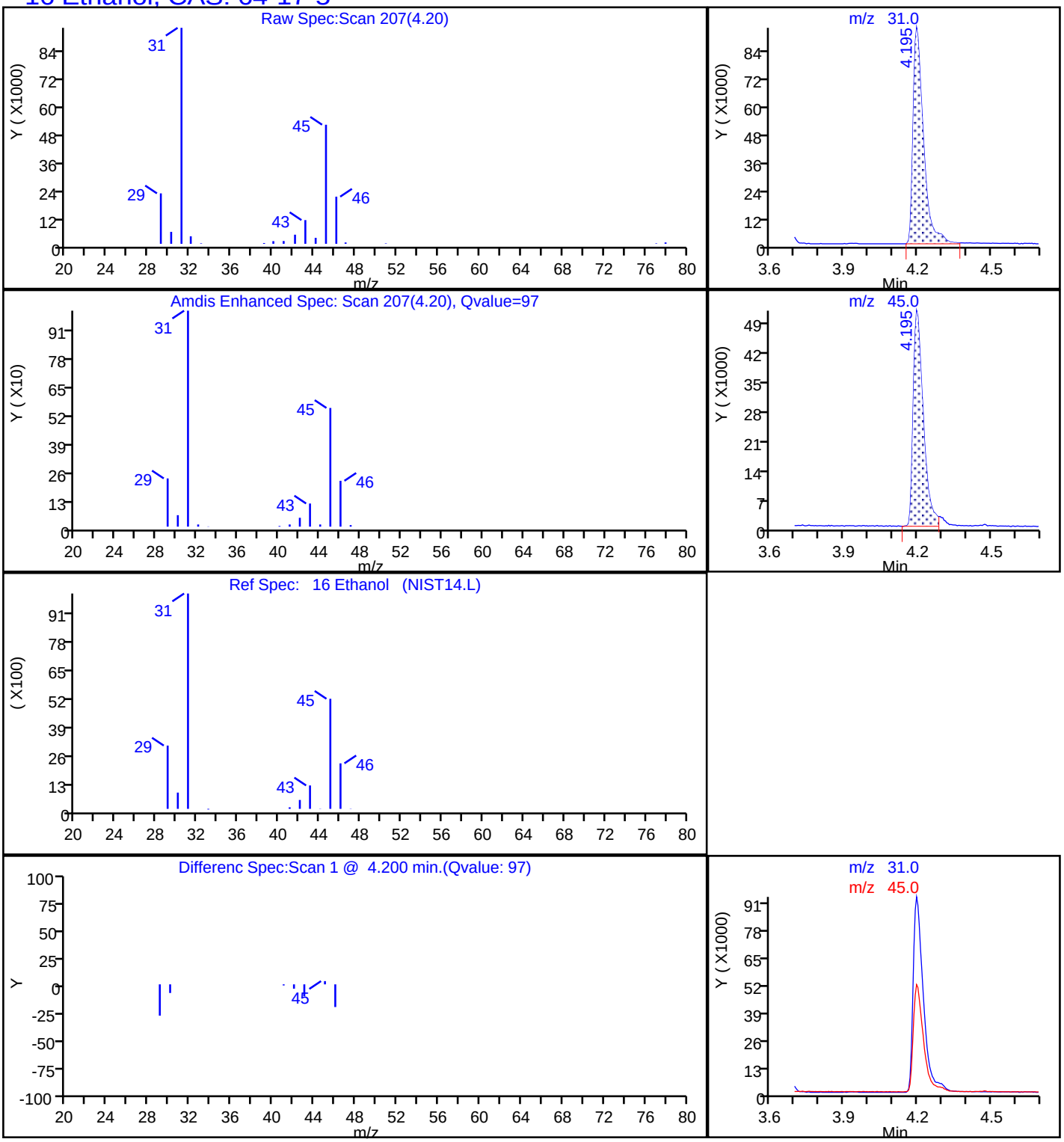


Report Date: 22-Mar-2018 13:17:46 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK05.D				
Injection Date:	21-Mar-2018 20:31:30	Instrument ID:	MG		
Lims ID:	140-10998-A-5	Lab Sample ID:	140-10998-5		
Client ID:	09594				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Ethanol, CAS: 64-17-5



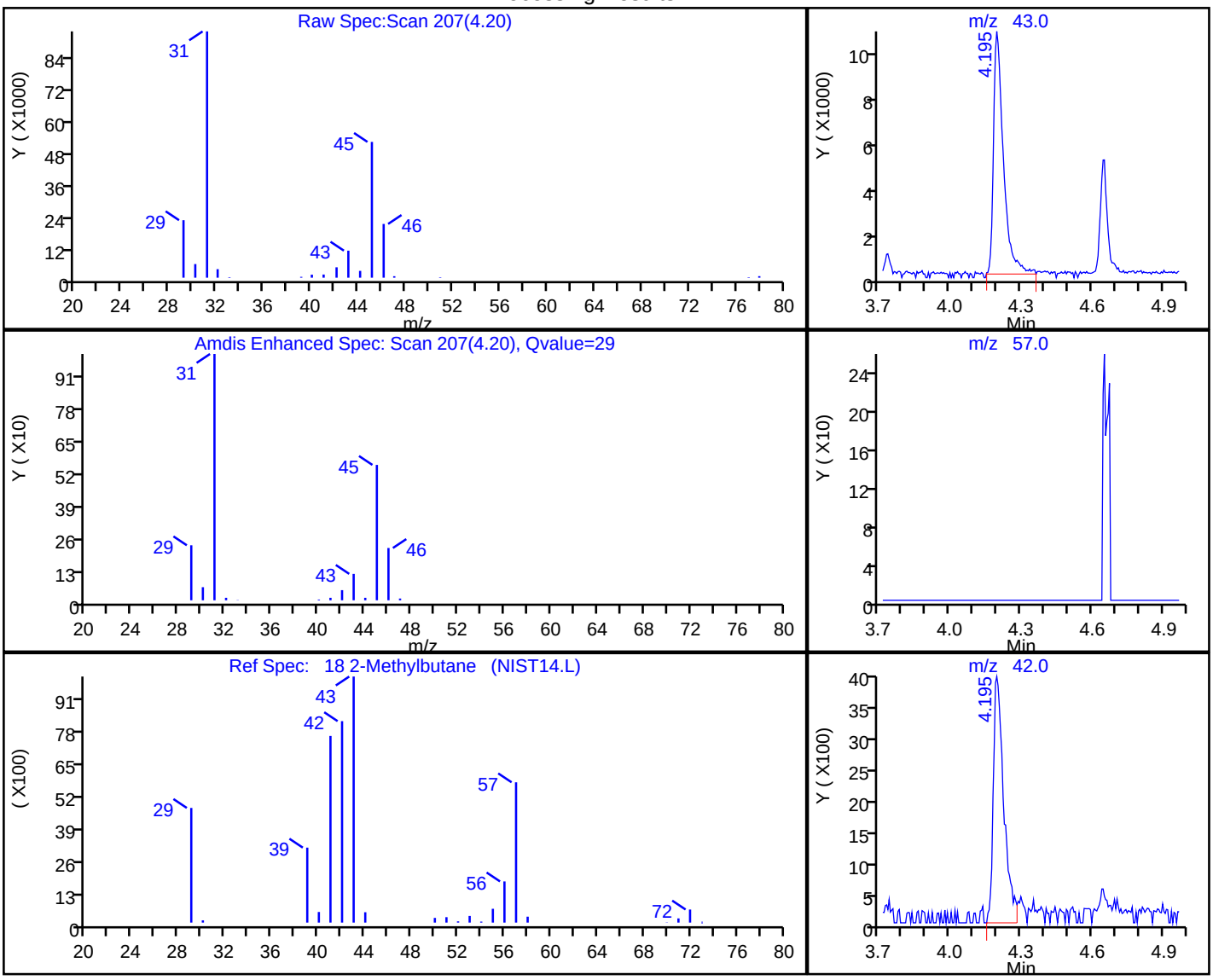
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK05.D				
Injection Date:	21-Mar-2018 20:31:30	Instrument ID:	MG		
Lims ID:	140-10998-A-5	Lab Sample ID:	140-10998-5		
Client ID:	09594				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.20	43.00	29924	0.229041
4.20	42.00	12344	
4.34	57.00	0	

Reviewer: tajh, 22-Mar-2018 10:24:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

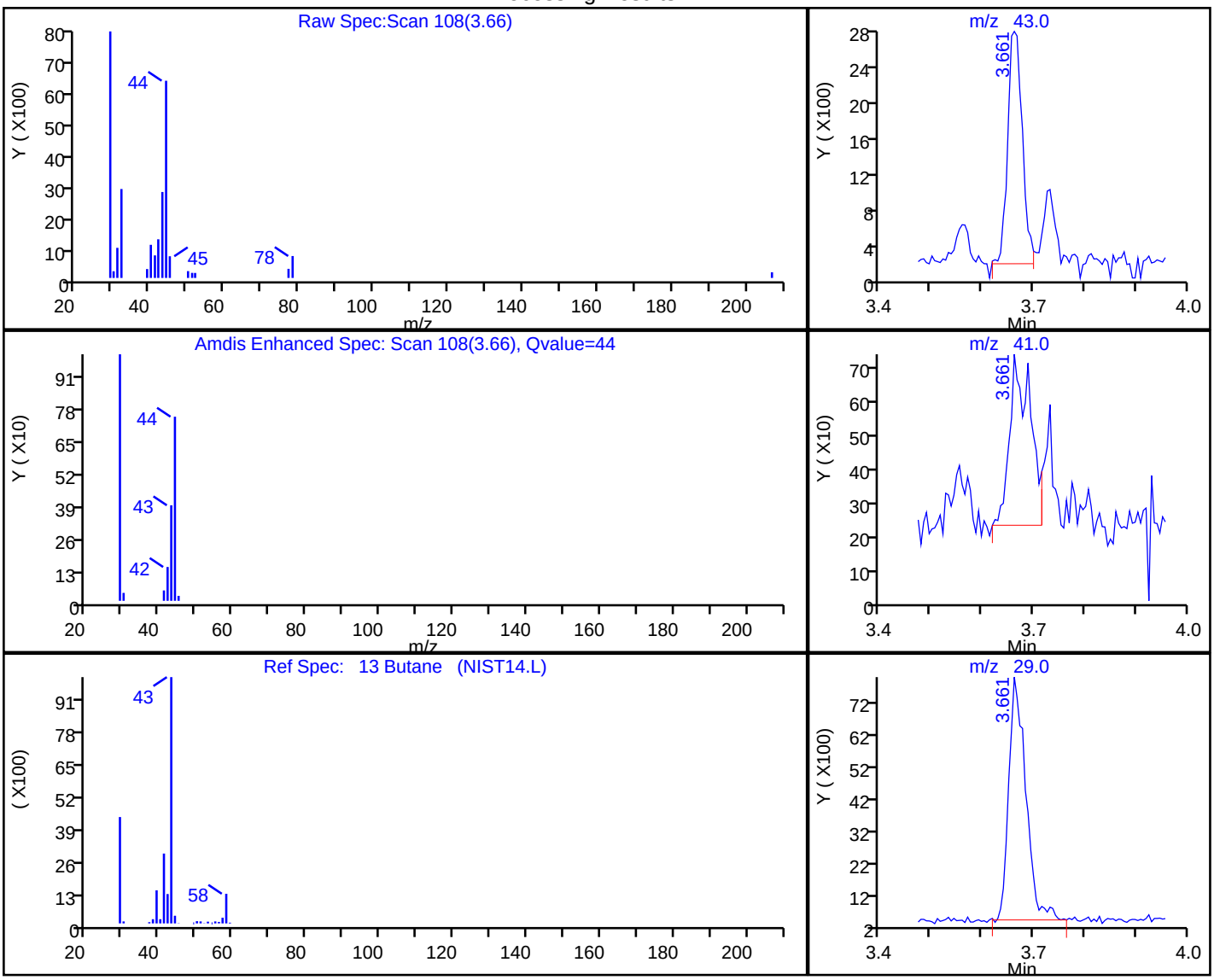
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK05.D				
Injection Date:	21-Mar-2018 20:31:30	Instrument ID:	MG		
Lims ID:	140-10998-A-5	Lab Sample ID:	140-10998-5		
Client ID:	09594				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.66	43.00	5237	0.030984
3.66	41.00	1448	
3.66	29.00	17702	

Reviewer: tajh, 22-Mar-2018 10:24:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10514 | Lab Sample ID: 140-10998-6
Matrix: Air | Lab File ID: 10998BK06.D
Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 15:26
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10514
Lab Sample ID: 140-10998-6
Matrix: Air
Lab File ID: 10998BK06.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 15:26
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10514 | Lab Sample ID: 140-10998-6

Matrix: Air | Lab File ID: 10998BK06.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 15:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10514 Lab Sample ID: 140-10998-6
Matrix: Air Lab File ID: 10998BK06.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 15:26
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK06.D				
Lims ID:	140-10998-A-6				
Client ID:	10514				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 15:26:30	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007695-007				
Misc. Info.:	10514				
Operator ID:	007126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2018 13:17:08	Calib Date:	20-Mar-2018 22:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: barlozhetskayaa		Date:	21-Mar-2018 17:18:12		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	319189	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1764340	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.640	14.646	-0.006	88	1559351	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1090963	3.96	
33 Carbon disulfide	76	5.479	5.473	0.006	97	3509	0.0124	

Reagents:

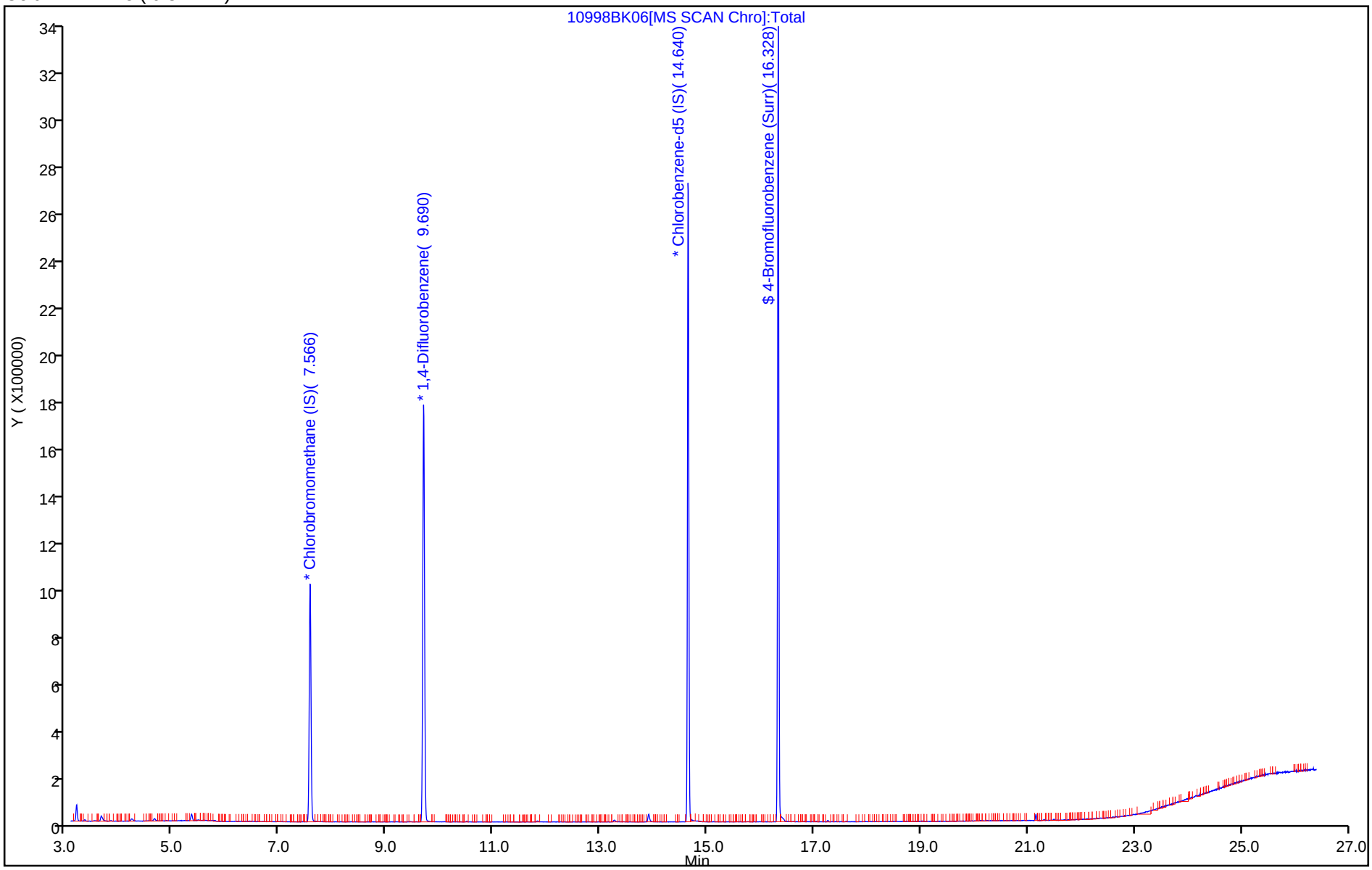
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:22 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK06.D				
Injection Date:	21-Mar-2018 15:26:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-6	Lab Sample ID:	140-10998-6	Worklist Smp#:	7
Client ID:	10514				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



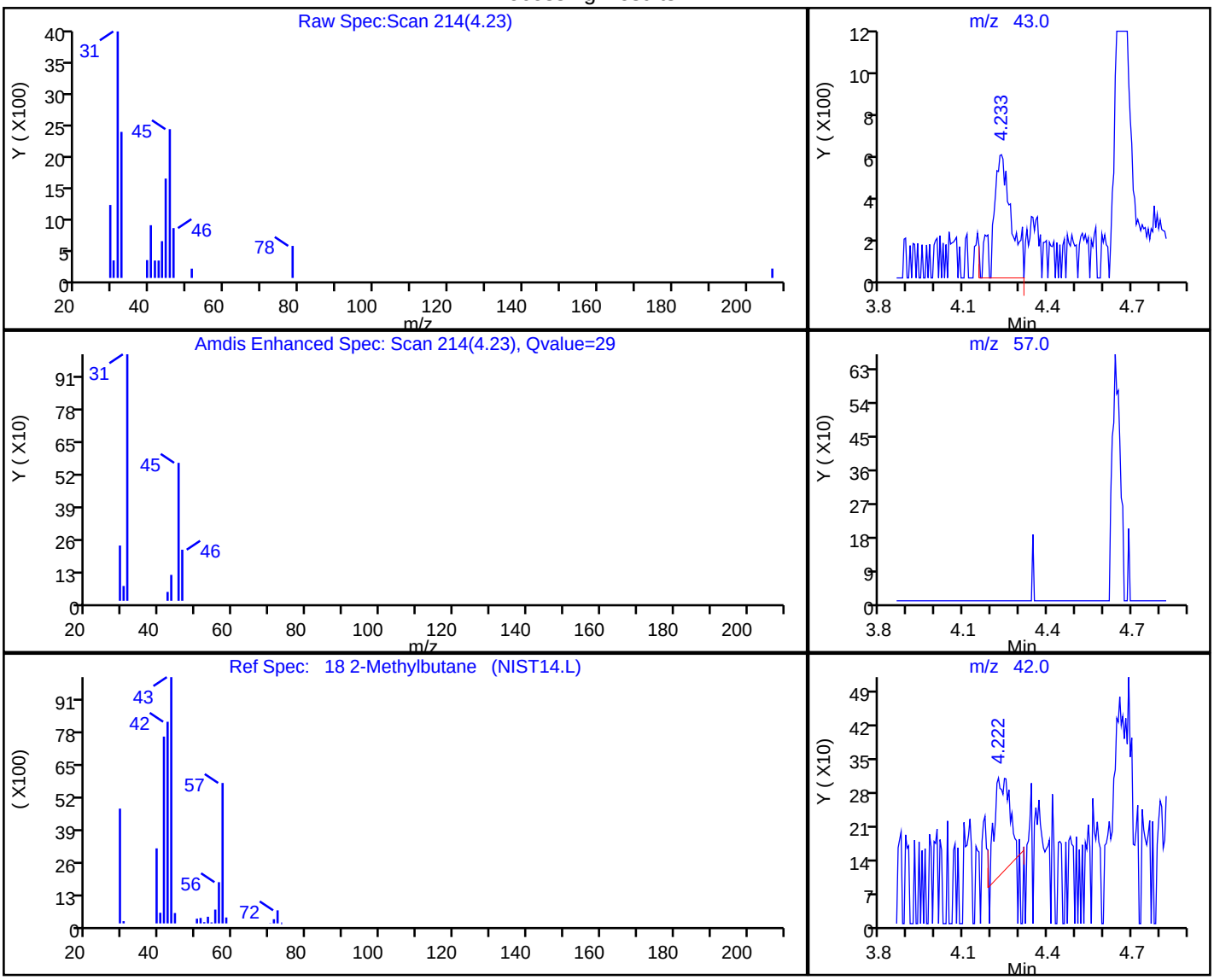
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK06.D				
Injection Date:	21-Mar-2018 15:26:30	Instrument ID:	MG		
Lims ID:	140-10998-A-6	Lab Sample ID:	140-10998-6		
Client ID:	10514				
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.23	43.00	2684	0.020412
4.34	57.00	0	
4.22	42.00	634	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:18:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

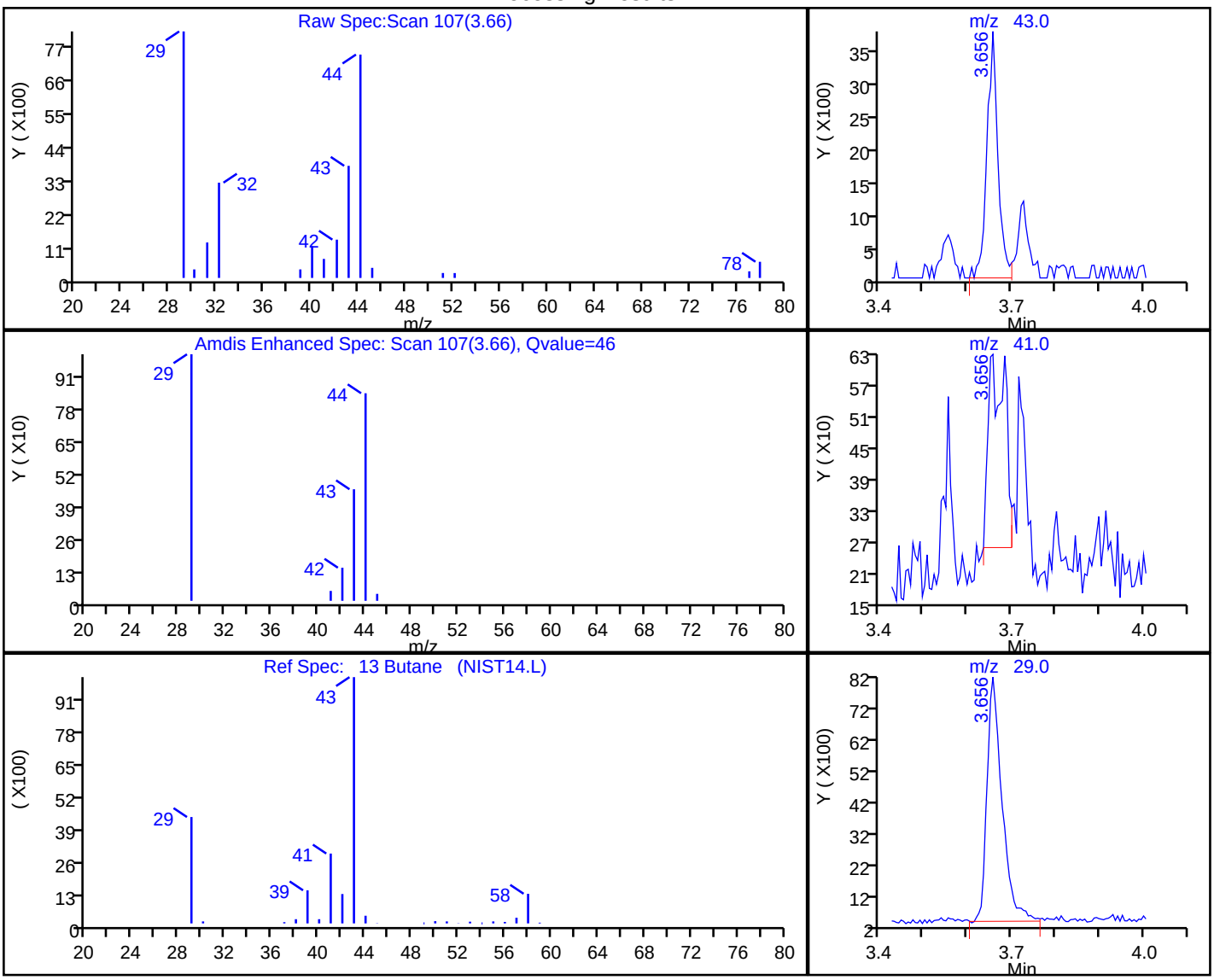
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK06.D				
Injection Date:	21-Mar-2018 15:26:30	Instrument ID:	MG		
Lims ID:	140-10998-A-6	Lab Sample ID:	140-10998-6		
Client ID:	10514				
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.66	43.00	6521	0.038333
3.66	41.00	990	
3.66	29.00	18889	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:18:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10811 | Lab Sample ID: 140-10998-7

Matrix: Air | Lab File ID: 10998BK07.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 16:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10811 | Lab Sample ID: 140-10998-7
Matrix: Air | Lab File ID: 10998BK07.D
Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 16:10
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10811 | Lab Sample ID: 140-10998-7

Matrix: Air | Lab File ID: 10998BK07.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 16:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10811 Lab Sample ID: 140-10998-7

Matrix: Air Lab File ID: 10998BK07.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 16:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK07.D
Lims ID: 140-10998-A-7
Client ID: 10811
Sample Type: Client
Inject. Date: 21-Mar-2018 16:10:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-008
Misc. Info.: 10811
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 22-Mar-2018 13:19:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	95	320712	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1778964	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.640	14.646	-0.006	88	1583359	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1113583	3.98	

Reagents:

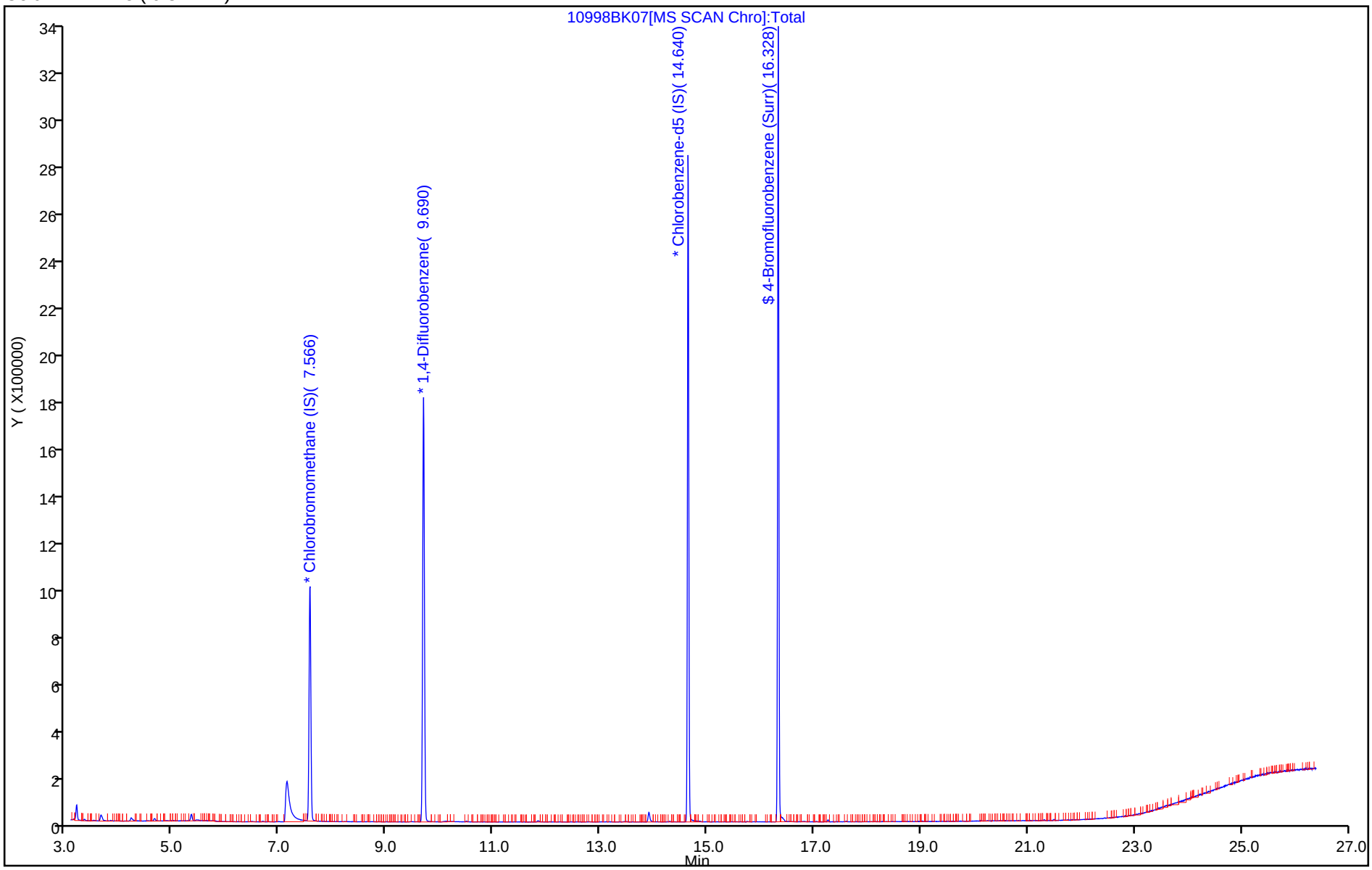
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:19:47 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK07.D				
Injection Date:	21-Mar-2018 16:10:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-7	Lab Sample ID:	140-10998-7	Worklist Smp#:	8
Client ID:	10811				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



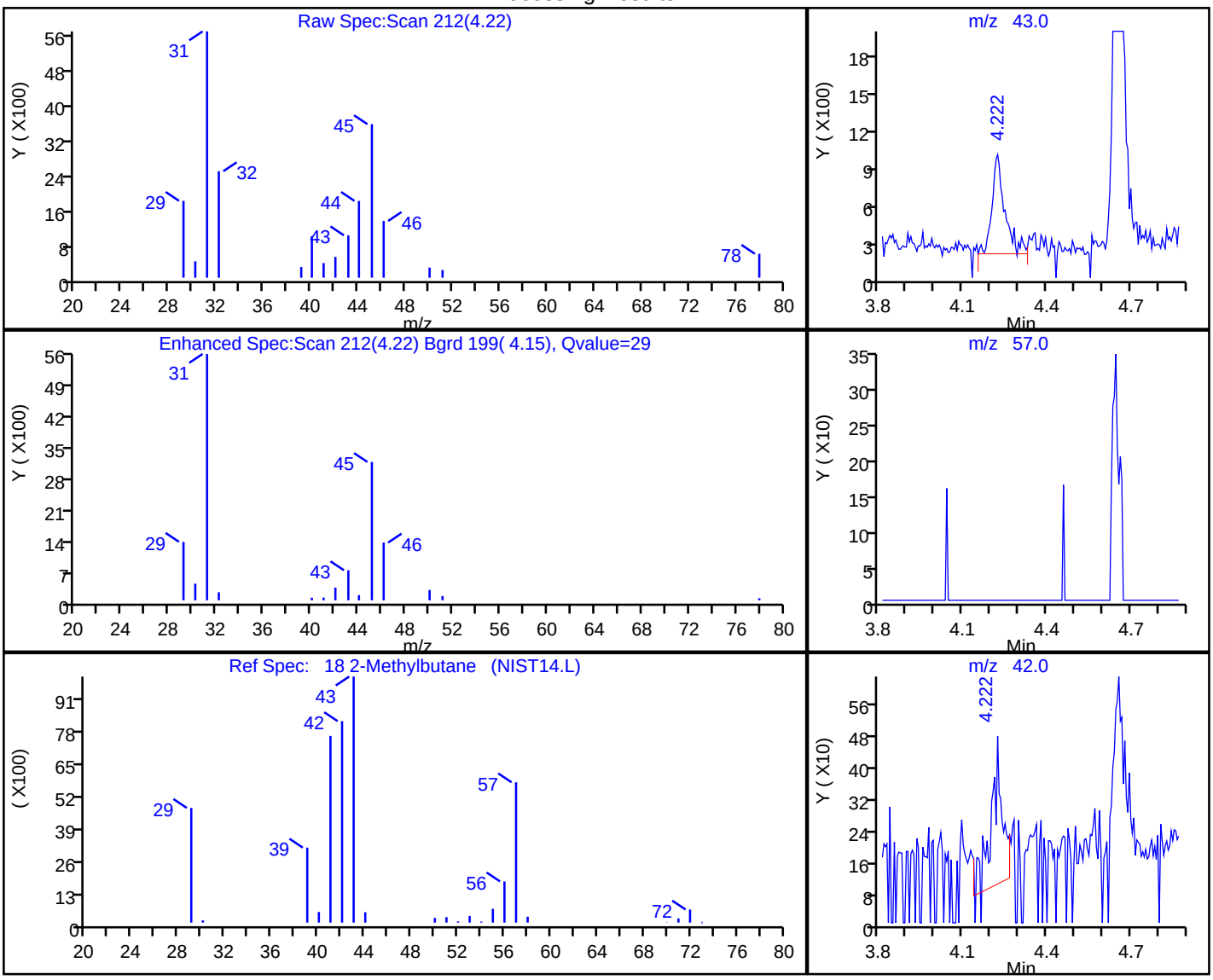
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK07.D				
Injection Date:	21-Mar-2018 16:10:30	Instrument ID:	MG		
Lims ID:	140-10998-A-7	Lab Sample ID:	140-10998-7		
Client ID:	10811				
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.22	43.00	2492	0.018862
4.34	57.00	0	
4.22	42.00	1045	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:18:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

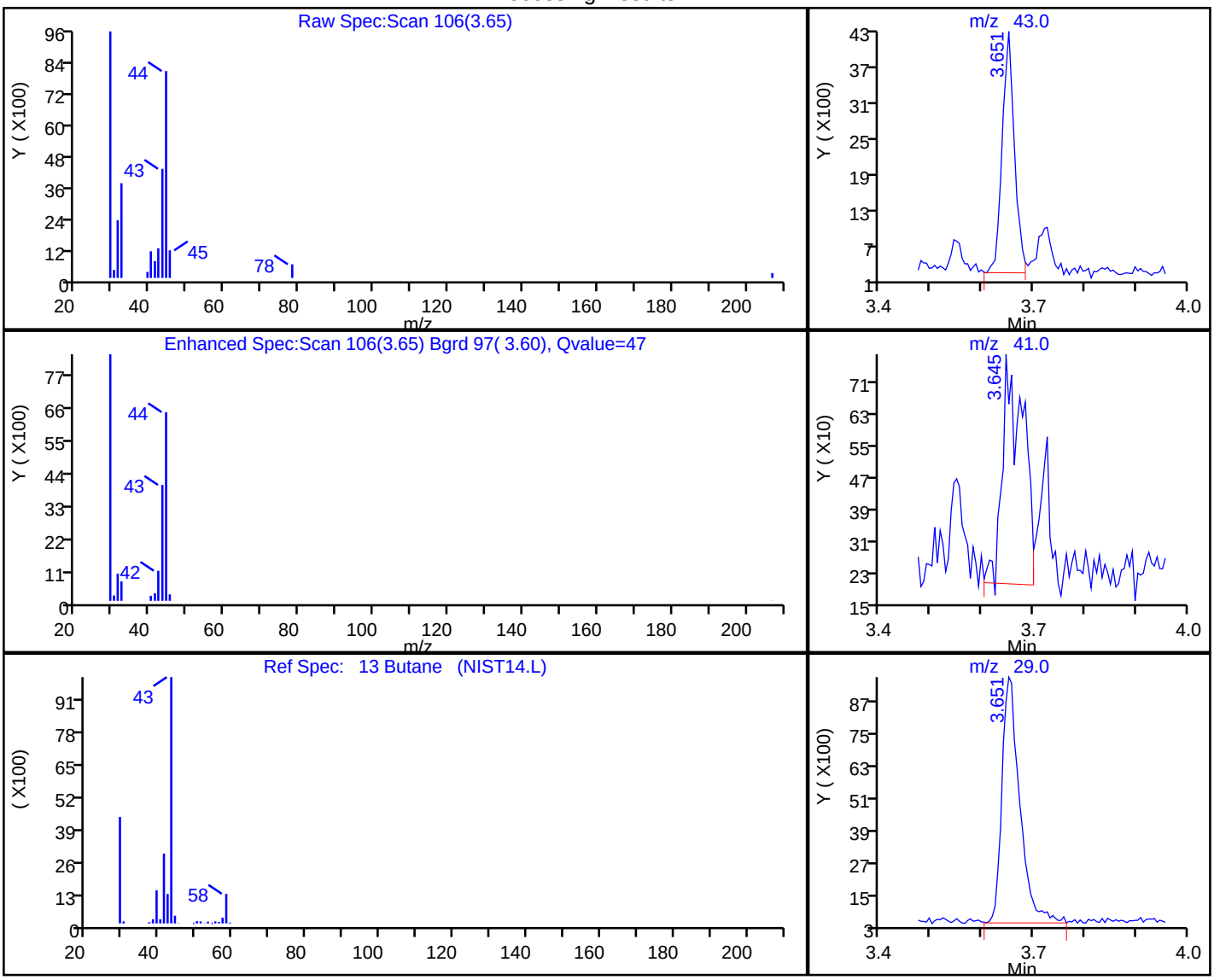
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK07.D				
Injection Date:	21-Mar-2018 16:10:30	Instrument ID:	MG		
Lims ID:	140-10998-A-7	Lab Sample ID:	140-10998-7		
Client ID:	10811				
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	6616	0.038707
3.65	41.00	1660	
3.65	29.00	22331	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:18:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09966 | Lab Sample ID: 140-10998-8

Matrix: Air | Lab File ID: 10998BK08.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 16:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09966
Lab Sample ID: 140-10998-8
Matrix: Air
Lab File ID: 10998BK08.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 16:54
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09966
Lab Sample ID: 140-10998-8
Matrix: Air
Lab File ID: 10998BK08.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 16:54
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09966 Lab Sample ID: 140-10998-8
Matrix: Air Lab File ID: 10998BK08.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 16:54
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK08.D
Lims ID: 140-10998-A-8
Client ID: 09966
Sample Type: Client
Inject. Date: 21-Mar-2018 16:54:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-009
Misc. Info.: 09966
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 17:43:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.571	0.000	96	318377	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.696	0.000	95	1786481	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	88	1604800	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1116022	3.94	
16 Ethanol	31	4.233	4.168	0.065	97	31393	0.6915	
19 Acrolein	56	4.519	4.503	0.016	92	3148	0.1458	
22 Acetone	58	4.611	4.600	0.011	98	62116	1.49	
25 Isopropyl alcohol	45	4.837	4.708	0.129	99	35490	0.3002	
33 Carbon disulfide	76	5.479	5.473	0.006	100	6333	0.0224	
41 Ethyl acetate	43	7.485	7.479	0.006	83	21119	0.1080	
59 1,4-Dioxane	88	10.823	10.715	0.108	92	2707	0.0735	

Reagents:

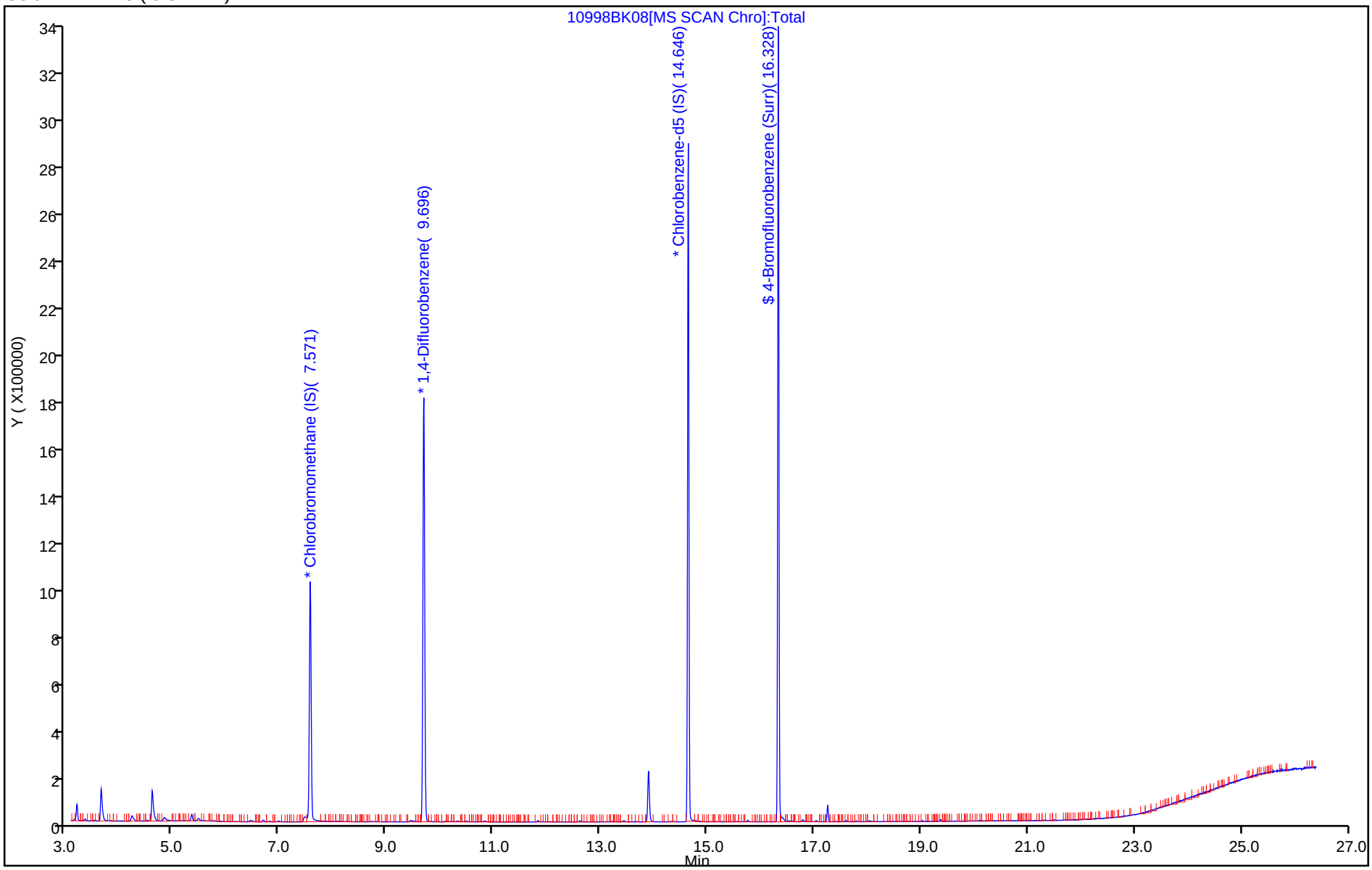
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:26 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK08.D				
Injection Date:	21-Mar-2018 16:54:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-8	Lab Sample ID:	140-10998-8	Worklist Smp#:	9
Client ID:	09966				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



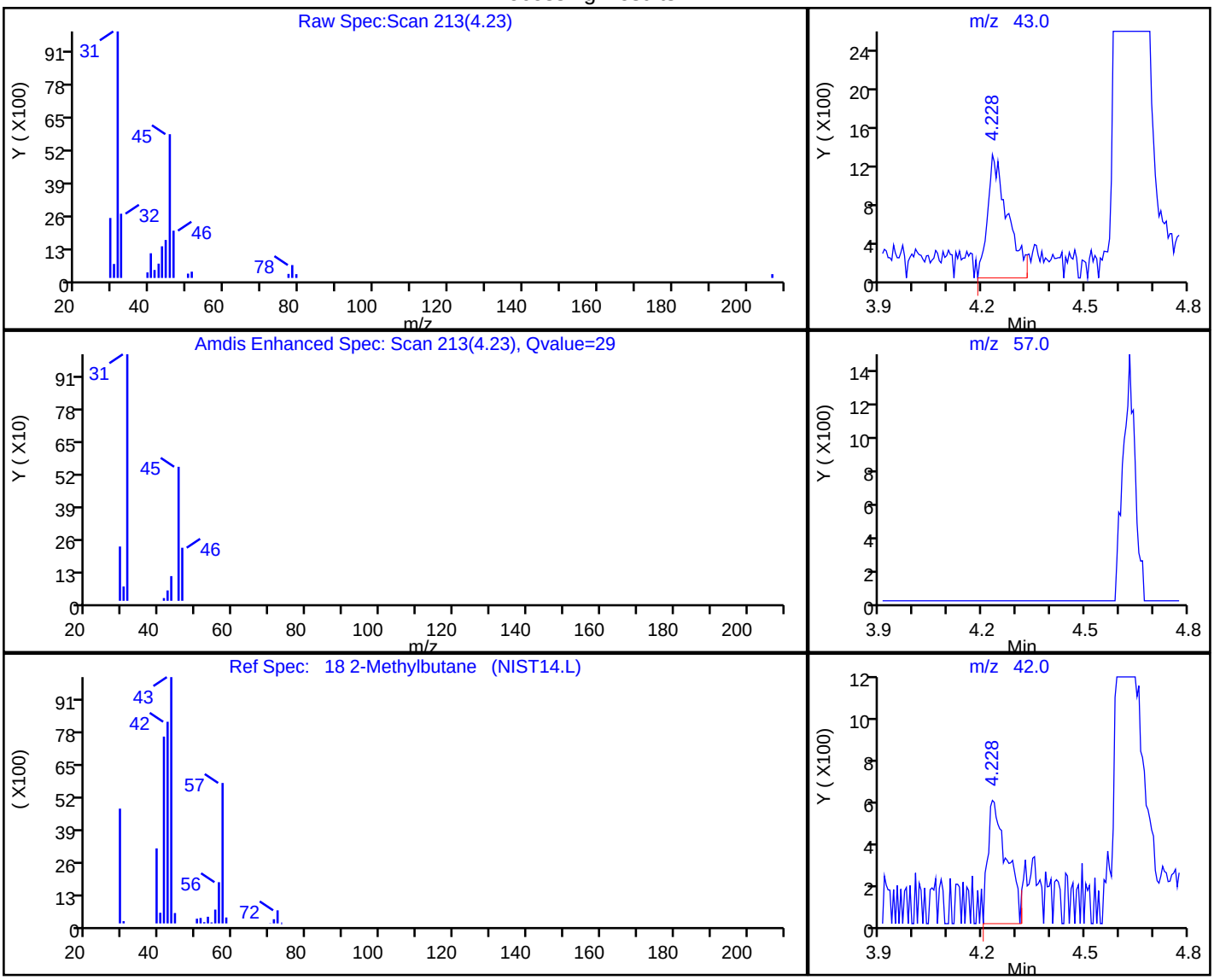
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK08.D				
Injection Date:	21-Mar-2018 16:54:30	Instrument ID:	MG		
Lims ID:	140-10998-A-8	Lab Sample ID:	140-10998-8		
Client ID:	09966				
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.23	43.00	5146	0.039235
4.34	57.00	0	
4.23	42.00	2206	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:43:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

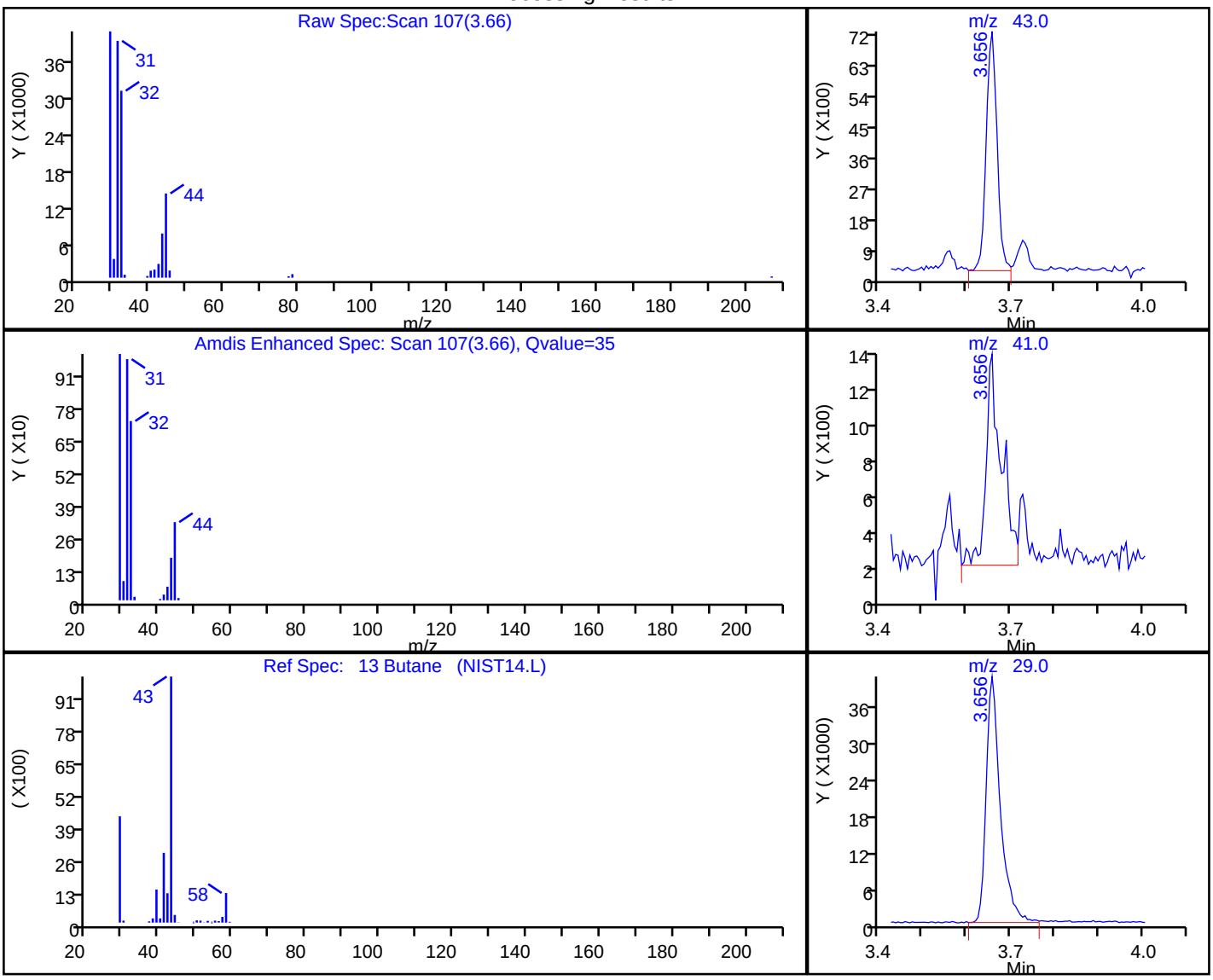
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK08.D				
Injection Date:	21-Mar-2018 16:54:30	Instrument ID:	MG		
Lims ID:	140-10998-A-8	Lab Sample ID:	140-10998-8		
Client ID:	09966				
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.66	43.00	12153	0.071622
3.66	41.00	2813	
3.66	29.00	90460	

Reviewer: barlozhetskayaa, 21-Mar-2018 17:43:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 11148 | Lab Sample ID: 140-10998-9

Matrix: Air | Lab File ID: 10998BK09.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 17:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11148
Lab Sample ID: 140-10998-9
Matrix: Air
Lab File ID: 10998BK09.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 17:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	11		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11148
Lab Sample ID: 140-10998-9
Matrix: Air
Lab File ID: 10998BK09.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 17:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 11148 Lab Sample ID: 140-10998-9
Matrix: Air Lab File ID: 10998BK09.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 17:38
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Lims ID:	140-10998-A-9				
Client ID:	11148				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 17:38:30	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007695-010				
Misc. Info.:	11148				
Operator ID:	007126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2018 13:17:08	Calib Date:	20-Mar-2018 22:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 18:42:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.571	0.000	96	324394	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.696	0.000	95	1864173	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	87	1707847	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1228663	4.07	
16 Ethanol	31	4.201	4.168	0.033	97	30092	0.6505	
19 Acrolein	56	4.530	4.503	0.027	89	2521	0.1146	
25 Isopropyl alcohol	45	4.719	4.708	0.011	99	1364269	11.3	

Reagents:

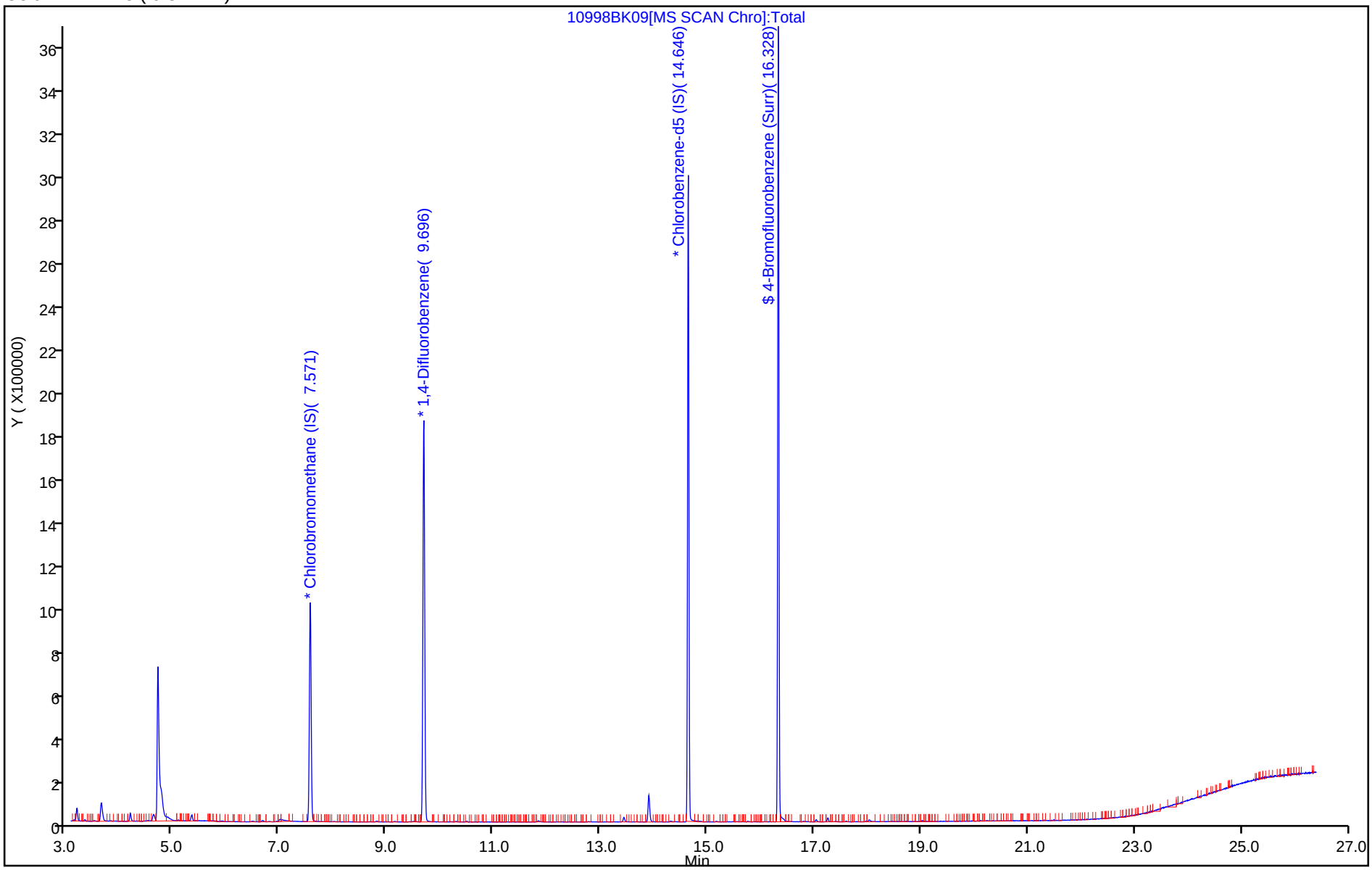
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:30 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Injection Date:	21-Mar-2018 17:38:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-9	Lab Sample ID:	140-10998-9	Worklist Smp#:	10
Client ID:	11148				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

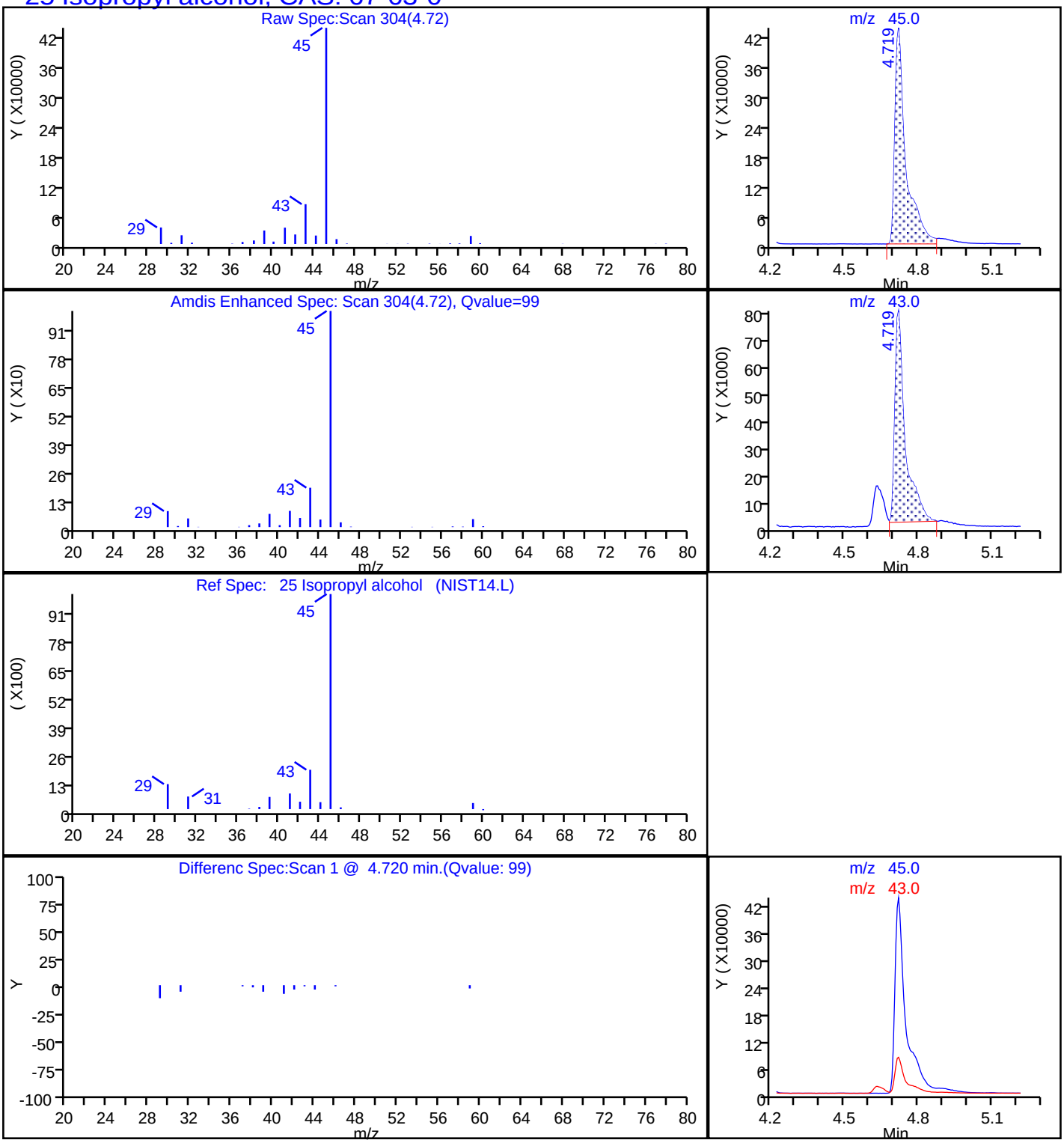


Report Date: 22-Mar-2018 13:17:30 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Injection Date:	21-Mar-2018 17:38:30	Instrument ID:	MG		
Lims ID:	140-10998-A-9	Lab Sample ID:	140-10998-9		
Client ID:	11148				
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

25 Isopropyl alcohol, CAS: 67-63-0



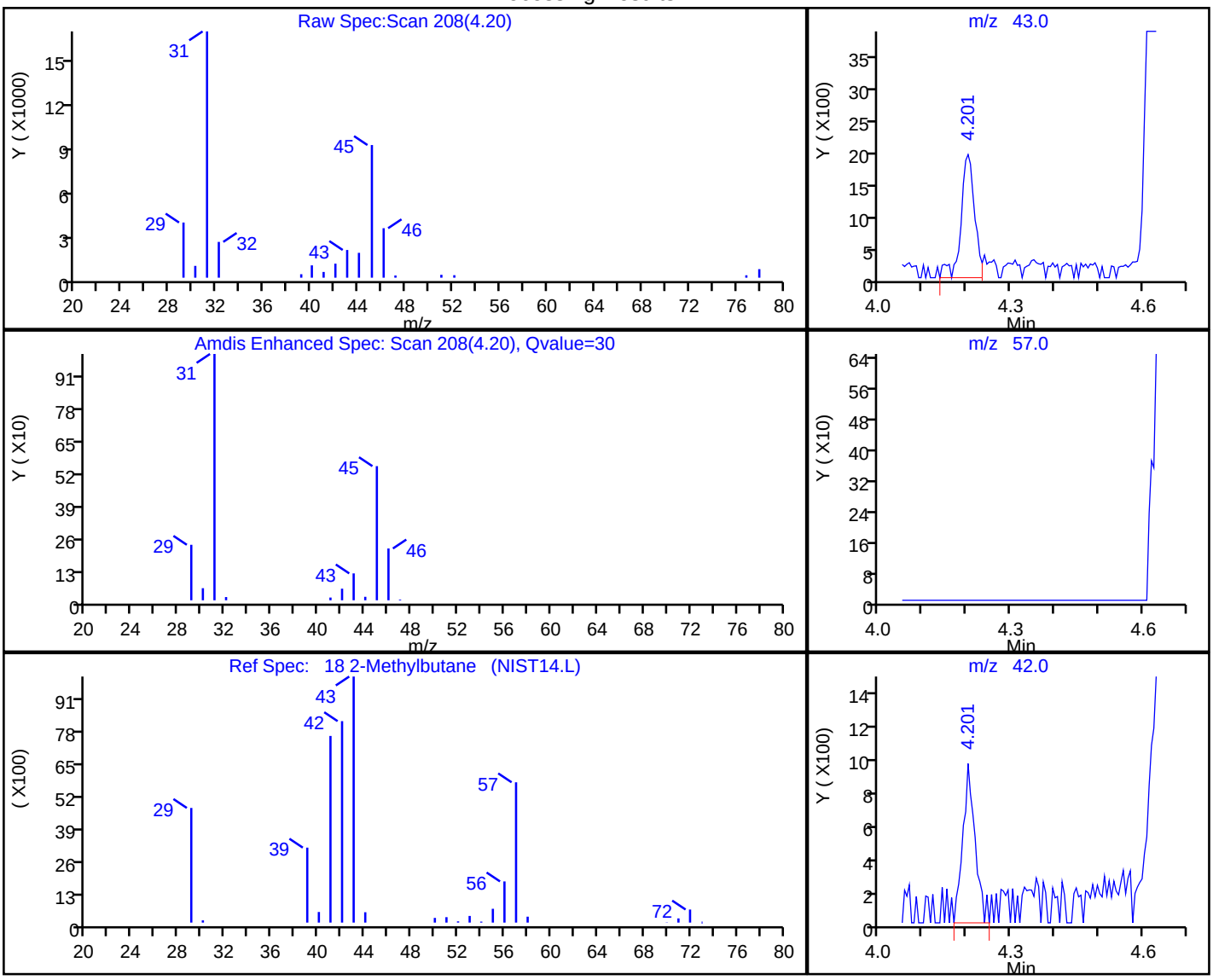
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Injection Date:	21-Mar-2018 17:38:30	Instrument ID:	MG		
Lims ID:	140-10998-A-9	Lab Sample ID:	140-10998-9		
Client ID:	11148				
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.20	43.00	4171	0.031211
4.34	57.00	0	
4.20	42.00	1897	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:42:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

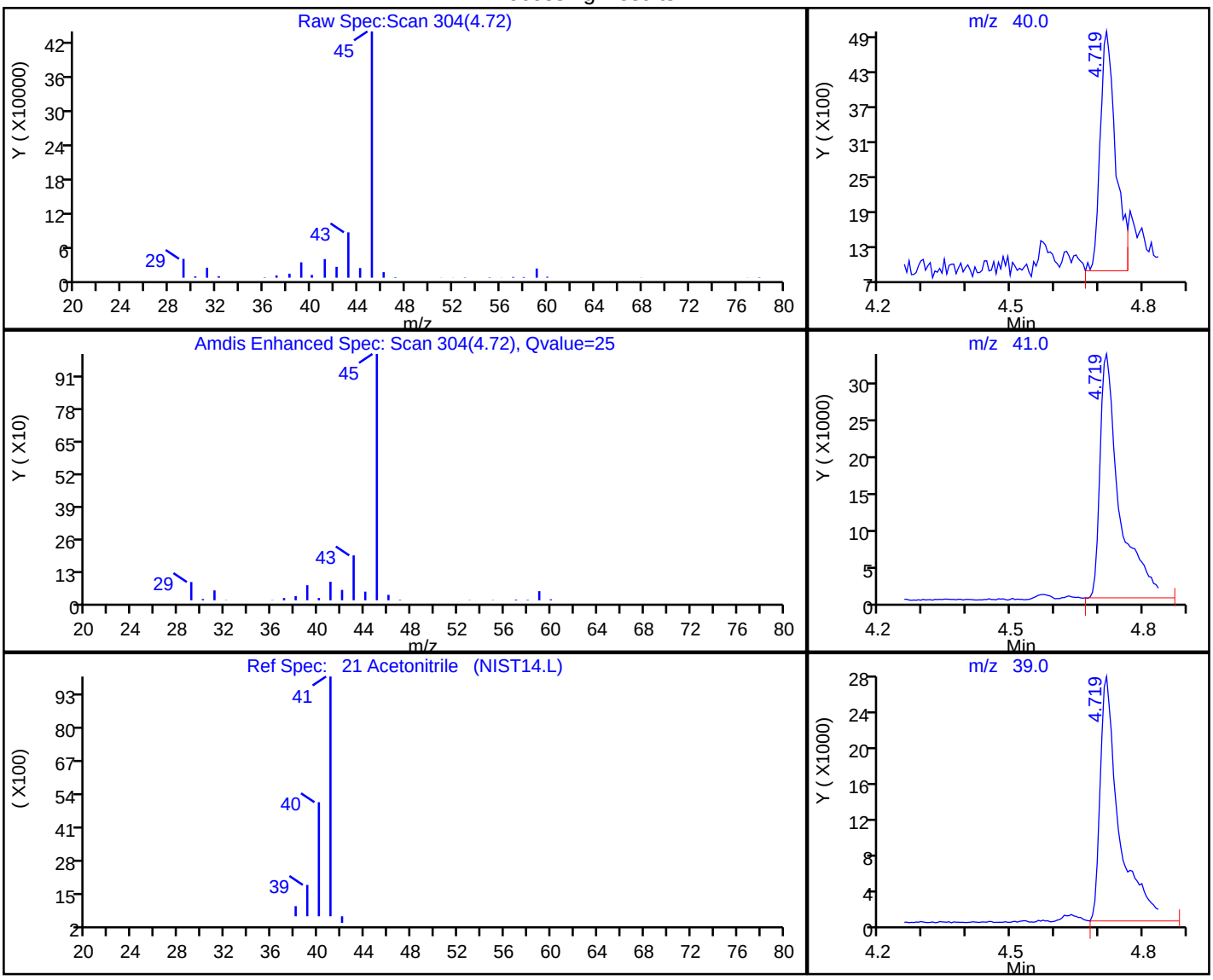
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Injection Date:	21-Mar-2018 17:38:30	Instrument ID:	MG		
Lims ID:	140-10998-A-9	Lab Sample ID:	140-10998-9		
Client ID:	11148				
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

21 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
4.72	40.00	9994	0.256295
4.72	41.00	102180	
4.72	39.00	82232	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:42:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

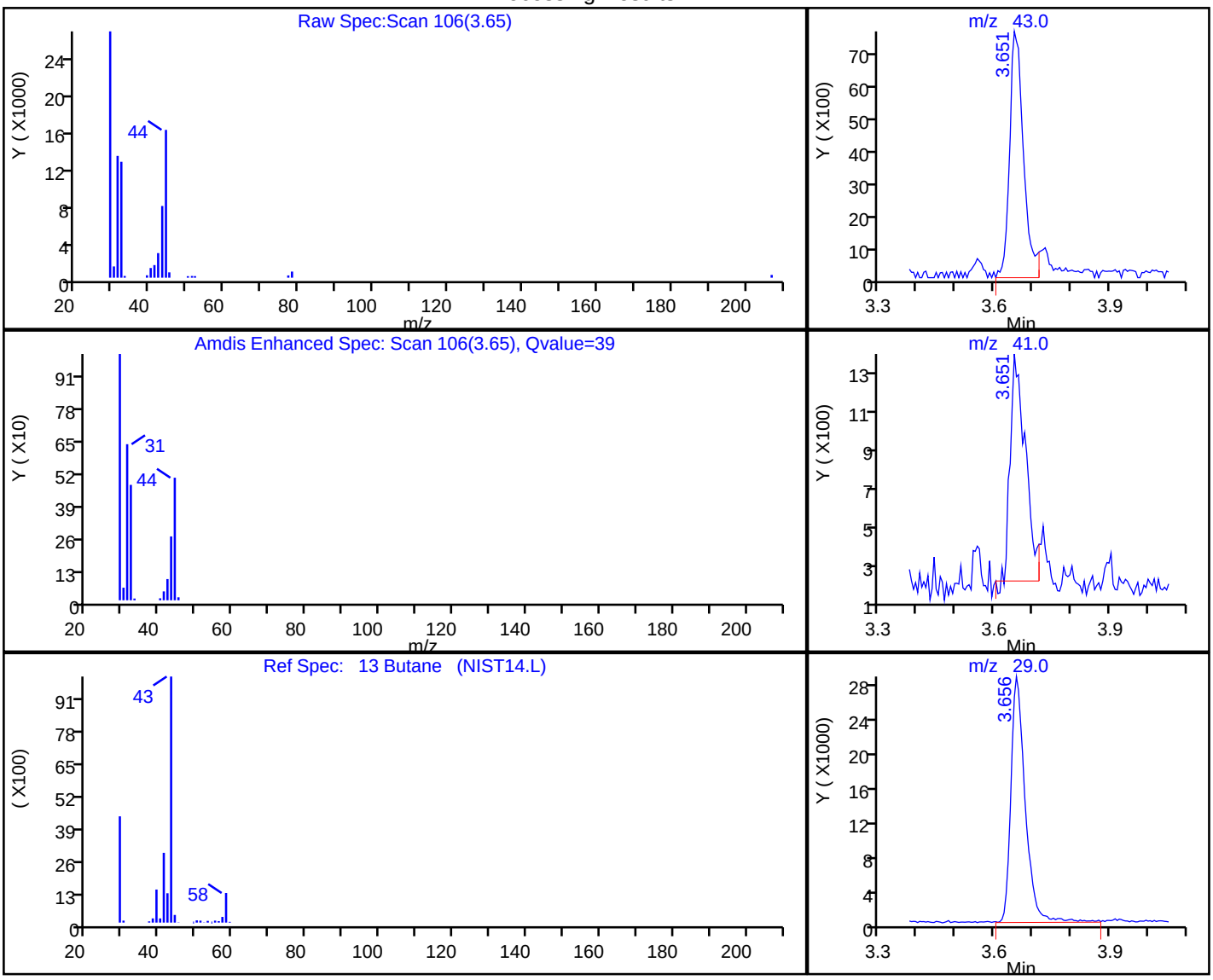
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Injection Date:	21-Mar-2018 17:38:30	Instrument ID:	MG		
Lims ID:	140-10998-A-9	Lab Sample ID:	140-10998-9		
Client ID:	11148				
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	19287	0.111557
3.65	41.00	3000	
3.66	29.00	74227	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:42:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

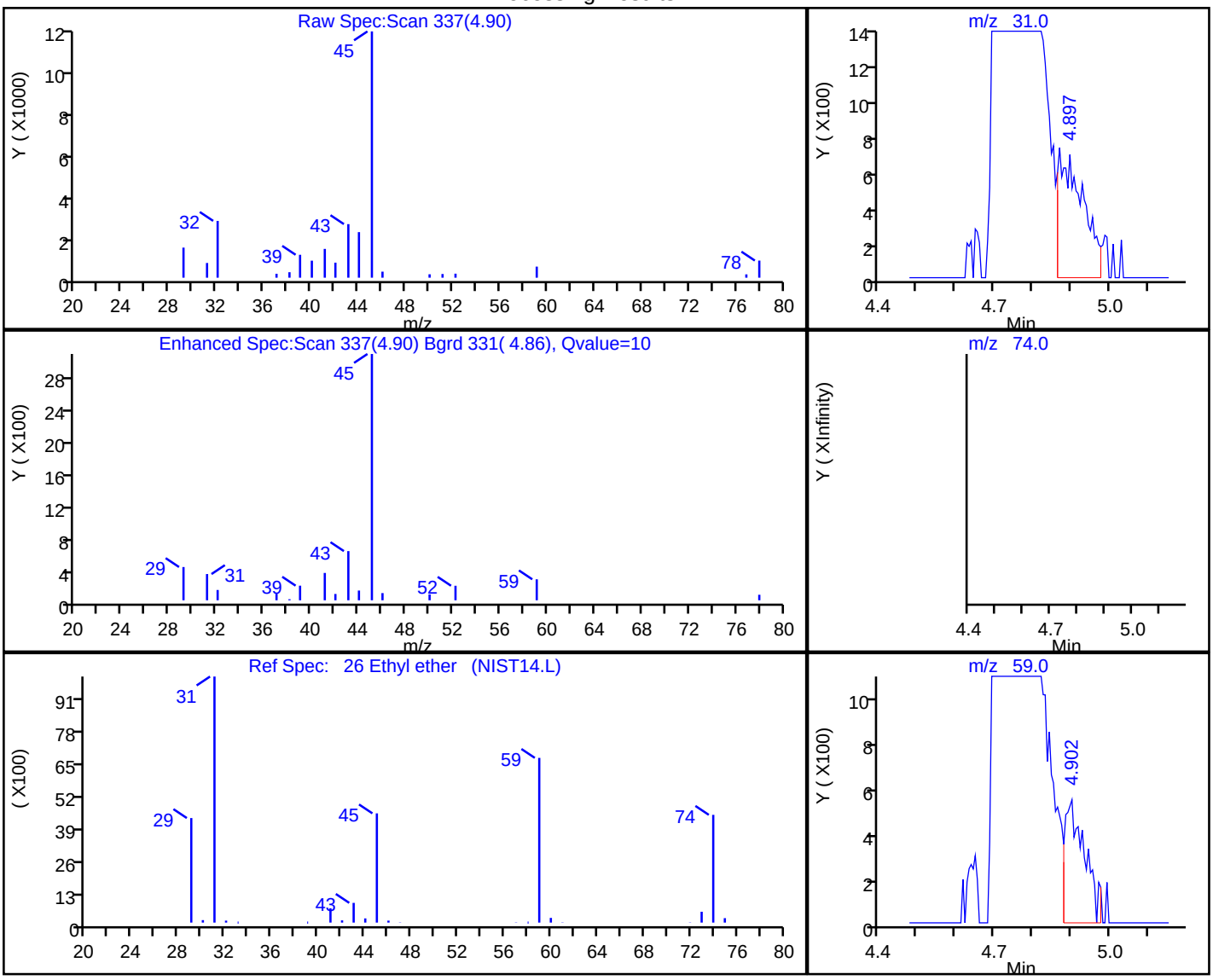
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK09.D				
Injection Date:	21-Mar-2018 17:38:30	Instrument ID:	MG		
Lims ID:	140-10998-A-9	Lab Sample ID:	140-10998-9		
Client ID:	11148				
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

26 Ethyl ether, CAS: 60-29-7

Processing Results



RT	Mass	Response	Amount
4.90	31.00	3067	0.027391
4.82	74.00	0	
4.90	59.00	1936	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:42:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09767 | Lab Sample ID: 140-10998-10

Matrix: Air | Lab File ID: 10998BK10.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09767
Lab Sample ID: 140-10998-10
Matrix: Air
Lab File ID: 10998BK10.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 18:21
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09767 | Lab Sample ID: 140-10998-10

Matrix: Air | Lab File ID: 10998BK10.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09767 Lab Sample ID: 140-10998-10

Matrix: Air Lab File ID: 10998BK10.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 18:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK10.D
Lims ID: 140-10998-A-10
Client ID: 09767
Sample Type: Client
Inject. Date: 21-Mar-2018 18:21:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007695-011
Misc. Info.: 09767
Operator ID: 007126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 18:59:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.571	7.571	0.000	95	324751	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.696	0.000	95	1765131	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.646	14.646	0.000	88	1583181	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1117253	3.99	

Reagents:

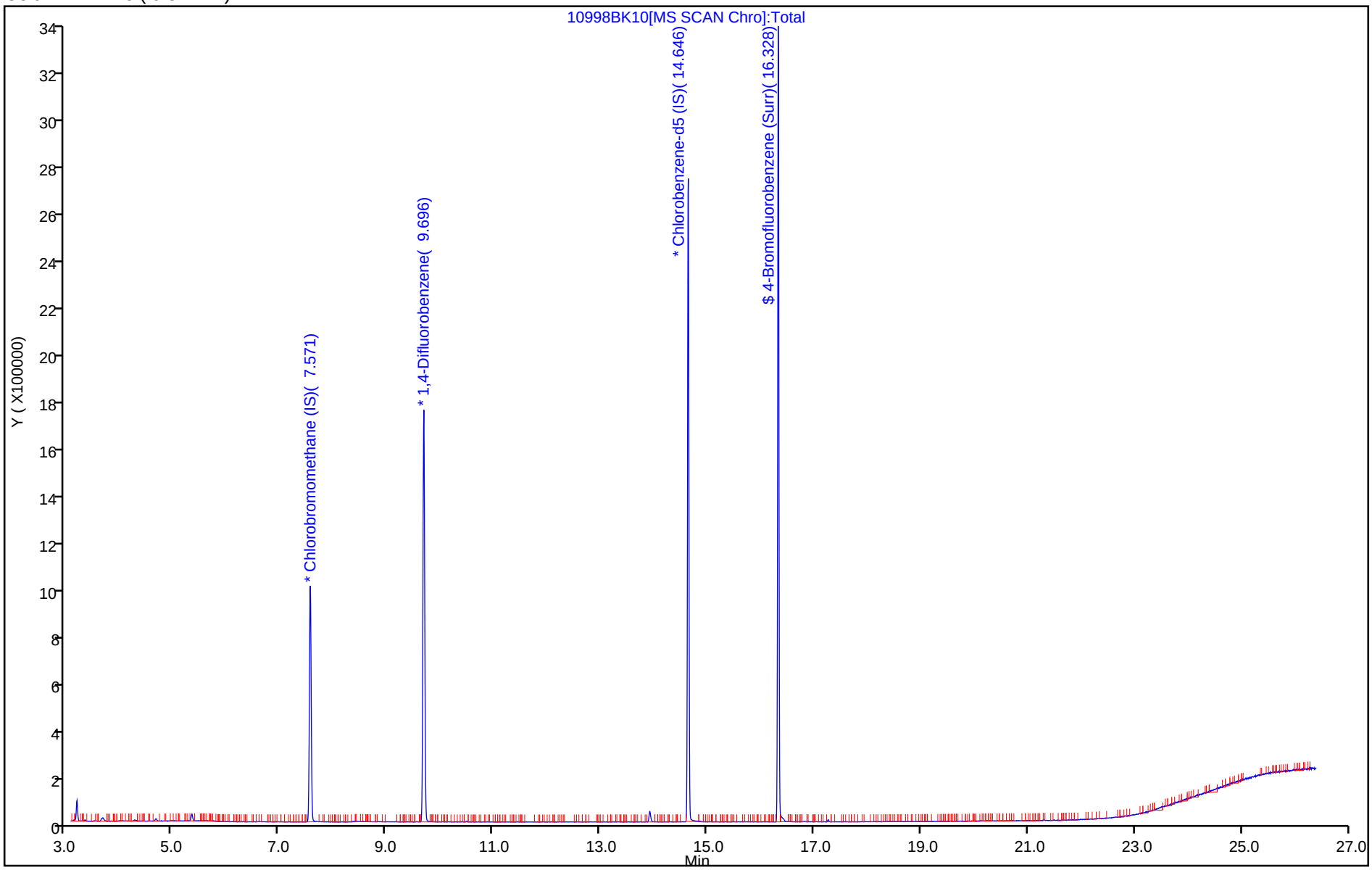
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:34 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK10.D				
Injection Date:	21-Mar-2018 18:21:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-10	Lab Sample ID:	140-10998-10	Worklist Smp#:	11
Client ID:	09767				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10370 | Lab Sample ID: 140-10998-11

Matrix: Air | Lab File ID: 10998BK11.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10370
Lab Sample ID: 140-10998-11
Matrix: Air
Lab File ID: 10998BK11.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 19:04
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	3.6		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	52	E	0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10370 | Lab Sample ID: 140-10998-11

Matrix: Air | Lab File ID: 10998BK11.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10370 Lab Sample ID: 140-10998-11
Matrix: Air Lab File ID: 10998BK11.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 19:04
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Lims ID:	140-10998-A-11				
Client ID:	10370				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 19:04:30	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007695-012				
Misc. Info.:	10370				
Operator ID:	007126	Instrument ID:	MG		

Method:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	22-Mar-2018 13:17:08	Calib Date:	20-Mar-2018 22:00:30
Integrator:	RTE	ID Type:	Deconvolution ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	XAWRK004	

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 19:44:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	320866	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1808500	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.640	14.646	-0.006	88	1618988	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1144018	4.00	
16 Ethanol	31	4.185	4.168	0.017	97	162554	3.55	
25 Isopropyl alcohol	45	4.724	4.708	0.016	99	6234366	52.3	E

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

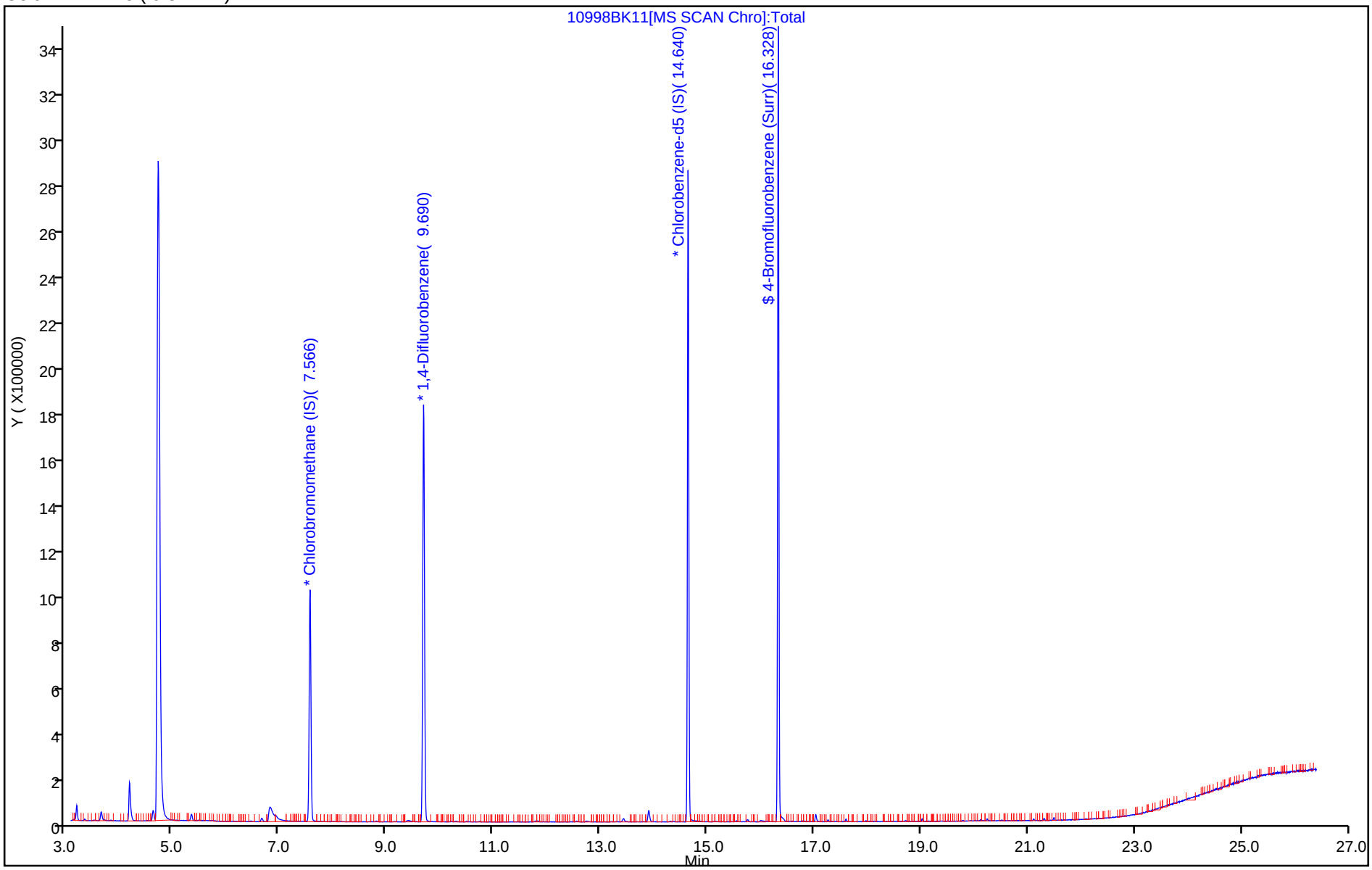
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:36 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11	Worklist Smp#:	12
Client ID:	10370				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

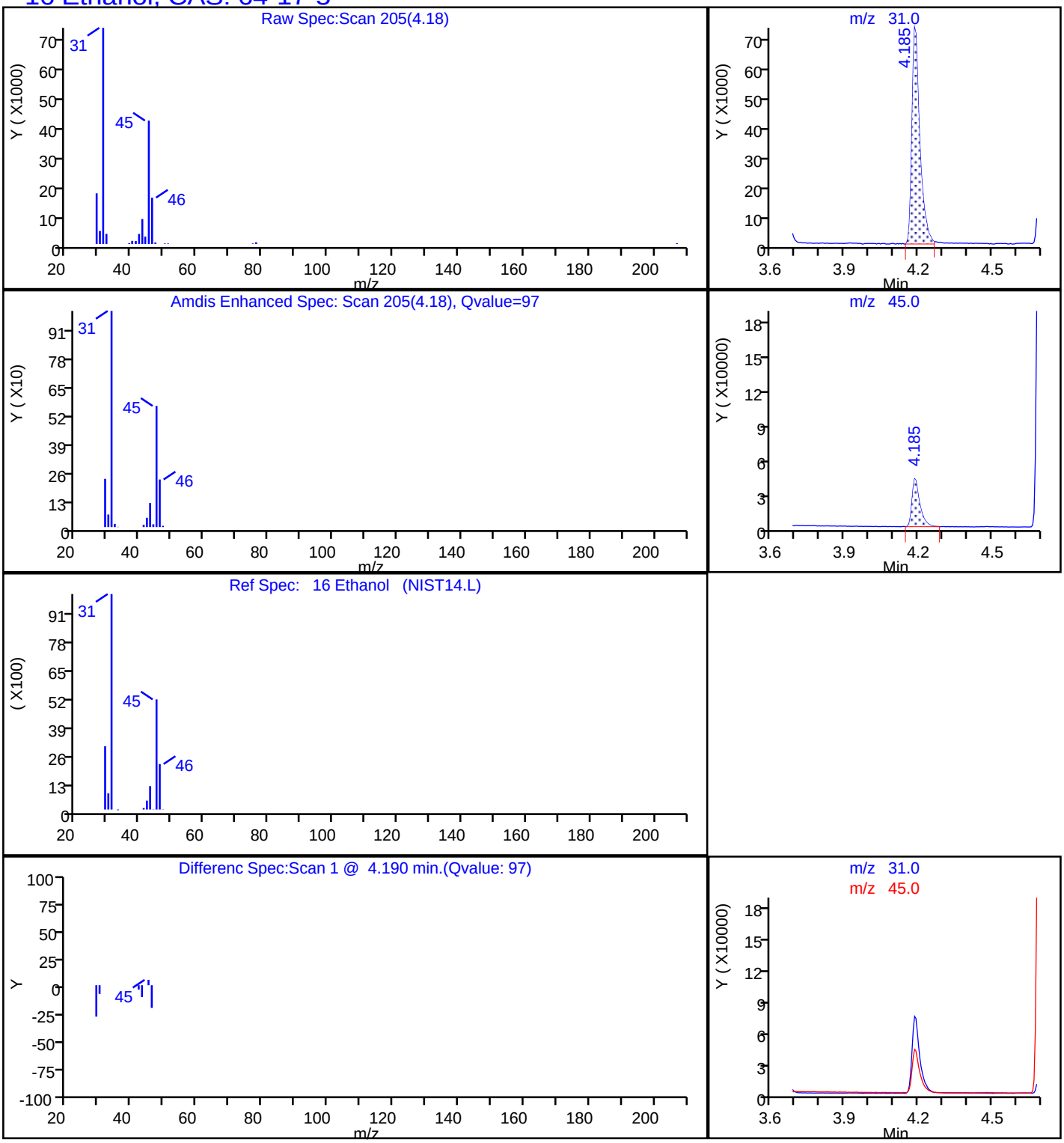


Report Date: 22-Mar-2018 13:17:37 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Ethanol, CAS: 64-17-5

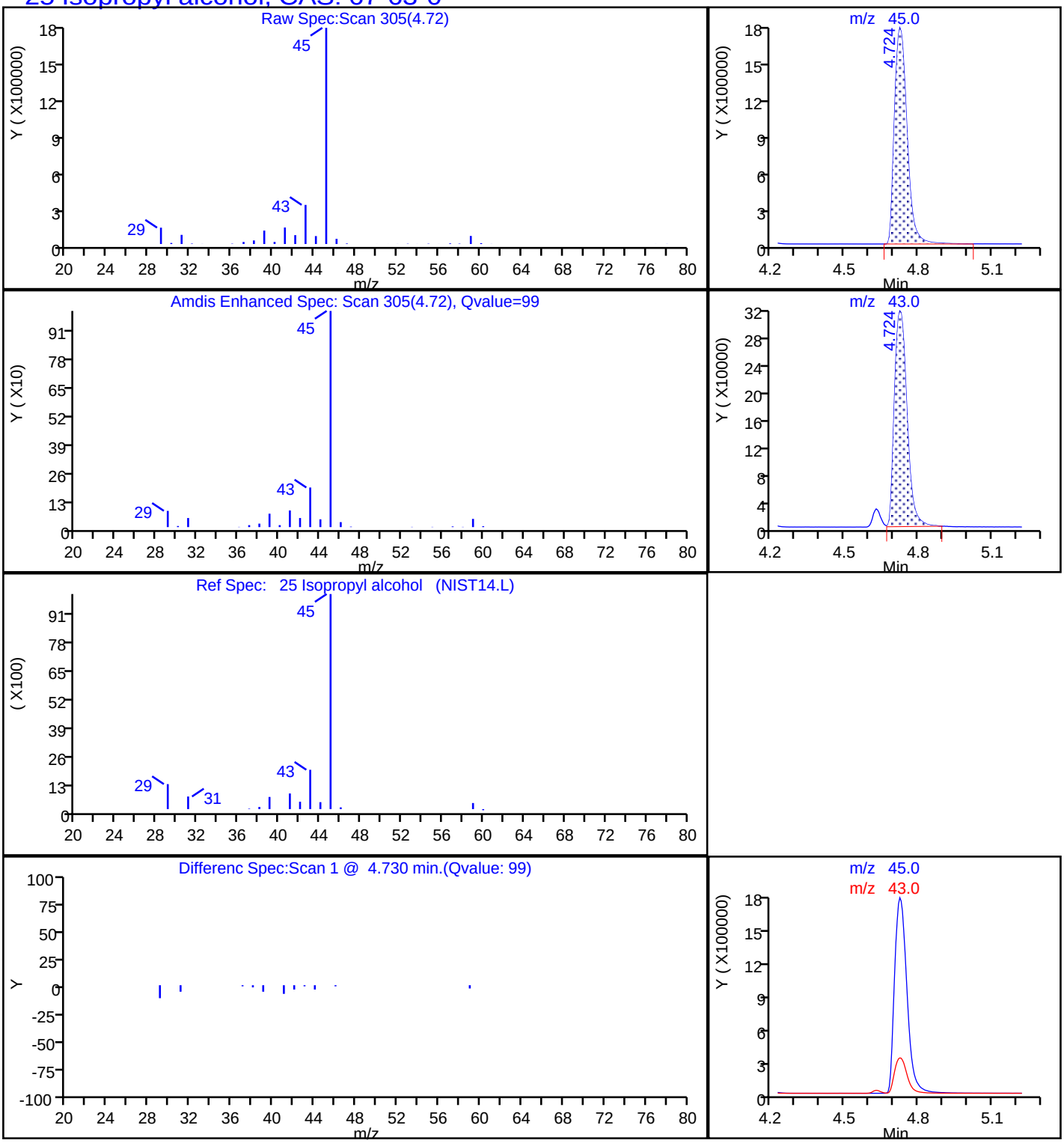


Report Date: 22-Mar-2018 13:17:37 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

25 Isopropyl alcohol, CAS: 67-63-0



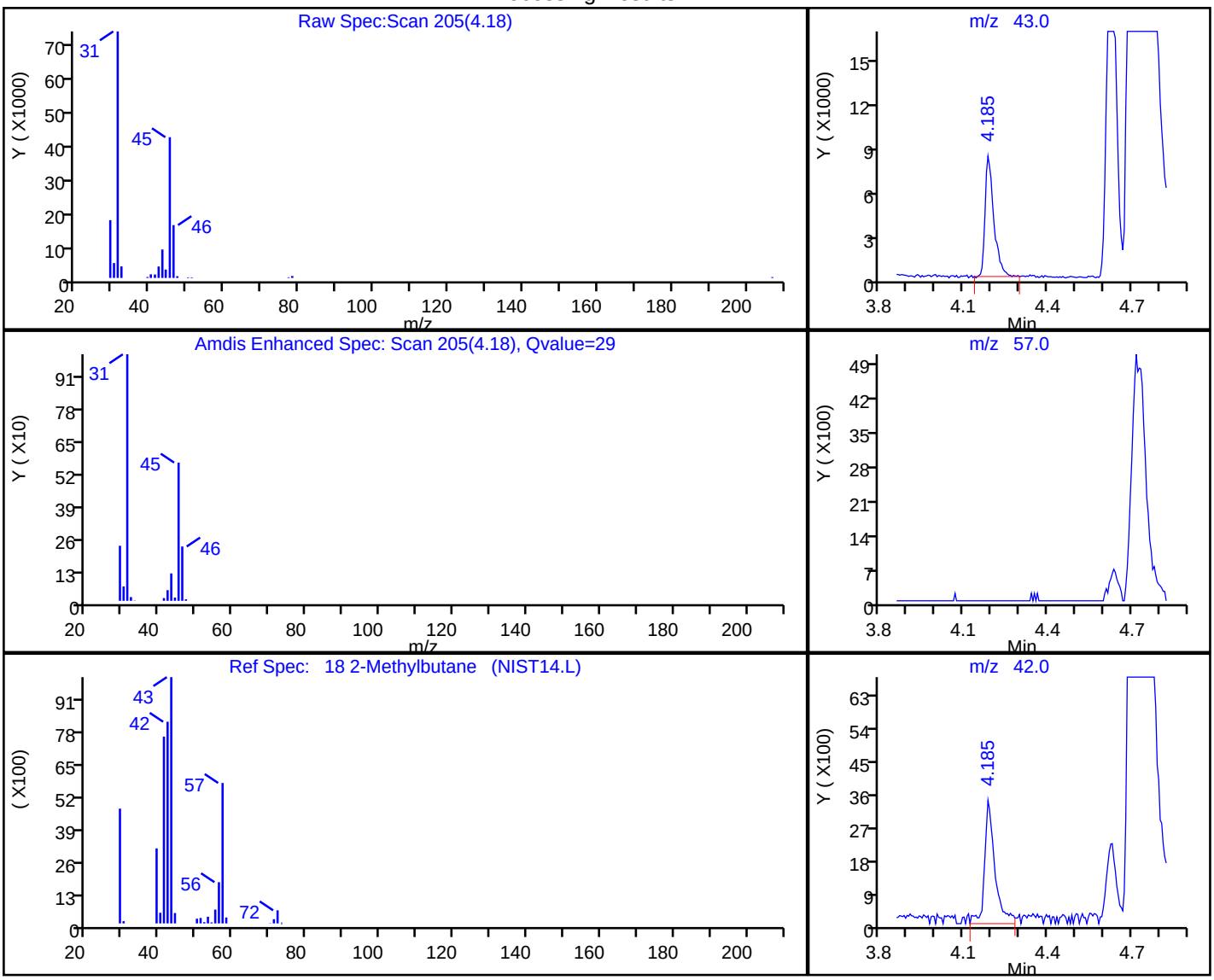
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

18 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.18	43.00	17799	0.134653
4.34	57.00	0	
4.18	42.00	8819	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:44:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

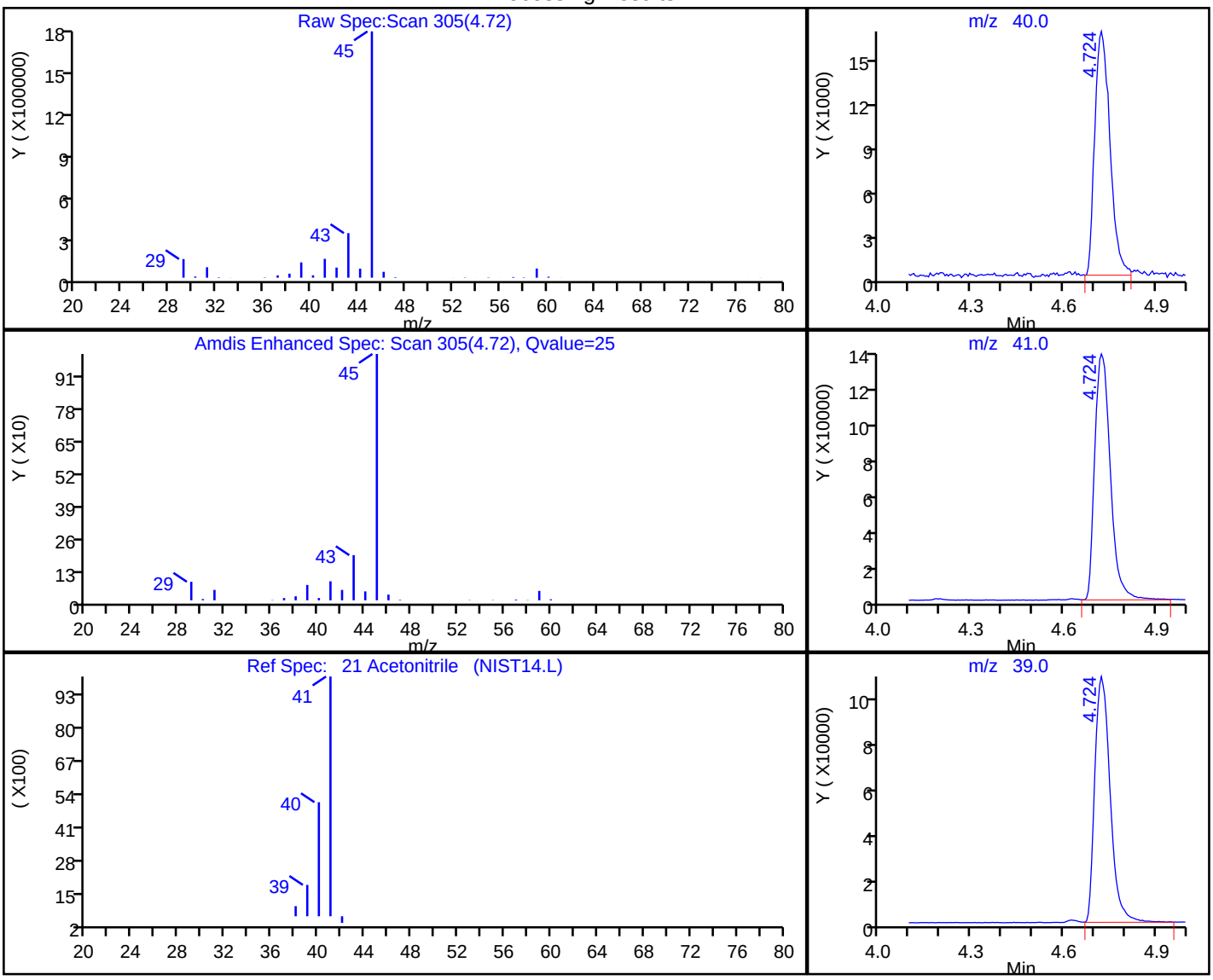
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

21 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
4.72	40.00	55195	1.431035
4.72	41.00	476705	
4.72	39.00	380549	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:44:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

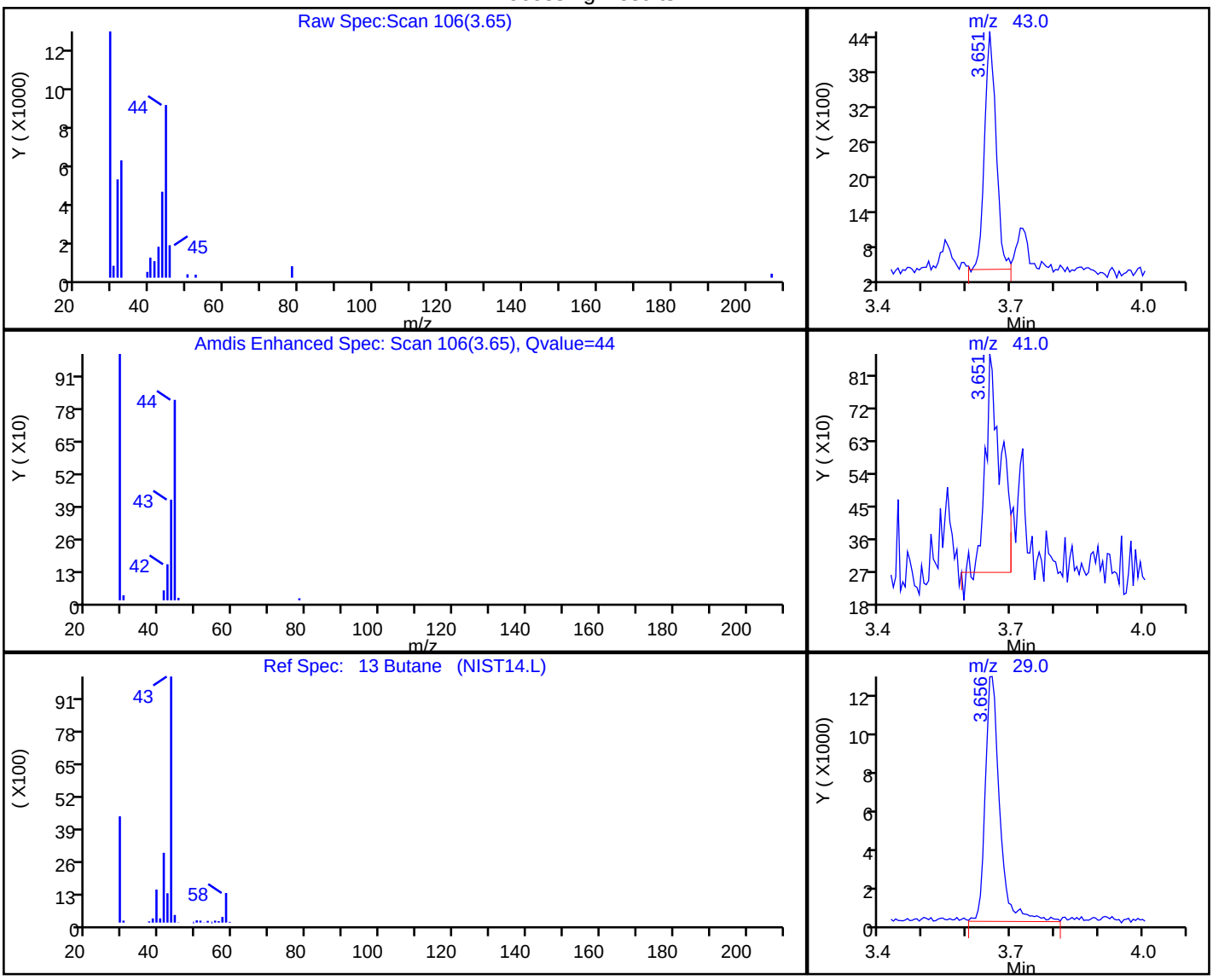
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	7514	0.043939
3.65	41.00	1471	
3.66	29.00	28896	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:44:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

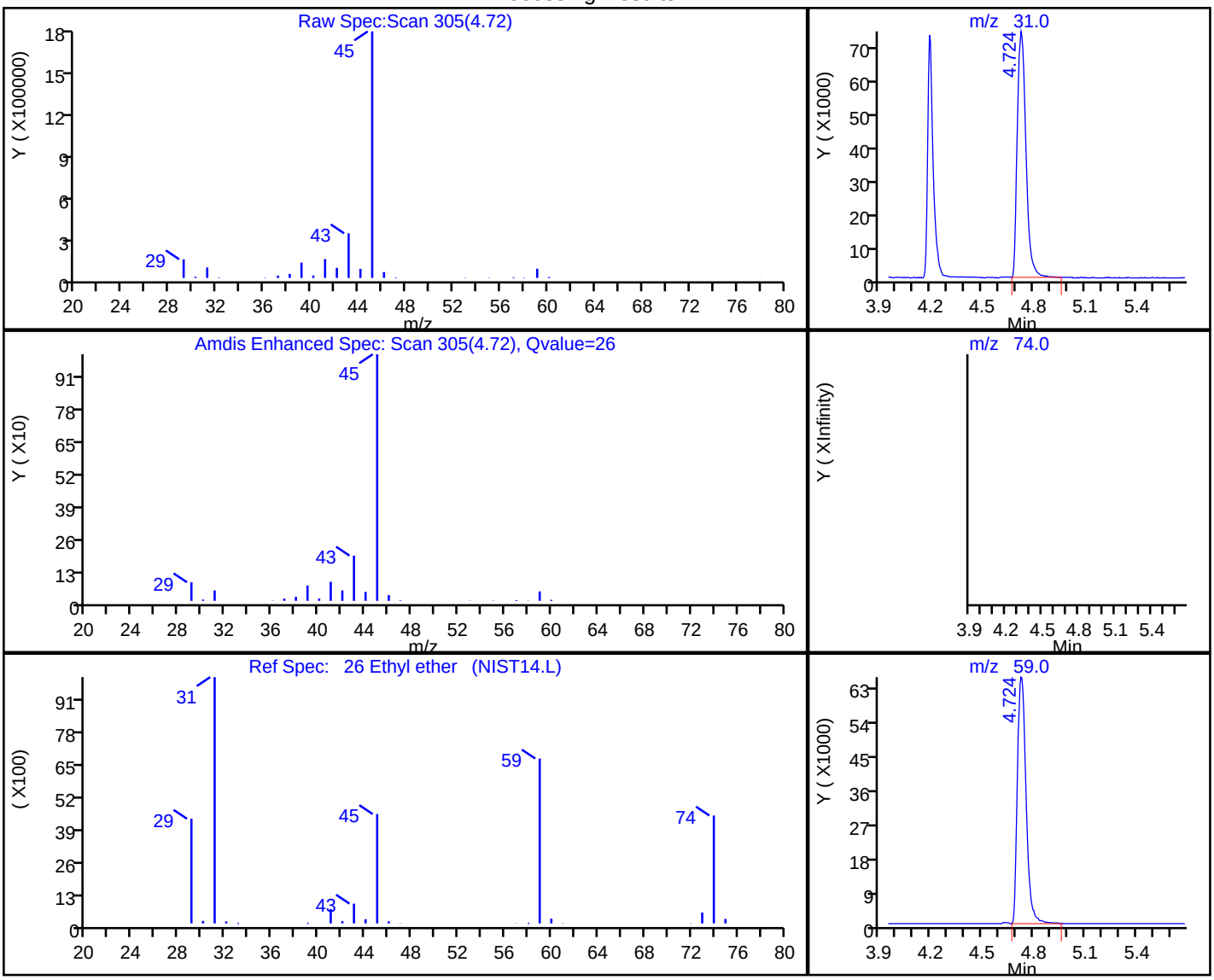
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

26 Ethyl ether, CAS: 60-29-7

Processing Results



RT	Mass	Response	Amount
4.72	31.00	262577	2.370828
4.82	74.00	0	
4.72	59.00	233806	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:44:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

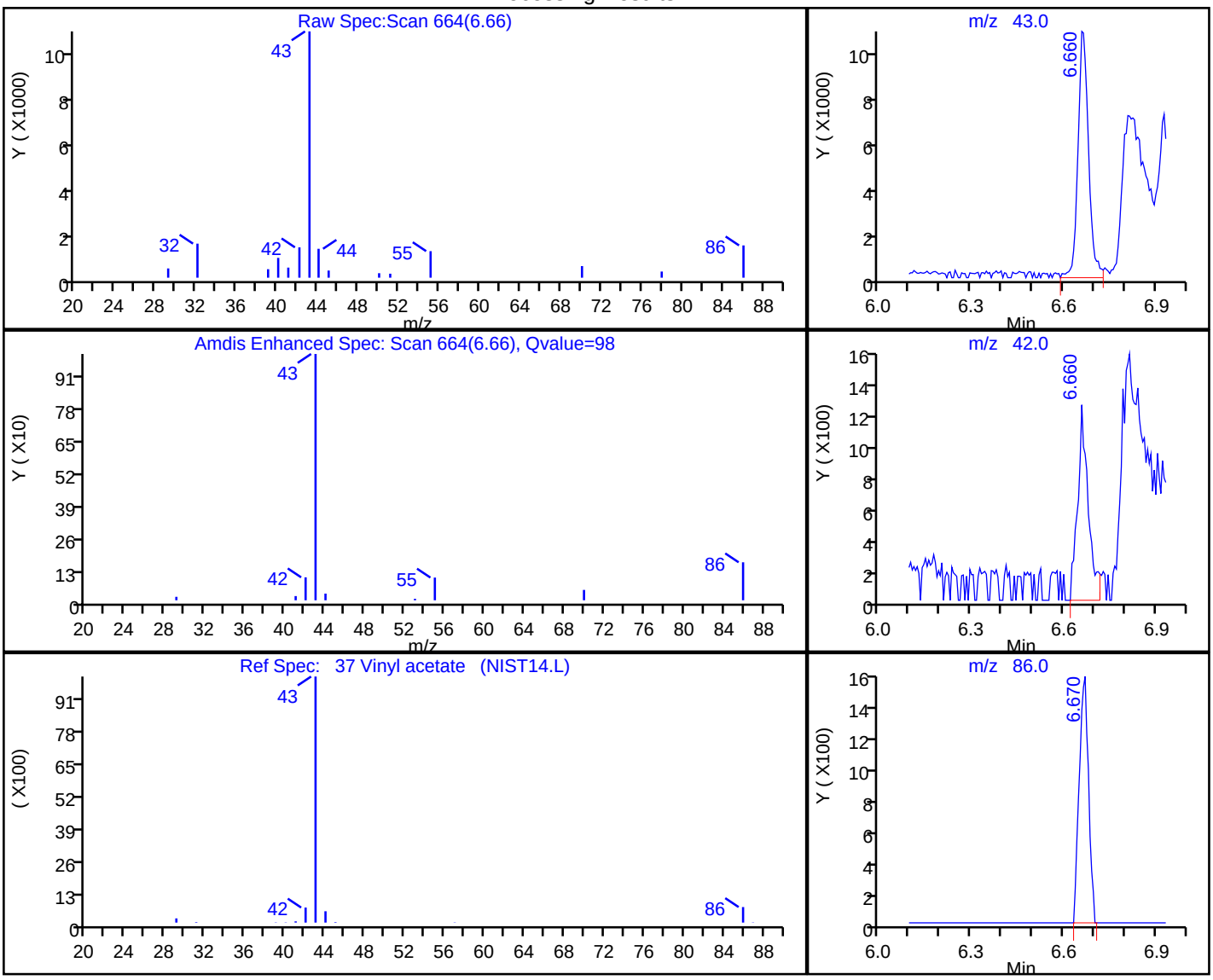
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK11.D				
Injection Date:	21-Mar-2018 19:04:30	Instrument ID:	MG		
Lims ID:	140-10998-A-11	Lab Sample ID:	140-10998-11		
Client ID:	10370				
Operator ID:	007126	ALS Bottle#:	9	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
6.66	43.00	24503	0.095642
6.66	42.00	3018	
6.67	86.00	3275	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:44:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10258 | Lab Sample ID: 140-10998-12

Matrix: Air | Lab File ID: 10998BK12.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18967 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10258
Lab Sample ID: 140-10998-12
Matrix: Air
Lab File ID: 10998BK12.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 19:47
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10258
Lab Sample ID: 140-10998-12
Matrix: Air
Lab File ID: 10998BK12.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 19:47
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18967
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10258 Lab Sample ID: 140-10998-12

Matrix: Air Lab File ID: 10998BK12.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 19:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK12.D				
Lims ID:	140-10998-A-12				
Client ID:	10258				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 19:47:30	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007695-013				
Misc. Info.:	10258				
Operator ID:	007126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2018 13:17:08	Calib Date:	20-Mar-2018 22:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

First Level Reviewer: tajh Date: 22-Mar-2018 10:23:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	323566	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1868502	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.641	14.646	-0.005	88	1688796	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1175676	3.94	
25 Isopropyl alcohol	45	4.816	4.708	0.108	98	21208	0.1765	
44 Tetrahydrofuran	42	8.019	7.965	0.054	36	3208	0.0302	
62 4-Methyl-2-pentanone (MIBK	43	11.810	11.734	0.076	98	17235	0.0903	

Reagents:

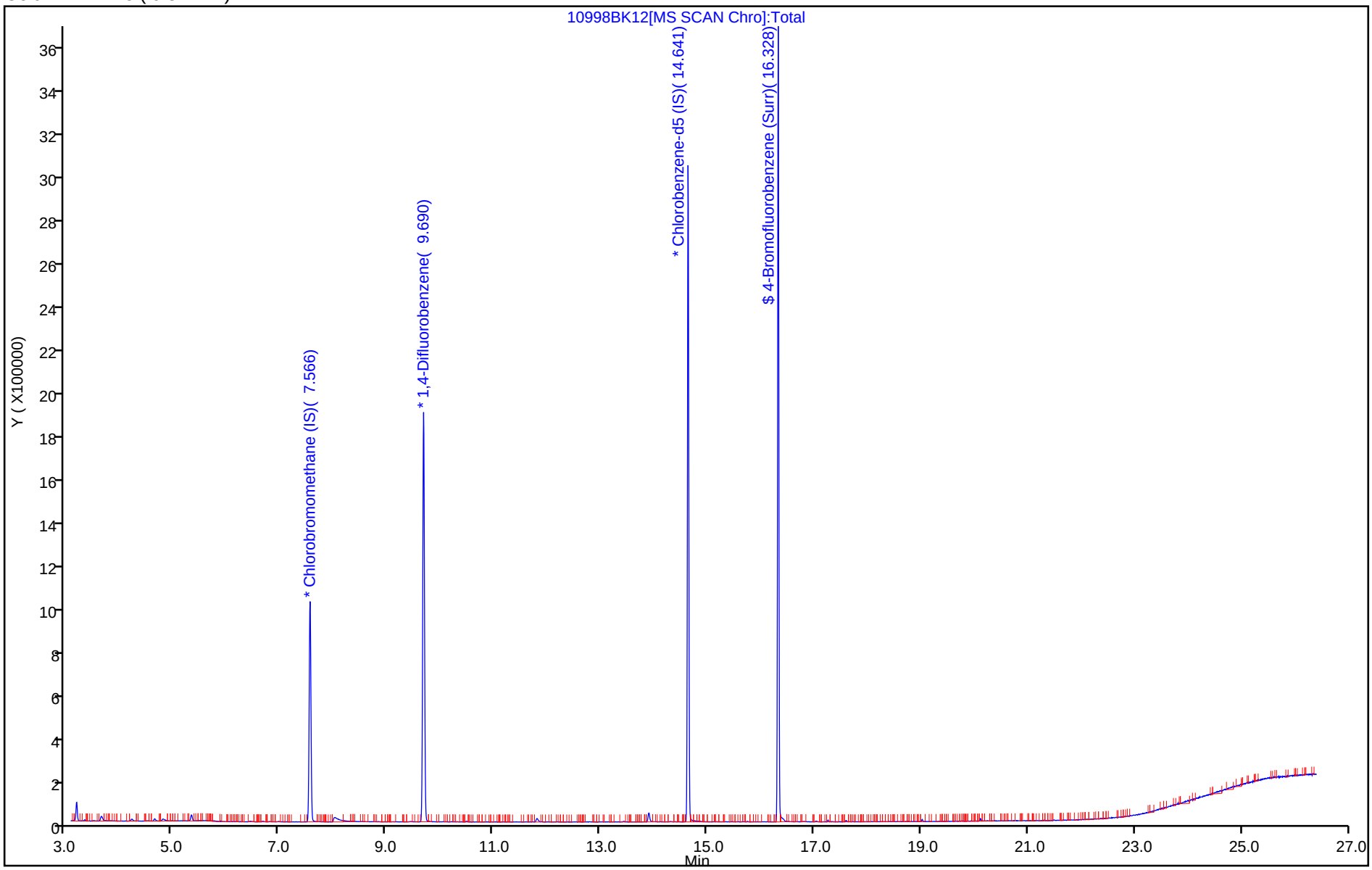
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 13:17:42 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK12.D				
Injection Date:	21-Mar-2018 19:47:30	Instrument ID:	MG	Operator ID:	007126
Lims ID:	140-10998-A-12	Lab Sample ID:	140-10998-12	Worklist Smp#:	13
Client ID:	10258				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



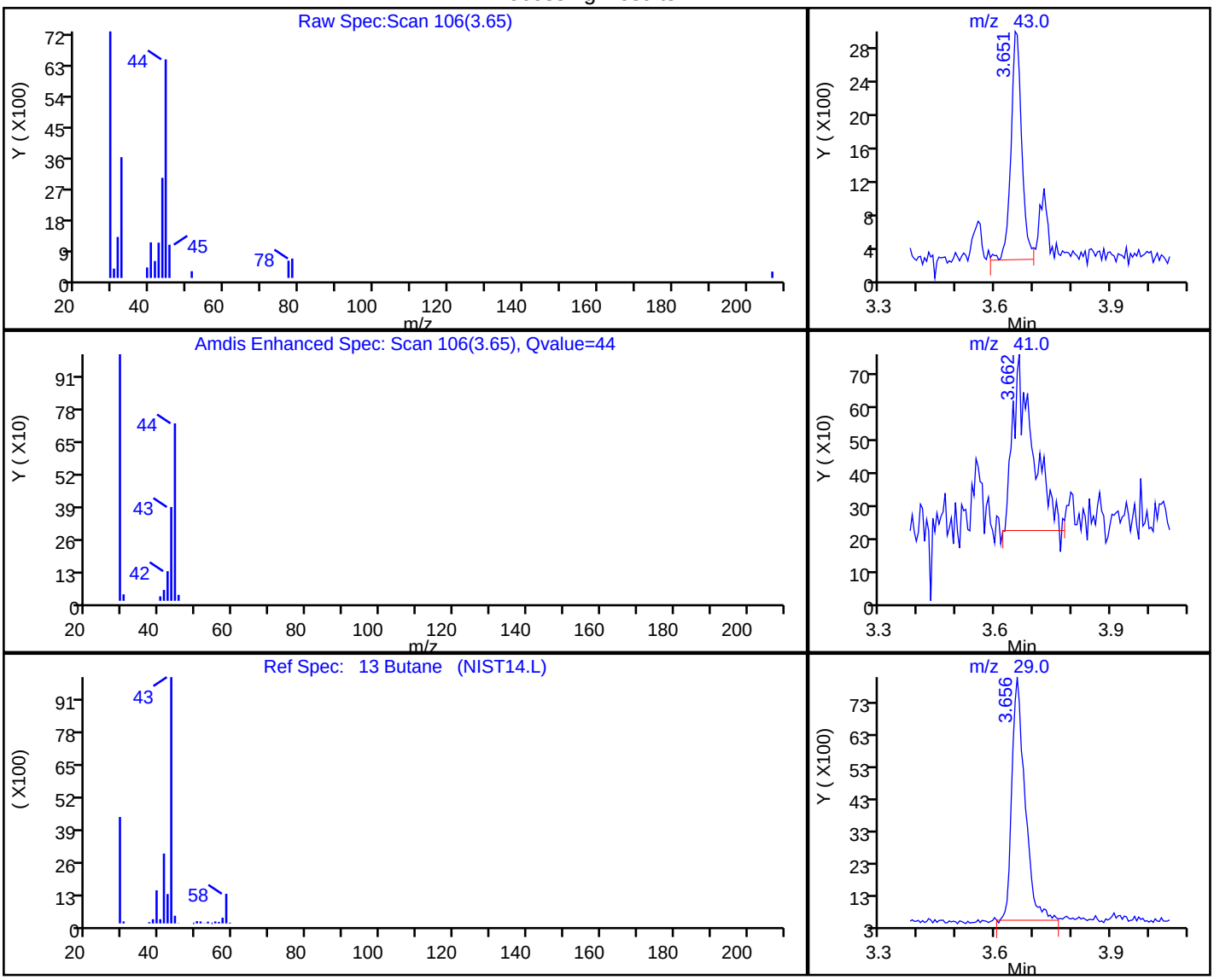
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\10998BK12.D				
Injection Date:	21-Mar-2018 19:47:30	Instrument ID:	MG		
Lims ID:	140-10998-A-12	Lab Sample ID:	140-10998-12		
Client ID:	10258				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.65	43.00	5338	0.030954
3.66	41.00	1992	
3.66	29.00	18106	

Reviewer: tajh, 22-Mar-2018 10:23:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09985 | Lab Sample ID: 140-10998-13

Matrix: Air | Lab File ID: X10998B13.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/22/2018 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18968 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09985
Lab Sample ID: 140-10998-13
Matrix: Air
Lab File ID: X10998B13.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/22/2018 12:40
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18968
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09985 | Lab Sample ID: 140-10998-13

Matrix: Air | Lab File ID: X10998B13.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/22/2018 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18968 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09985 Lab Sample ID: 140-10998-13

Matrix: Air Lab File ID: X10998B13.D

Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) Date Analyzed: 03/22/2018 12:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18968 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\X10998B13.D				
Lims ID:	140-10998-A-13				
Client ID:	09985				
Sample Type:	Client				
Inject. Date:	22-Mar-2018 12:40:30	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007696-004				
Misc. Info.:	09985				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	23-Mar-2018 09:47:16	Calib Date:	20-Mar-2018 22:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK013				

First Level Reviewer: tajh Date: 22-Mar-2018 13:20:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.544	7.576	-0.032	96	306313	4.00	
* 2 1,4-Difluorobenzene	114	9.669	9.701	-0.032	95	1726035	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.624	14.646	-0.022	88	1572648	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.312	16.334	-0.022	94	1125304	4.05	

Reagents:

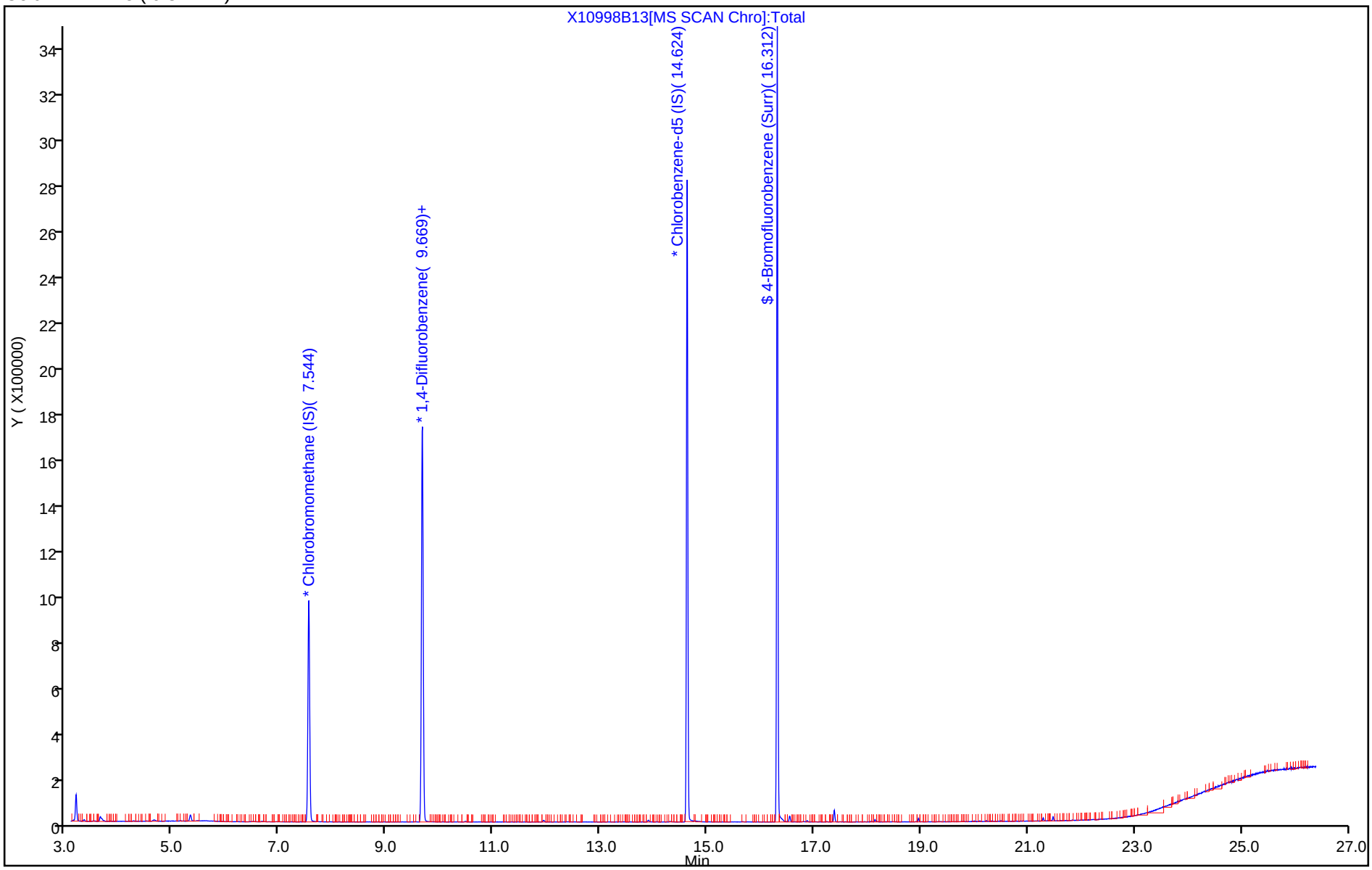
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 23-Mar-2018 09:47:19 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\X10998B13.D				
Injection Date:	22-Mar-2018 12:40:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-10998-A-13	Lab Sample ID:	140-10998-13	Worklist Smp#:	4
Client ID:	09985				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



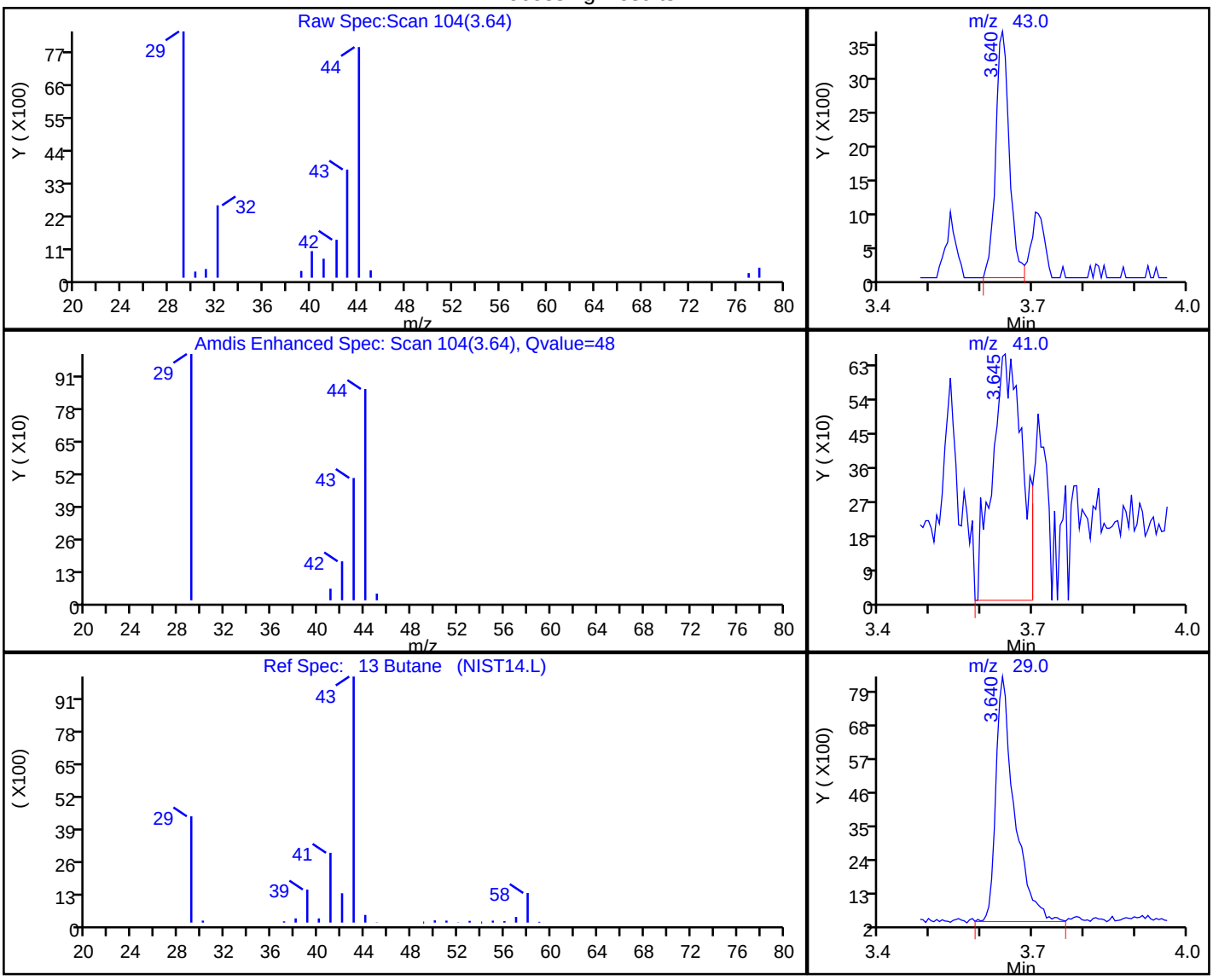
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\X10998B13.D				
Injection Date:	22-Mar-2018 12:40:30	Instrument ID:	MG		
Lims ID:	140-10998-A-13	Lab Sample ID:	140-10998-13		
Client ID:	09985				
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.64	43.00	6849	0.041927
3.65	41.00	2695	
3.64	29.00	20745	

Reviewer: tajh, 22-Mar-2018 13:20:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10040 | Lab Sample ID: 140-10998-14

Matrix: Air | Lab File ID: RC21BK10998-14.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 17:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18913 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10040
Lab Sample ID: 140-10998-14
Matrix: Air
Lab File ID: RC21BK10998-14.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 17:33
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18913
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND	*	0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND	*	0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10040
Lab Sample ID: 140-10998-14
Matrix: Air
Lab File ID: RC21BK10998-14.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 17:33
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18913
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND	*	0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND	*	0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10040 Lab Sample ID: 140-10998-14
Matrix: Air Lab File ID: RC21BK10998-14.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 17:33
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18913 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-14.D
Lims ID: 140-10998-A-14
Client ID: 10040
Sample Type: Client
Inject. Date: 21-Mar-2018 17:33:30 ALS Bottle#: 16 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007677-025
Misc. Info.: 10040
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 22-Mar-2018 10:53:20 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 18:29:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.670	-0.005	76	284118	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.811	-0.005	94	1682038	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	87	1410088	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	90	1091429	4.08	
24 Isopropyl alcohol	45	4.818	4.807	0.011	95	5624	0.0492	
33 Carbon disulfide	76	5.594	5.584	0.010	94	4092	0.0137	
44 Tetrahydrofuran	42	8.096	8.053	0.043	74	2821	0.0307	
59 1,4-Dioxane	88	10.830	10.798	0.032	81	3175	0.0670	
102 2,3-Dihydroindene	117	18.622	18.628	-0.006	1	328	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

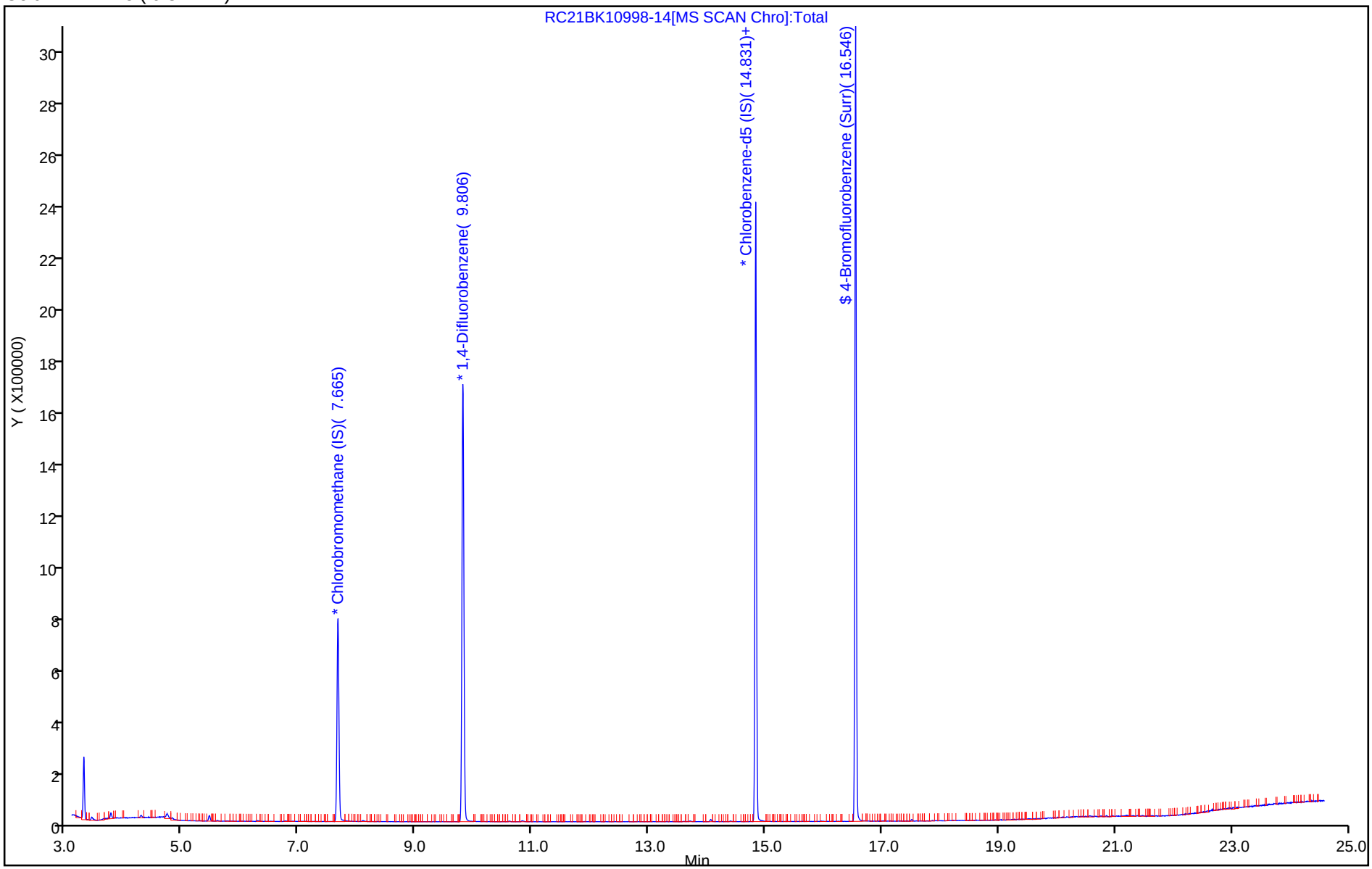
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 10:53:30 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-14.D				
Injection Date:	21-Mar-2018 17:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10998-A-14	Lab Sample ID:	140-10998-14	Worklist Smp#:	25
Client ID:	10040				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

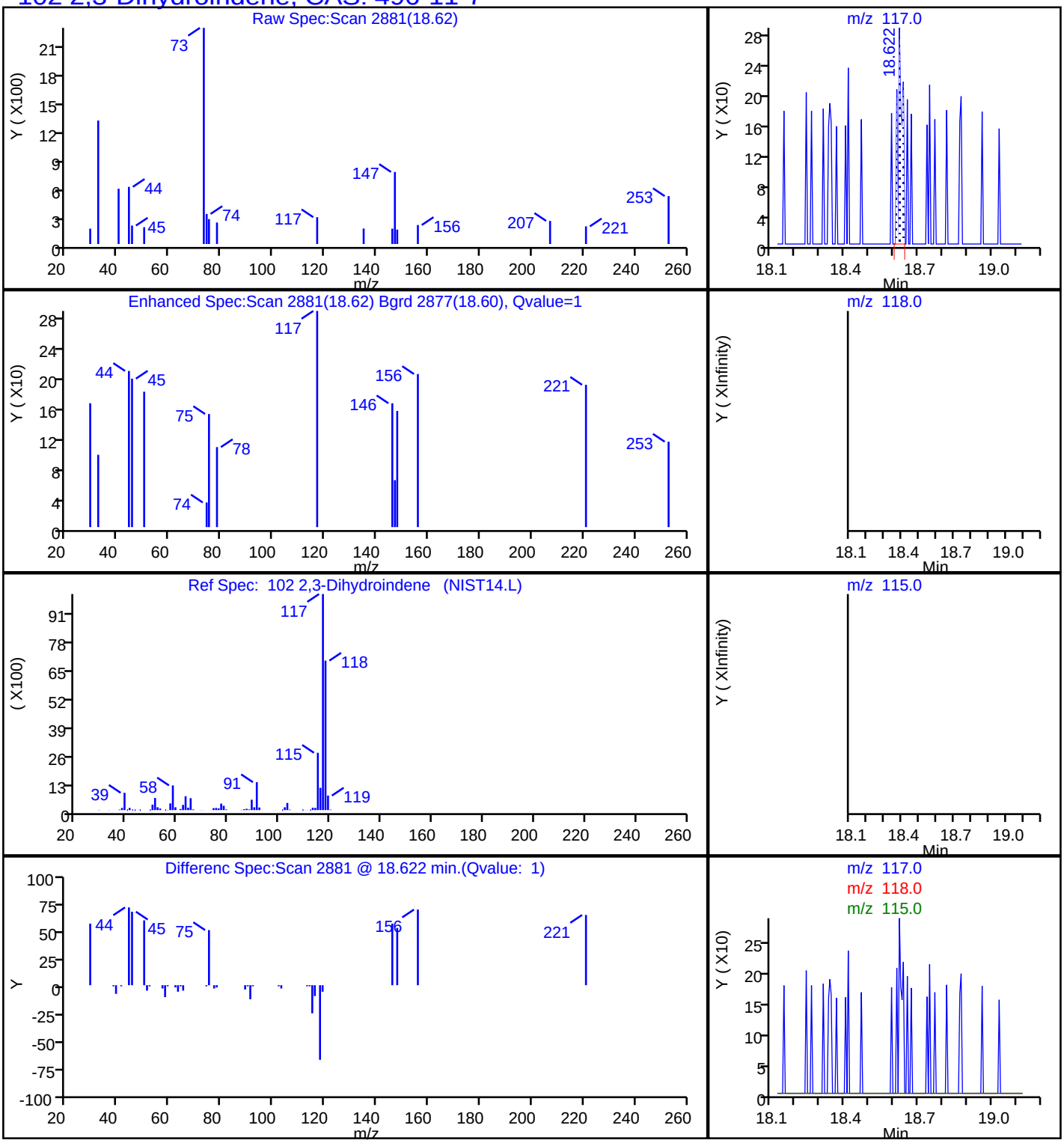


Report Date: 22-Mar-2018 10:53:30 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-14.D				
Injection Date:	21-Mar-2018 17:33:30	Instrument ID:	MR		
Lims ID:	140-10998-A-14	Lab Sample ID:	140-10998-14		
Client ID:	10040				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7



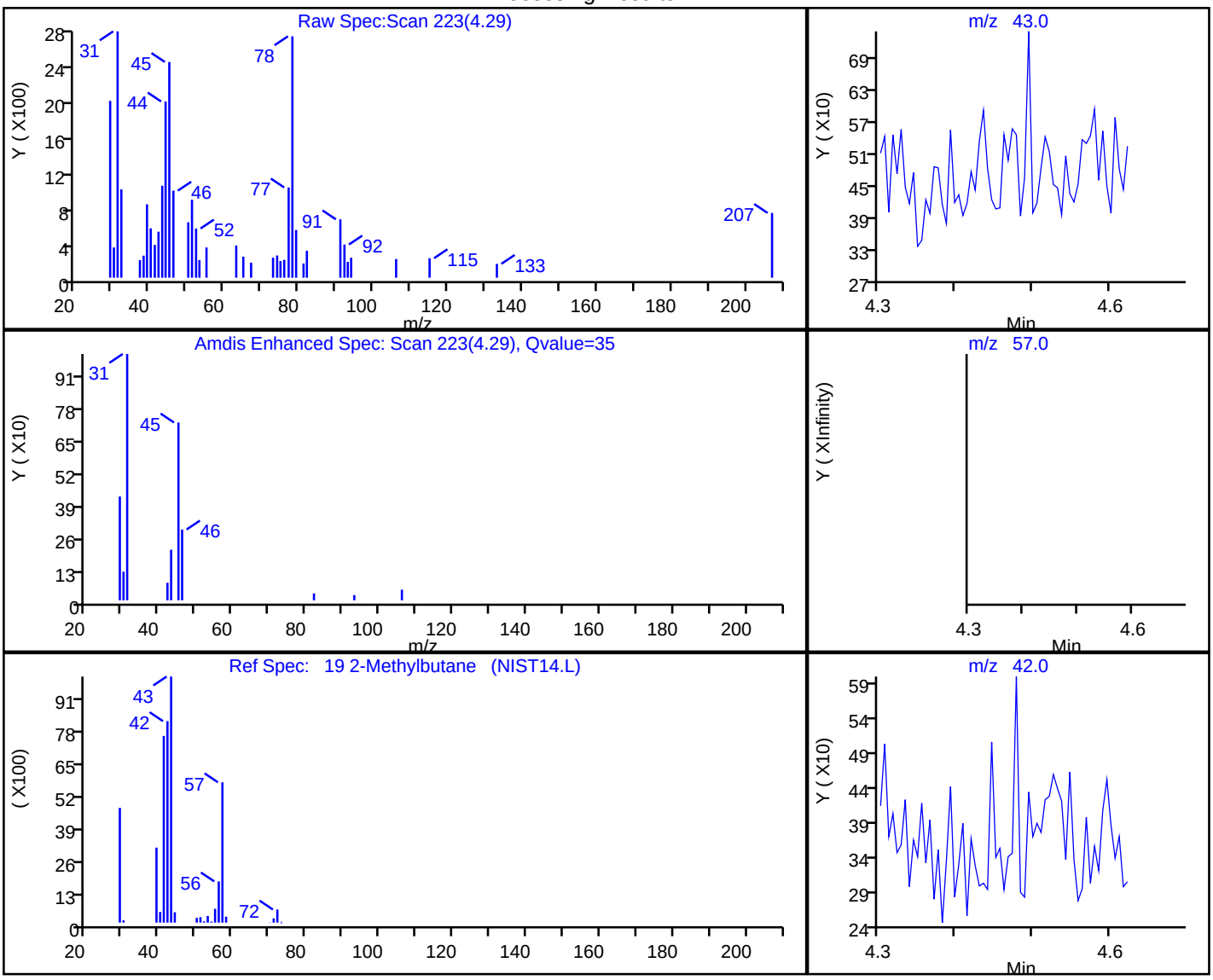
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-14.D				
Injection Date:	21-Mar-2018 17:33:30	Instrument ID:	MR		
Lims ID:	140-10998-A-14	Lab Sample ID:	140-10998-14		
Client ID:	10040				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.29	43.00	1245	0.022130
4.46	57.00	0	
4.28	42.00	722	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:29:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

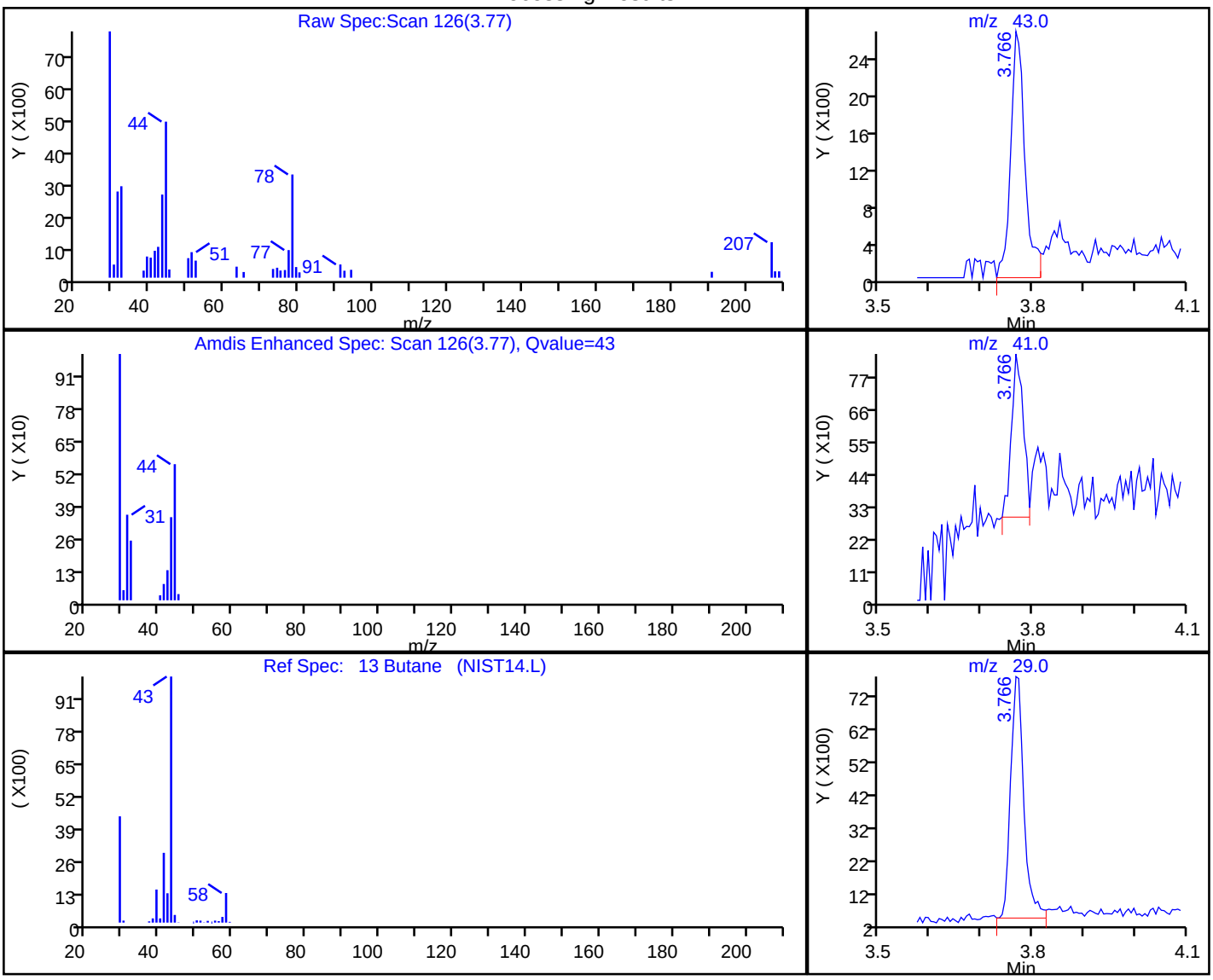
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-14.D				
Injection Date:	21-Mar-2018 17:33:30	Instrument ID:	MR		
Lims ID:	140-10998-A-14	Lab Sample ID:	140-10998-14		
Client ID:	10040				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.77	43.00	5081	0.063641
3.77	41.00	904	
3.77	29.00	13352	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:29:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10170 | Lab Sample ID: 140-10998-15

Matrix: Air | Lab File ID: RC21BK10998-15.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18913 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND	*	0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND	*	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	NC		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10170
Lab Sample ID: 140-10998-15
Matrix: Air
Lab File ID: RC21BK10998-15.D
Analysis Method: TO 15 LL
Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL)
Date Analyzed: 03/21/2018 18:24
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 18913
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND	*	0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND	*	0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	NC		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 10170 | Lab Sample ID: 140-10998-15

Matrix: Air | Lab File ID: RC21BK10998-15.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18913 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND	*	0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND	*	0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 10170 Lab Sample ID: 140-10998-15
Matrix: Air Lab File ID: RC21BK10998-15.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 18:24
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18913 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-15.D				
Lims ID:	140-10998-A-15				
Client ID:	10170				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 18:24:30	ALS Bottle#:	16	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007677-026				
Misc. Info.:	10170				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Mar-2018 10:53:20	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: barlozhetskayaa		Date:	21-Mar-2018 19:11:54		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.660	7.670	-0.010	76	279370	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.811	-0.005	94	1663123	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	88	1386599	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	90	1077056	4.10	
35 2-Methylpentane	43	6.026	6.209	-0.183	1	49	NC	
102 2,3-Dihydroindene	117	18.622	18.628	-0.006	1	161	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

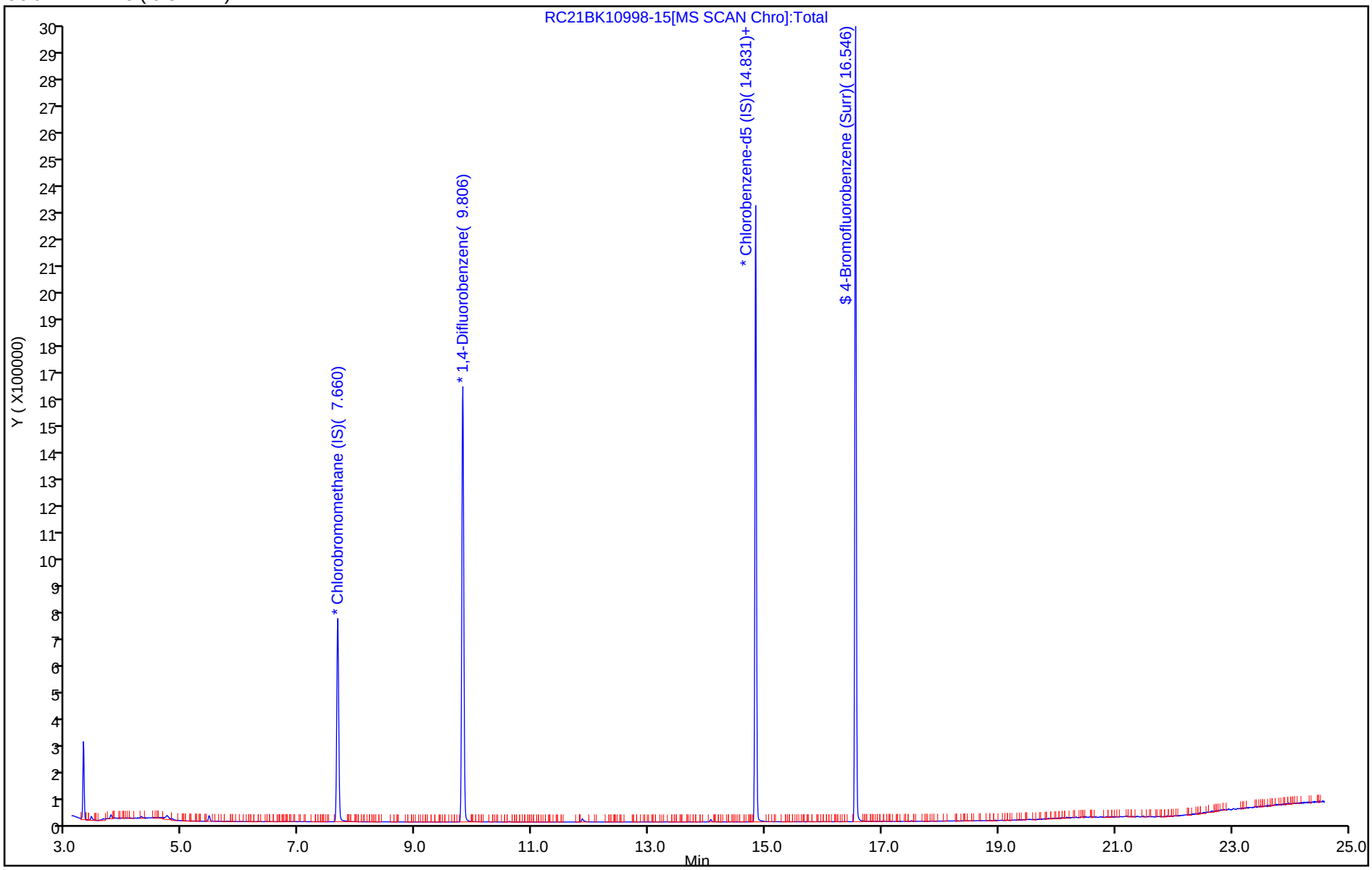
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Mar-2018 10:53:32 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-15.D				
Injection Date:	21-Mar-2018 18:24:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10998-A-15	Lab Sample ID:	140-10998-15	Worklist Smp#:	26
Client ID:	10170				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

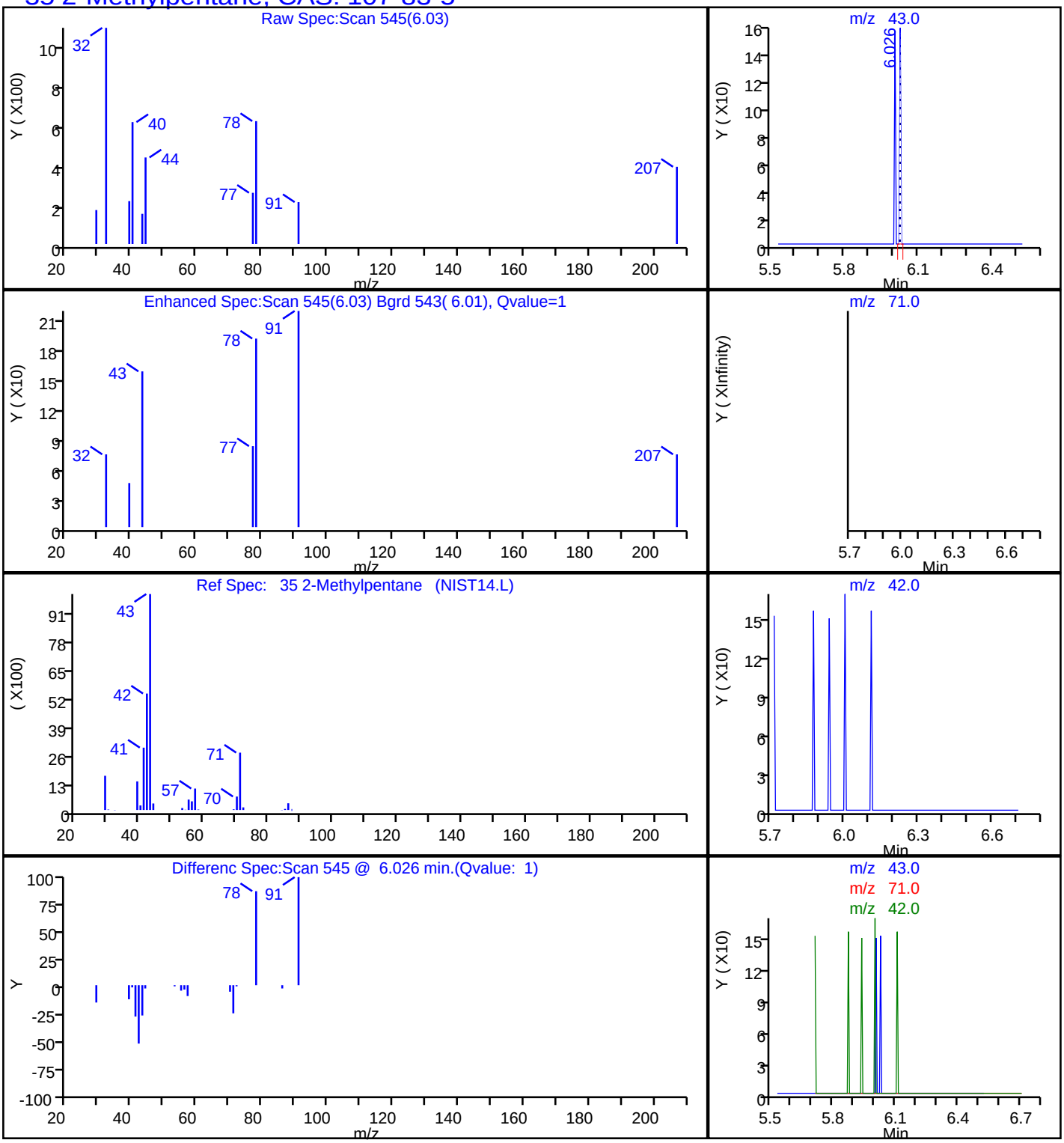


Report Date: 22-Mar-2018 10:53:32 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-15.D				
Injection Date:	21-Mar-2018 18:24:30	Instrument ID:	MR		
Lims ID:	140-10998-A-15	Lab Sample ID:	140-10998-15		
Client ID:	10170				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5

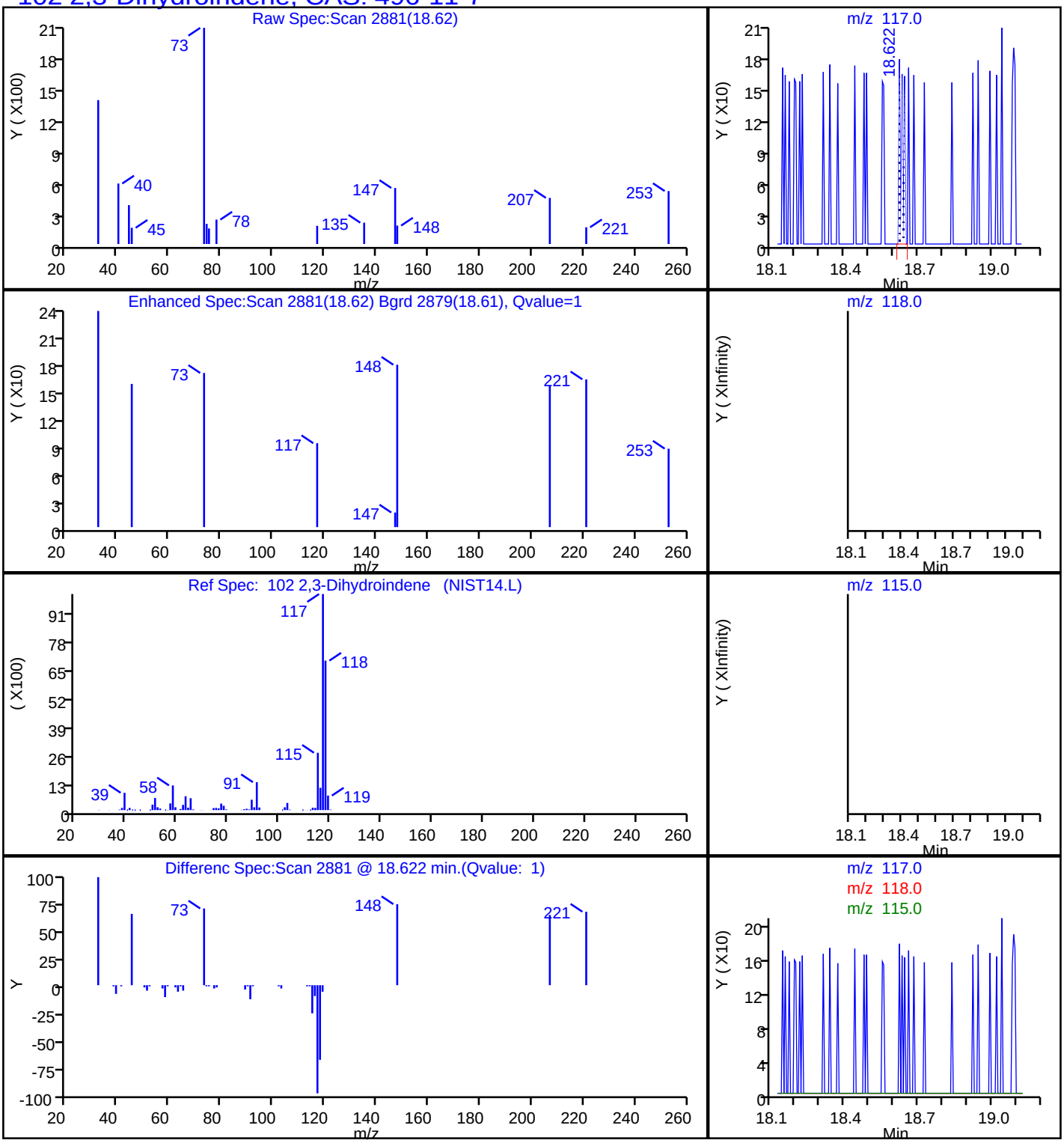


Report Date: 22-Mar-2018 10:53:32 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-15.D				
Injection Date:	21-Mar-2018 18:24:30	Instrument ID:	MR		
Lims ID:	140-10998-A-15	Lab Sample ID:	140-10998-15		
Client ID:	10170				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 2,3-Dihydroindene, CAS: 496-11-7



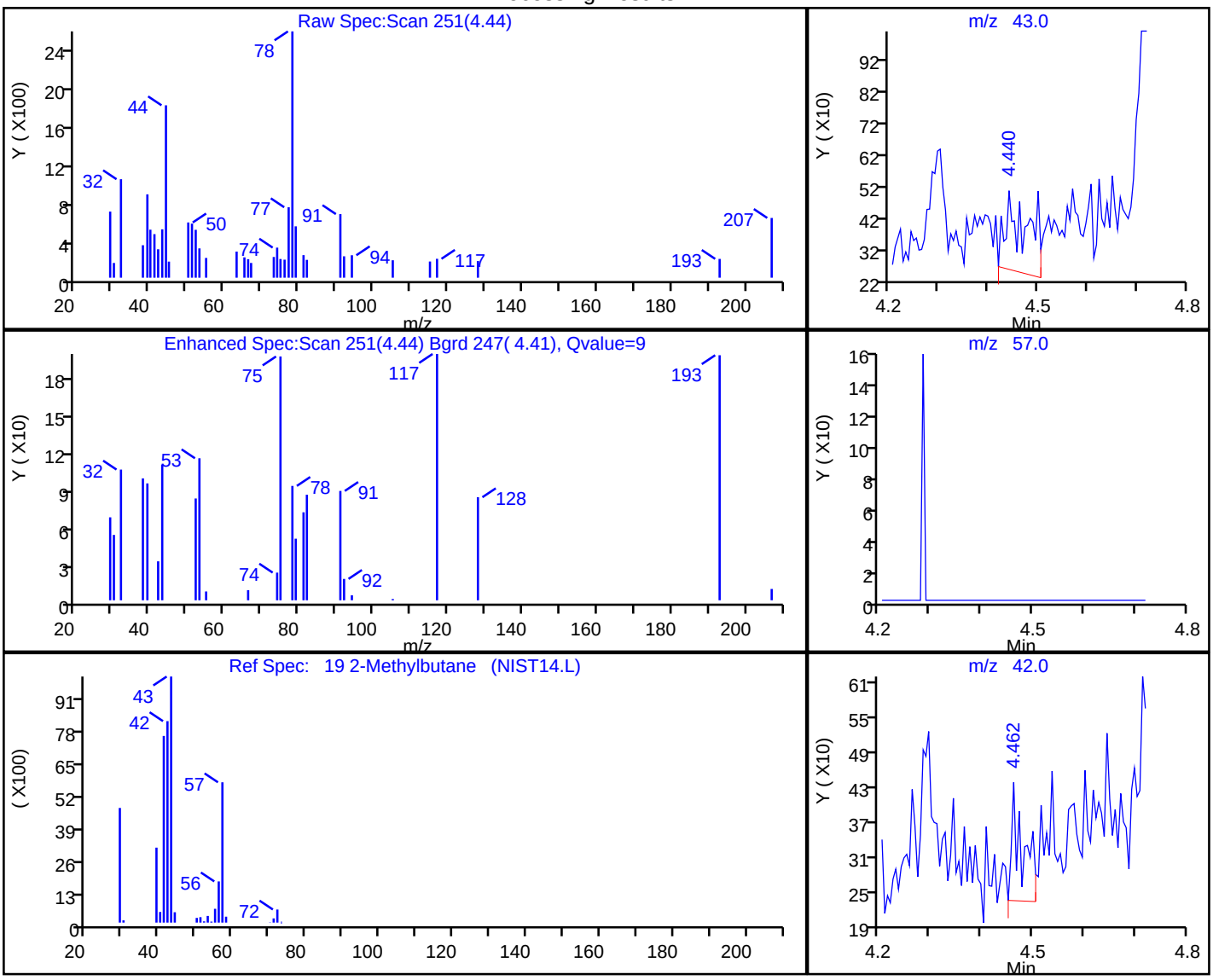
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180319-7677.b\RC21BK10998-15.D				
Injection Date:	21-Mar-2018 18:24:30	Instrument ID:	MR		
Lims ID:	140-10998-A-15	Lab Sample ID:	140-10998-15		
Client ID:	10170				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.44	43.00	765	0.013829
4.46	57.00	0	
4.46	42.00	301	

Reviewer: barlozhetskayaa, 21-Mar-2018 19:11:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09994 | Lab Sample ID: 140-10998-16

Matrix: Air | Lab File ID: 10998BK16.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09994 | Lab Sample ID: 140-10998-16

Matrix: Air | Lab File ID: 10998BK16.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND	*	0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	2.3		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10998-1

SDG No.:

Client Sample ID: 09994 | Lab Sample ID: 140-10998-16

Matrix: Air | Lab File ID: 10998BK16.D

Analysis Method: TO 15 LL | Date Collected: 03/20/2018 11:10

Sample wt/vol: 500(mL) | Date Analyzed: 03/21/2018 18:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 18894 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND	*	0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND	*	0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10998-1
SDG No.:
Client Sample ID: 09994 Lab Sample ID: 140-10998-16
Matrix: Air Lab File ID: 10998BK16.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:10
Sample wt/vol: 500(mL) Date Analyzed: 03/21/2018 18:09
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18894 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK16.D				
Lims ID:	140-10998-A-16				
Client ID:	09994				
Sample Type:	Client				
Inject. Date:	21-Mar-2018 18:09:30	ALS Bottle#:	15	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007672-028				
Misc. Info.:	09994				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Mar-2018 18:51:28	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				

First Level Reviewer: barlozhetskayaa Date: 21-Mar-2018 19:12:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.672	9.673	-0.001	90	211825	4.00	
* 2 1,4-Difluorobenzene	114	11.770	11.777	-0.007	95	1253490	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.375	16.376	-0.001	88	1187822	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.978	17.978	-0.001	96	864938	4.03	
17 Ethanol	31	5.449	5.417	0.031	96	59584	2.32	
25 Isopropyl alcohol	45	6.294	6.170	0.123	80	4432	0.0641	

Reagents:

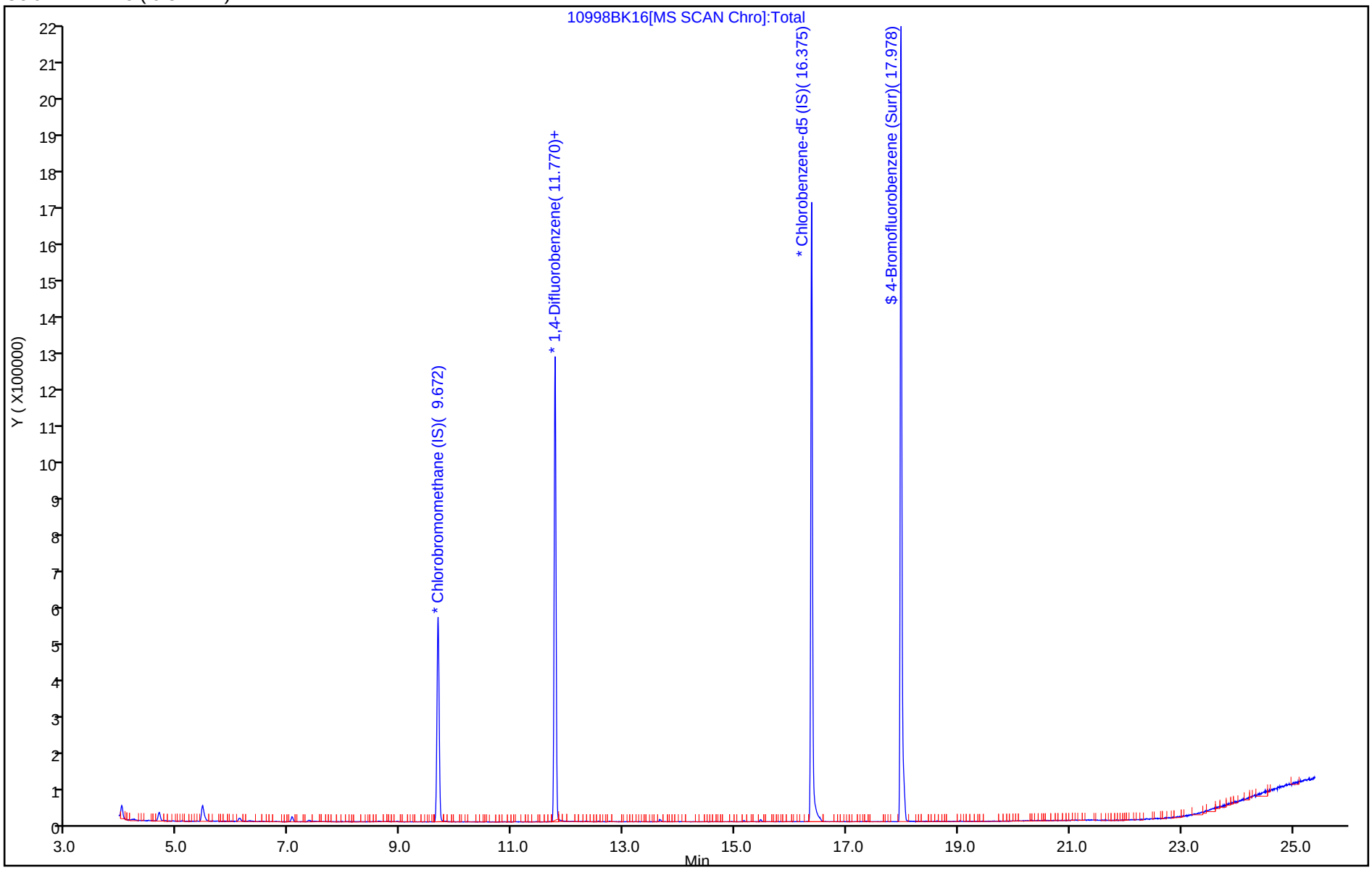
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Mar-2018 19:12:11 Chrom Revision: 2.2 13-Mar-2018 08:45:20

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK16.D				
Injection Date:	21-Mar-2018 18:09:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10998-A-16	Lab Sample ID:	140-10998-16	Worklist Smp#:	28
Client ID:	09994				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

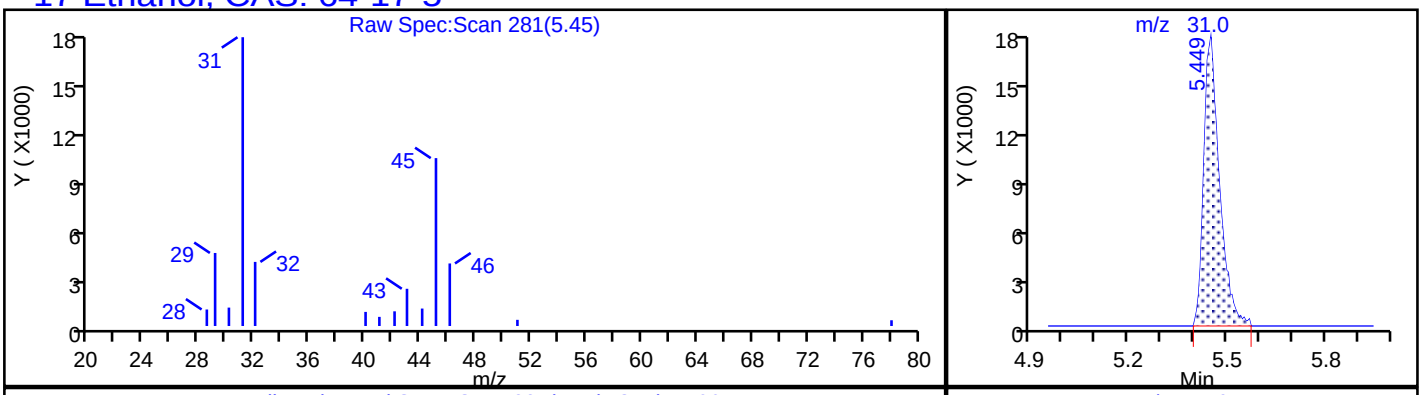


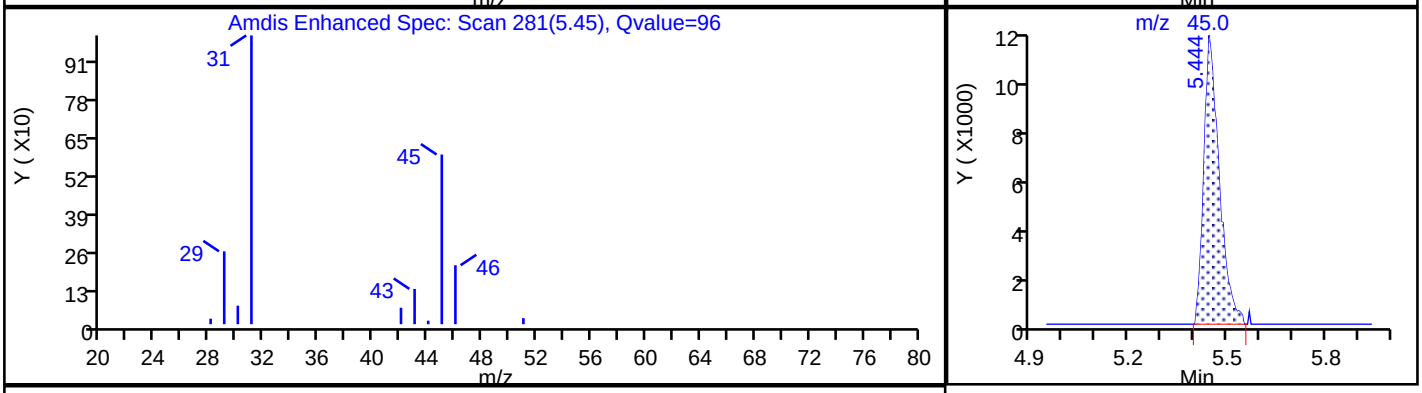
Report Date: 21-Mar-2018 19:12:11 Chrom Revision: 2.2 13-Mar-2018 08:45:20

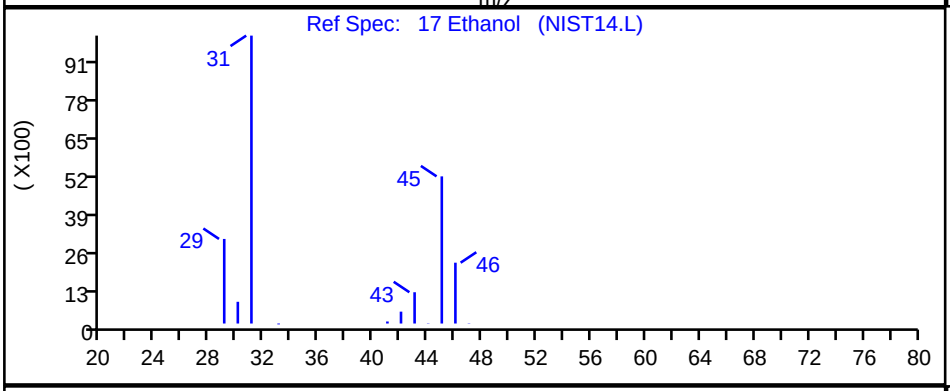
TestAmerica Knoxville

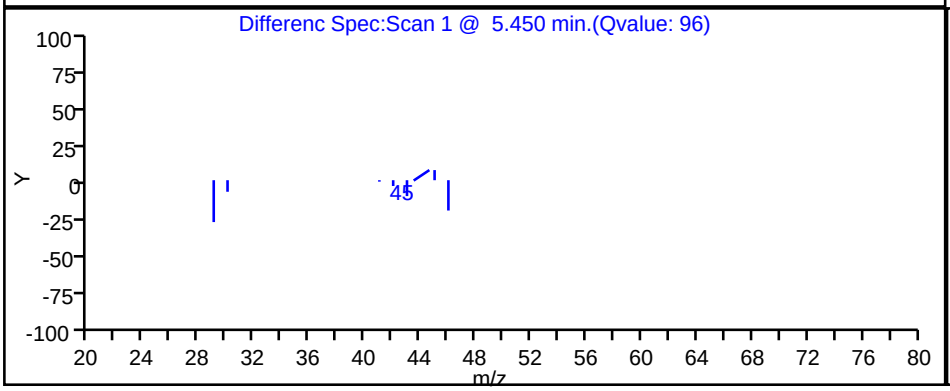
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK16.D				
Injection Date:	21-Mar-2018 18:09:30	Instrument ID:	MJ		
Lims ID:	140-10998-A-16	Lab Sample ID:	140-10998-16		
Client ID:	09994				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

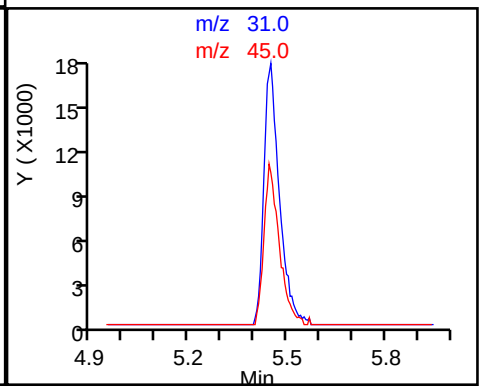
17 Ethanol, CAS: 64-17-5











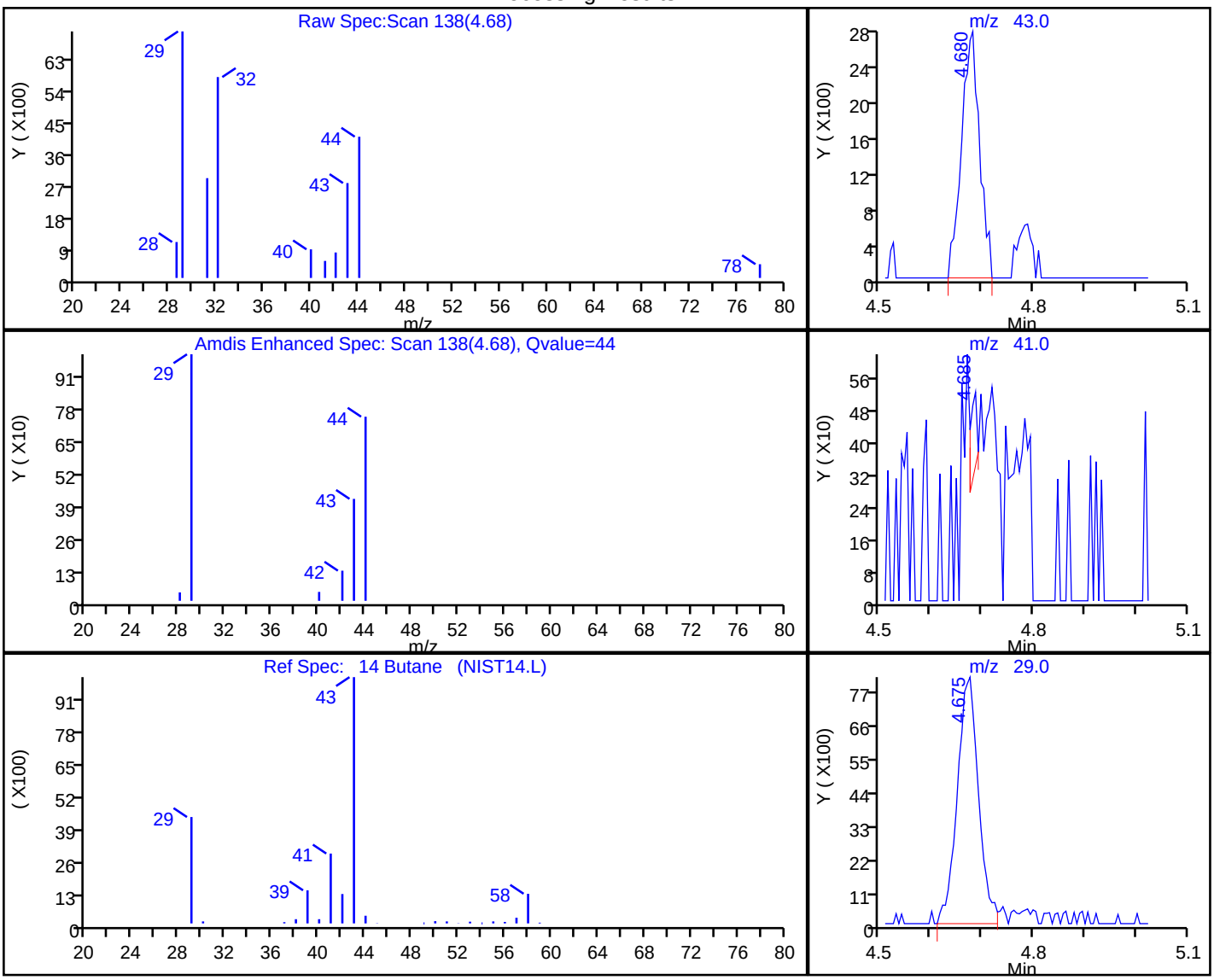
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK16.D				
Injection Date:	21-Mar-2018 18:09:30	Instrument ID:	MJ		
Lims ID:	140-10998-A-16	Lab Sample ID:	140-10998-16		
Client ID:	09994				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.68	43.00	6658	0.062728
4.69	41.00	168	
4.67	29.00	23592	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:51:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

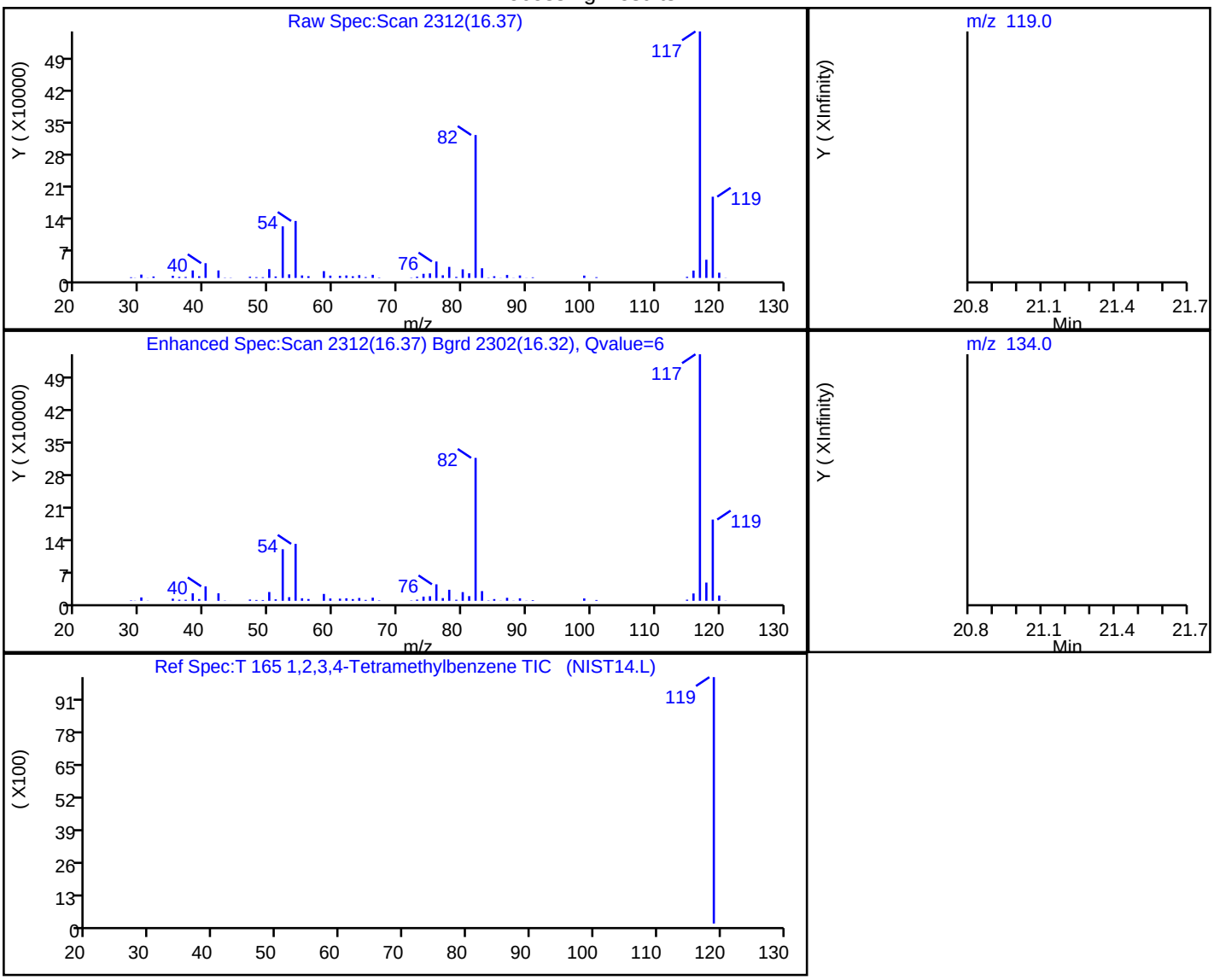
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK16.D				
Injection Date:	21-Mar-2018 18:09:30	Instrument ID:	MJ		
Lims ID:	140-10998-A-16	Lab Sample ID:	140-10998-16		
Client ID:	09994				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 165 1,2,3,4-Tetramethylbenzene TIC, CAS: 488-23-3

Processing Results



RT	Mass	Response	Amount
16.37	119.00	380777	1.282270
23.43	134.00	204	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:51:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

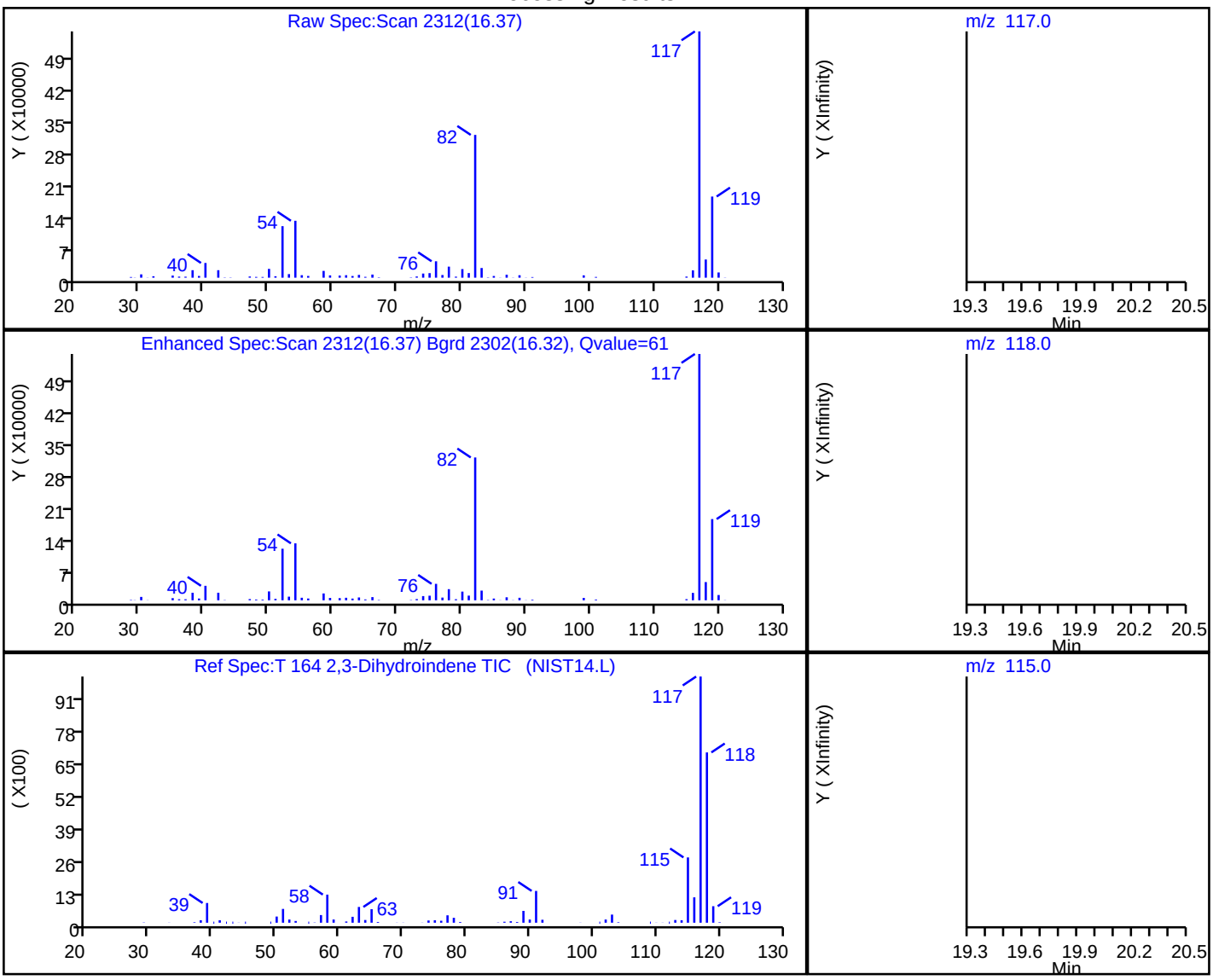
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180319-7672.b\10998BK16.D				
Injection Date:	21-Mar-2018 18:09:30	Instrument ID:	MJ		
Lims ID:	140-10998-A-16	Lab Sample ID:	140-10998-16		
Client ID:	09994				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

T 164 2,3-Dihydroindene TIC, CAS: 496-11-7

Processing Results



RT	Mass	Response	Amount
16.37	117.00	1187822	4.000000
16.37	118.00	88114	
16.37	115.00	4560	

Reviewer: barlozhetskayaa, 21-Mar-2018 18:51:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Memorandum

May 23, 2019

To:	Chuck Ahrens, GHD	Ref. No.:	003978-20
From:	Grant Anderson/sb/18	Tel:	(651) 639-0913

Subject: **Analytical Results and Reduced Data Validation**
Air Sampling Event
Wausau Superfund – Wausau, Wisconsin
April 2019

1. Introduction

The following document details a reduced validation of analytical results for air samples collected in support of the air monitoring program at the Wausau Superfund Site in Wausau, Wisconsin in April 2019. Samples were submitted to Eurofins TestAmerica (TestAmerica) located in Knoxville, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services, Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS) samples, and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) Quality Assurance Project Plan (QAPP), Report 2, March 2011

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October 1999, United States Environmental Protection Agency (USEPA) 540/R 99/008

Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were analyzed within the required holding times.

All air samples were collected in summa canisters and delivered at room temperature.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. The LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Field QA/QC Samples

The field QA/QC consisted of a field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, a field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The relative percent difference (RPD) associated with these duplicate samples must be less than 50 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
April 2019

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
OA-190425-KJ-01	Outdoor Air near 2103 N 3rd St	air	04/25/2019	10:50	Select VOCs	
IA-190425-KJ-01	2103 N 3rd St	air	04/25/2019	10:45	Select VOCs	
IA-190425-KJ-02	200 E Wausau Ave - Showroom	air	04/25/2019	14:00	Select VOCs	
IA-190425-KJ-03	2108 N. 3rd St. Dining room	air	04/25/2019	14:05	Select VOCs	
IA-190425-KJ-04	2108 N. 3rd St. Basement	air	04/25/2019	14:10	Select VOCs	
SS-190425-KJ-01	2103 N 3rd St	air	04/25/2019	11:12	Select VOCs	
SS-190425-KJ-02	200 E Wausau Ave - Showroom	air	04/25/2019	11:48	Select VOCs	
SS-190425-KJ-03	200 E Wausau Ave - South Storage	air	04/25/2019	12:21	Select VOCs	
SS-190425-KJ-04	200 E Wausau Ave - South Storage	air	04/25/2019	12:50	Select VOCs	duplicate

Notes:

VOCs - Volatile Organic Compounds
Select VOCs - cis-1,2-dichlorothene, tetrachloroethene, trichloroethene, vinyl chloride

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
April 2019

Location ID:		**200 E Wausau Ave - Showroom**	**200 E Wausau Ave - Showroom**	**200 E Wausau Ave - South Storage**	**200 E Wausau Ave - South Storage**	**2103 N 3rd St**
Sample Name:		**IA-190425-KJ-02**	**SS-190425-KJ-02**	**SS-190425-KJ-03**	**SS-190425-KJ-04**	**IA-190425-KJ-01**
Sample Date:		**04/25/2019**	**04/25/2019**	**04/25/2019**	**04/25/2019**	**04/25/2019**
					Duplicate	
Parameters	**Unit**					
Volatile Organic Compounds						
cis-1,2-Dichloroethene	ppbv	0.080 U	0.80 U	0.37 J	0.40 J	0.080 U
Tetrachloroethene	ppbv	0.10	110	14	15	0.25
Trichloroethene	ppbv	0.018 J	4.7	2.7	2.9	0.070
Vinyl chloride	ppbv	0.040 U	0.40 U	0.40 U	0.40 U	0.040 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	3.2 U	1.5 J	1.6 J	0.32 U
Tetrachloroethene	µg/m3	0.68	740	97	100	1.7
Trichloroethene	µg/m3	0.098 J	25	15	16	0.38
Vinyl chloride	µg/m3	0.10 U	1.0 U	1.0 U	1.0 U	0.10 U

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
April 2019

Location ID:		**2103 N 3rd St**	**2108 N. 3rd St. Dining room**	**2108 N. 3rd St. Basement**	**Outdoor Air near 2103 N 3rd St**
Sample Name:		**SS-190425-KJ-01**	**IA-190425-KJ-03**	**IA-190425-KJ-04**	**OA-190425-KJ-01**
Sample Date:		**04/25/2019**	**04/25/2019**	**04/25/2019**	**04/25/2019**
Parameters	**Unit**				
Volatile Organic Compounds					
cis-1,2-Dichloroethene	ppbv	0.80 U	0.080 U	0.080 U	0.080 U
Tetrachloroethene	ppbv	0.80 U	0.35	0.50	0.022 J
Trichloroethene	ppbv	0.40 U	0.12	0.13	0.059
Vinyl chloride	ppbv	0.40 U	0.040 U	0.040 U	0.040 U
cis-1,2-Dichloroethene	µg/m3	3.2 U	0.32 U	0.32 U	0.32 U
Tetrachloroethene	µg/m3	5.4 U	2.4	3.4	0.15 J
Trichloroethene	µg/m3	2.1 U	0.65	0.71	0.32
Vinyl chloride	µg/m3	1.0 U	0.10 U	0.10 U	0.10 U

Note:

U - Not detected at the associated reporting limit
J - Estimated concentration

Table 3

Analytical Method and Holding Time Criteria
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
April 2019

			Holding Time	
Parameter	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Volatile Organic Compounds (VOCs)	TO-15	Air	-	30

Notes:

Method References:

TO-15 - "Compendium of Methods for the Determination of Toxic Organic Compounds in Air", EPA-625/R-96/010b, January 1999.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-15136-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Authorized for release by:
5/9/2019 12:36:21 PM

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

LINKS

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-15136-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative
140-15136-1

Comments
No additional comments.

Receipt
The samples were received on 4/30/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

Method(s) TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: OA-190425-KJ-01 — Lab Sample ID: 140-15136-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.022	J	0.080	0.016	ppb v/v	1.43		TO 15 LL	Total/NA
Trichloroethene	0.059		0.040	0.014	ppb v/v	1.43		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.15	J	0.54	0.11	ug/m3	1.43		TO 15 LL	Total/NA
Trichloroethene	0.32		0.21	0.075	ug/m3	1.43		TO 15 LL	Total/NA

Client Sample ID: IA-190425-KJ-01 — Lab Sample ID: 140-15136-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.25		0.080	0.016	ppb v/v	1.4		TO 15 LL	Total/NA
Trichloroethene	0.070		0.040	0.014	ppb v/v	1.4		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.7		0.54	0.11	ug/m3	1.4		TO 15 LL	Total/NA
Trichloroethene	0.38		0.21	0.075	ug/m3	1.4		TO 15 LL	Total/NA

Client Sample ID: IA-190425-KJ-02 — Lab Sample ID: 140-15136-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.10		0.080	0.016	ppb v/v	1.38		TO 15 LL	Total/NA
Trichloroethene	0.018	J	0.040	0.014	ppb v/v	1.38		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.68		0.54	0.11	ug/m3	1.38		TO 15 LL	Total/NA
Trichloroethene	0.098	J	0.21	0.075	ug/m3	1.38		TO 15 LL	Total/NA

Client Sample ID: IA-190425-KJ-03 — Lab Sample ID: 140-15136-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.35		0.080	0.016	ppb v/v	1.4		TO 15 LL	Total/NA
Trichloroethene	0.12		0.040	0.014	ppb v/v	1.4		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.4		0.54	0.11	ug/m3	1.4		TO 15 LL	Total/NA
Trichloroethene	0.65		0.21	0.075	ug/m3	1.4		TO 15 LL	Total/NA

Client Sample ID: IA-190425-KJ-04 — Lab Sample ID: 140-15136-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.50		0.080	0.016	ppb v/v	1.33		TO 15 LL	Total/NA
Trichloroethene	0.13		0.040	0.014	ppb v/v	1.33		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	3.4		0.54	0.11	ug/m3	1.33		TO 15 LL	Total/NA
Trichloroethene	0.71		0.21	0.075	ug/m3	1.33		TO 15 LL	Total/NA

Client Sample ID: SS-190425-KJ-01 — Lab Sample ID: 140-15136-6

No Detections.

Client Sample ID: SS-190425-KJ-02 — Lab Sample ID: 140-15136-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	110		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.7		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	740		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: SS-190425-KJ-02 (Continued) — Lab Sample ID: 140-15136-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	25		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-190425-KJ-03 — Lab Sample ID: 140-15136-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.37	J	0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	14		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.7		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.5	J	3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	97		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	15		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-190425-KJ-04 — Lab Sample ID: 140-15136-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.40	J	0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	15		0.80	0.16	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.9		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.6	J	3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	100		5.4	1.1	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	16		2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: OA-190425-KJ-01

Lab Sample ID: 140-15136-1
Matrix: Air

Date Collected: 04/25/19 10:50
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/02/19 22:39	1.43
Tetrachloroethene	**0.022**	**J**	0.080	0.016	ppb v/v			05/02/19 22:39	1.43
Trichloroethene	**0.059**		0.040	0.014	ppb v/v			05/02/19 22:39	1.43
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/02/19 22:39	1.43

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/02/19 22:39	1.43
Tetrachloroethene	**0.15**	**J**	0.54	0.11	ug/m3			05/02/19 22:39	1.43
Trichloroethene	**0.32**		0.21	0.075	ug/m3			05/02/19 22:39	1.43
Vinyl chloride	ND		0.10	0.074	ug/m3			05/02/19 22:39	1.43

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*05/02/19 22:39*	*1.43*

Client Sample ID: IA-190425-KJ-01

Lab Sample ID: 140-15136-2
Matrix: Air

Date Collected: 04/25/19 10:45
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/02/19 23:35	1.4
Tetrachloroethene	**0.25**		0.080	0.016	ppb v/v			05/02/19 23:35	1.4
Trichloroethene	**0.070**		0.040	0.014	ppb v/v			05/02/19 23:35	1.4
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/02/19 23:35	1.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/02/19 23:35	1.4
Tetrachloroethene	**1.7**		0.54	0.11	ug/m3			05/02/19 23:35	1.4
Trichloroethene	**0.38**		0.21	0.075	ug/m3			05/02/19 23:35	1.4
Vinyl chloride	ND		0.10	0.074	ug/m3			05/02/19 23:35	1.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*60 - 140*		*05/02/19 23:35*	*1.4*

Client Sample ID: IA-190425-KJ-02

Lab Sample ID: 140-15136-3
Matrix: Air

Date Collected: 04/25/19 14:00
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/03/19 00:30	1.38
Tetrachloroethene	**0.10**		0.080	0.016	ppb v/v			05/03/19 00:30	1.38
Trichloroethene	**0.018**	**J**	0.040	0.014	ppb v/v			05/03/19 00:30	1.38
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/03/19 00:30	1.38

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/03/19 00:30	1.38
Tetrachloroethene	**0.68**		0.54	0.11	ug/m3			05/03/19 00:30	1.38
Trichloroethene	**0.098**	**J**	0.21	0.075	ug/m3			05/03/19 00:30	1.38
Vinyl chloride	ND		0.10	0.074	ug/m3			05/03/19 00:30	1.38

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: IA-190425-KJ-02

Lab Sample ID: 140-15136-3
Matrix: Air

Date Collected: 04/25/19 14:00
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 6L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		60 - 140		05/03/19 00:30	1.38

Client Sample ID: IA-190425-KJ-03

Lab Sample ID: 140-15136-4
Matrix: Air

Date Collected: 04/25/19 14:05
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/03/19 01:26	1.4
Tetrachloroethene	**0.35**		0.080	0.016	ppb v/v			05/03/19 01:26	1.4
Trichloroethene	**0.12**		0.040	0.014	ppb v/v			05/03/19 01:26	1.4
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/03/19 01:26	1.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/03/19 01:26	1.4
Tetrachloroethene	**2.4**		0.54	0.11	ug/m3			05/03/19 01:26	1.4
Trichloroethene	**0.65**		0.21	0.075	ug/m3			05/03/19 01:26	1.4
Vinyl chloride	ND		0.10	0.074	ug/m3			05/03/19 01:26	1.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		60 - 140		05/03/19 01:26	1.4

Client Sample ID: IA-190425-KJ-04

Lab Sample ID: 140-15136-5
Matrix: Air

Date Collected: 04/25/19 14:10
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/03/19 02:22	1.33
Tetrachloroethene	**0.50**		0.080	0.016	ppb v/v			05/03/19 02:22	1.33
Trichloroethene	**0.13**		0.040	0.014	ppb v/v			05/03/19 02:22	1.33
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/03/19 02:22	1.33

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/03/19 02:22	1.33
Tetrachloroethene	**3.4**		0.54	0.11	ug/m3			05/03/19 02:22	1.33
Trichloroethene	**0.71**		0.21	0.075	ug/m3			05/03/19 02:22	1.33
Vinyl chloride	ND		0.10	0.074	ug/m3			05/03/19 02:22	1.33

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		60 - 140		05/03/19 02:22	1.33

Client Sample ID: SS-190425-KJ-01

Lab Sample ID: 140-15136-6
Matrix: Air

Date Collected: 04/25/19 11:12
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			05/03/19 03:11	1

Client Sample ID: SS-190425-KJ-01 — Lab Sample ID: 140-15136-6

Date Collected: 04/25/19 11:12 — **Matrix: Air**
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.80	0.16	ppb v/v			05/03/19 03:11	1
Trichloroethene	ND		0.40	0.14	ppb v/v			05/03/19 03:11	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			05/03/19 03:11	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			05/03/19 03:11	1
Tetrachloroethene	ND		5.4	1.1	ug/m3			05/03/19 03:11	1
Trichloroethene	ND		2.1	0.75	ug/m3			05/03/19 03:11	1
Vinyl chloride	ND		1.0	0.74	ug/m3			05/03/19 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*05/03/19 03:11*	*1*

Client Sample ID: SS-190425-KJ-02 — Lab Sample ID: 140-15136-7

Date Collected: 04/25/19 11:48 — **Matrix: Air**
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.24	ppb v/v			05/03/19 04:02	1
Tetrachloroethene	**110**		0.80	0.16	ppb v/v			05/03/19 04:02	1
Trichloroethene	**4.7**		0.40	0.14	ppb v/v			05/03/19 04:02	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			05/03/19 04:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.95	ug/m3			05/03/19 04:02	1
Tetrachloroethene	**740**		5.4	1.1	ug/m3			05/03/19 04:02	1
Trichloroethene	**25**		2.1	0.75	ug/m3			05/03/19 04:02	1
Vinyl chloride	ND		1.0	0.74	ug/m3			05/03/19 04:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*05/03/19 04:02*	*1*

Client Sample ID: SS-190425-KJ-03 — Lab Sample ID: 140-15136-8

Date Collected: 04/25/19 12:21 — **Matrix: Air**
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.37**	**J**	0.80	0.24	ppb v/v			05/03/19 04:54	1
Tetrachloroethene	**14**		0.80	0.16	ppb v/v			05/03/19 04:54	1
Trichloroethene	**2.7**		0.40	0.14	ppb v/v			05/03/19 04:54	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			05/03/19 04:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.5**	**J**	3.2	0.95	ug/m3			05/03/19 04:54	1
Tetrachloroethene	**97**		5.4	1.1	ug/m3			05/03/19 04:54	1
Trichloroethene	**15**		2.1	0.75	ug/m3			05/03/19 04:54	1
Vinyl chloride	ND		1.0	0.74	ug/m3			05/03/19 04:54	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: SS-190425-KJ-03

Lab Sample ID: 140-15136-8
Matrix: Air

Date Collected: 04/25/19 12:21
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 1L

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*05/03/19 04:54*	*1*

Client Sample ID: SS-190425-KJ-04

Lab Sample ID: 140-15136-9
Matrix: Air

Date Collected: 04/25/19 12:50
Date Received: 04/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.40**	**J**	0.80	0.24	ppb v/v			05/03/19 05:47	1
Tetrachloroethene	**15**		0.80	0.16	ppb v/v			05/03/19 05:47	1
Trichloroethene	**2.9**		0.40	0.14	ppb v/v			05/03/19 05:47	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			05/03/19 05:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.6**	**J**	3.2	0.95	ug/m3			05/03/19 05:47	1
Tetrachloroethene	**100**		5.4	1.1	ug/m3			05/03/19 05:47	1
Trichloroethene	**16**		2.1	0.75	ug/m3			05/03/19 05:47	1
Vinyl chloride	ND		1.0	0.74	ug/m3			05/03/19 05:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*05/03/19 05:47*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v
cis-1,2-Dichloroethene	0.32	0.095	ug/m3
Tetrachloroethene	0.080	0.016	ppb v/v
Tetrachloroethene	0.54	0.11	ug/m3
Trichloroethene	0.040	0.014	ppb v/v
Trichloroethene	0.21	0.075	ug/m3
Vinyl chloride	0.040	0.029	ppb v/v
Vinyl chloride	0.10	0.074	ug/m3

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**								
140-15136-1	OA-190425-KJ-01	106								
140-15136-2	IA-190425-KJ-01	108								
140-15136-3	IA-190425-KJ-02	106								
140-15136-4	IA-190425-KJ-03	106								
140-15136-5	IA-190425-KJ-04	105								
140-15136-6	SS-190425-KJ-01	104								
140-15136-7	SS-190425-KJ-02	106								
140-15136-8	SS-190425-KJ-03	105								
140-15136-9	SS-190425-KJ-04	106								
LCS 140-29714/1002	Lab Control Sample	105								
MB 140-29714/5	Method Blank	104								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-29714/5
Matrix: Air
Analysis Batch: 29714

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/02/19 15:35	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			05/02/19 15:35	1
Trichloroethene	ND		0.040	0.014	ppb v/v			05/02/19 15:35	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/02/19 15:35	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/02/19 15:35	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			05/02/19 15:35	1
Trichloroethene	ND		0.21	0.075	ug/m3			05/02/19 15:35	1
Vinyl chloride	ND		0.10	0.074	ug/m3			05/02/19 15:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*05/02/19 15:35*	*1*

Lab Sample ID: LCS 140-29714/1002
Matrix: Air
Analysis Batch: 29714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	1.00	1.03		ppb v/v		103	70 - 130
Tetrachloroethene	1.00	0.968		ppb v/v		97	70 - 130
Trichloroethene	1.00	1.02		ppb v/v		102	70 - 130
Vinyl chloride	1.00	1.02		ppb v/v		102	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	4.0	4.09		ug/m3		103	70 - 130
Tetrachloroethene	6.8	6.57		ug/m3		97	70 - 130
Trichloroethene	5.4	5.50		ug/m3		102	70 - 130
Vinyl chloride	2.6	2.60		ug/m3		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Air - GC/MS VOA

Analysis Batch: 29714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-15136-1	OA-190425-KJ-01	Total/NA	Air	TO 15 LL	
140-15136-2	IA-190425-KJ-01	Total/NA	Air	TO 15 LL	
140-15136-3	IA-190425-KJ-02	Total/NA	Air	TO 15 LL	
140-15136-4	IA-190425-KJ-03	Total/NA	Air	TO 15 LL	
140-15136-5	IA-190425-KJ-04	Total/NA	Air	TO 15 LL	
140-15136-6	SS-190425-KJ-01	Total/NA	Air	TO 15 LL	
140-15136-7	SS-190425-KJ-02	Total/NA	Air	TO 15 LL	
140-15136-8	SS-190425-KJ-03	Total/NA	Air	TO 15 LL	
140-15136-9	SS-190425-KJ-04	Total/NA	Air	TO 15 LL	
MB 140-29714/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-29714/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: OA-190425-KJ-01 — Lab Sample ID: 140-15136-1

Date Collected: 04/25/19 10:50 — **Matrix: Air**
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.43	715 mL	500 mL	29714	05/02/19 22:39	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-190425-KJ-01 — Lab Sample ID: 140-15136-2

Date Collected: 04/25/19 10:45 — **Matrix: Air**
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.4	700 mL	500 mL	29714	05/02/19 23:35	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-190425-KJ-02 — Lab Sample ID: 140-15136-3

Date Collected: 04/25/19 14:00 — **Matrix: Air**
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.38	690 mL	500 mL	29714	05/03/19 00:30	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-190425-KJ-03 — Lab Sample ID: 140-15136-4

Date Collected: 04/25/19 14:05 — **Matrix: Air**
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.4	700 mL	500 mL	29714	05/03/19 01:26	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: IA-190425-KJ-04 — Lab Sample ID: 140-15136-5

Date Collected: 04/25/19 14:10 — **Matrix: Air**
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.33	665 mL	500 mL	29714	05/03/19 02:22	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-190425-KJ-01 — Lab Sample ID: 140-15136-6

Date Collected: 04/25/19 11:12 — **Matrix: Air**
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	29714	05/03/19 03:11	S1K	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Client Sample ID: SS-190425-KJ-02
Lab Sample ID: 140-15136-7
Date Collected: 04/25/19 11:48
Matrix: Air
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	29714	05/03/19 04:02	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-190425-KJ-03
Lab Sample ID: 140-15136-8
Date Collected: 04/25/19 12:21
Matrix: Air
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	29714	05/03/19 04:54	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: SS-190425-KJ-04
Lab Sample ID: 140-15136-9
Date Collected: 04/25/19 12:50
Matrix: Air
Date Received: 04/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	29714	05/03/19 05:47	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-29714/5
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	29714	05/02/19 15:35	S1K	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-29714/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	29714	05/02/19 11:32	S1K	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Laboratory: Eurofins TestAmerica, Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-15136-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-15136-1	OA-190425-KJ-01	Air	04/25/19 10:50	04/30/19 10:00
140-15136-2	IA-190425-KJ-01	Air	04/25/19 10:45	04/30/19 10:00
140-15136-3	IA-190425-KJ-02	Air	04/25/19 14:00	04/30/19 10:00
140-15136-4	IA-190425-KJ-03	Air	04/25/19 14:05	04/30/19 10:00
140-15136-5	IA-190425-KJ-04	Air	04/25/19 14:10	04/30/19 10:00
140-15136-6	SS-190425-KJ-01	Air	04/25/19 11:12	04/30/19 10:00
140-15136-7	SS-190425-KJ-02	Air	04/25/19 11:48	04/30/19 10:00
140-15136-8	SS-190425-KJ-03	Air	04/25/19 12:21	04/30/19 10:00
140-15136-9	SS-190425-KJ-04	Air	04/25/19 12:50	04/30/19 10:00

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Grant Anderson	Sampled By: K. Jenkin	1 of 2 COCs
Company: GHD	Phone: 651-639 0913		
Address: 1801 Old Hwy 8 NW	Site Contact:		
City/State/Zip St. Paul, MN 55112	TAL Contact:		
Phone: 651 639 0913			
FAX:			
Project Name: Wausau Water NPL	Analysis Turnaround Time		
Site/location: Wausau, WI	Standard (Specify) Std.		
PO # 34015892	Rush (Specify)		

140-15136 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
OA-190425-KJ-01	4-24 4-25-19	4-24 13:45	4-25 10:50	-29	-8.5	8689	09523	x								x			
IA-190425-KJ-01	4-24 4-25-19	4-24 1340	4-25 1045	-30	-9	8752	10731	x							x				
IA-190425-KJ-02	4-24 4-25-19	4-24 1530	4-25 1400	-27	-6	7588	11637	x							x				
IA-190425-KJ-03	4-24 4-25-19	4-24 1615	4-25 1405	-30	-12	8780	09983	x							x				
IA-190425-KJ-04	4-24 4-25-19	4-24 1620	4-25 1410	-28	-6	7358	10686	x							x				
SS-190425-KJ-01	4-25-19	11:00	11:12	-30	-5	10953	11621	x									x		

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 3 boxes
Fedex PO, No custody seal
trk# 7750 8359 1789
" " 1080
" " 1090
KW 4/30/19

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: C. Ahrens - GHD	Date/Time: 4/29/19 12:00	Canisters Received by: [signature] 4/30/19 1000 TA Knox
Samples Relinquished by:	Date/Time:	Received by:
Relinquished by:	Date/Time:	Received by:

Lab Use Only Shipper Name: Opened by: Condition:

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Grant Anderson	Sampled By: K. Jenkin	2 of 2 COCs
Company: GHD	Phone: 651-639 0913		
Address: 1801 Old Hwy. 8 NW	Site Contact:		
City/State/Zip St. Paul, MN 55112	TAL Contact:		
Phone: 651 639-0913			
FAX:			
Project Name: Wausau Water NPL	Analysis Turnaround Time		
Site/location: Wausau, WI	Standard (Specify) Std.		
PO # 34015892	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SS-190425-KJ-02	4-25-19	1138	1148	-27	-5	11787	11645	X									X		
SS-190425-KJ-03	4-25-19	1211	1221	-27	-3	11953	11577	X									X		
SS-190425-KJ-04	4-25-19	1240	1250	-30	-7	11914	11870	X									X		

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:
The following cannisters were not used and are empty: 10107, 09687, 10566, 11572, 11704

Canisters Shipped by: C. Abrams - GHD	Date/Time: 4/29/19 12:00	Canisters Received by: [illegible] 4/30/19 1000 TA [illegible]	14 cans 8 flow 6 KR
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

Lab Use Only Shipper Name: Opened by: Condition:

Loc: 140

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:** **15136**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 14003779 PM Instructions:

Sample Receiving Associate: Date: 4/30/19

QA026R31.doc, 112618

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 5/2/2019

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-15136-a-1	09523	14291	IND	6	-8.2	09:34	0.6
HMT	140-15136-a-2	10731	14309	IND	6	-8.6	09:35	0.0
HMT	140-15136-a-3	11637	14202	IND	6	-8.2	09:36	0.0
HMT	140-15136-a-4	09983	14254	IND	6	-8.6	09:37	0.0
HMT	140-15136-a-5	10686	14309	IND	6	-7.4	09:38	0.0
HMT	140-15136-a-6	11621	14803	B	1	-4.5	09:39	
HMT	140-15136-a-7	11645	14803	B	1	-6.5	09:40	
HMT	140-15136-a-8	11577	14803	B	1	-6.5	09:41	
HMT	140-15136-a-9	11870	14803	B	1	-5.6	09:42	

□ Receiving –Air Can –Calve Open (NCM #_____)
□ Air - Can P -24 to -25 " - Flow Contr. Works (NCM#_____)
□ Air - Can P -24 to -25 " - Flow Contr. Faulty (NCM#_____)
□ Air - Can P Out -26" - Flow Contr. Works (NCM#_____)
□ Air - Can P Out -26" - Flow Contr. Faulty (NCM#_____)
□ Air - Can P Low -24 to -25 " - Grab Sample (NCM#_____)
□ Air - Can P Low -26 "- Grab Sample (NCM#_____)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14202-1
SDG No.:
Client Sample ID: 11637 | Lab Sample ID: 140-14202-1
Matrix: Air | Lab File ID: B08L14202.D
Analysis Method: TO 15 LL | Date Collected: 02/07/2019 15:45
Sample wt/vol: 500(mL) | Date Analyzed: 02/09/2019 03:18
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27519 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14202-1
SDG No.:
Client Sample ID: 11637
Lab Sample ID: 140-14202-1
Matrix: Air
Lab File ID: B08L14202.D
Analysis Method: TO 15 LL
Date Collected: 02/07/2019 15:45
Sample wt/vol: 500(mL)
Date Analyzed: 02/09/2019 03:18
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27519
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14202-1

SDG No.:

Client Sample ID: 11637 | Lab Sample ID: 140-14202-1

Matrix: Air | Lab File ID: B08L14202.D

Analysis Method: TO 15 LL | Date Collected: 02/07/2019 15:45

Sample wt/vol: 500(mL) | Date Analyzed: 02/09/2019 03:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27519 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14202-1
SDG No.:
Client Sample ID: 11637 Lab Sample ID: 140-14202-1
Matrix: Air Lab File ID: B08L14202.D
Analysis Method: TO 15 LL Date Collected: 02/07/2019 15:45
Sample wt/vol: 500(mL) Date Analyzed: 02/09/2019 03:18
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27519 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190208-10772.b\B08L14202.D				
Lims ID:	140-14202-A-1				
Client ID:	11637				
Sample Type:	Client				
Inject. Date:	09-Feb-2019 03:18:30	ALS Bottle#:	15	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010772-020				
Misc. Info.:	11637				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\chromna\Knoxville\ChromData\MG\20190208-10772.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Feb-2019 12:52:21	Calib Date:	11-Jan-2019 21:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0304				
First Level Reviewer: khachitpongpanits		Date:	11-Feb-2019 12:54:48		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	94	290378	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	97	1846040	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.086	-0.006	96	1717037	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.709	-0.006	78	1491042	4.24	
31 Methylene Chloride	84	6.595	6.595	0.000	98	17779	0.1491	

Reagents:

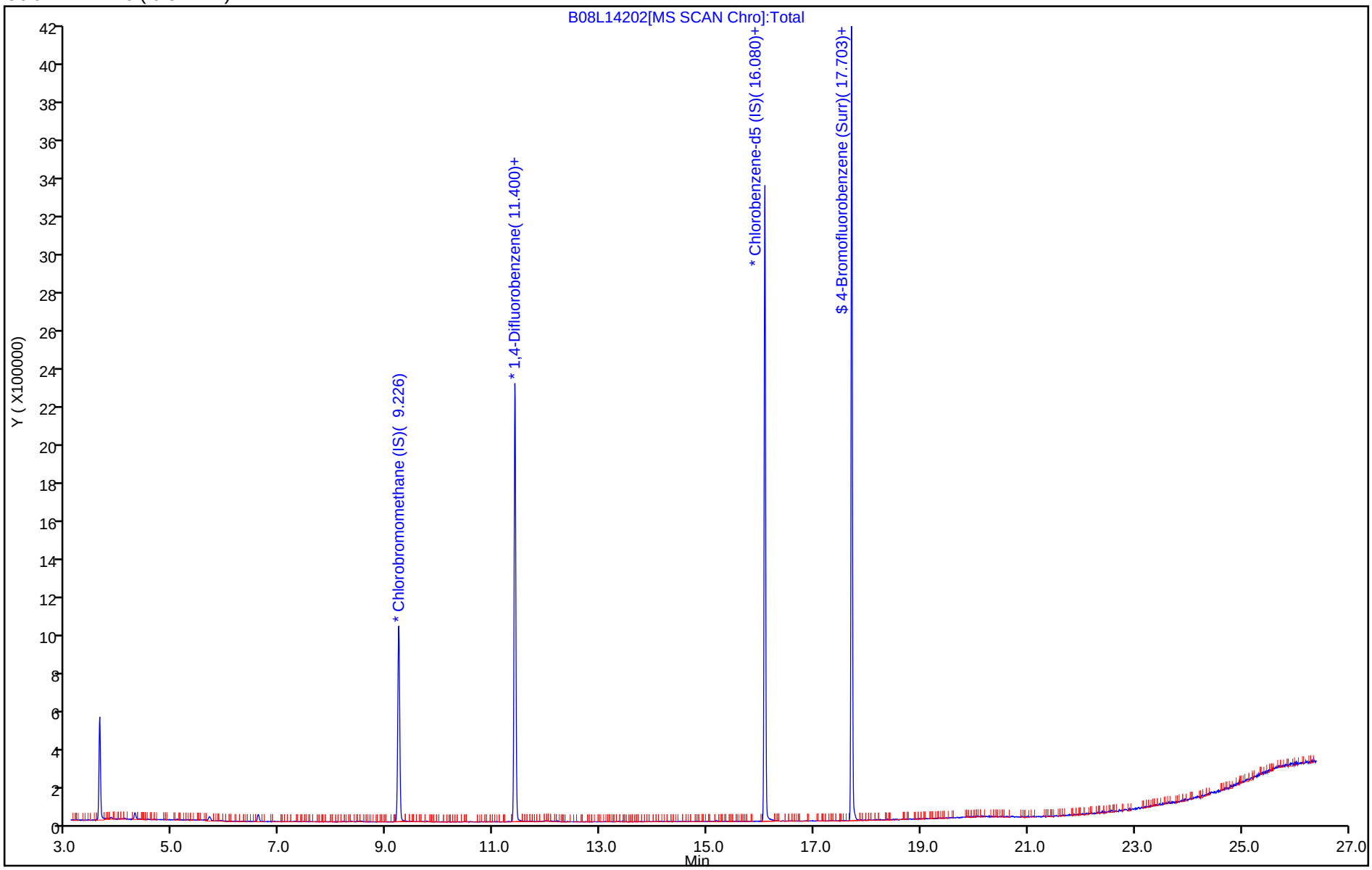
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 11-Feb-2019 12:54:49 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190208-10772.b\B08L14202.D				
Injection Date:	09-Feb-2019 03:18:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14202-A-1	Lab Sample ID:	140-14202-1	Worklist Smp#:	20
Client ID:	11637				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14254-1

SDG No.:

Client Sample ID: 09983 | Lab Sample ID: 140-14254-11

Matrix: Air | Lab File ID: B18L14254R.D

Analysis Method: TO 15 LL | Date Collected: 02/13/2019 07:45

Sample wt/vol: 500(mL) | Date Analyzed: 02/18/2019 16:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14254-1
SDG No.:
Client Sample ID: 09983
Lab Sample ID: 140-14254-11
Matrix: Air
Lab File ID: B18L14254R.D
Analysis Method: TO 15 LL
Date Collected: 02/13/2019 07:45
Sample wt/vol: 500(mL)
Date Analyzed: 02/18/2019 16:36
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27752
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14254-1

SDG No.:

Client Sample ID: 09983 | Lab Sample ID: 140-14254-11

Matrix: Air | Lab File ID: B18L14254R.D

Analysis Method: TO 15 LL | Date Collected: 02/13/2019 07:45

Sample wt/vol: 500(mL) | Date Analyzed: 02/18/2019 16:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14254-1
SDG No.:
Client Sample ID: 09983 Lab Sample ID: 140-14254-11
Matrix: Air Lab File ID: B18L14254R.D
Analysis Method: TO 15 LL Date Collected: 02/13/2019 07:45
Sample wt/vol: 500(mL) Date Analyzed: 02/18/2019 16:36
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27752 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\B18L14254R.D				
Lims ID:	140-14254-A-11				
Client ID:	09983				
Sample Type:	Client				
Inject. Date:	18-Feb-2019 16:36:30	ALS Bottle#:	1	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010864-008				
Misc. Info.:	09983				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Feb-2019 09:56:20	Calib Date:	11-Jan-2019 21:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0308				
First Level Reviewer: khachitpongpanits		Date:	19-Feb-2019 10:04:02		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.237	-0.005	95	377870	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.410	-0.005	97	2195574	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.085	-0.005	95	2026266	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.703	0.000	79	1717554	4.14	
25 Isopropyl alcohol	45	5.980	5.779	0.194	97	7994	0.0528	
31 Methylene Chloride	84	6.606	6.593	0.006	98	21198	0.1366	
46 Tetrahydrofuran	42	9.798	9.663	0.124	88	5312	0.0317	
64 4-Methyl-2-pentanone (MIBK	43	13.357	13.286	0.065	99	28591	0.0925	

Reagents:

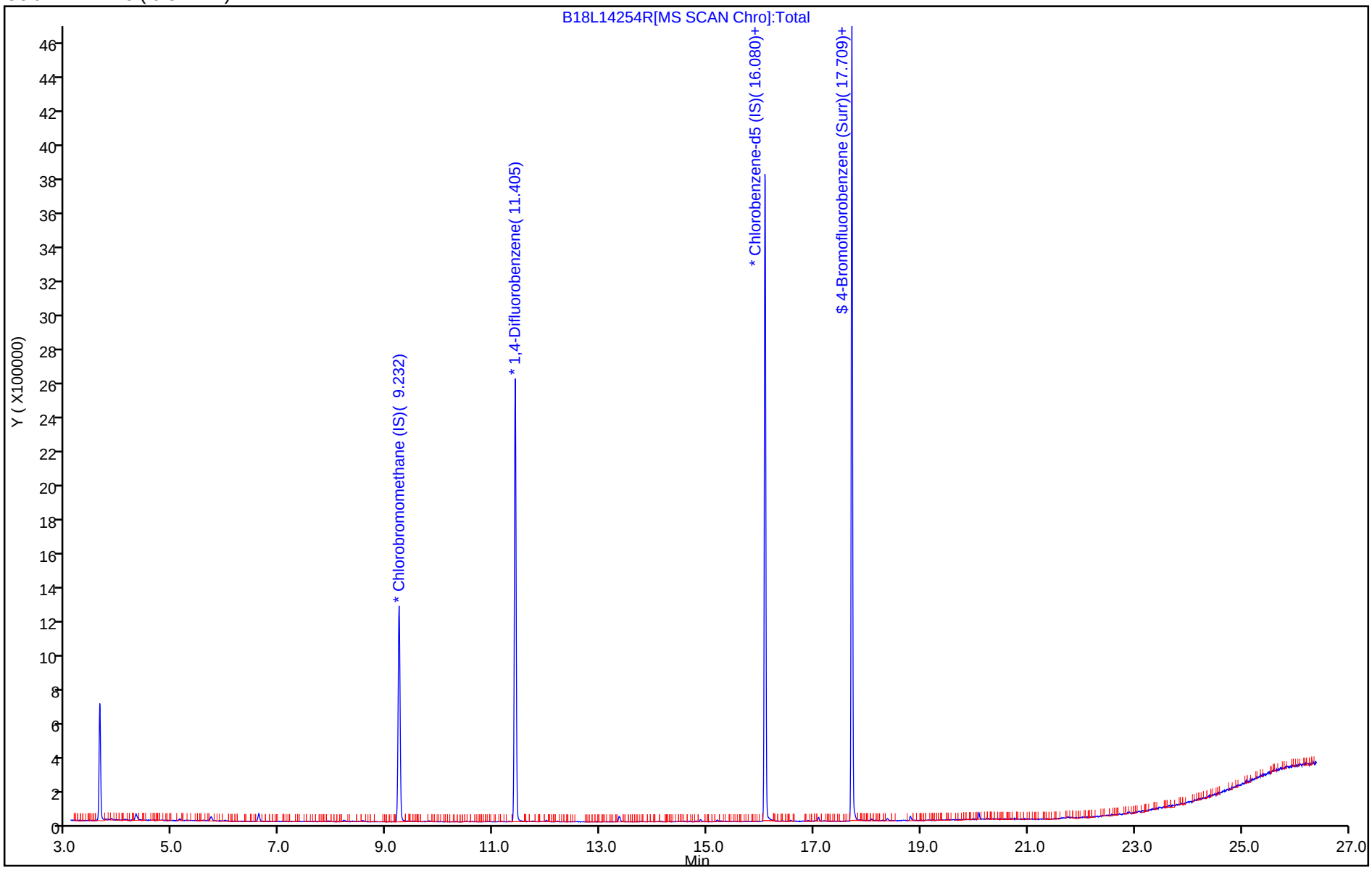
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Feb-2019 10:04:03 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\B18L14254R.D				
Injection Date:	18-Feb-2019 16:36:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14254-A-11	Lab Sample ID:	140-14254-11	Worklist Smp#:	8
Client ID:	09983				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1

SDG No.:

Client Sample ID: 09523 | Lab Sample ID: 140-14291-3

Matrix: Air | Lab File ID: 14291BK03.D

Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/18/2019 23:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1
SDG No.:
Client Sample ID: 09523 | Lab Sample ID: 140-14291-3
Matrix: Air | Lab File ID: 14291BK03.D
Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL) | Date Analyzed: 02/18/2019 23:24
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1

SDG No.:

Client Sample ID: 09523 | Lab Sample ID: 140-14291-3

Matrix: Air | Lab File ID: 14291BK03.D

Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/18/2019 23:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14291-1

SDG No.:

Client Sample ID: 09523 Lab Sample ID: 140-14291-3

Matrix: Air Lab File ID: 14291BK03.D

Analysis Method: TO 15 LL Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) Date Analyzed: 02/18/2019 23:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27752 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK03.D				
Lims ID:	140-14291-A-3				
Client ID:	09523				
Sample Type:	Client				
Inject. Date:	18-Feb-2019 23:24:30	ALS Bottle#:	9	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010864-017				
Misc. Info.:	09523				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Feb-2019 12:27:41	Calib Date:	11-Jan-2019 21:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0331				
First Level Reviewer: khachitpongpanits		Date:	19-Feb-2019 12:27:41		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.237	-0.005	97	427596	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.410	-0.005	97	2601984	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.085	-0.005	95	2383349	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.703	0.000	83	1973312	4.04	
31 Methylene Chloride	84	6.611	6.596	0.011	97	23924	0.1362	

Reagents:

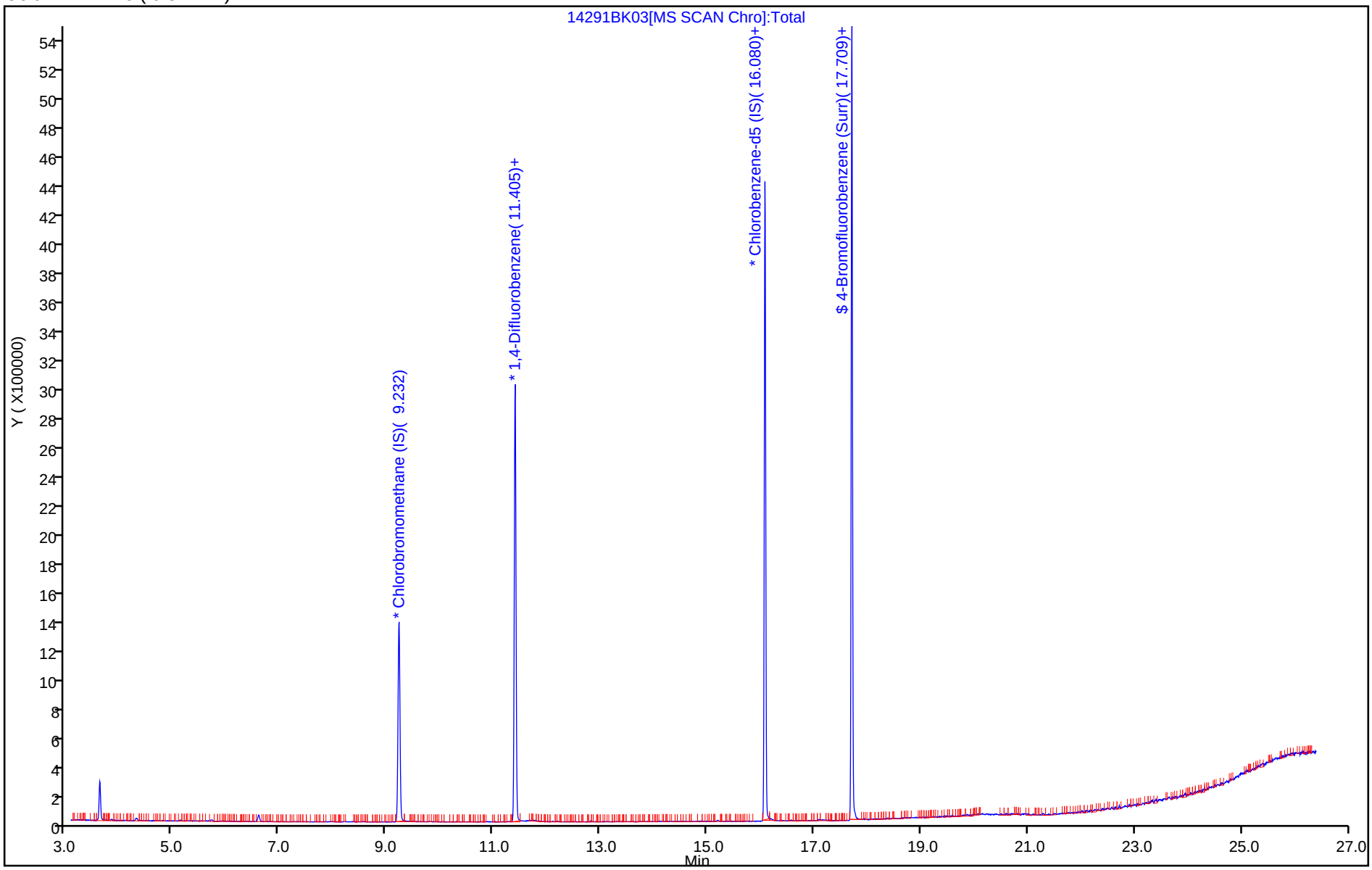
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Feb-2019 12:27:42 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK03.D				
Injection Date:	18-Feb-2019 23:24:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14291-A-3	Lab Sample ID:	140-14291-3	Worklist Smp#:	17
Client ID:	09523				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



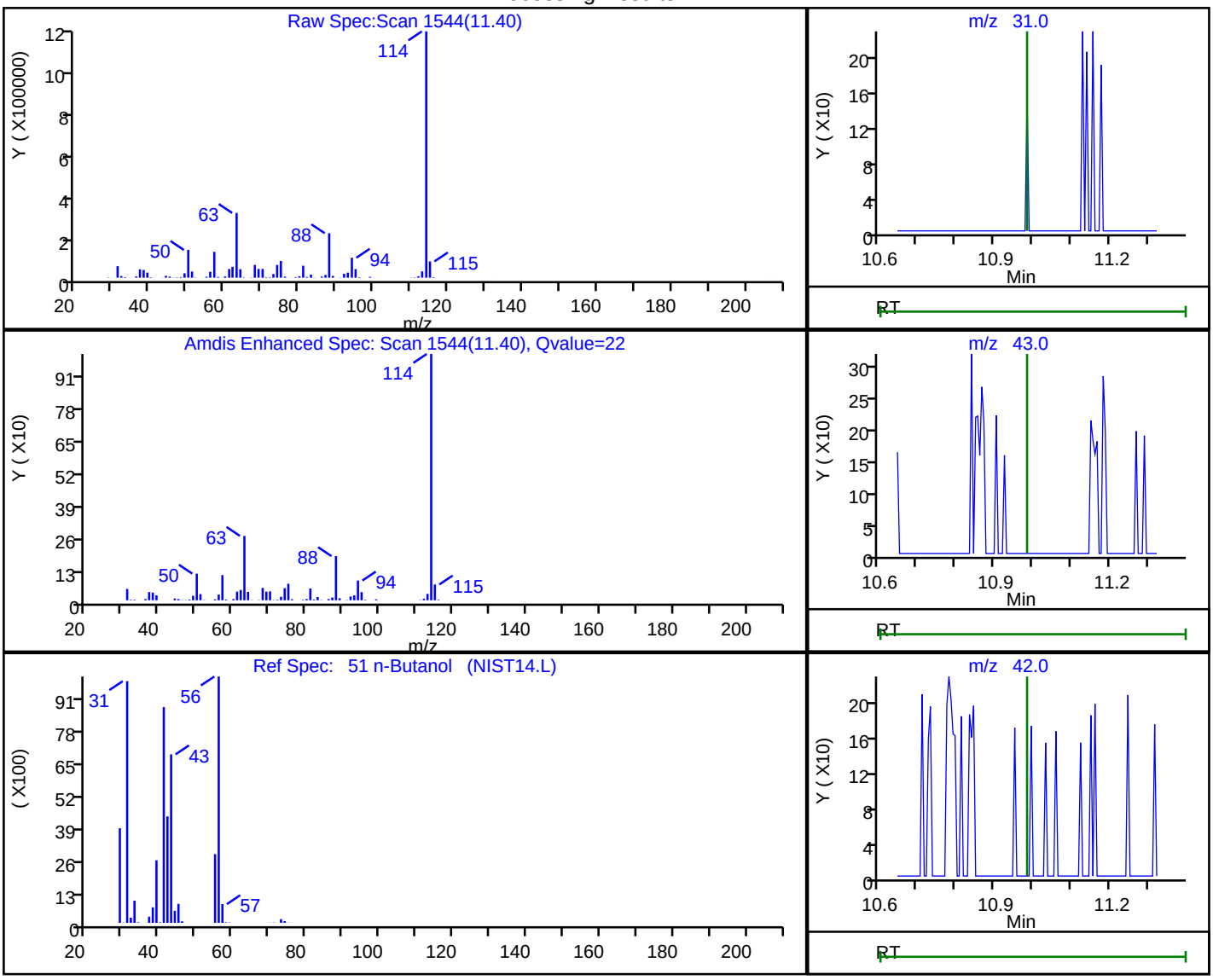
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK03.D				
Injection Date:	18-Feb-2019 23:24:30	Instrument ID:	MG		
Lims ID:	140-14291-A-3	Lab Sample ID:	140-14291-3		
Client ID:	09523				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

51 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
11.40	31.00	118687	2.037197
11.40	43.00	1291	
10.98	42.00	0	

Reviewer: khachitpongpanits, 19-Feb-2019 12:27:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1
SDG No.:
Client Sample ID: 10315 | Lab Sample ID: 140-14291-4
Matrix: Air | Lab File ID: 14291BK04.D
Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 00:09
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.33		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14291-1
SDG No.:
Client Sample ID: 10315
Lab Sample ID: 140-14291-4
Matrix: Air
Lab File ID: 14291BK04.D
Analysis Method: TO 15 LL
Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL)
Date Analyzed: 02/19/2019 00:09
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27752
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1

SDG No.:

Client Sample ID: 10315 | Lab Sample ID: 140-14291-4

Matrix: Air | Lab File ID: 14291BK04.D

Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 00:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14291-1

SDG No.:

Client Sample ID: 10315 Lab Sample ID: 140-14291-4

Matrix: Air Lab File ID: 14291BK04.D

Analysis Method: TO 15 LL Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) Date Analyzed: 02/19/2019 00:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27752 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK04.D				
Lims ID:	140-14291-A-4				
Client ID:	10315				
Sample Type:	Client				
Inject. Date:	19-Feb-2019 00:09:30	ALS Bottle#:	10	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010864-018				
Misc. Info.:	10315				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Feb-2019 22:45:38	Calib Date:	11-Jan-2019 21:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0331				
First Level Reviewer: khachitpongpanits		Date:	19-Feb-2019 13:01:45		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.237	-0.005	97	430723	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.410	-0.005	97	2444224	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.085	-0.005	93	2313870	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.703	0.000	82	1925495	4.06	
64 4-Methyl-2-pentanone (MIBK	43	13.341	13.286	0.049	99	113553	0.3301	

Reagents:

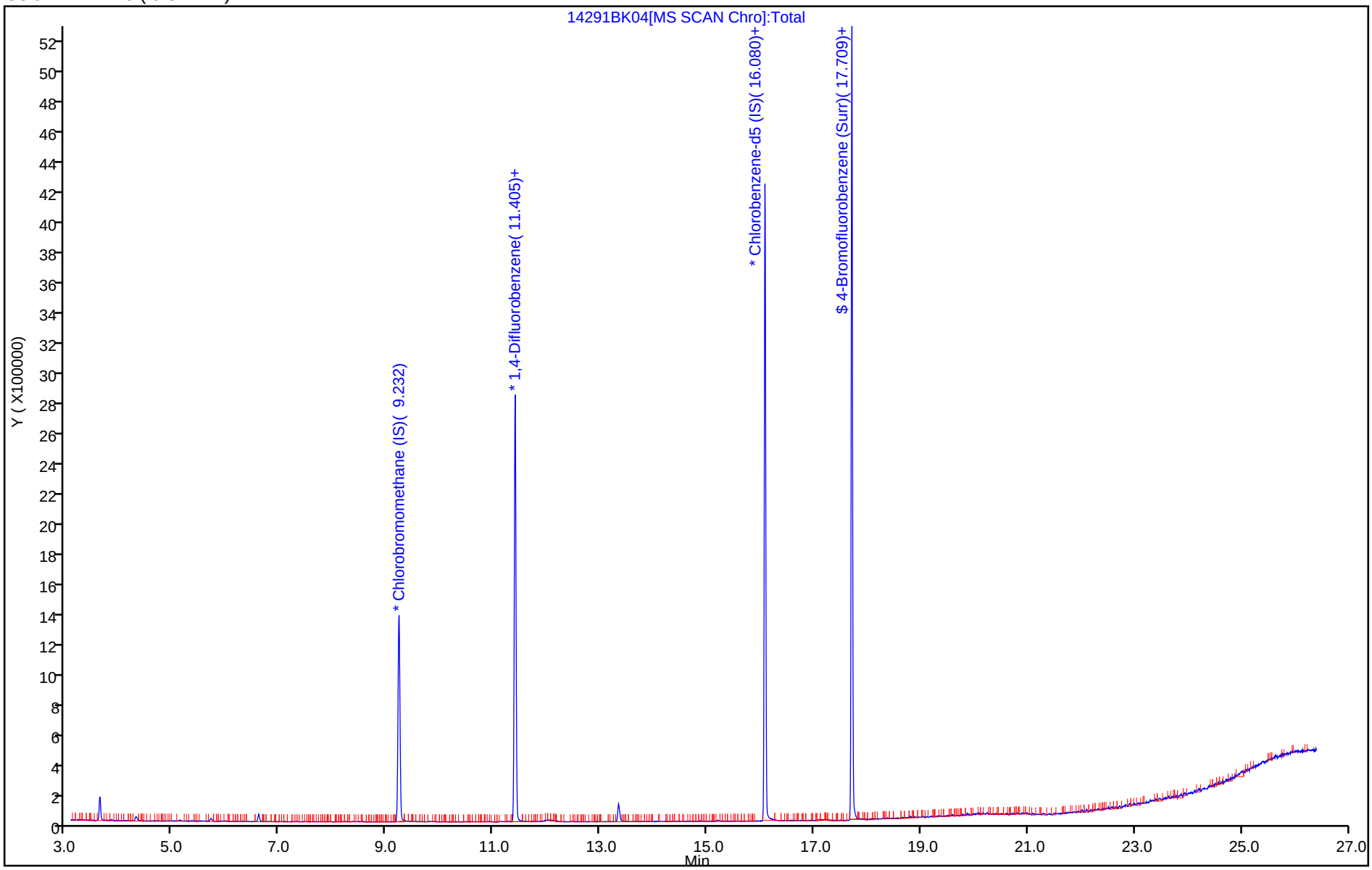
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Feb-2019 13:01:47 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK04.D				
Injection Date:	19-Feb-2019 00:09:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14291-A-4	Lab Sample ID:	140-14291-4	Worklist Smp#:	18
Client ID:	10315				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

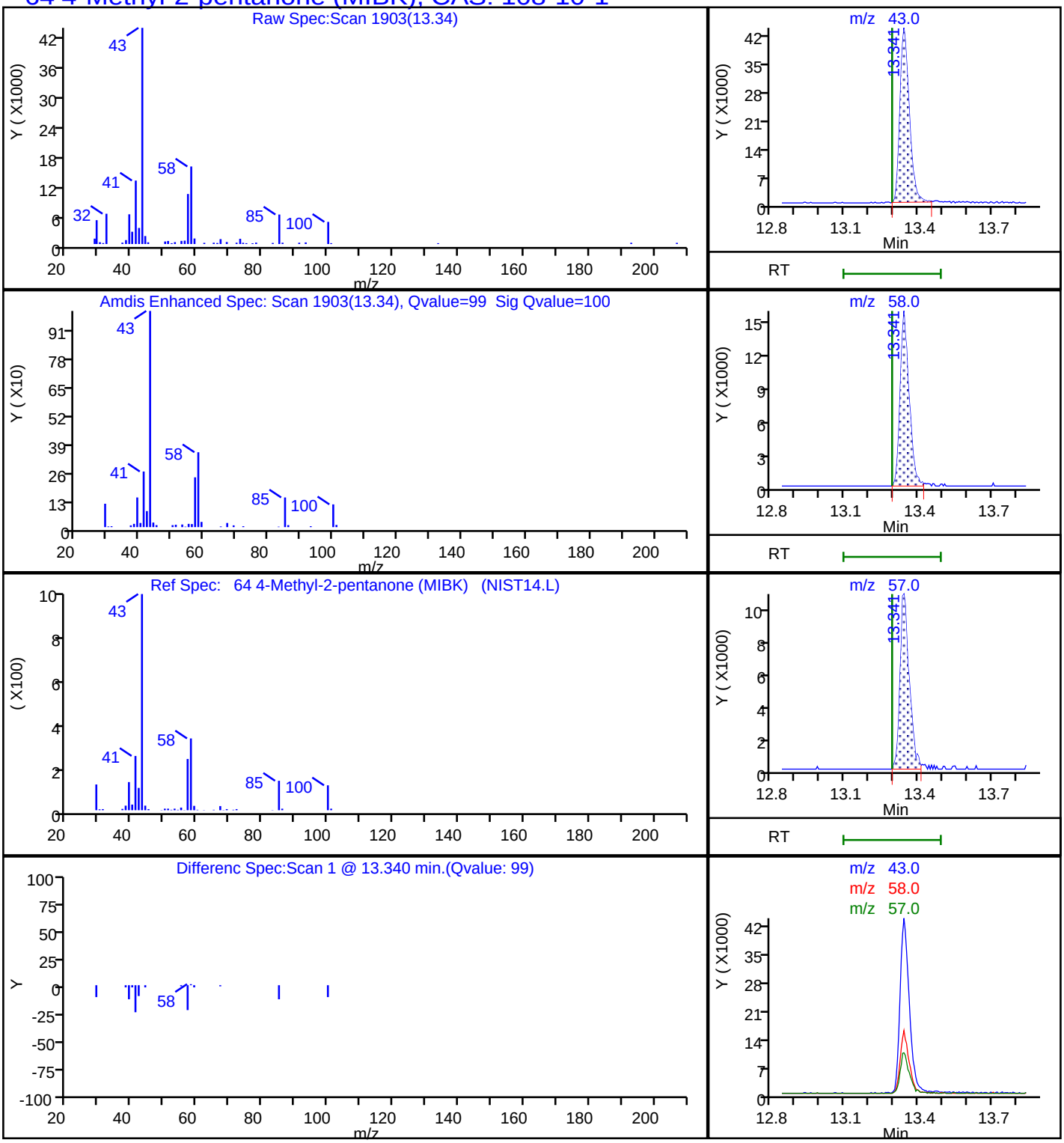


Report Date: 19-Feb-2019 13:01:47 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK04.D				
Injection Date:	19-Feb-2019 00:09:30	Instrument ID:	MG		
Lims ID:	140-14291-A-4	Lab Sample ID:	140-14291-4		
Client ID:	10315				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

64 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1
SDG No.:
Client Sample ID: 11153 | Lab Sample ID: 140-14291-9
Matrix: Air | Lab File ID: 14291BK09.D
Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 03:12
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.26		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14291-1
SDG No.:
Client Sample ID: 11153
Lab Sample ID: 140-14291-9
Matrix: Air
Lab File ID: 14291BK09.D
Analysis Method: TO 15 LL
Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL)
Date Analyzed: 02/19/2019 03:12
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27752
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1

SDG No.:

Client Sample ID: 11153 | Lab Sample ID: 140-14291-9

Matrix: Air | Lab File ID: 14291BK09.D

Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 03:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14291-1

SDG No.:

Client Sample ID: 11153 Lab Sample ID: 140-14291-9

Matrix: Air Lab File ID: 14291BK09.D

Analysis Method: TO 15 LL Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) Date Analyzed: 02/19/2019 03:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27752 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK09.D
Lims ID: 140-14291-A-9
Client ID: 11153
Sample Type: Client
Inject. Date: 19-Feb-2019 03:12:30 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0010864-022
Misc. Info.: 11153
Operator ID: 7126 Instrument ID: MG

Method: \\chromna\Knoxville\ChromData\MG\20190218-10864.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2019 01:47:46 Calib Date: 11-Jan-2019 21:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: CTX0331

First Level Reviewer: khachitpongpanits Date: 19-Feb-2019 15:49:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.237	-0.005	97	414248	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.410	-0.005	97	2481147	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.085	-0.005	95	2321181	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.703	0.000	83	1962815	4.13	
9 Chloromethane	52	4.104	4.091	0.011	100	4538	0.0943	
31 Methylene Chloride	84	6.606	6.597	0.006	99	26287	0.1545	
46 Tetrahydrofuran	42	9.798	9.668	0.124	77	4600	0.0251	
61 1,4-Dioxane	88	12.484	12.381	0.098	66	1891	0.0367	
64 4-Methyl-2-pentanone (MIBK	43	13.341	13.286	0.049	99	90757	0.2599	
67 Toluene	91	14.134	14.129	0.001	92	38343	0.0751	

Reagents:

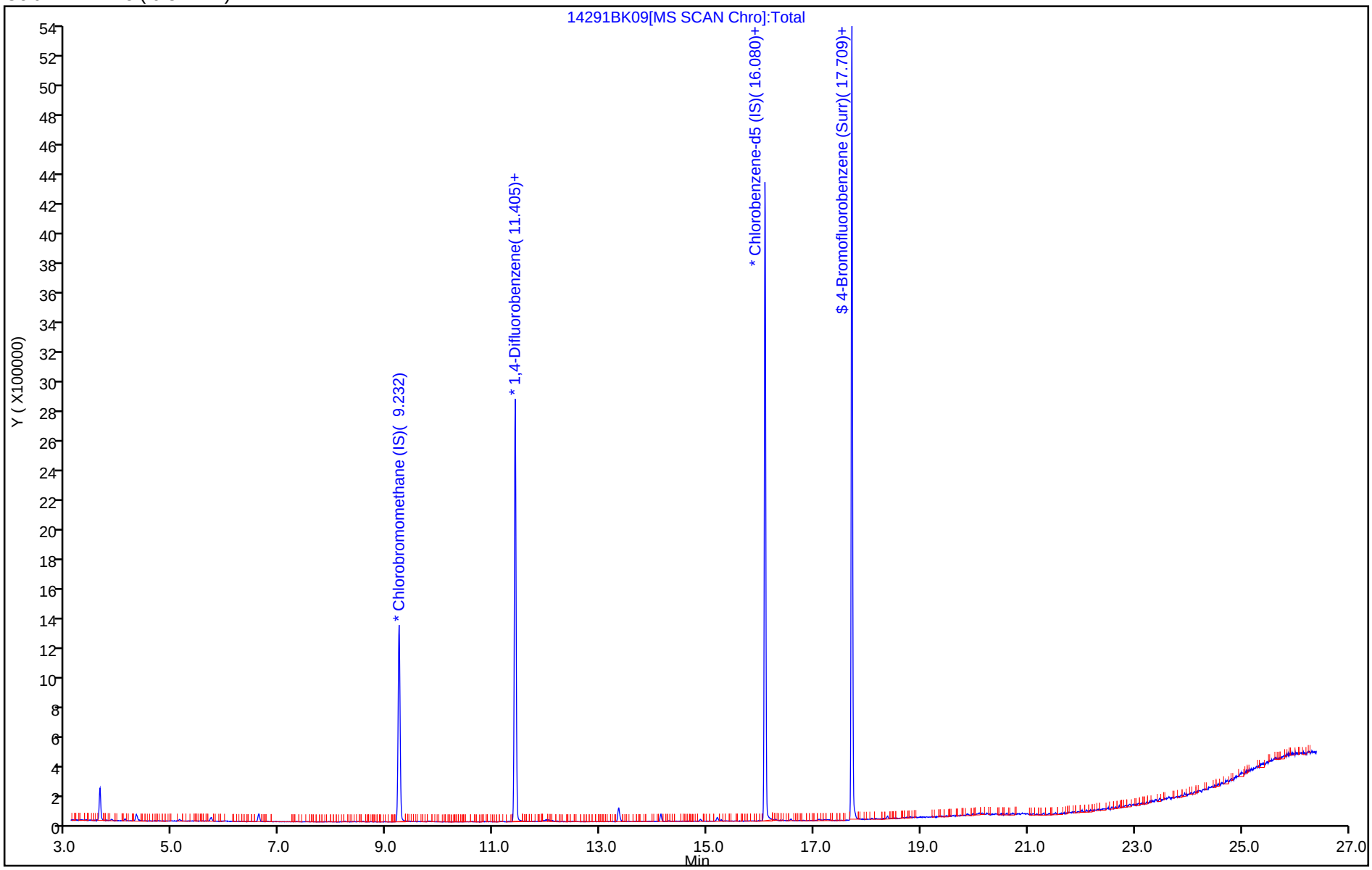
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Feb-2019 15:49:32 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK09.D				
Injection Date:	19-Feb-2019 03:12:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14291-A-9	Lab Sample ID:	140-14291-9	Worklist Smp#:	22
Client ID:	11153				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

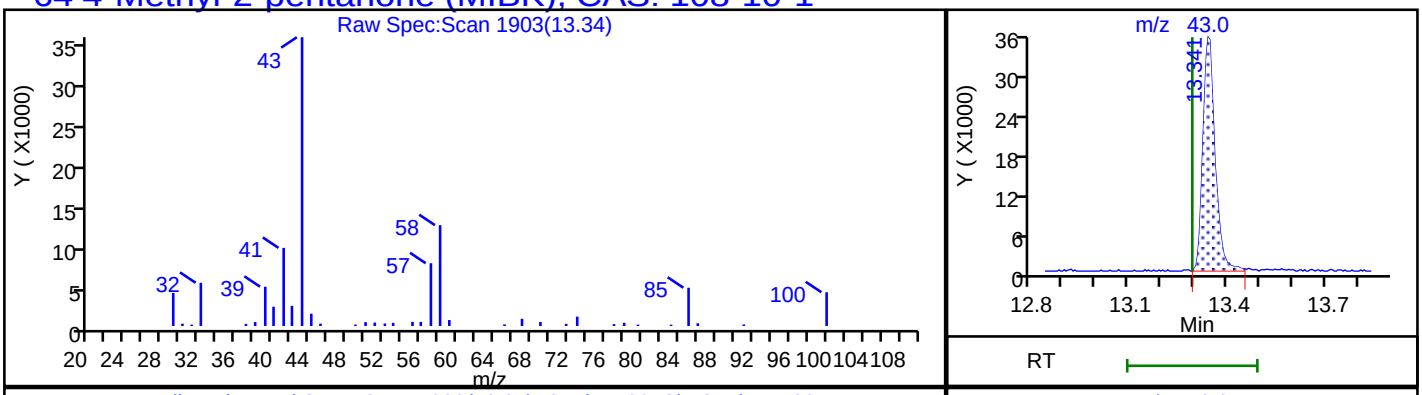


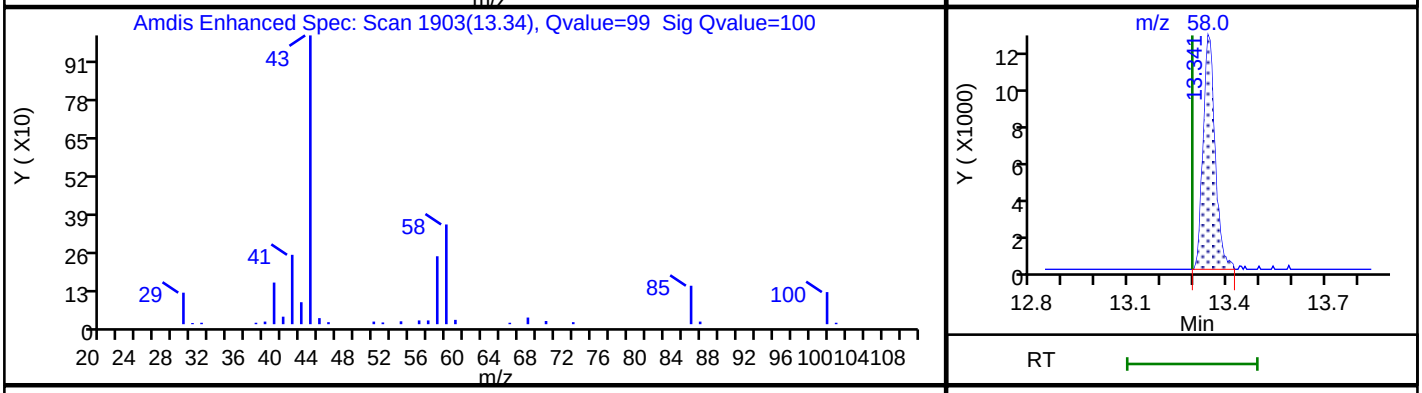
Report Date: 19-Feb-2019 15:49:32 Chrom Revision: 2.3 28-Jan-2019 09:43:36

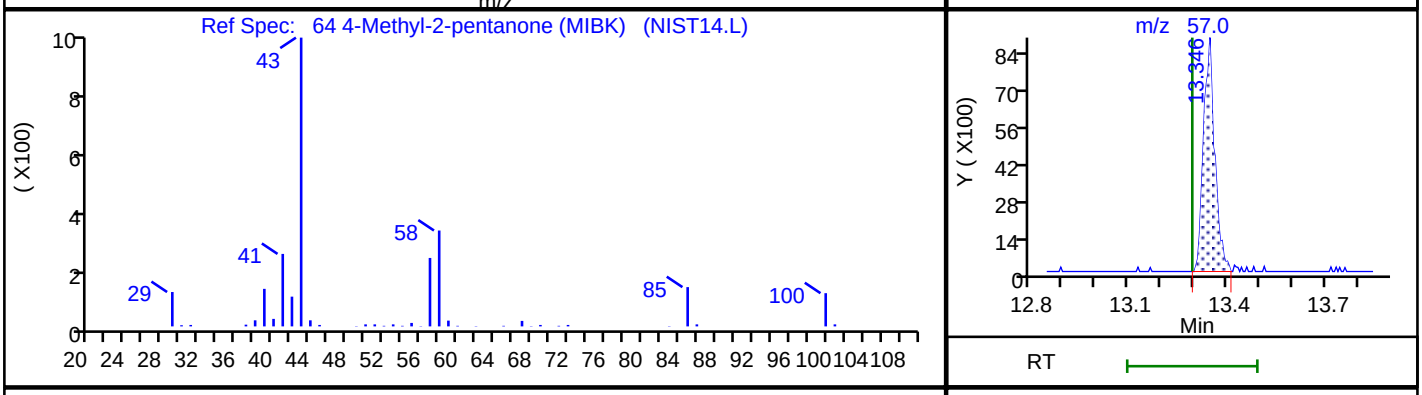
TestAmerica Knoxville

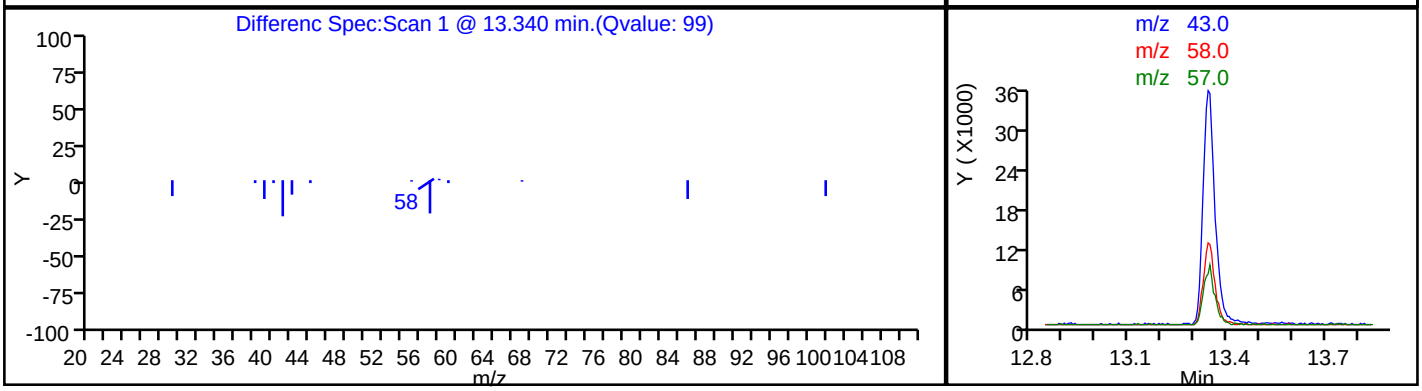
Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK09.D				
Injection Date:	19-Feb-2019 03:12:30	Instrument ID:	MG		
Lims ID:	140-14291-A-9	Lab Sample ID:	140-14291-9		
Client ID:	11153				
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

64 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1









FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1
SDG No.:
Client Sample ID: 10009 | Lab Sample ID: 140-14291-10
Matrix: Air | Lab File ID: 14291BK10.D
Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 03:58
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1

SDG No.:

Client Sample ID: 10009 | Lab Sample ID: 140-14291-10

Matrix: Air | Lab File ID: 14291BK10.D

Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 03:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14291-1

SDG No.:

Client Sample ID: 10009 | Lab Sample ID: 140-14291-10

Matrix: Air | Lab File ID: 14291BK10.D

Analysis Method: TO 15 LL | Date Collected: 02/15/2019 16:15

Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2019 03:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27752 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14291-1
SDG No.:
Client Sample ID: 10009 Lab Sample ID: 140-14291-10
Matrix: Air Lab File ID: 14291BK10.D
Analysis Method: TO 15 LL Date Collected: 02/15/2019 16:15
Sample wt/vol: 500(mL) Date Analyzed: 02/19/2019 03:58
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27752 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK10.D				
Lims ID:	140-14291-A-10				
Client ID:	10009				
Sample Type:	Client				
Inject. Date:	19-Feb-2019 03:58:30	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010864-023				
Misc. Info.:	10009				
Operator ID:	7126	Instrument ID:	MG		

Method:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\MG_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	19-Feb-2019 09:04:06	Calib Date:	11-Jan-2019 21:51:30
Integrator:	RTE	ID Type:	Deconvolution ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	CTX0307	

First Level Reviewer: tajh Date: 19-Feb-2019 09:04:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	97	439216	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.410	-0.005	97	2810718	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.085	-0.005	93	2509326	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.703	0.000	83	2027999	3.94	
23 Acetone	58	5.700	5.639	0.054	63	46224	0.7001	
31 Methylene Chloride	84	6.606	6.593	0.006	98	25358	0.1406	
33 Carbon disulfide	76	6.778	6.760	0.011	93	6363	0.0135	
46 Tetrahydrofuran	42	9.798	9.663	0.124	91	8341	0.0429	
61 1,4-Dioxane	88	12.467	12.380	0.081	91	7477	0.1280	
64 4-Methyl-2-pentanone (MIBK	43	13.357	13.286	0.065	99	34002	0.0859	

Reagents:

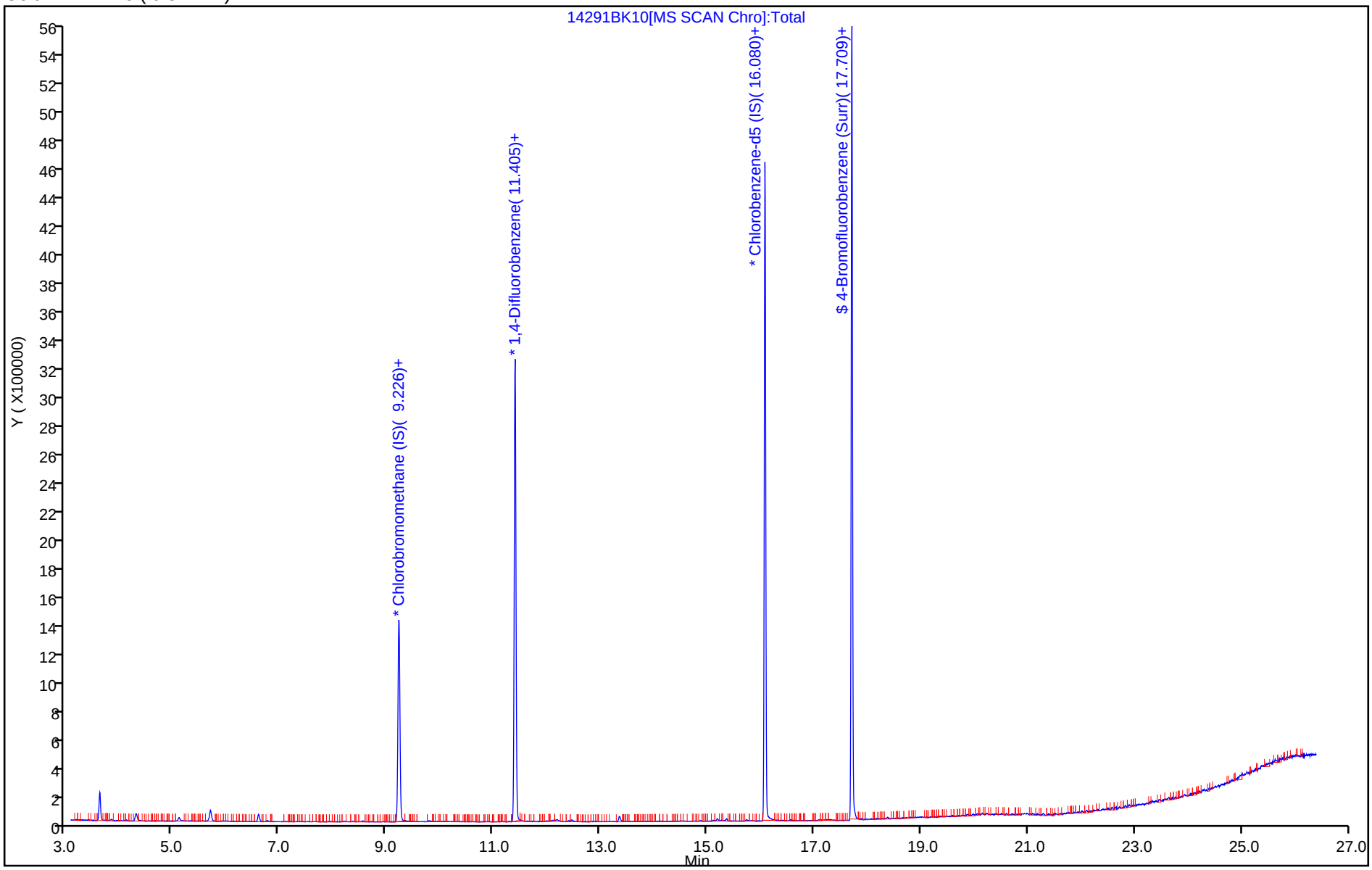
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 19-Feb-2019 09:04:06 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190218-10864.b\14291BK10.D				
Injection Date:	19-Feb-2019 03:58:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14291-A-10	Lab Sample ID:	140-14291-10	Worklist Smp#:	23
Client ID:	10009				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10731 | Lab Sample ID: 140-14309-1

Matrix: Air | Lab File ID: 14309BK01.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 12:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10731
Lab Sample ID: 140-14309-1
Matrix: Air
Lab File ID: 14309BK01.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/20/2019 12:06
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10731 | Lab Sample ID: 140-14309-1

Matrix: Air | Lab File ID: 14309BK01.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 12:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10731 Lab Sample ID: 140-14309-1

Matrix: Air Lab File ID: 14309BK01.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 12:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK01.D				
Lims ID:	140-14309-A-1				
Client ID:	10731				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 12:06:30	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-004				
Misc. Info.:	10731				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 12:38:25	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 12:49:32		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.390	0.000	70	205734	4.00	
* 2 1,4-Difluorobenzene	114	9.455	9.455	0.000	95	1216791	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.508	14.508	0.000	91	1050538	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.233	16.234	-0.001	90	915016	4.10	

Reagents:

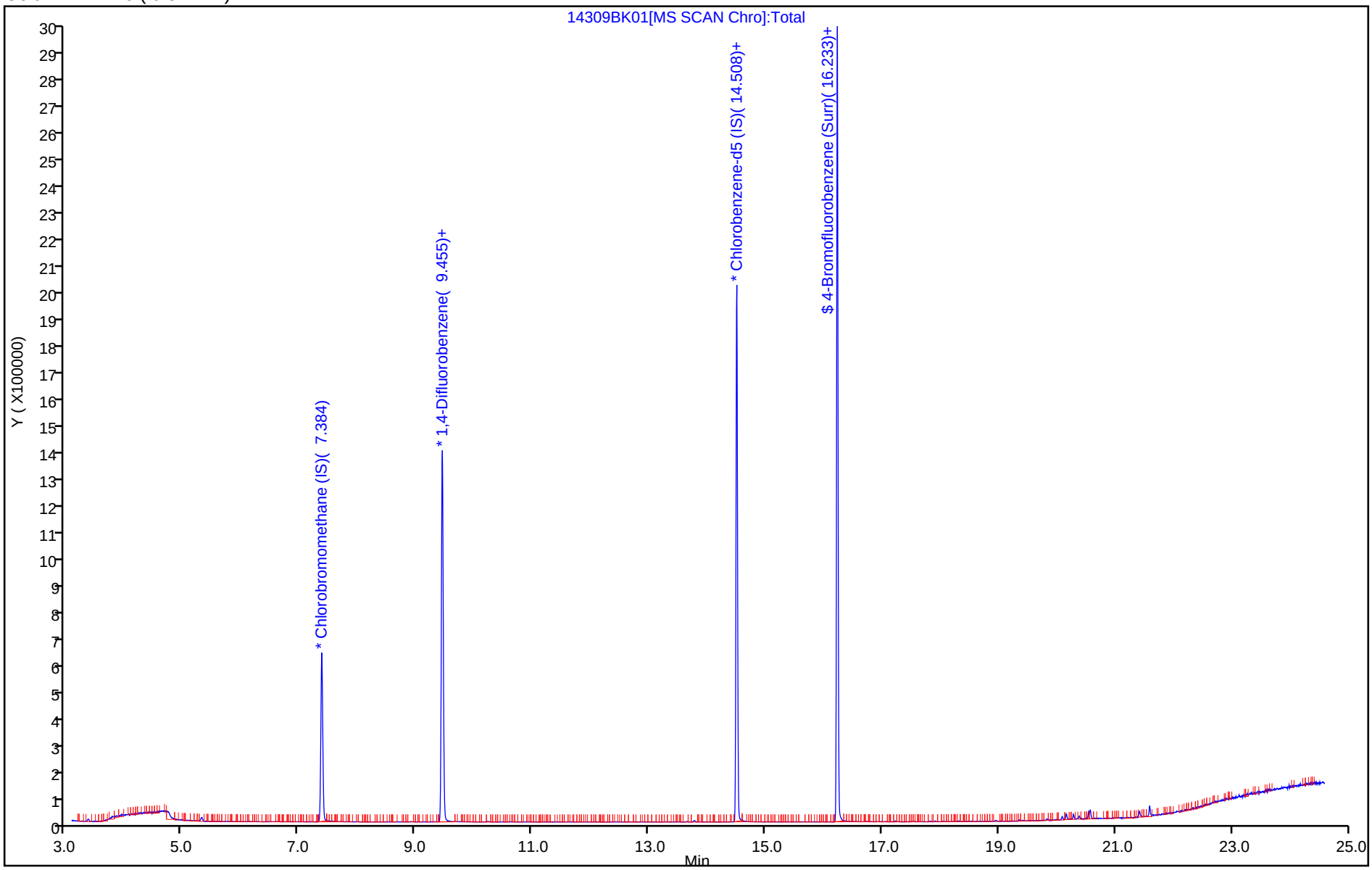
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 12:49:33 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK01.D				
Injection Date:	20-Feb-2019 12:06:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-1	Lab Sample ID:	140-14309-1	Worklist Smp#:	4
Client ID:	10731				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10686 | Lab Sample ID: 140-14309-2
Matrix: Air | Lab File ID: 14309BK02.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 13:53
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10686 | Lab Sample ID: 140-14309-2
Matrix: Air | Lab File ID: 14309BK02.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 13:53
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10686
Lab Sample ID: 140-14309-2
Matrix: Air
Lab File ID: 14309BK02.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/20/2019 13:53
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10686 Lab Sample ID: 140-14309-2

Matrix: Air Lab File ID: 14309BK02.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 13:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK02.D				
Lims ID:	140-14309-A-2				
Client ID:	10686				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 13:53:30	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-006				
Misc. Info.:	10686				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:00:45	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:00:45		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.390	-0.006	71	200971	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1177361	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.508	14.508	0.000	91	1036947	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	88	917487	4.16	

Reagents:

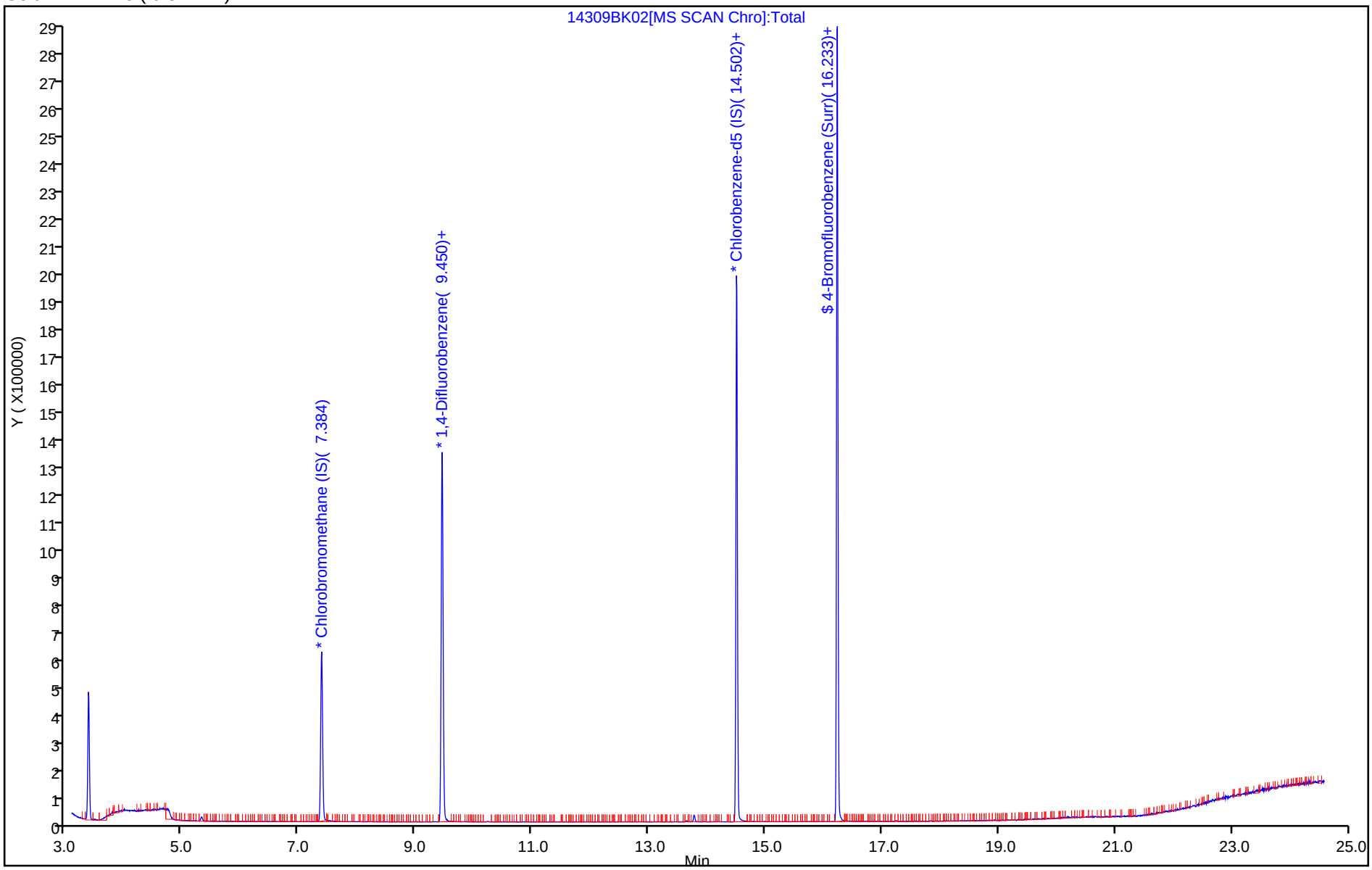
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:00:46 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK02.D				
Injection Date:	20-Feb-2019 13:53:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-2	Lab Sample ID:	140-14309-2	Worklist Smp#:	6
Client ID:	10686				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



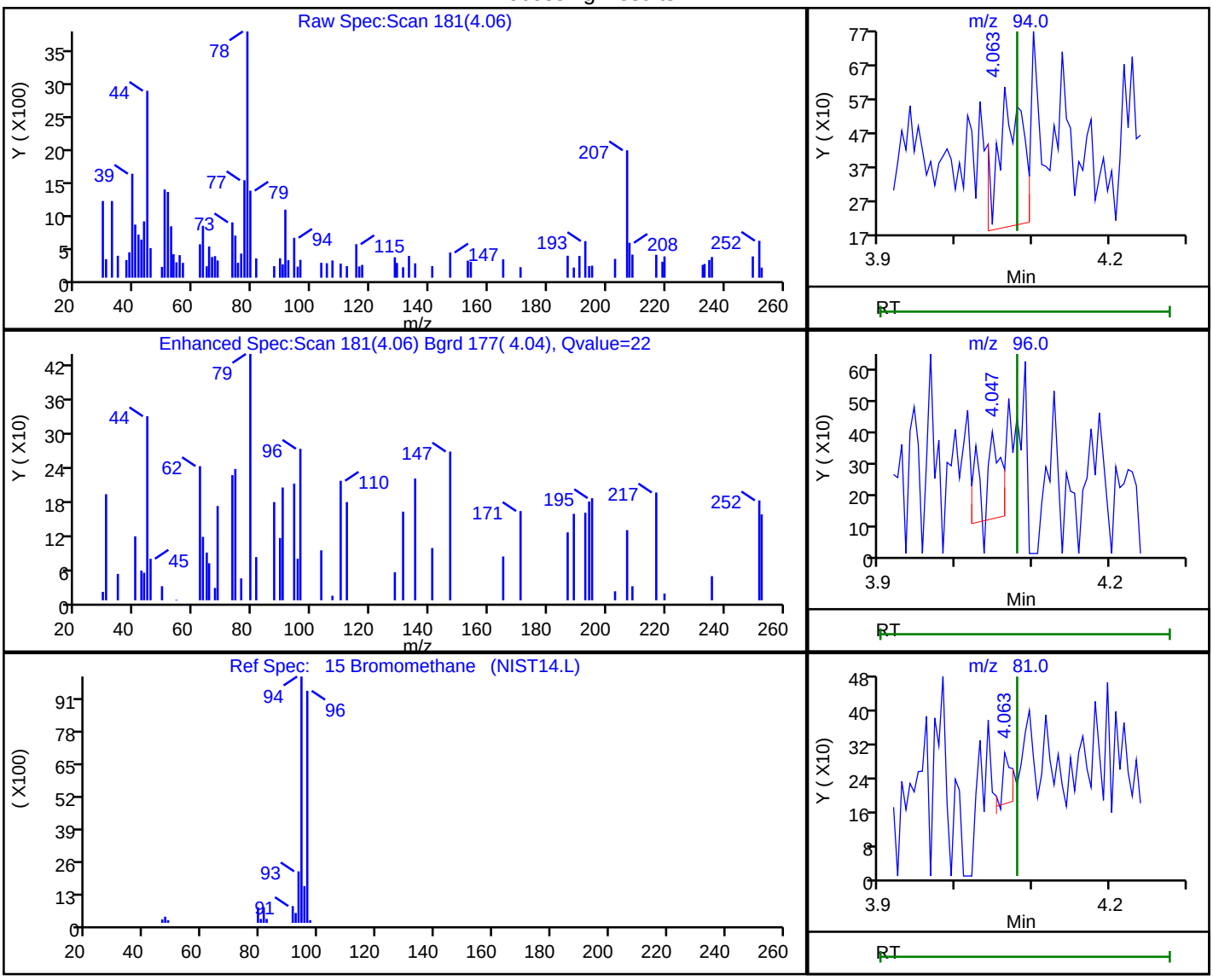
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK02.D				
Injection Date:	20-Feb-2019 13:53:30	Instrument ID:	MR		
Lims ID:	140-14309-A-2	Lab Sample ID:	140-14309-2		
Client ID:	10686				
Operator ID:	HMT	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.06	94.00	889	0.014323
4.05	96.00	442	
4.06	81.00	95	

Reviewer: khachitpongpanits, 21-Feb-2019 13:00:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

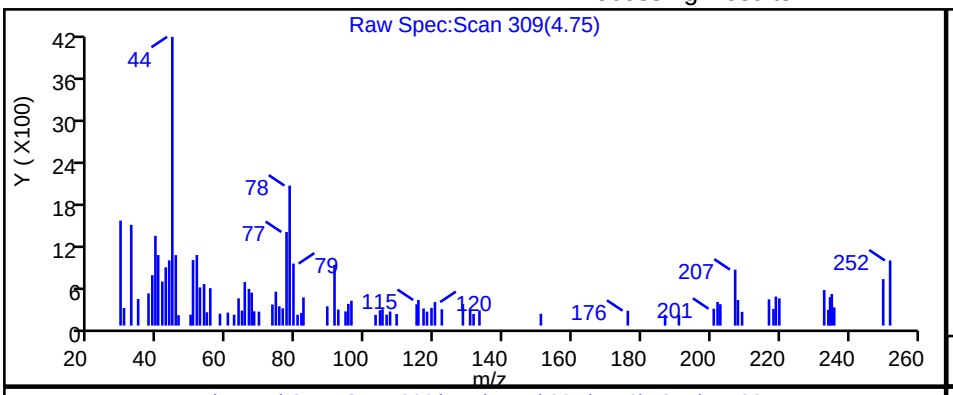
User Disabled Compound Report

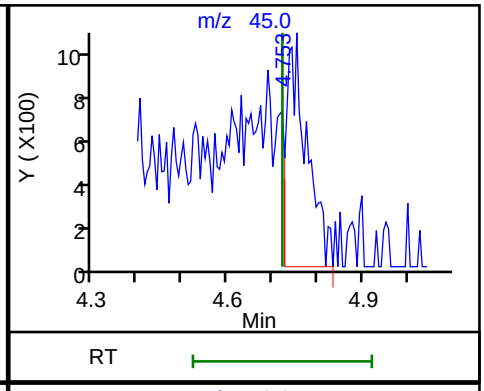
TestAmerica Knoxville

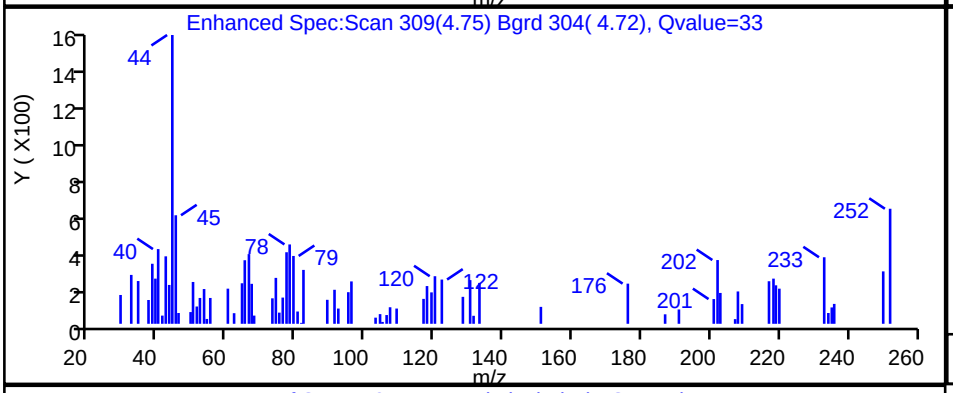
Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK02.D				
Injection Date:	20-Feb-2019 13:53:30	Instrument ID:	MR		
Lims ID:	140-14309-A-2	Lab Sample ID:	140-14309-2		
Client ID:	10686				
Operator ID:	HMT	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

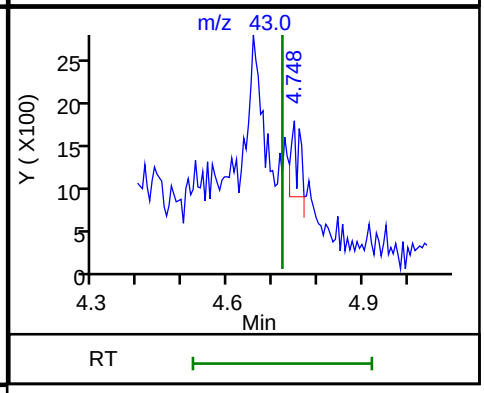
25 Isopropyl alcohol, CAS: 67-63-0

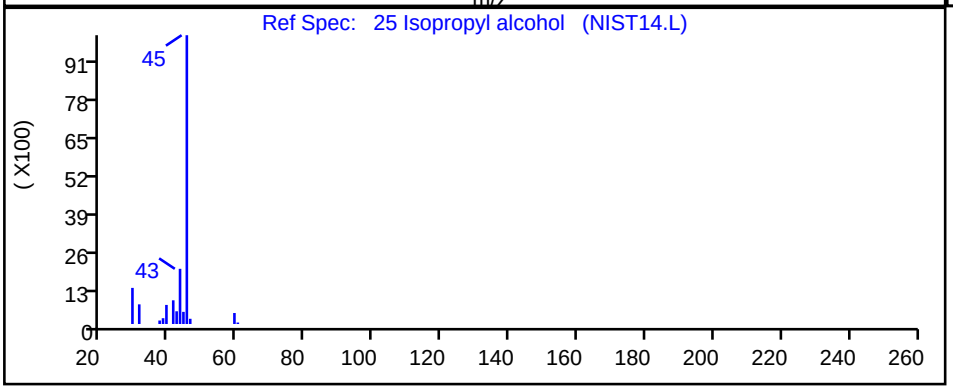
Processing Results











RT	Mass	Response	Amount
4.75	45.00	3170	0.055758
4.75	43.00	1117	

Reviewer: khachitpongpanits, 21-Feb-2019 13:00:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11044 | Lab Sample ID: 140-14309-3
Matrix: Air | Lab File ID: 14309BK03.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 16:38
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11044
Lab Sample ID: 140-14309-3
Matrix: Air
Lab File ID: 14309BK03.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/20/2019 16:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	3.1		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11044
Lab Sample ID: 140-14309-3
Matrix: Air
Lab File ID: 14309BK03.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/20/2019 16:38
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 11044 Lab Sample ID: 140-14309-3

Matrix: Air Lab File ID: 14309BK03.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 16:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK03.D				
Lims ID:	140-14309-A-3				
Client ID:	11044				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 16:38:30	ALS Bottle#:	5	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-009				
Misc. Info.:	11044				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:02:37	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:02:37		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	204795	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1210068	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.508	-0.005	91	1069327	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	918768	4.04	
23 Acetone	58	4.645	4.640	0.005	99	13402	0.6307	
25 Isopropyl alcohol	45	4.726	4.721	0.005	97	182286	3.15	
44 Tetrahydrofuran	42	7.800	7.745	0.049	54	2789	0.0615	

Reagents:

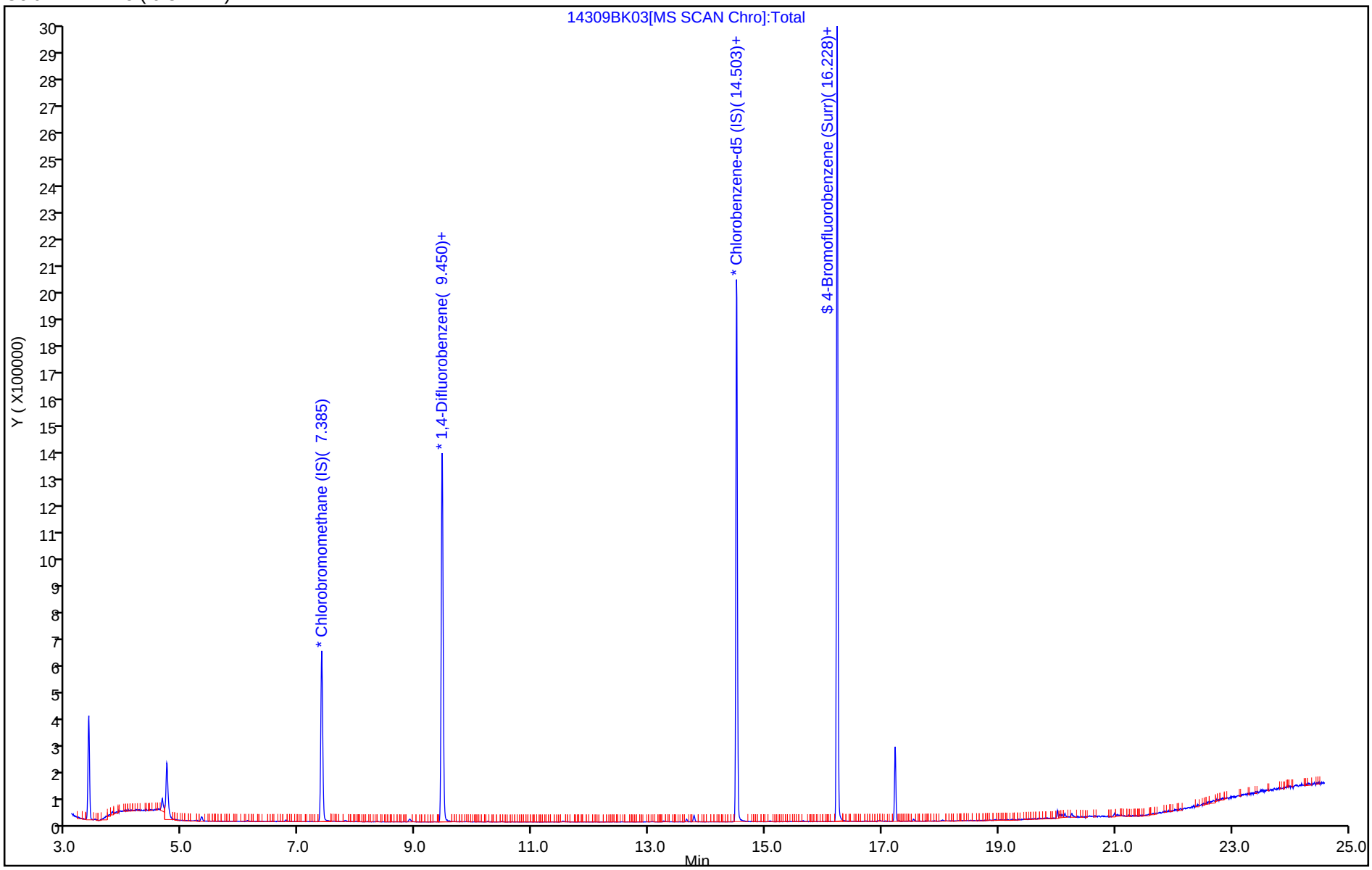
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:02:38 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK03.D				
Injection Date:	20-Feb-2019 16:38:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-3	Lab Sample ID:	140-14309-3	Worklist Smp#:	9
Client ID:	11044				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

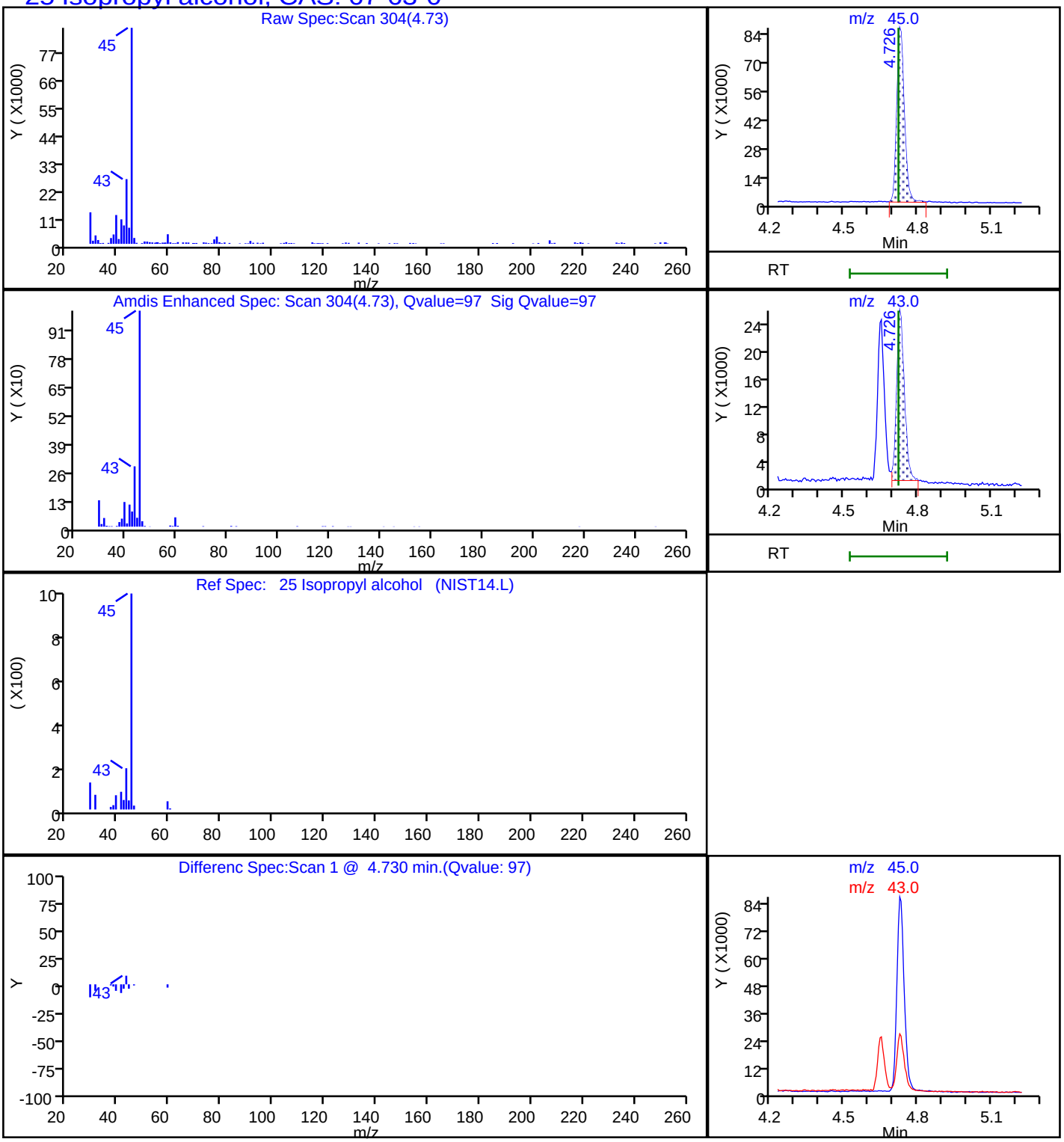


Report Date: 21-Feb-2019 13:02:39 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK03.D				
Injection Date:	20-Feb-2019 16:38:30	Instrument ID:	MR		
Lims ID:	140-14309-A-3	Lab Sample ID:	140-14309-3		
Client ID:	11044				
Operator ID:	HMT	ALS Bottle#:	5	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

25 Isopropyl alcohol, CAS: 67-63-0



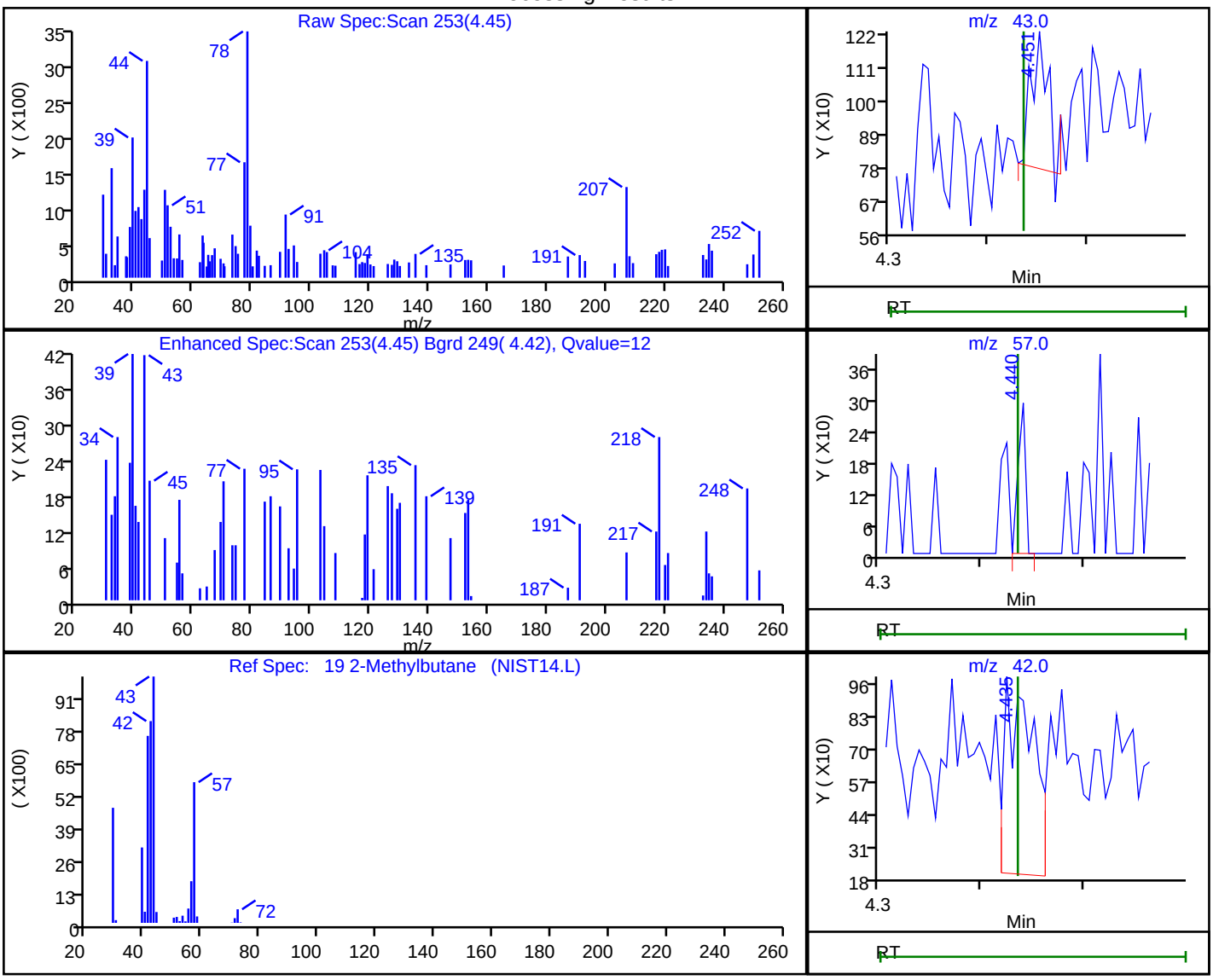
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK03.D				
Injection Date:	20-Feb-2019 16:38:30	Instrument ID:	MR		
Lims ID:	140-14309-A-3	Lab Sample ID:	140-14309-3		
Client ID:	11044				
Operator ID:	HMT	ALS Bottle#:	5	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.45	43.00	554	0.013527
4.44	57.00	148	
4.43	42.00	1527	

Reviewer: khachitpongpanits, 21-Feb-2019 13:02:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

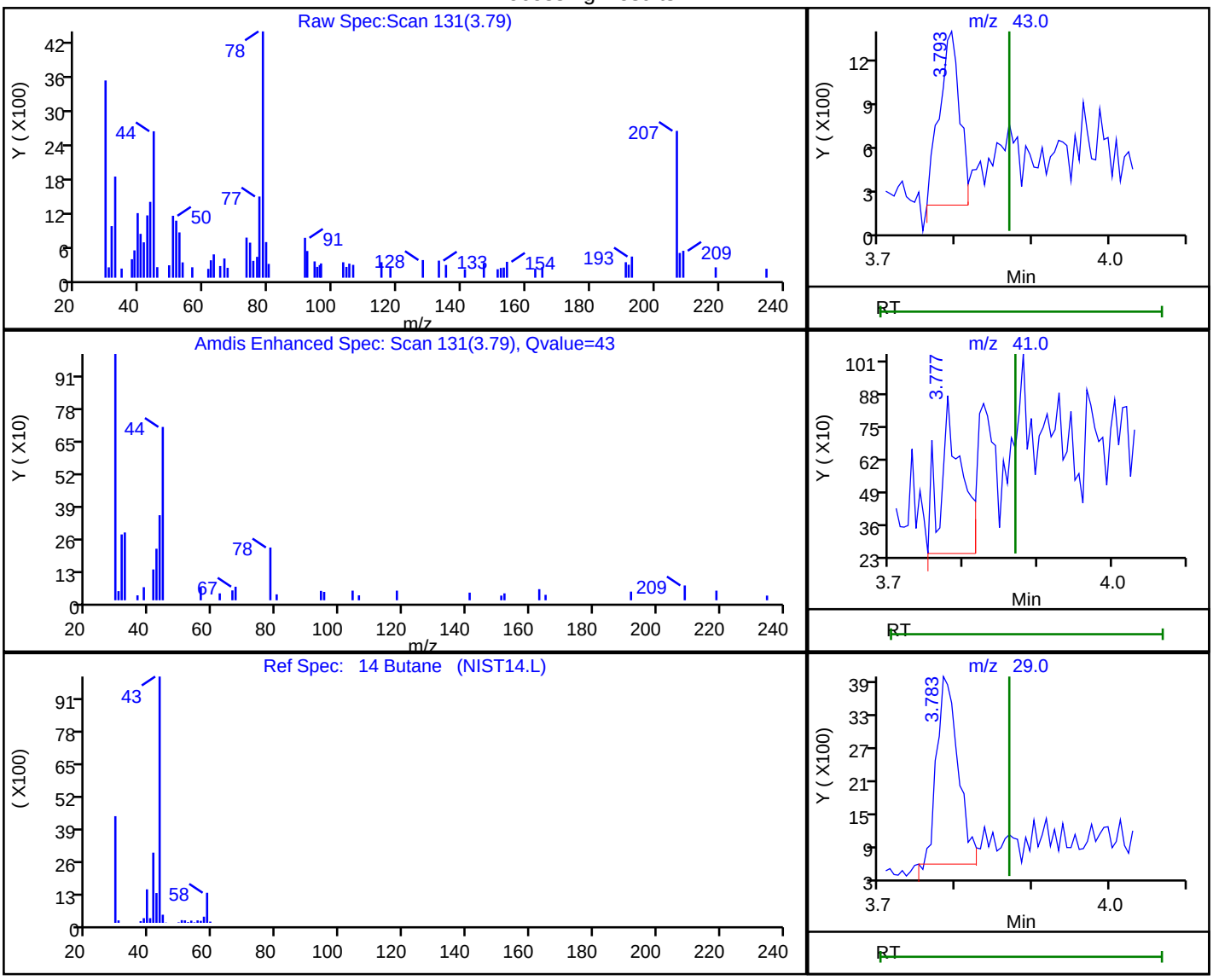
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK03.D				
Injection Date:	20-Feb-2019 16:38:30	Instrument ID:	MR		
Lims ID:	140-14309-A-3	Lab Sample ID:	140-14309-3		
Client ID:	11044				
Operator ID:	HMT	ALS Bottle#:	5	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	2172	0.037472
3.78	41.00	1232	
3.78	29.00	6631	

Reviewer: khachitpongpanits, 21-Feb-2019 13:01:56

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

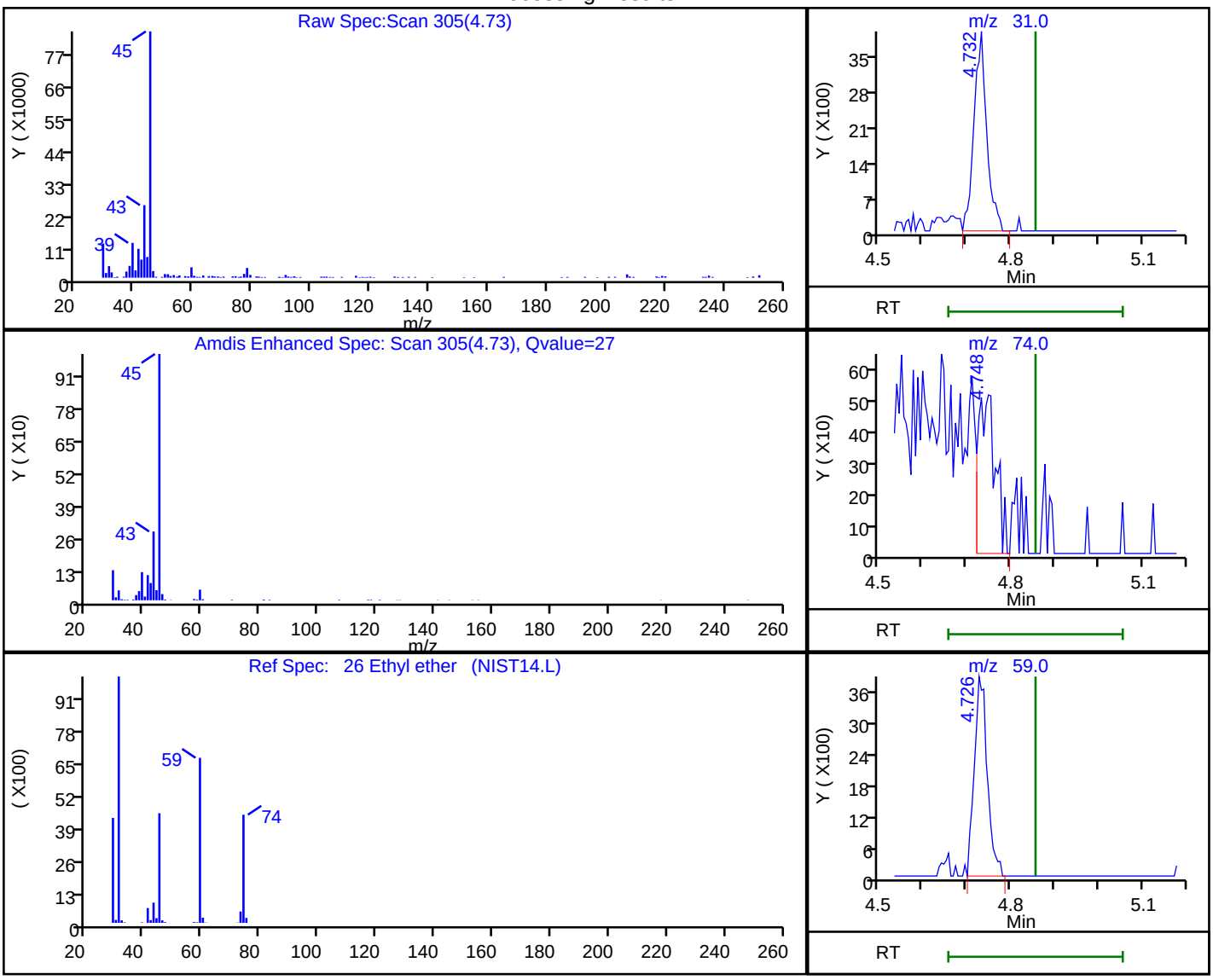
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK03.D				
Injection Date:	20-Feb-2019 16:38:30	Instrument ID:	MR		
Lims ID:	140-14309-A-3	Lab Sample ID:	140-14309-3		
Client ID:	11044				
Operator ID:	HMT	ALS Bottle#:	5	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

26 Ethyl ether, CAS: 60-29-7

Processing Results



RT	Mass	Response	Amount
4.73	31.00	8003	0.234652
4.75	74.00	1423	
4.73	59.00	7905	

Reviewer: khachitpongpanits, 21-Feb-2019 13:02:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10823 | Lab Sample ID: 140-14309-4
Matrix: Air | Lab File ID: 14309BK04.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 17:31
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10823 | Lab Sample ID: 140-14309-4
Matrix: Air | Lab File ID: 14309BK04.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 17:31
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10823
Lab Sample ID: 140-14309-4
Matrix: Air
Lab File ID: 14309BK04.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/20/2019 17:31
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10823 Lab Sample ID: 140-14309-4

Matrix: Air Lab File ID: 14309BK04.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK04.D				
Lims ID:	140-14309-A-4				
Client ID:	10823				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 17:31:30	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-010				
Misc. Info.:	10823				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:03:28	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:03:28		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	205249	4.00	
* 2 1,4-Difluorobenzene	114	9.455	9.455	0.000	95	1204660	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.508	-0.005	90	1056674	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	906721	4.04	

Reagents:

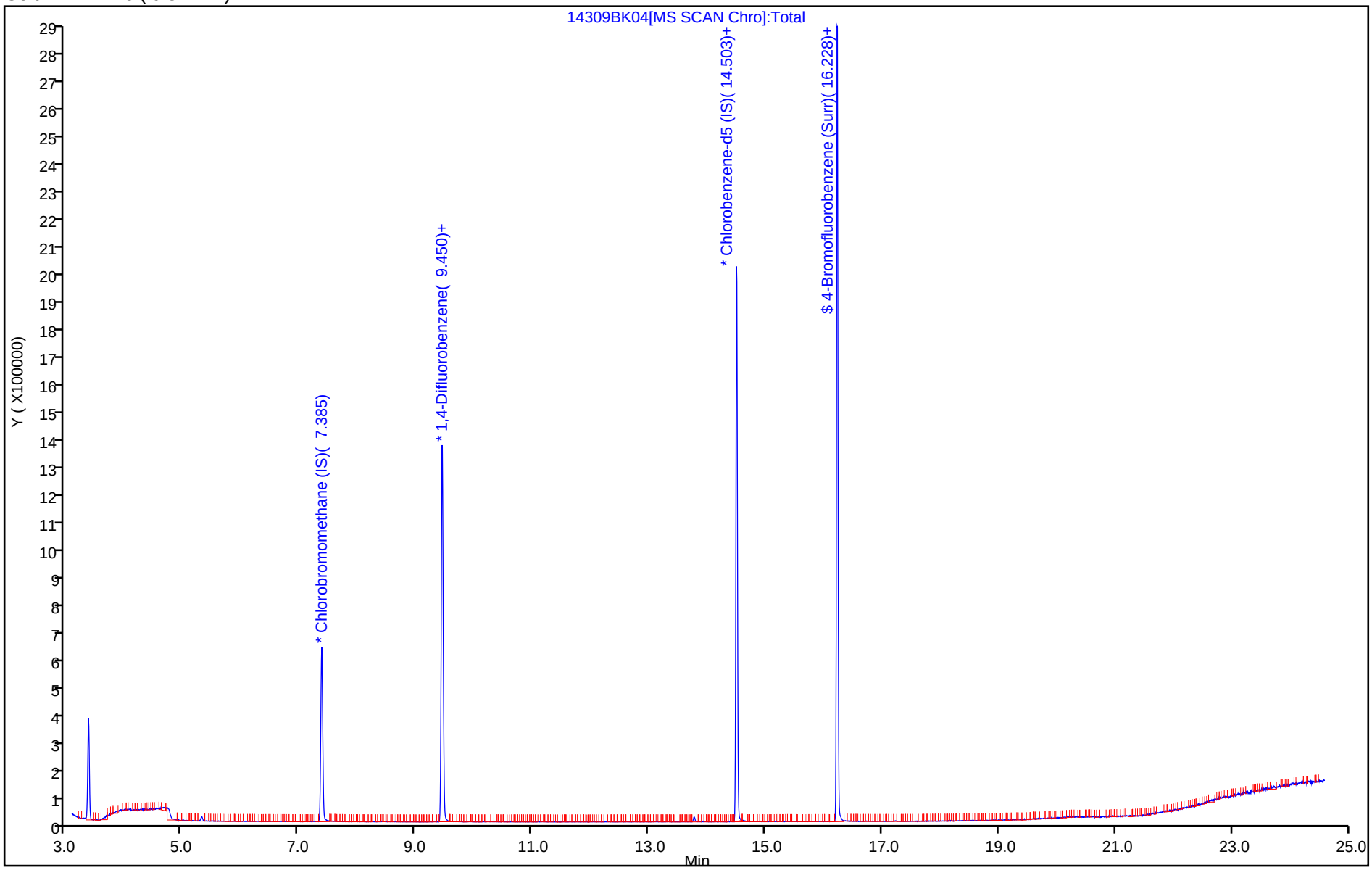
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:03:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK04.D				
Injection Date:	20-Feb-2019 17:31:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-4	Lab Sample ID:	140-14309-4	Worklist Smp#:	10
Client ID:	10823				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



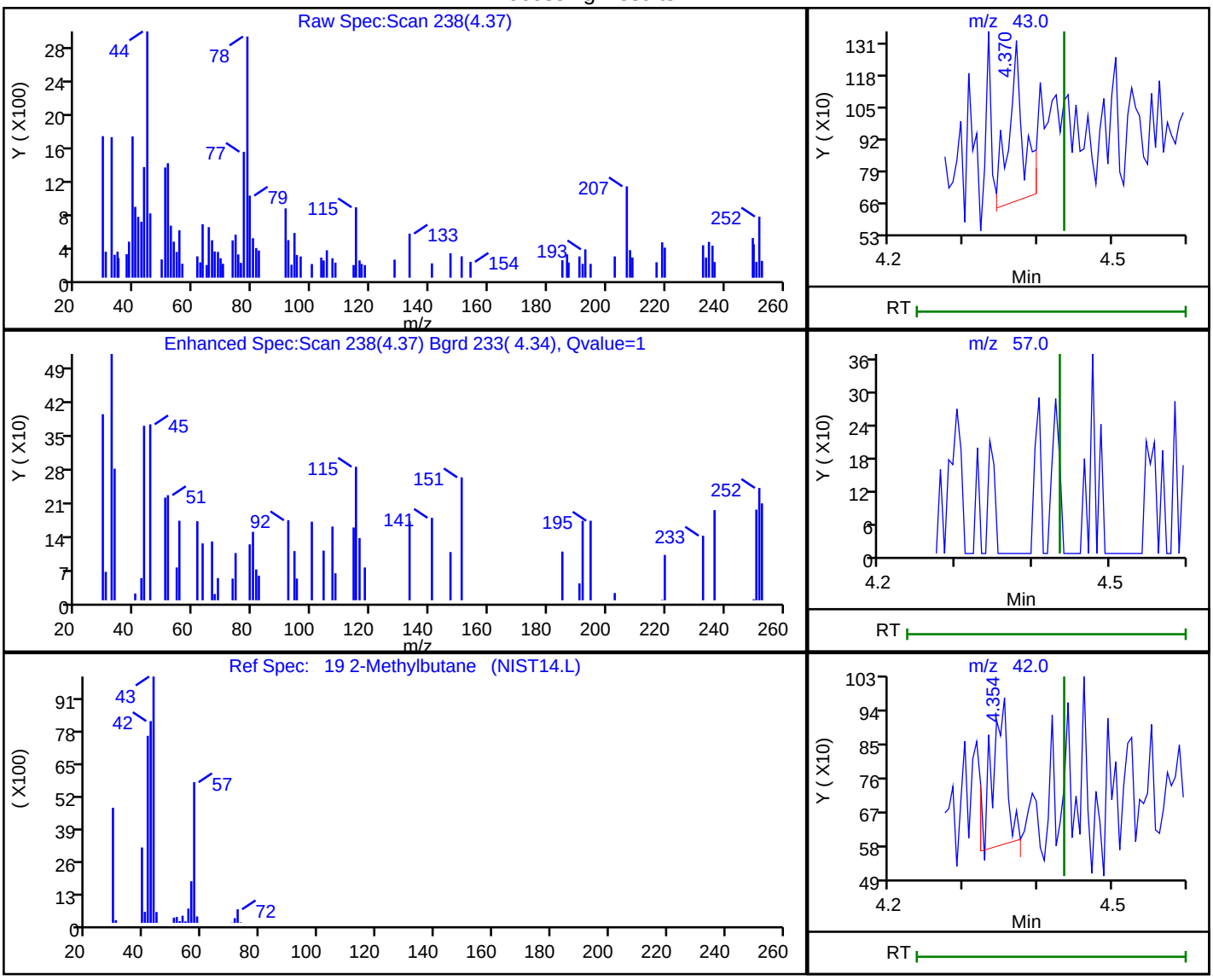
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK04.D				
Injection Date:	20-Feb-2019 17:31:30	Instrument ID:	MR		
Lims ID:	140-14309-A-4	Lab Sample ID:	140-14309-4		
Client ID:	10823				
Operator ID:	HMT	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.37	43.00	910	0.022171
4.44	57.00	0	
4.35	42.00	584	

Reviewer: khachitpongpanits, 21-Feb-2019 13:03:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10218 | Lab Sample ID: 140-14309-5
Matrix: Air | Lab File ID: 14309BK05.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 18:26
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10218 | Lab Sample ID: 140-14309-5
Matrix: Air | Lab File ID: 14309BK05.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 18:26
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10218 | Lab Sample ID: 140-14309-5

Matrix: Air | Lab File ID: 14309BK05.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 18:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10218 Lab Sample ID: 140-14309-5

Matrix: Air Lab File ID: 14309BK05.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 18:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK05.D				
Lims ID:	140-14309-A-5				
Client ID:	10218				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 18:26:30	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-011				
Misc. Info.:	10218				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:04:08	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:04:08		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	200139	4.00	
* 2 1,4-Difluorobenzene	114	9.455	9.455	0.000	95	1195904	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.508	14.508	0.000	91	1036555	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	899897	4.08	

Reagents:

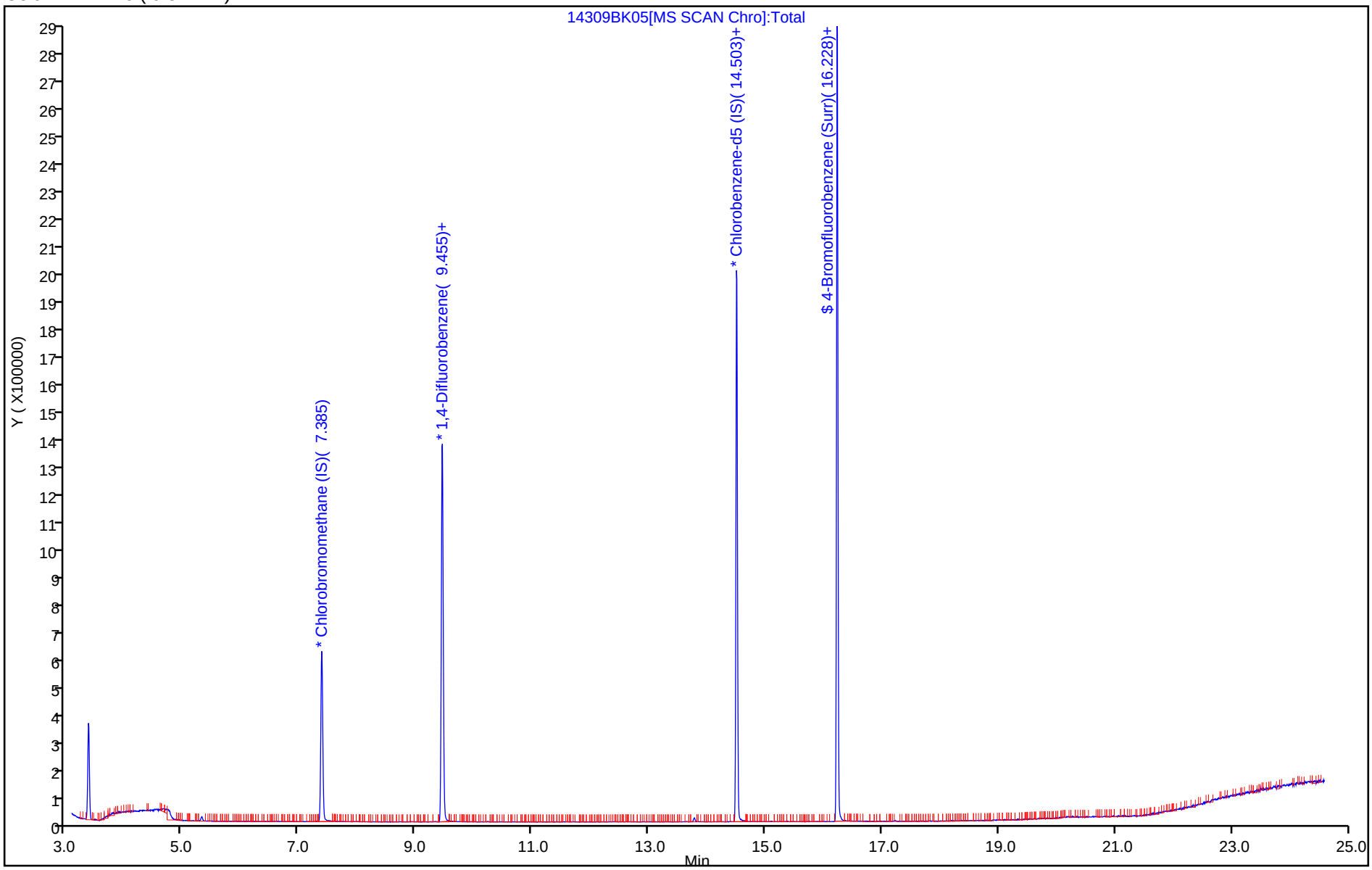
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:04:09 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK05.D				
Injection Date:	20-Feb-2019 18:26:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-5	Lab Sample ID:	140-14309-5	Worklist Smp#:	11
Client ID:	10218				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



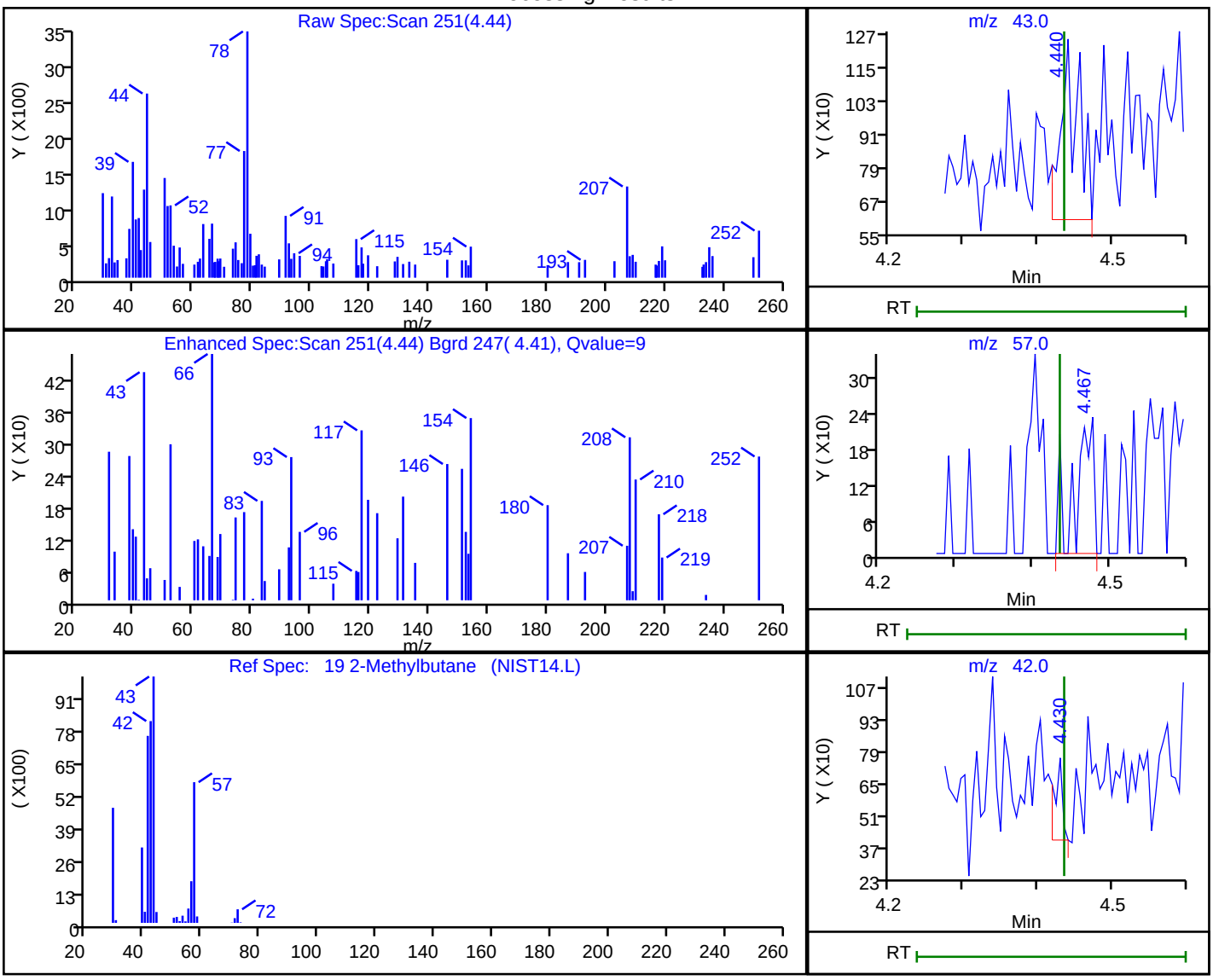
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK05.D				
Injection Date:	20-Feb-2019 18:26:30	Instrument ID:	MR		
Lims ID:	140-14309-A-5	Lab Sample ID:	140-14309-5		
Client ID:	10218				
Operator ID:	HMT	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.44	43.00	1101	0.027509
4.47	57.00	357	
4.43	42.00	269	

Reviewer: khachitpongpanits, 21-Feb-2019 13:03:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

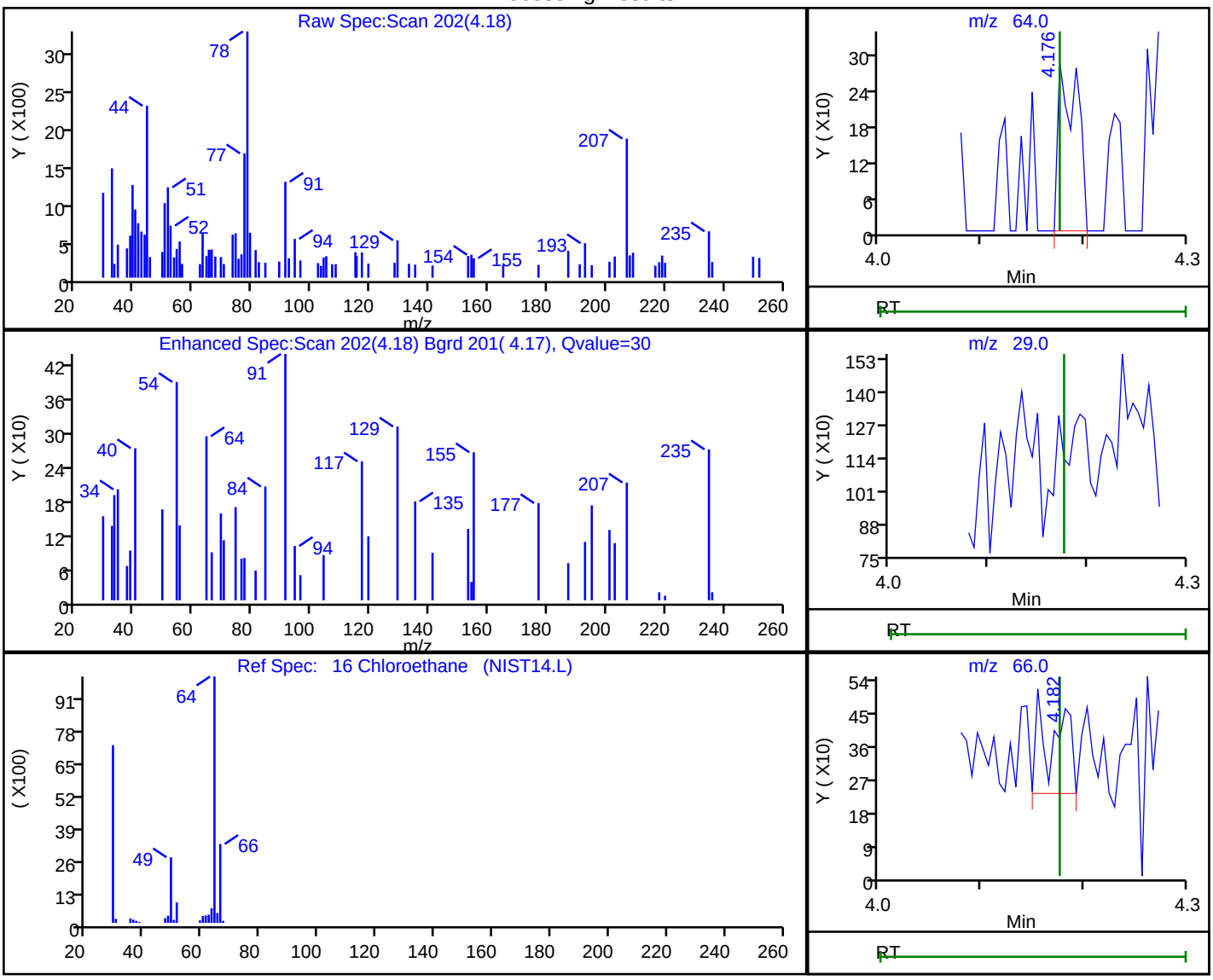
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK05.D				
Injection Date:	20-Feb-2019 18:26:30	Instrument ID:	MR		
Lims ID:	140-14309-A-5	Lab Sample ID:	140-14309-5		
Client ID:	10218				
Operator ID:	HMT	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.18	64.00	368	0.014799
4.18	29.00	0	
4.18	66.00	395	

Reviewer: khachitpongpanits, 21-Feb-2019 13:03:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10131 | Lab Sample ID: 140-14309-6
Matrix: Air | Lab File ID: 14309BK06.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 19:22
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10131 | Lab Sample ID: 140-14309-6
Matrix: Air | Lab File ID: 14309BK06.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 19:22
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10131
Lab Sample ID: 140-14309-6
Matrix: Air
Lab File ID: 14309BK06.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/20/2019 19:22
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5
ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10131 Lab Sample ID: 140-14309-6

Matrix: Air Lab File ID: 14309BK06.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 19:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK06.D				
Lims ID:	140-14309-A-6				
Client ID:	10131				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 19:22:30	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-012				
Misc. Info.:	10131				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:04:08	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:04:55		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	198024	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1170728	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.508	-0.005	90	1013860	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	876484	4.07	

Reagents:

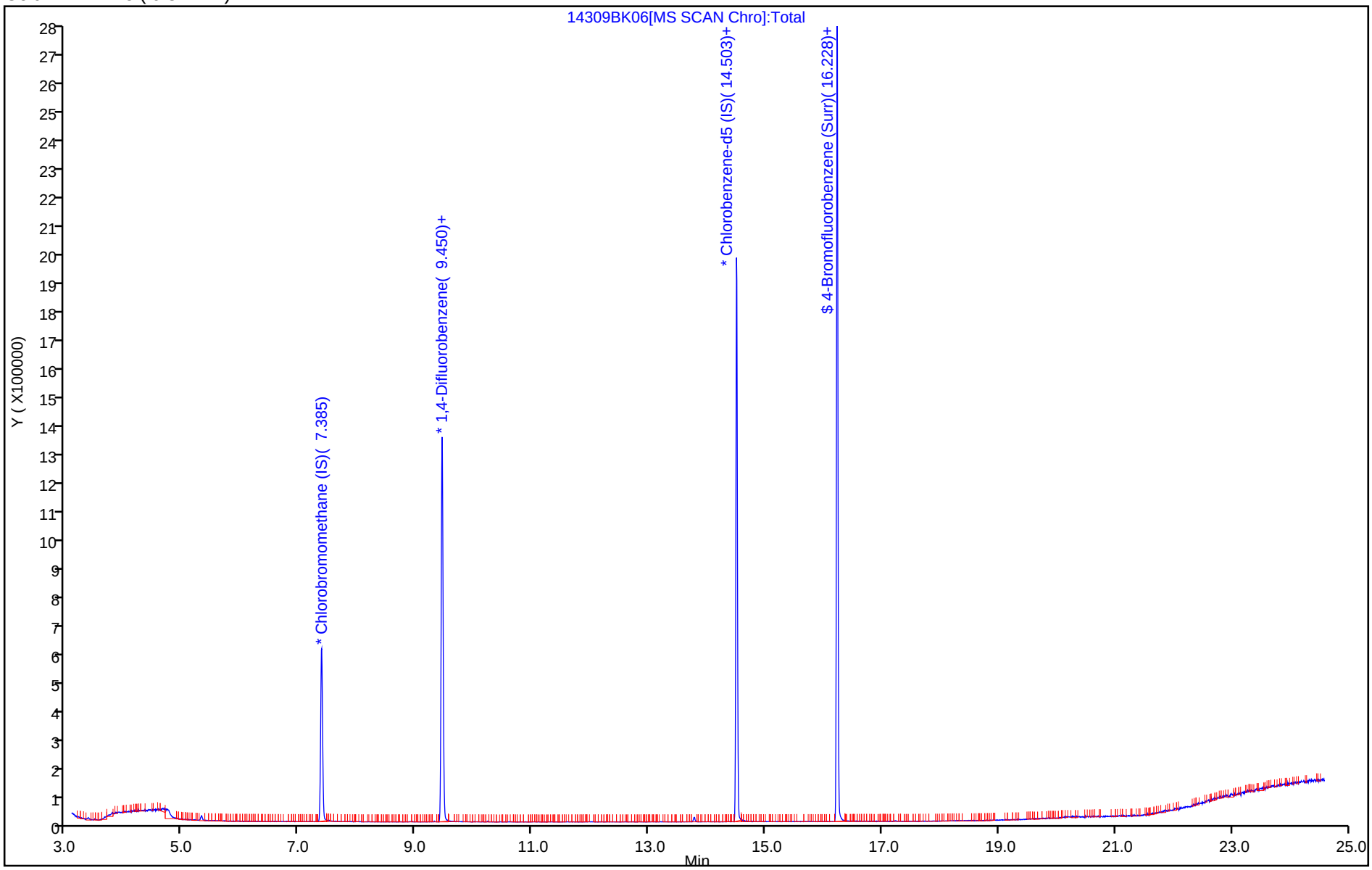
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:04:56 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK06.D				
Injection Date:	20-Feb-2019 19:22:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-6	Lab Sample ID:	140-14309-6	Worklist Smp#:	12
Client ID:	10131				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 09733 | Lab Sample ID: 140-14309-7

Matrix: Air | Lab File ID: 14309BK07.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 20:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 09733 | Lab Sample ID: 140-14309-7

Matrix: Air | Lab File ID: 14309BK07.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 20:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 09733 | Lab Sample ID: 140-14309-7

Matrix: Air | Lab File ID: 14309BK07.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 20:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 09733 Lab Sample ID: 140-14309-7

Matrix: Air Lab File ID: 14309BK07.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 20:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK07.D				
Lims ID:	140-14309-A-7				
Client ID:	09733				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 20:15:30	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-013				
Misc. Info.:	09733				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:05:40	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:05:40		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	72	197123	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1184381	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.508	-0.006	91	1030173	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	885523	4.04	

Reagents:

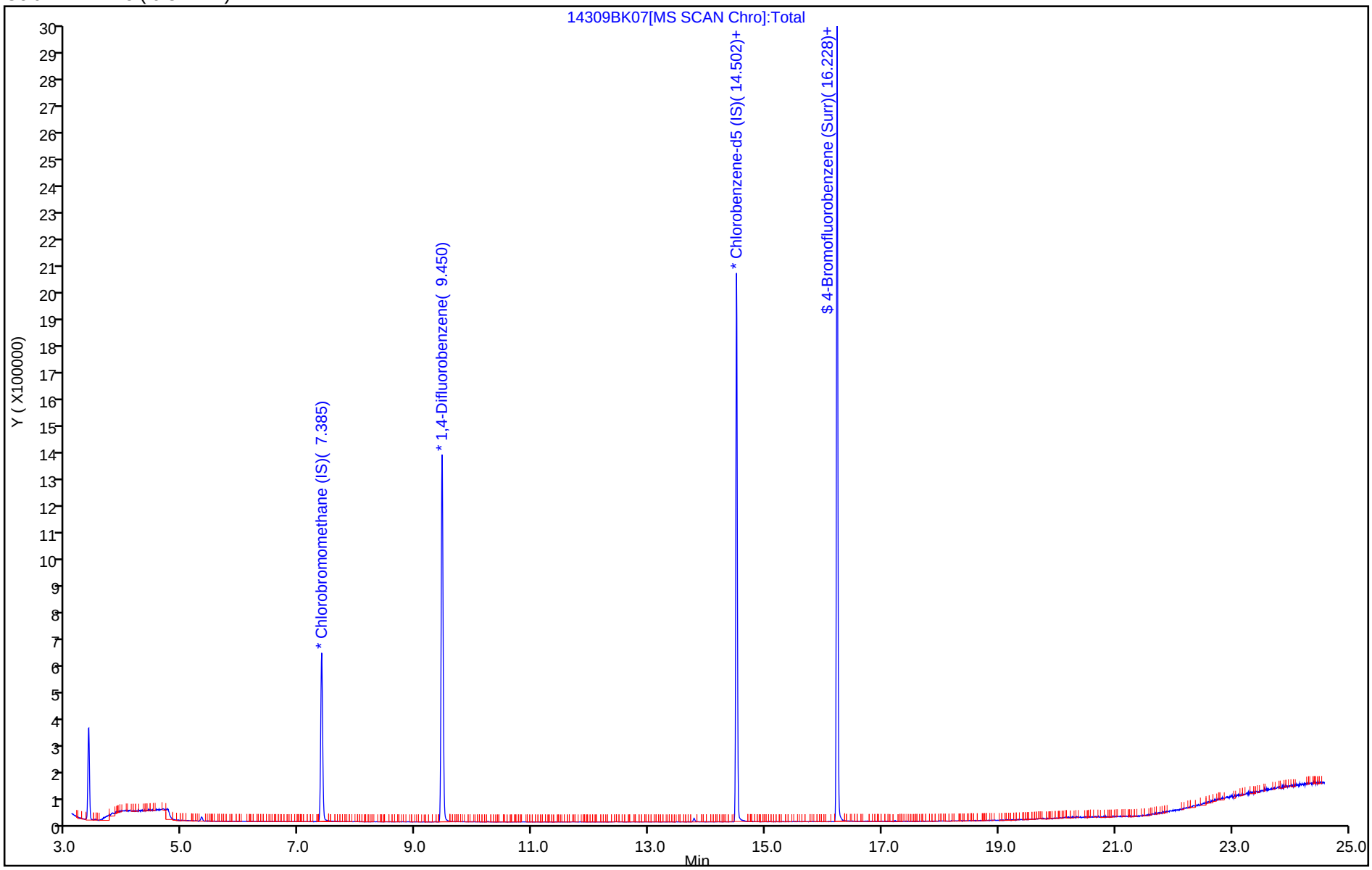
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:05:41 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK07.D				
Injection Date:	20-Feb-2019 20:15:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-7	Lab Sample ID:	140-14309-7	Worklist Smp#:	13
Client ID:	09733				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



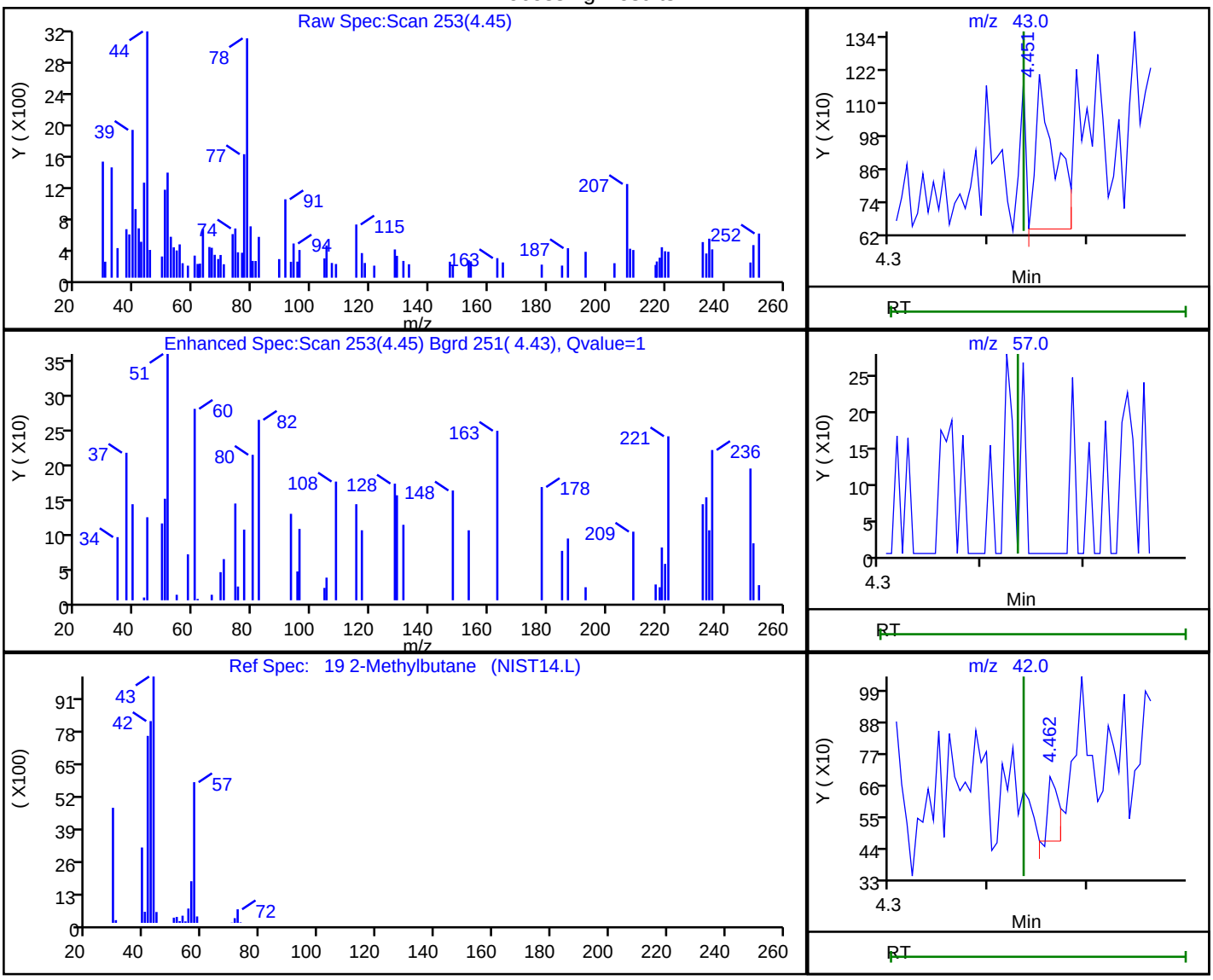
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK07.D				
Injection Date:	20-Feb-2019 20:15:30	Instrument ID:	MR		
Lims ID:	140-14309-A-7	Lab Sample ID:	140-14309-7		
Client ID:	09733				
Operator ID:	HMT	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.45	43.00	770	0.019533
4.44	57.00	0	
4.46	42.00	163	

Reviewer: khachitpongpanits, 21-Feb-2019 13:05:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

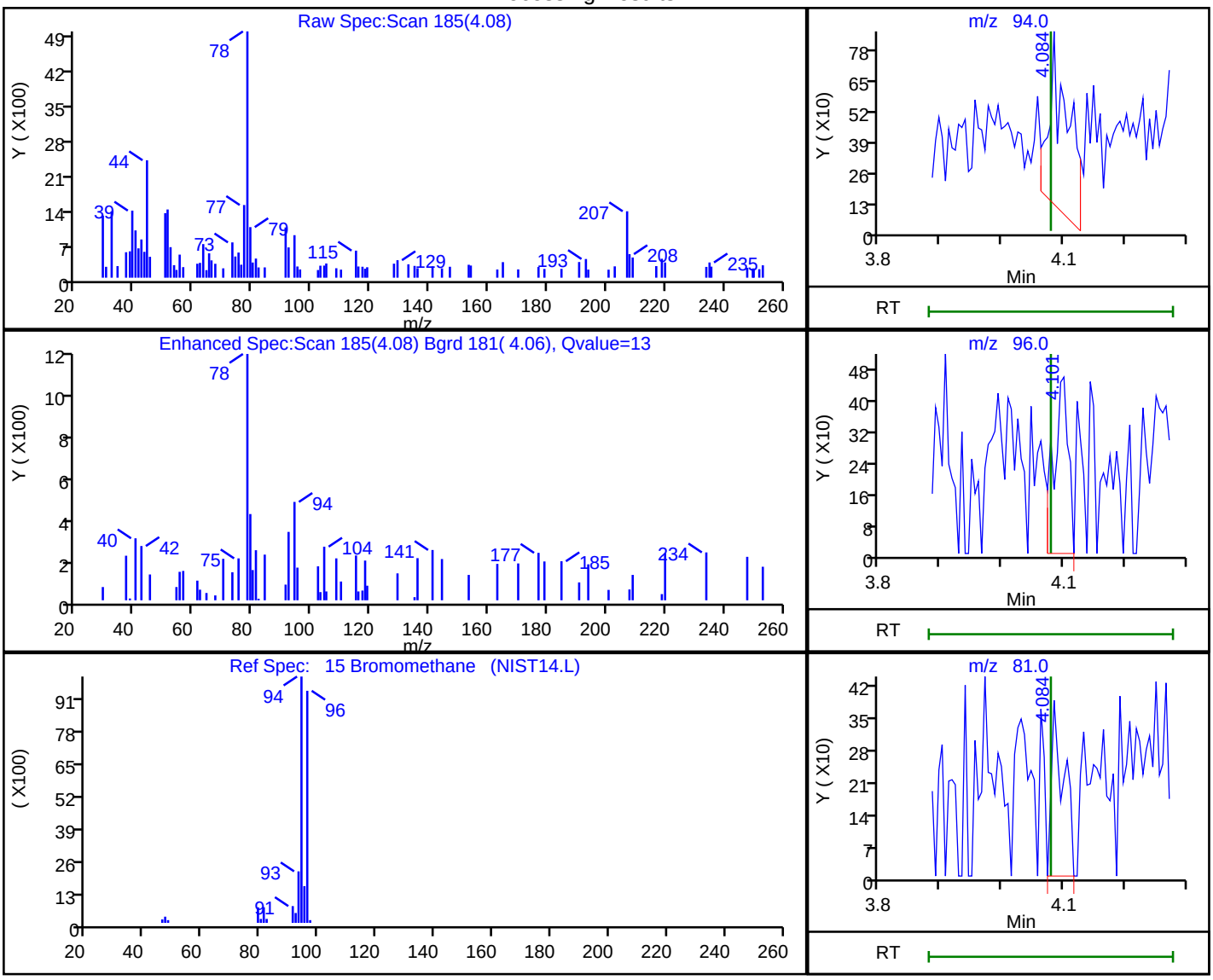
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK07.D				
Injection Date:	20-Feb-2019 20:15:30	Instrument ID:	MR		
Lims ID:	140-14309-A-7	Lab Sample ID:	140-14309-7		
Client ID:	09733				
Operator ID:	HMT	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.08	94.00	1614	0.026511
4.10	96.00	748	
4.08	81.00	537	

Reviewer: khachitpongpanits, 21-Feb-2019 13:05:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

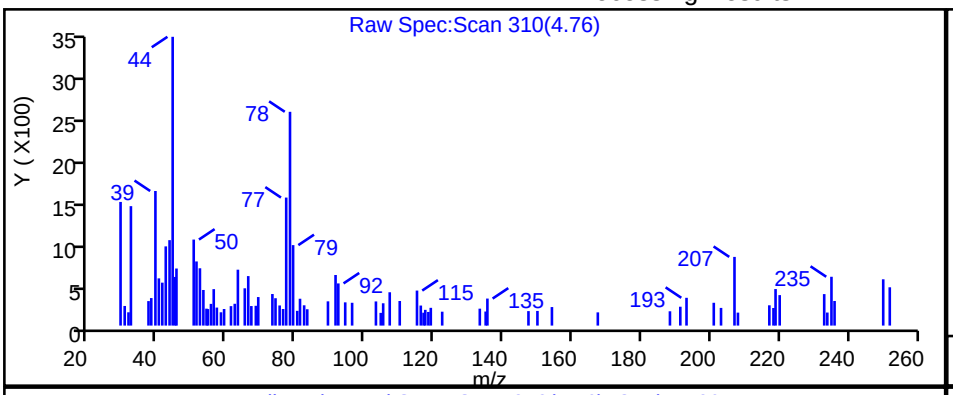
User Disabled Compound Report

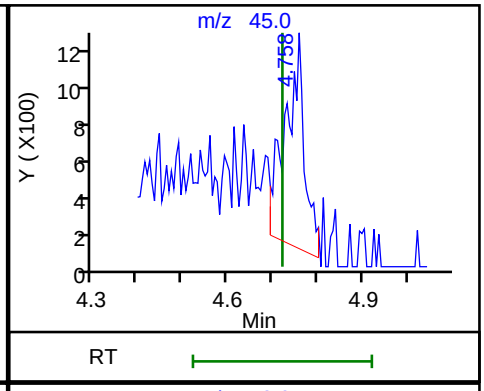
TestAmerica Knoxville

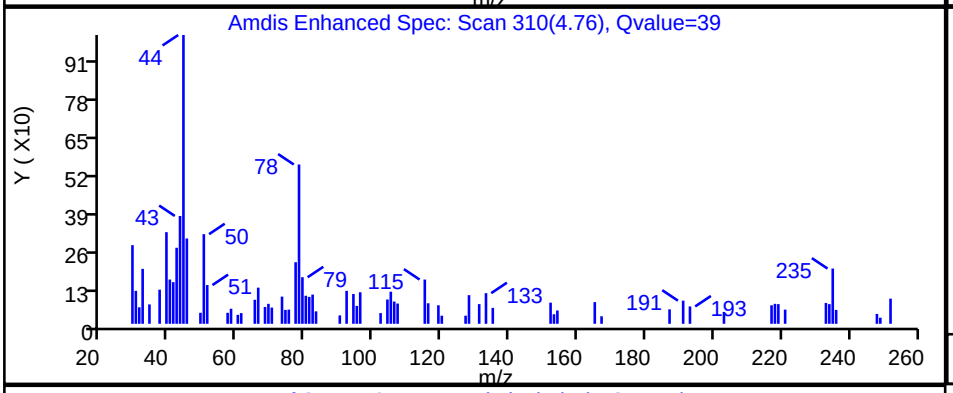
Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK07.D				
Injection Date:	20-Feb-2019 20:15:30	Instrument ID:	MR		
Lims ID:	140-14309-A-7	Lab Sample ID:	140-14309-7		
Client ID:	09733				
Operator ID:	HMT	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

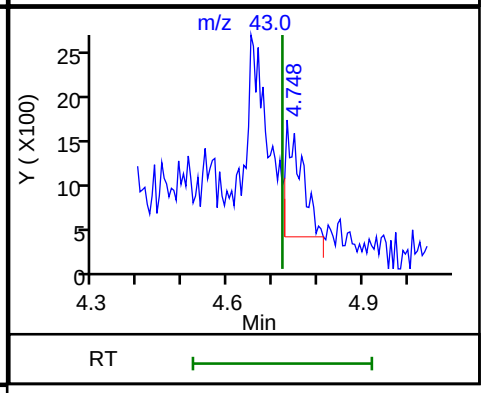
25 Isopropyl alcohol, CAS: 67-63-0

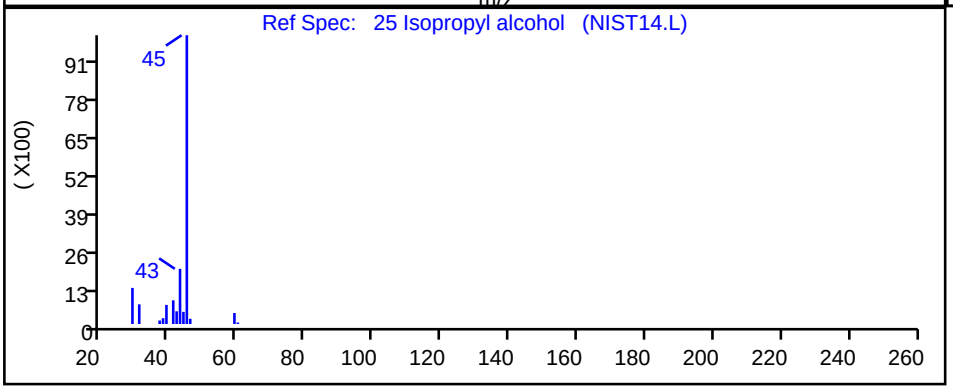
Processing Results











RT	Mass	Response	Amount
4.76	45.00	3437	0.061634
4.75	43.00	3162	

Reviewer: khachitpongpanits, 21-Feb-2019 13:05:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10544 | Lab Sample ID: 140-14309-8

Matrix: Air | Lab File ID: 14309BK08.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10544 | Lab Sample ID: 140-14309-8

Matrix: Air | Lab File ID: 14309BK08.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10544 | Lab Sample ID: 140-14309-8

Matrix: Air | Lab File ID: 14309BK08.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10544 Lab Sample ID: 140-14309-8
Matrix: Air Lab File ID: 14309BK08.D
Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 21:08
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK08.D				
Lims ID:	140-14309-A-8				
Client ID:	10544				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 21:08:30	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-014				
Misc. Info.:	10544				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:06:18	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:06:18		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	200364	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1176749	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.508	-0.005	91	1024172	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	882389	4.05	

Reagents:

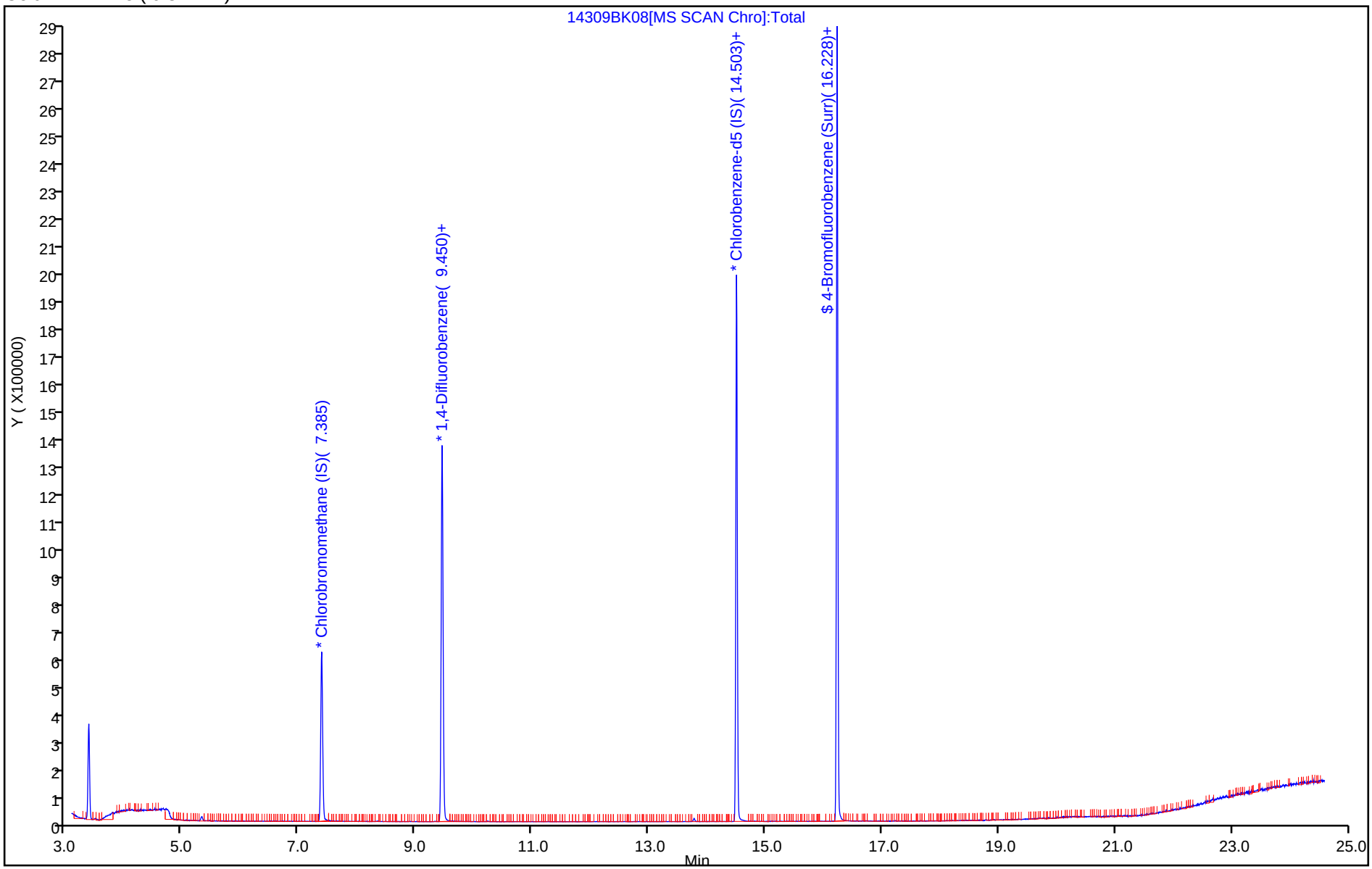
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:06:19 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK08.D				
Injection Date:	20-Feb-2019 21:08:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-8	Lab Sample ID:	140-14309-8	Worklist Smp#:	14
Client ID:	10544				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



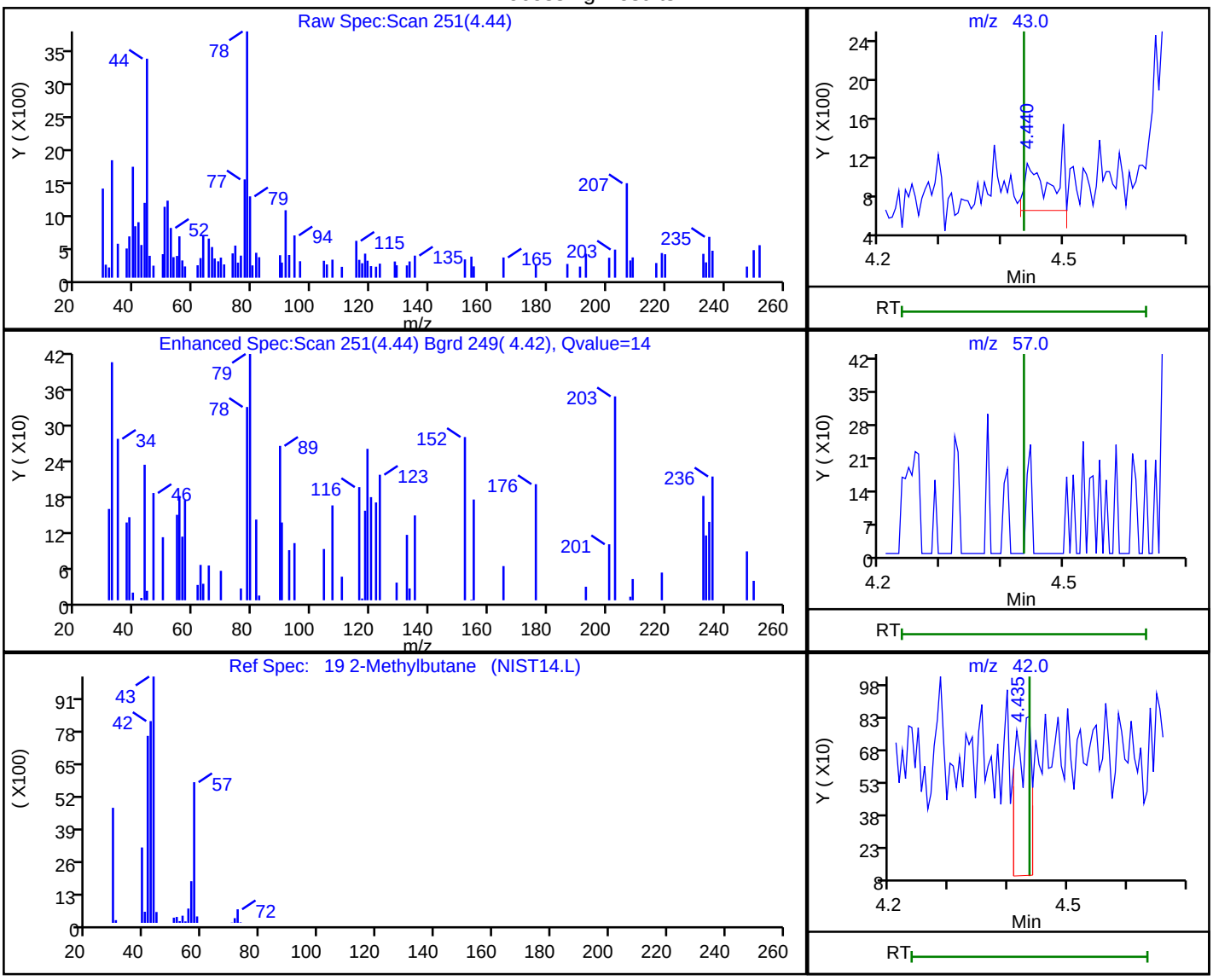
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK08.D				
Injection Date:	20-Feb-2019 21:08:30	Instrument ID:	MR		
Lims ID:	140-14309-A-8	Lab Sample ID:	140-14309-8		
Client ID:	10544				
Operator ID:	HMT	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.44	43.00	1437	0.035864
4.44	57.00	0	
4.43	42.00	1307	

Reviewer: khachitpongpanits, 21-Feb-2019 13:05:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10774 | Lab Sample ID: 140-14309-9

Matrix: Air | Lab File ID: 14309BK09.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 22:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10774 | Lab Sample ID: 140-14309-9
Matrix: Air | Lab File ID: 14309BK09.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 22:02
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10774 | Lab Sample ID: 140-14309-9

Matrix: Air | Lab File ID: 14309BK09.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 22:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10774 Lab Sample ID: 140-14309-9

Matrix: Air Lab File ID: 14309BK09.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 22:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK09.D				
Lims ID:	140-14309-A-9				
Client ID:	10774				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 22:02:30	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-015				
Misc. Info.:	10774				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:06:59	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:06:59		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	199089	4.00	
* 2 1,4-Difluorobenzene	114	9.455	9.455	0.000	95	1172616	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.508	-0.005	91	1016917	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	875041	4.05	

Reagents:

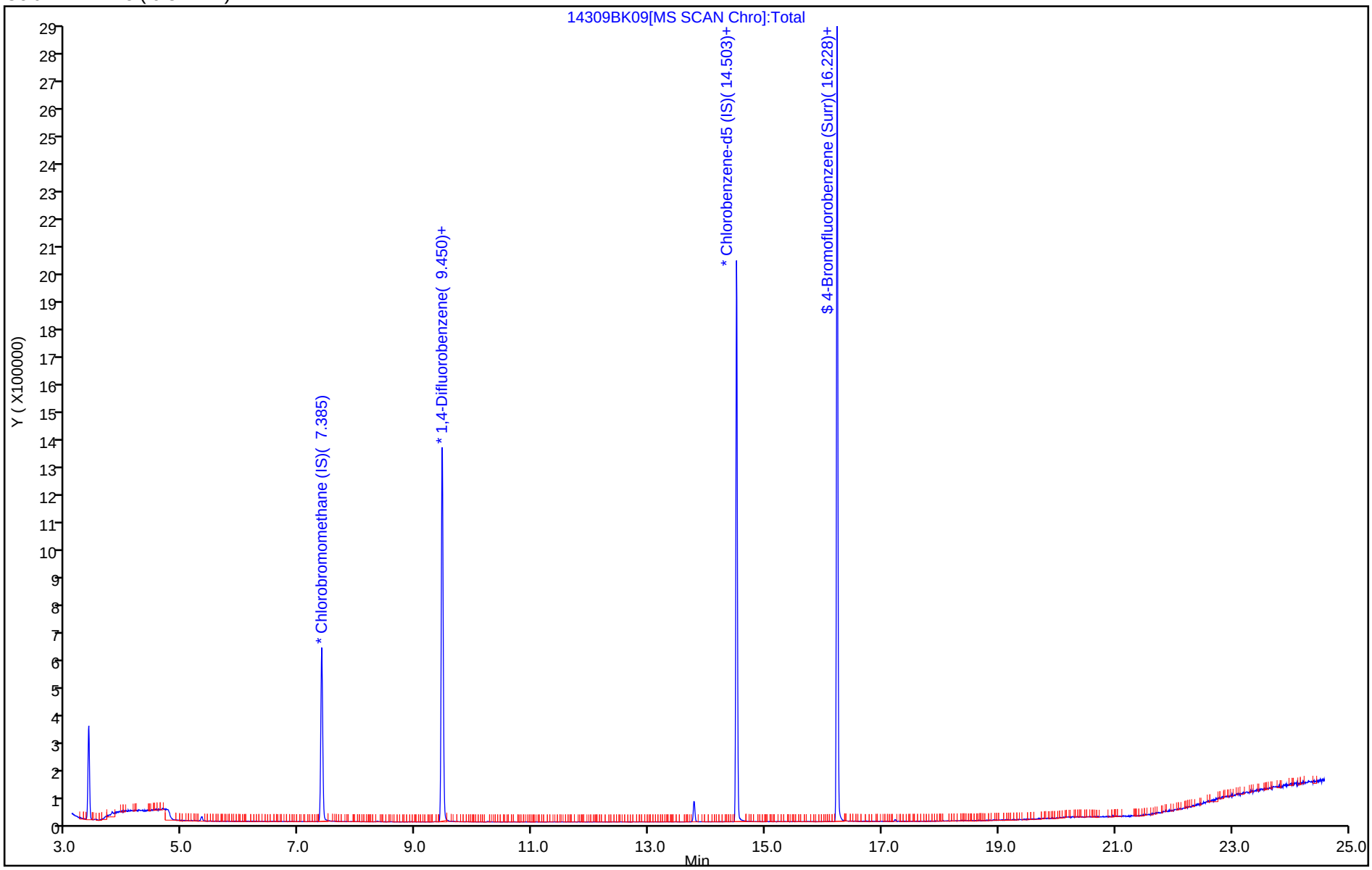
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:07:00 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK09.D				
Injection Date:	20-Feb-2019 22:02:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-9	Lab Sample ID:	140-14309-9	Worklist Smp#:	15
Client ID:	10774				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



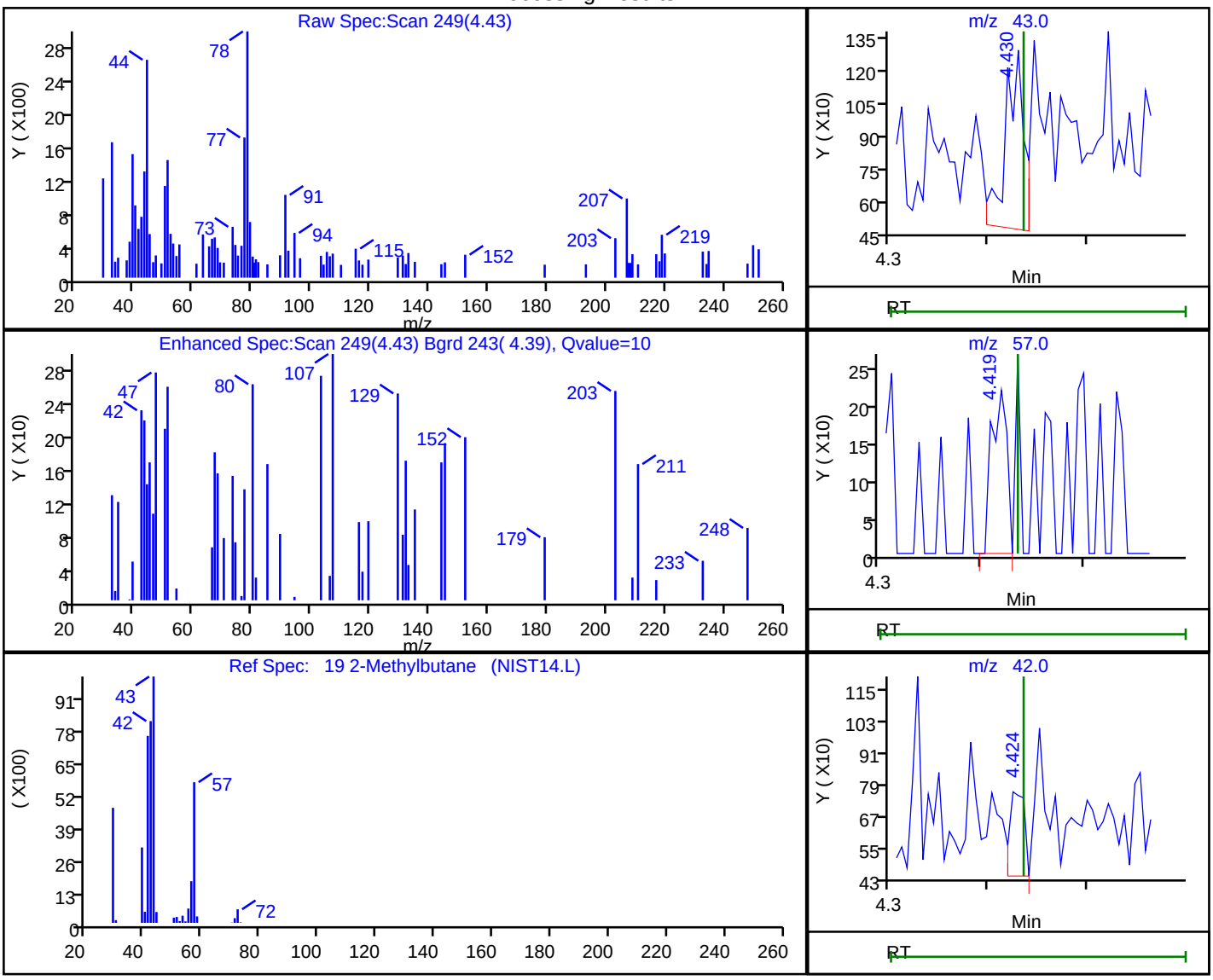
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK09.D				
Injection Date:	20-Feb-2019 22:02:30	Instrument ID:	MR		
Lims ID:	140-14309-A-9	Lab Sample ID:	140-14309-9		
Client ID:	10774				
Operator ID:	HMT	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.43	43.00	1082	0.027177
4.42	57.00	231	
4.42	42.00	338	

Reviewer: khachitpongpanits, 21-Feb-2019 13:06:34

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

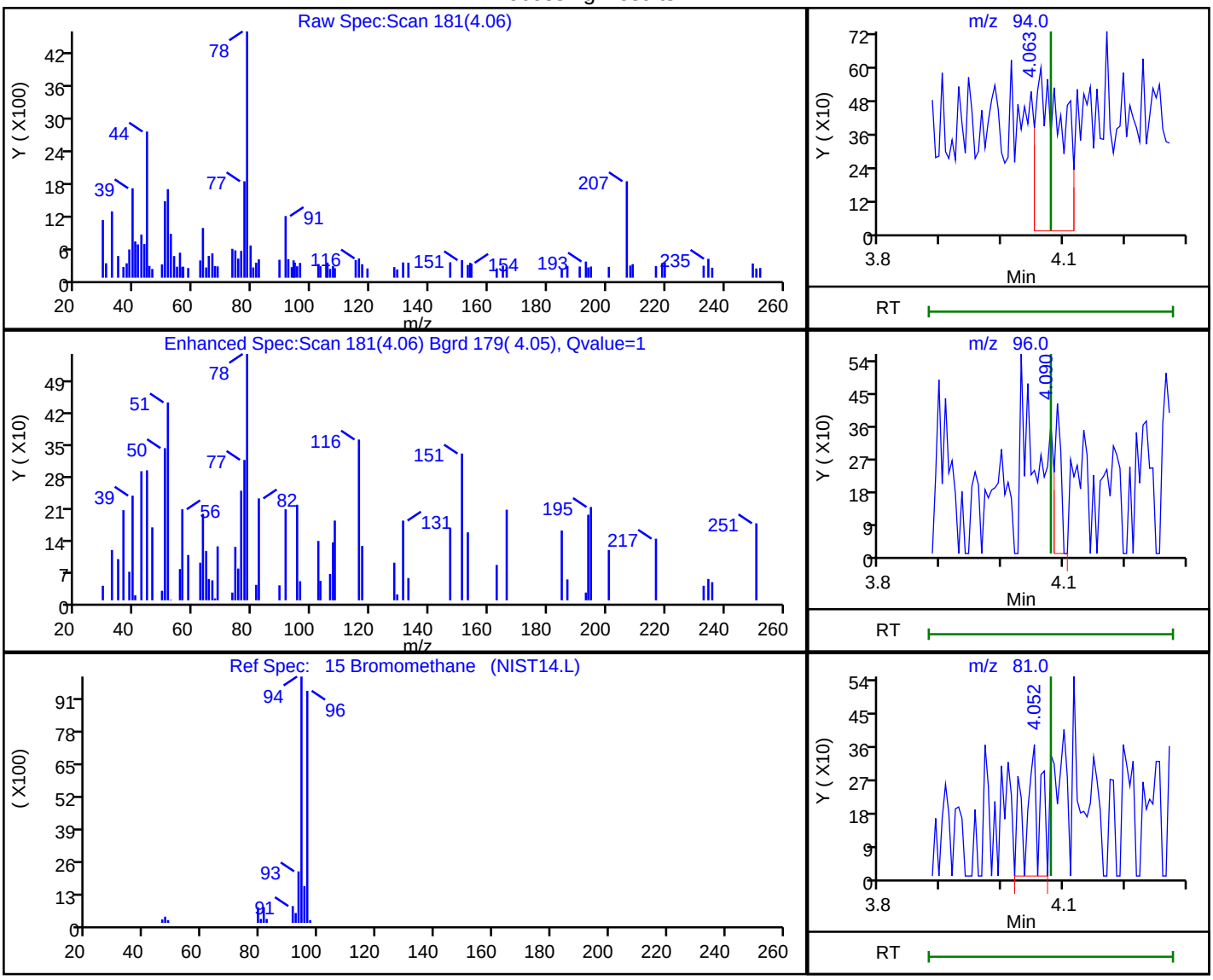
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK09.D				
Injection Date:	20-Feb-2019 22:02:30	Instrument ID:	MR		
Lims ID:	140-14309-A-9	Lab Sample ID:	140-14309-9		
Client ID:	10774				
Operator ID:	HMT	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.06	94.00	1787	0.029062
4.09	96.00	300	
4.05	81.00	603	

Reviewer: khachitpongpanits, 21-Feb-2019 13:06:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

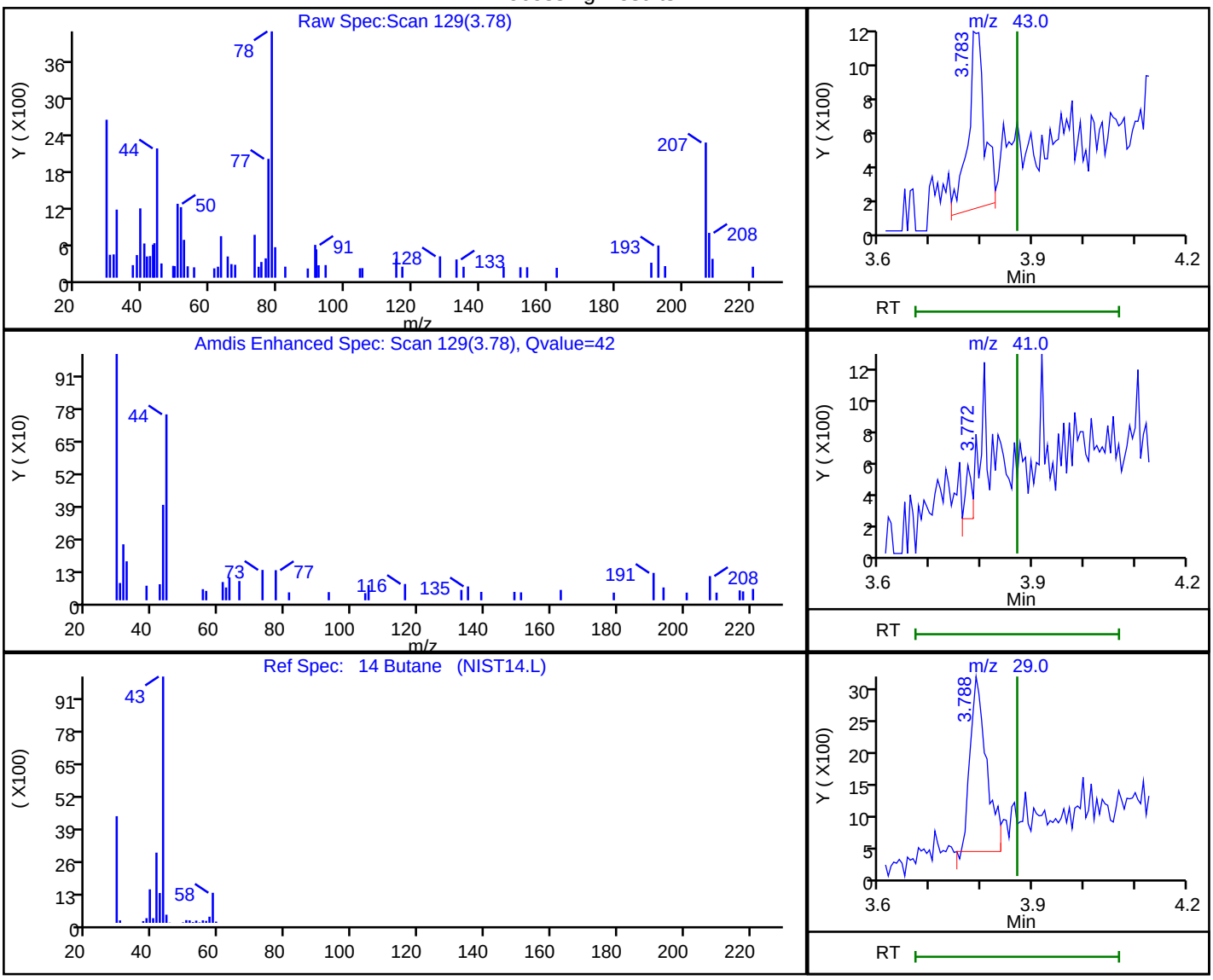
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK09.D				
Injection Date:	20-Feb-2019 22:02:30	Instrument ID:	MR		
Lims ID:	140-14309-A-9	Lab Sample ID:	140-14309-9		
Client ID:	10774				
Operator ID:	HMT	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.78	43.00	2230	0.039576
3.77	41.00	285	
3.79	29.00	6087	

Reviewer: khachitpongpanits, 21-Feb-2019 13:06:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

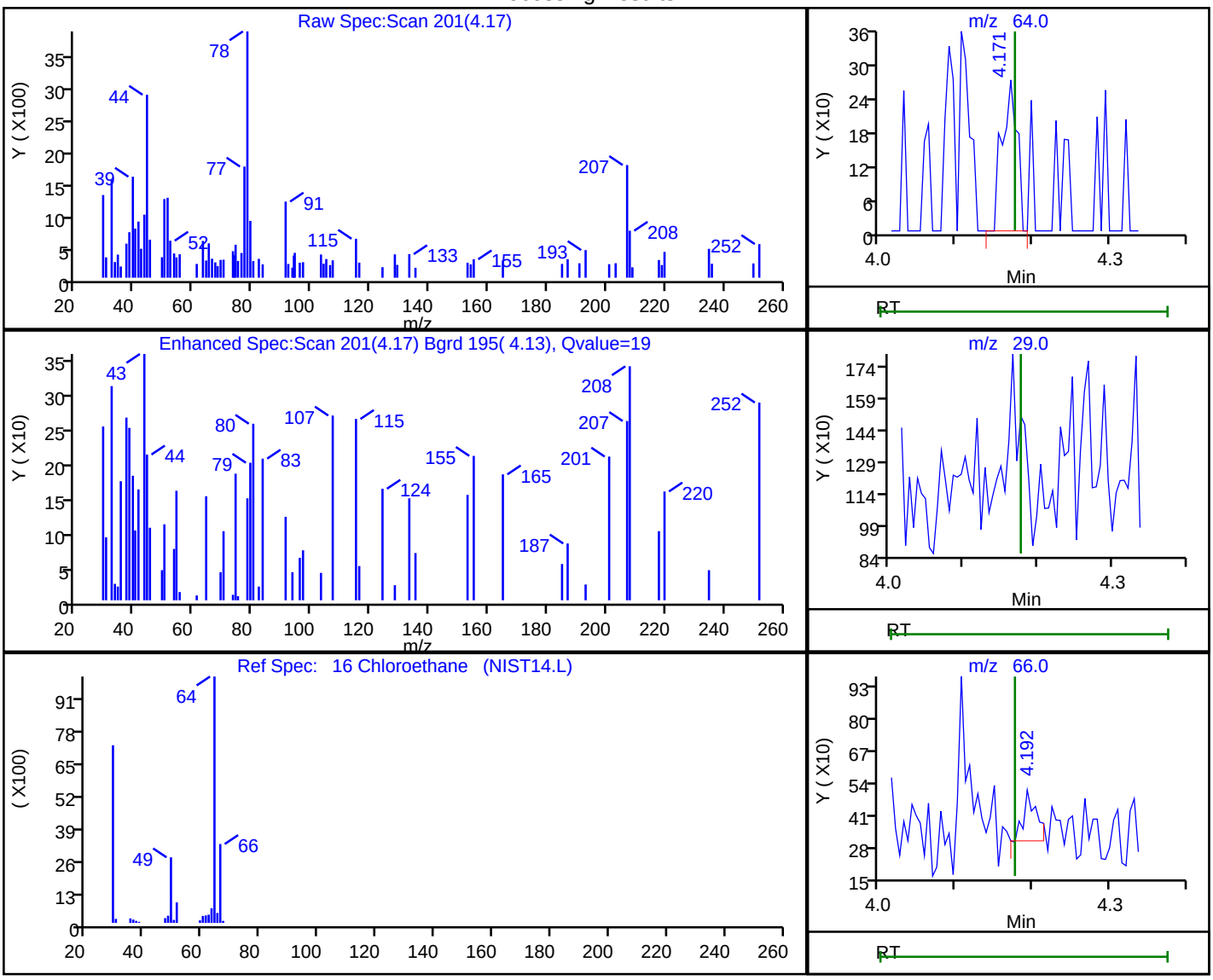
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK09.D				
Injection Date:	20-Feb-2019 22:02:30	Instrument ID:	MR		
Lims ID:	140-14309-A-9	Lab Sample ID:	140-14309-9		
Client ID:	10774				
Operator ID:	HMT	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.17	64.00	365	0.014756
4.18	29.00	0	
4.19	66.00	241	

Reviewer: khachitpongpanits, 21-Feb-2019 13:06:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10898 | Lab Sample ID: 140-14309-10

Matrix: Air | Lab File ID: 14309BK10.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 22:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10898 | Lab Sample ID: 140-14309-10

Matrix: Air | Lab File ID: 14309BK10.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 22:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10898 Lab Sample ID: 140-14309-10

Matrix: Air Lab File ID: 14309BK10.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 22:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10898 Lab Sample ID: 140-14309-10
Matrix: Air Lab File ID: 14309BK10.D
Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 22:56
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK10.D				
Lims ID:	140-14309-A-10				
Client ID:	10898				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 22:56:30	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-016				
Misc. Info.:	10898				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:07:55	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:07:55		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.390	-0.006	71	200721	4.00	
* 2 1,4-Difluorobenzene	114	9.455	9.455	0.000	95	1167062	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.508	-0.006	91	1015678	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	884140	4.09	

Reagents:

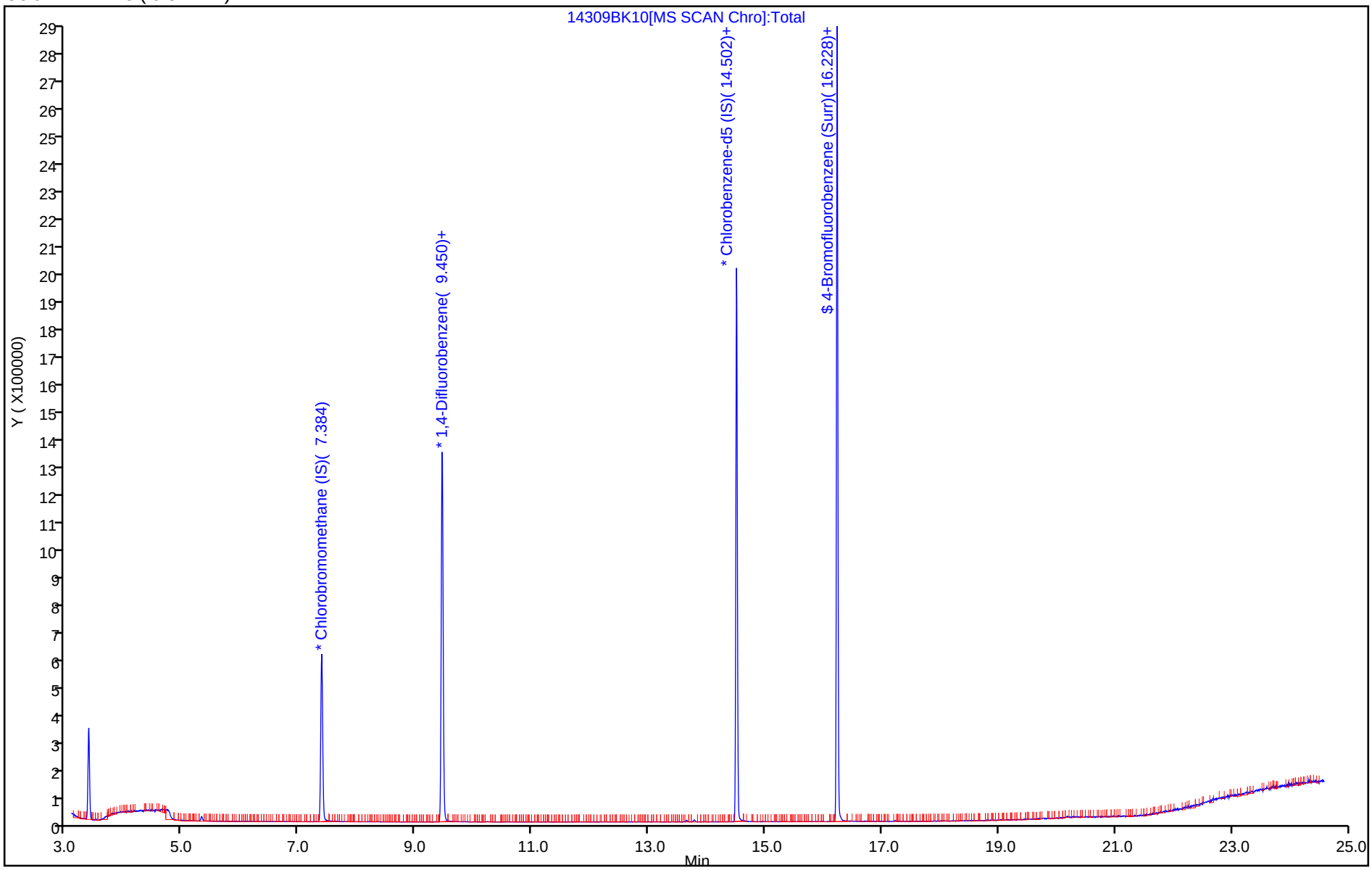
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:07:56 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK10.D				
Injection Date:	20-Feb-2019 22:56:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-10	Lab Sample ID:	140-14309-10	Worklist Smp#:	16
Client ID:	10898				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



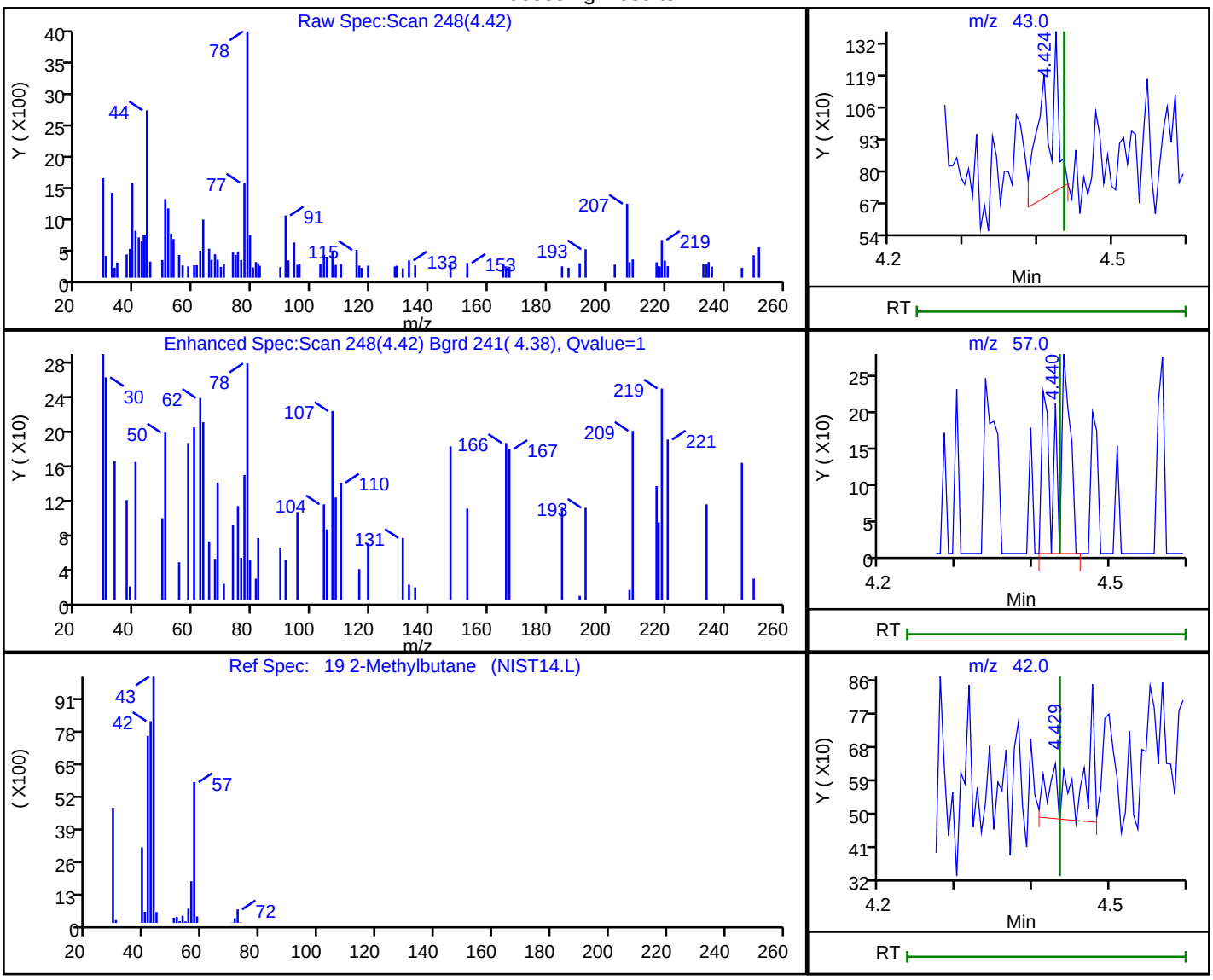
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK10.D				
Injection Date:	20-Feb-2019 22:56:30	Instrument ID:	MR		
Lims ID:	140-14309-A-10	Lab Sample ID:	140-14309-10		
Client ID:	10898				
Operator ID:	HMT	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.42	43.00	880	0.021924
4.44	57.00	410	
4.43	42.00	449	

Reviewer: khachitpongpanits, 21-Feb-2019 13:07:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

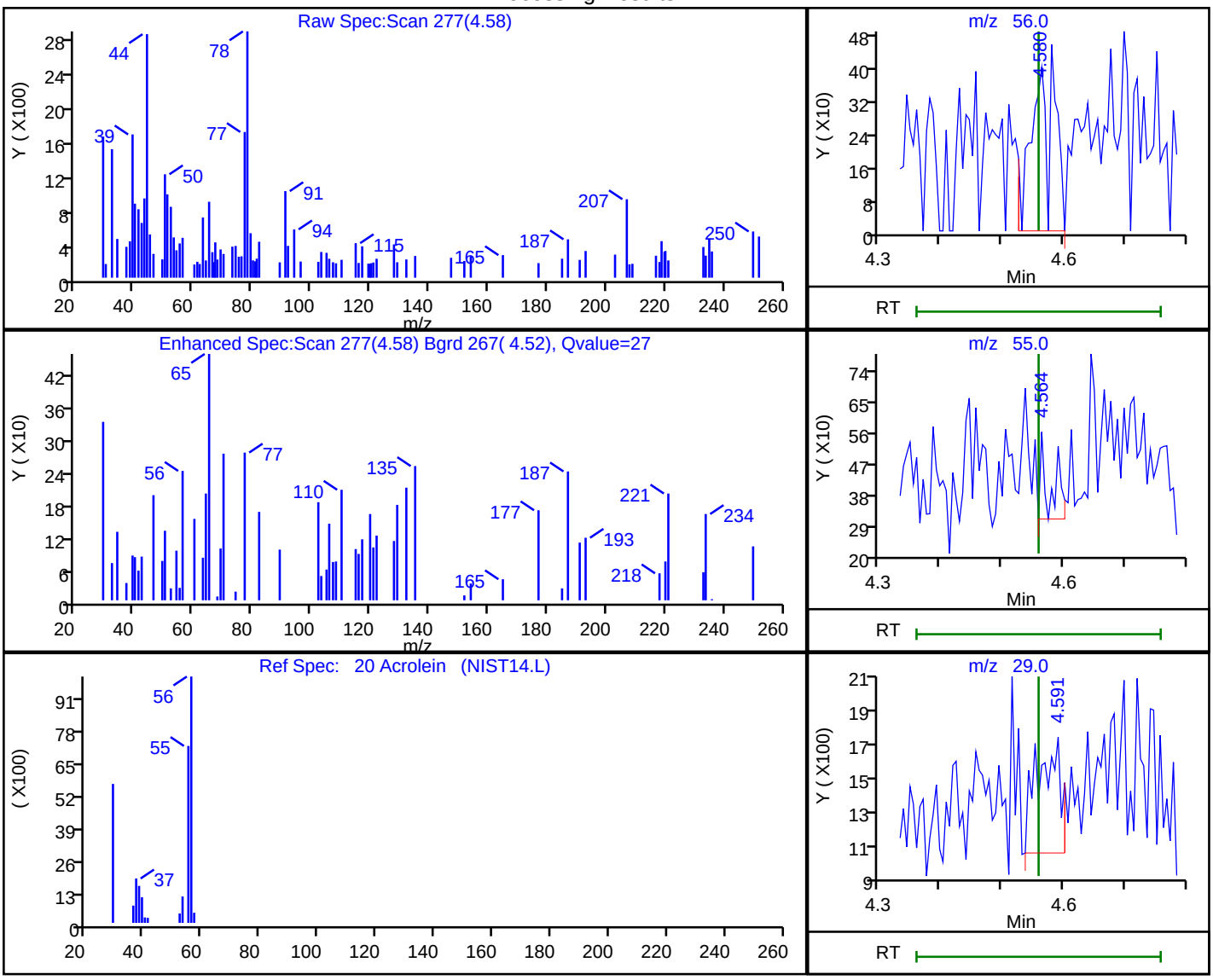
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK10.D				
Injection Date:	20-Feb-2019 22:56:30	Instrument ID:	MR		
Lims ID:	140-14309-A-10	Lab Sample ID:	140-14309-10		
Client ID:	10898				
Operator ID:	HMT	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.58	56.00	1095	0.086308
4.56	55.00	259	
4.59	29.00	1627	

Reviewer: khachitpongpanits, 21-Feb-2019 13:07:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

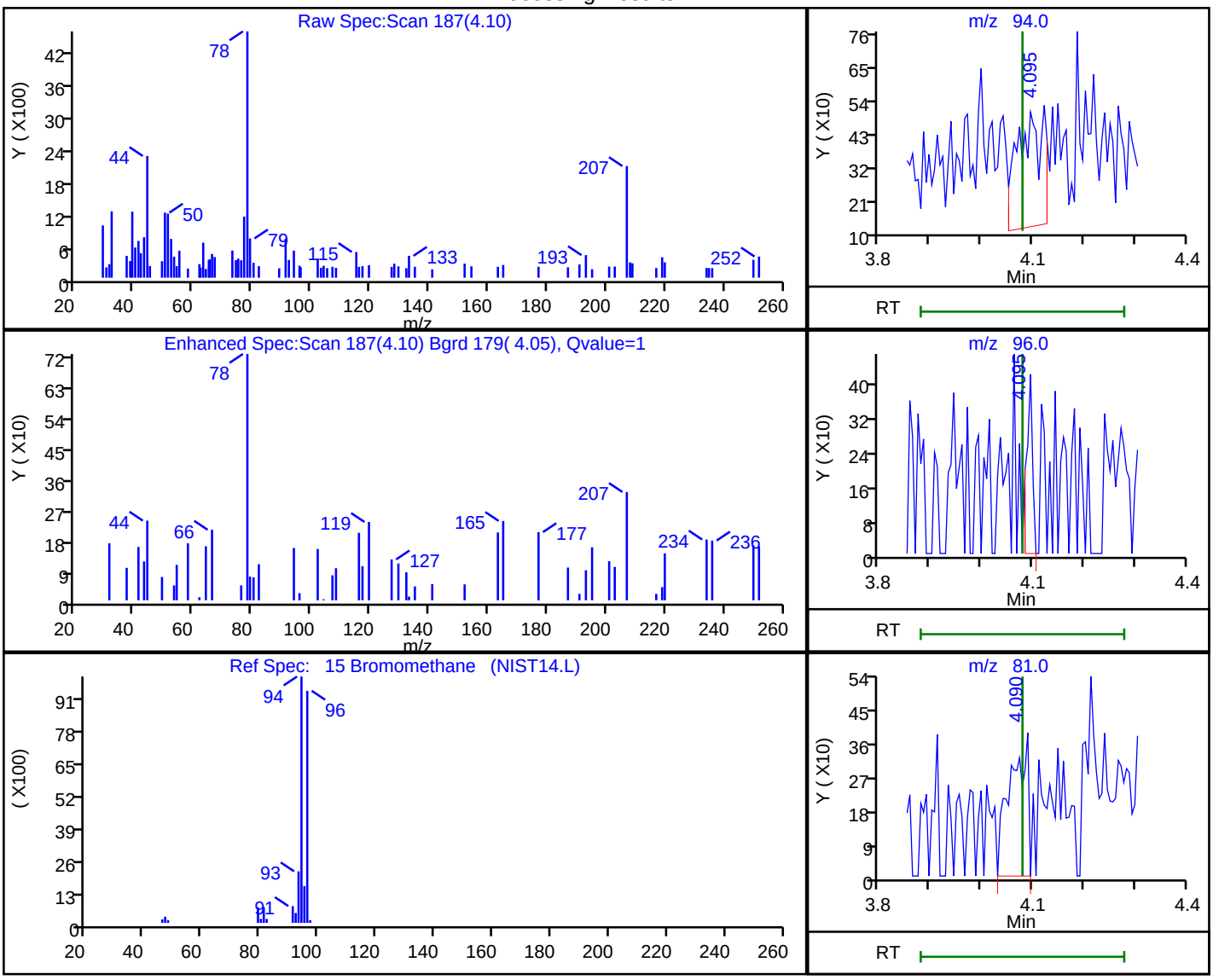
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK10.D				
Injection Date:	20-Feb-2019 22:56:30	Instrument ID:	MR		
Lims ID:	140-14309-A-10	Lab Sample ID:	140-14309-10		
Client ID:	10898				
Operator ID:	HMT	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.10	94.00	1339	0.021599
4.10	96.00	329	
4.09	81.00	925	

Reviewer: khachitpongpanits, 21-Feb-2019 13:07:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10103 | Lab Sample ID: 140-14309-11
Matrix: Air | Lab File ID: 14309BK11.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 23:50
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10103 | Lab Sample ID: 140-14309-11

Matrix: Air | Lab File ID: 14309BK11.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 23:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10103 | Lab Sample ID: 140-14309-11

Matrix: Air | Lab File ID: 14309BK11.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/20/2019 23:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10103 Lab Sample ID: 140-14309-11

Matrix: Air Lab File ID: 14309BK11.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/20/2019 23:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK11.D				
Lims ID:	140-14309-A-11				
Client ID:	10103				
Sample Type:	Client				
Inject. Date:	20-Feb-2019 23:50:30	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-017				
Misc. Info.:	10103				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:08:23	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:09:13		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.390	-0.006	71	199137	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1167310	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.508	-0.006	91	1024437	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.234	-0.006	89	877291	4.03	

Reagents:

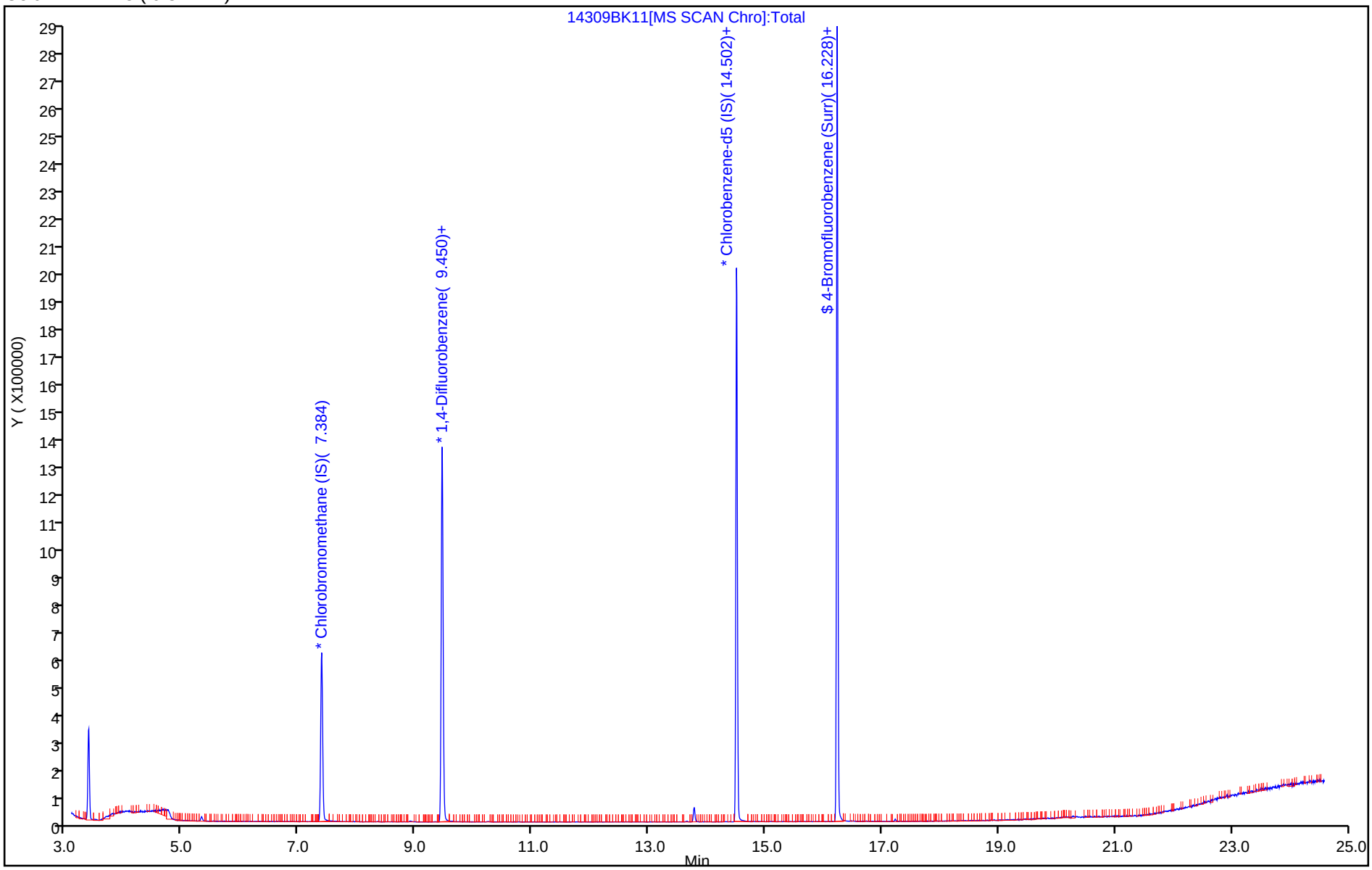
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:09:14 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK11.D				
Injection Date:	20-Feb-2019 23:50:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-11	Lab Sample ID:	140-14309-11	Worklist Smp#:	17
Client ID:	10103				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



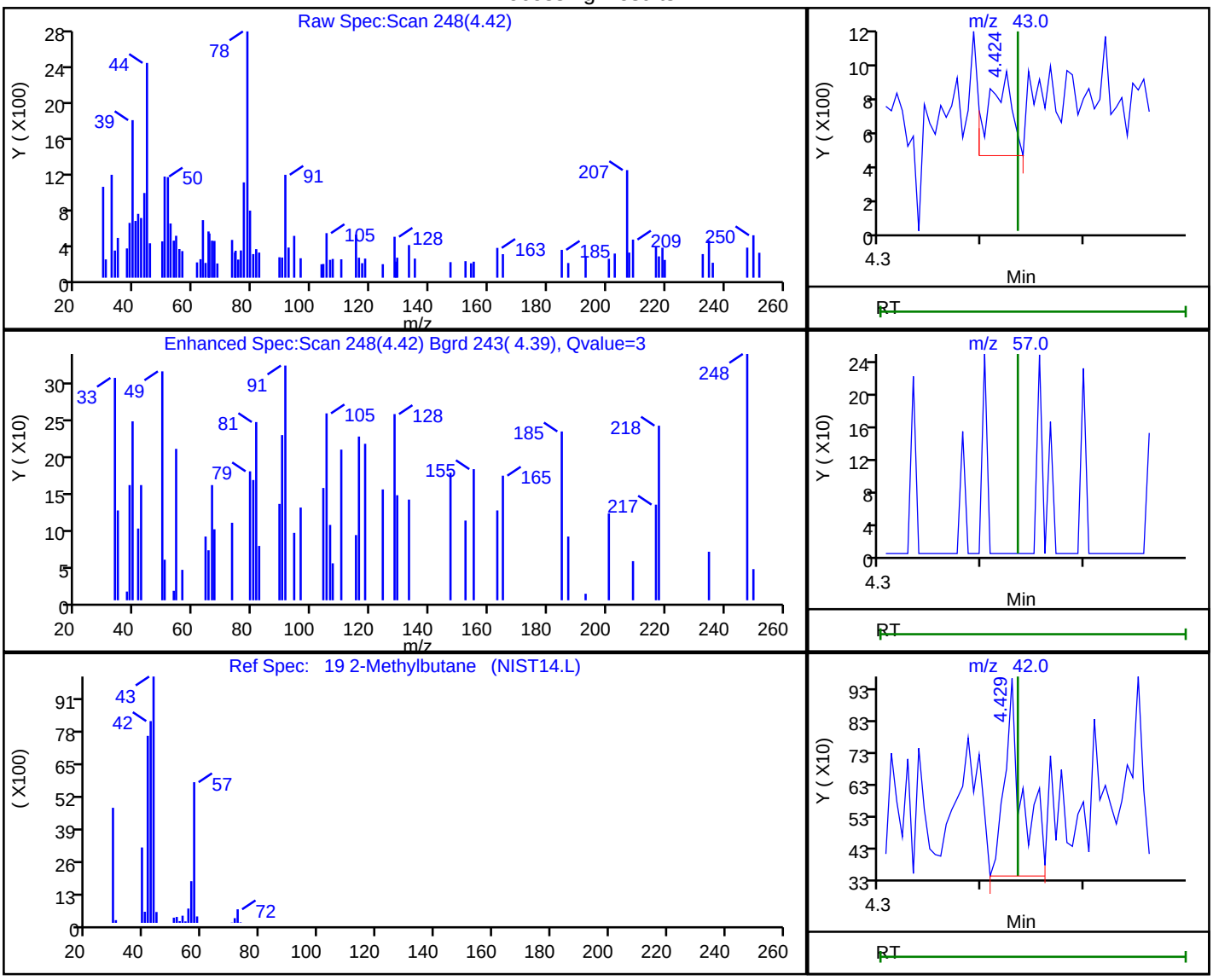
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK11.D				
Injection Date:	20-Feb-2019 23:50:30	Instrument ID:	MR		
Lims ID:	140-14309-A-11	Lab Sample ID:	140-14309-11		
Client ID:	10103				
Operator ID:	HMT	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.42	43.00	772	0.019386
4.44	57.00	0	
4.43	42.00	761	

Reviewer: khachitpongpanits, 21-Feb-2019 13:08:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

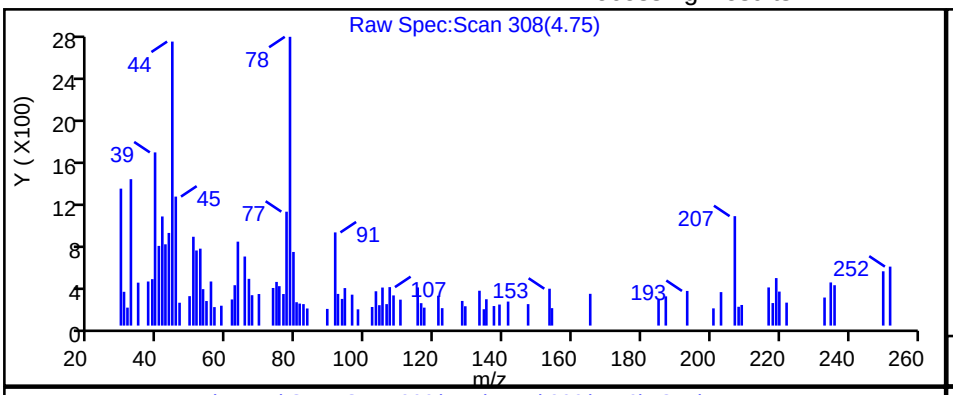
User Disabled Compound Report

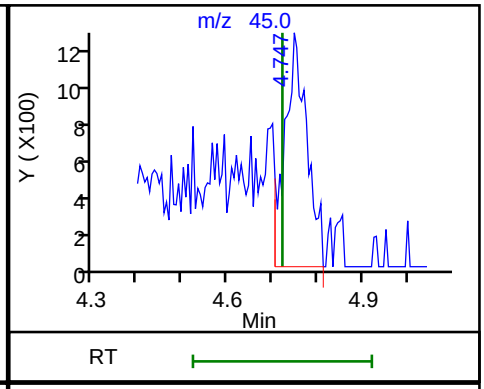
TestAmerica Knoxville

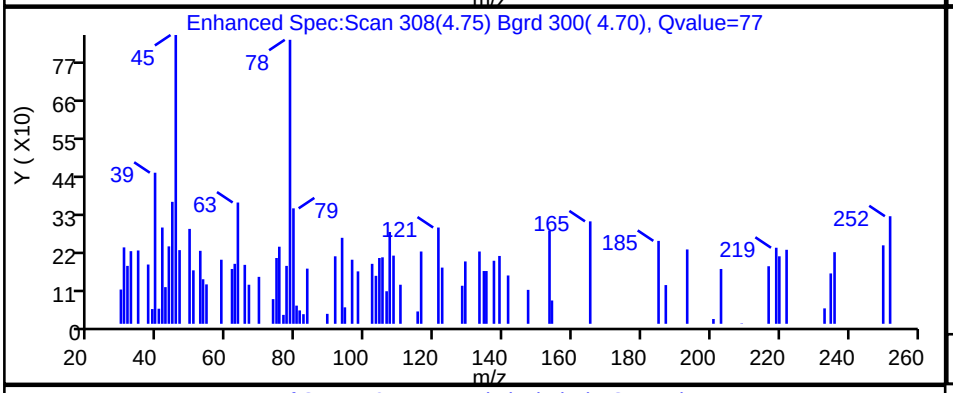
Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK11.D				
Injection Date:	20-Feb-2019 23:50:30	Instrument ID:	MR		
Lims ID:	140-14309-A-11	Lab Sample ID:	140-14309-11		
Client ID:	10103				
Operator ID:	HMT	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

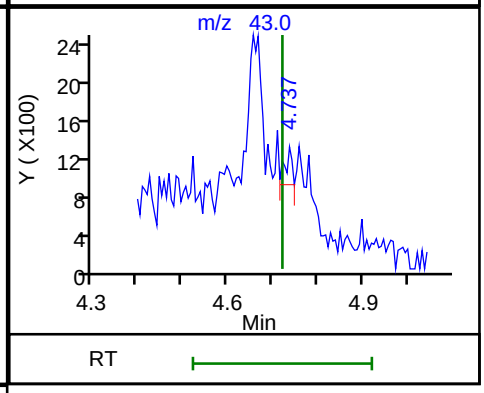
25 Isopropyl alcohol, CAS: 67-63-0

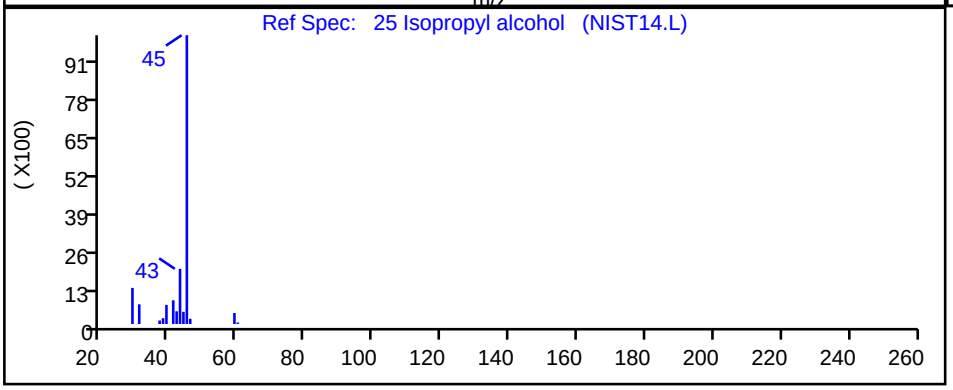
Processing Results











RT	Mass	Response	Amount
4.75	45.00	4136	0.073419
4.74	43.00	408	

Reviewer: khachitpongpanits, 21-Feb-2019 13:08:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10225 | Lab Sample ID: 140-14309-12

Matrix: Air | Lab File ID: 14309BK12.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 00:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10225 | Lab Sample ID: 140-14309-12

Matrix: Air | Lab File ID: 14309BK12.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 00:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10225
Lab Sample ID: 140-14309-12
Matrix: Air
Lab File ID: 14309BK12.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/21/2019 00:43
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10225 Lab Sample ID: 140-14309-12
Matrix: Air Lab File ID: 14309BK12.D
Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) Date Analyzed: 02/21/2019 00:43
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK12.D				
Lims ID:	140-14309-A-12				
Client ID:	10225				
Sample Type:	Client				
Inject. Date:	21-Feb-2019 00:43:30	ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-018				
Misc. Info.:	10225				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 13:23:13	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 13:23:13		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	84	198947	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1176095	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.508	-0.006	91	1017816	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.227	-0.006	89	886550	4.10	

Reagents:

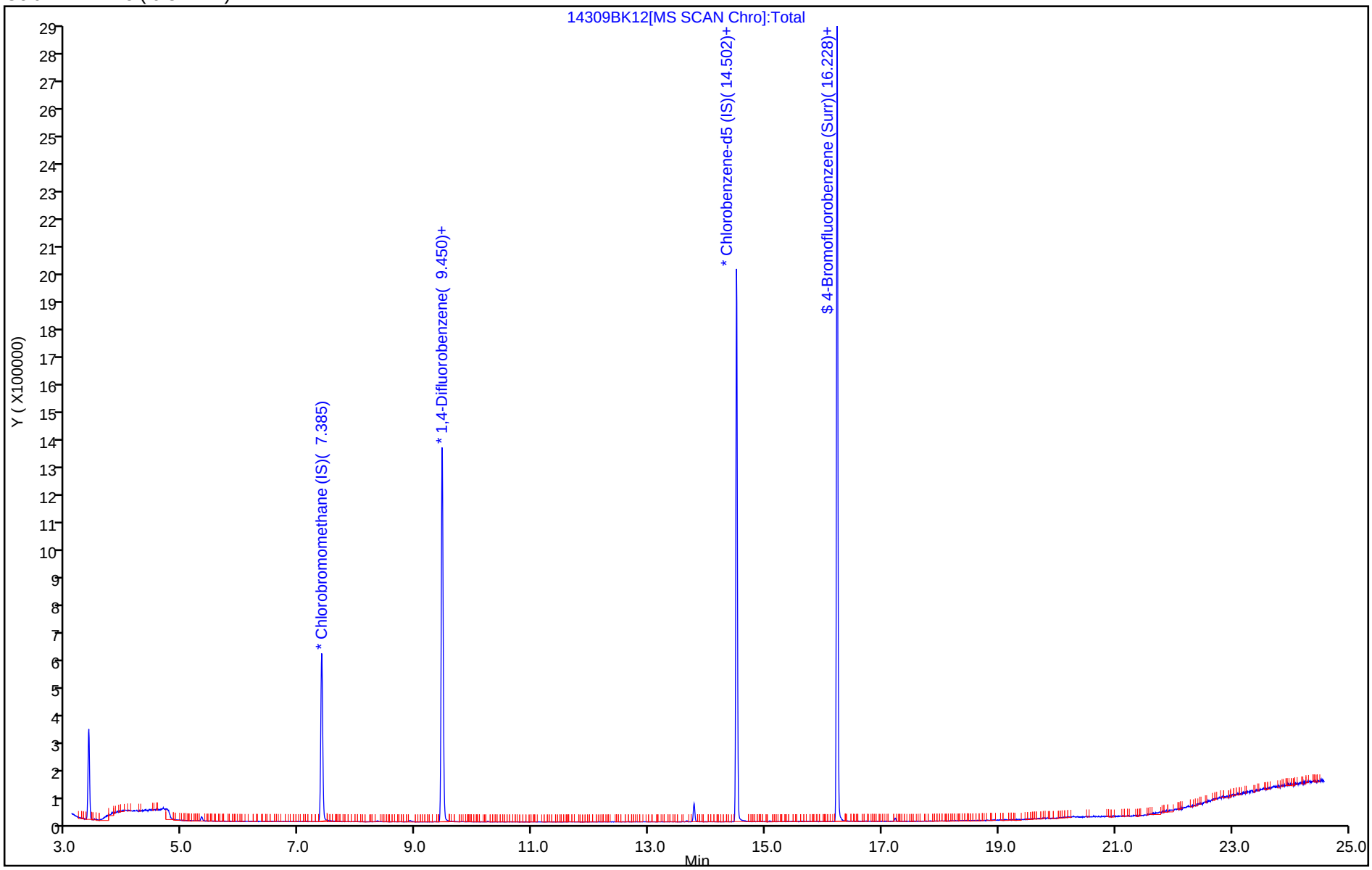
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 13:23:13 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK12.D				
Injection Date:	21-Feb-2019 00:43:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-12	Lab Sample ID:	140-14309-12	Worklist Smp#:	18
Client ID:	10225				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



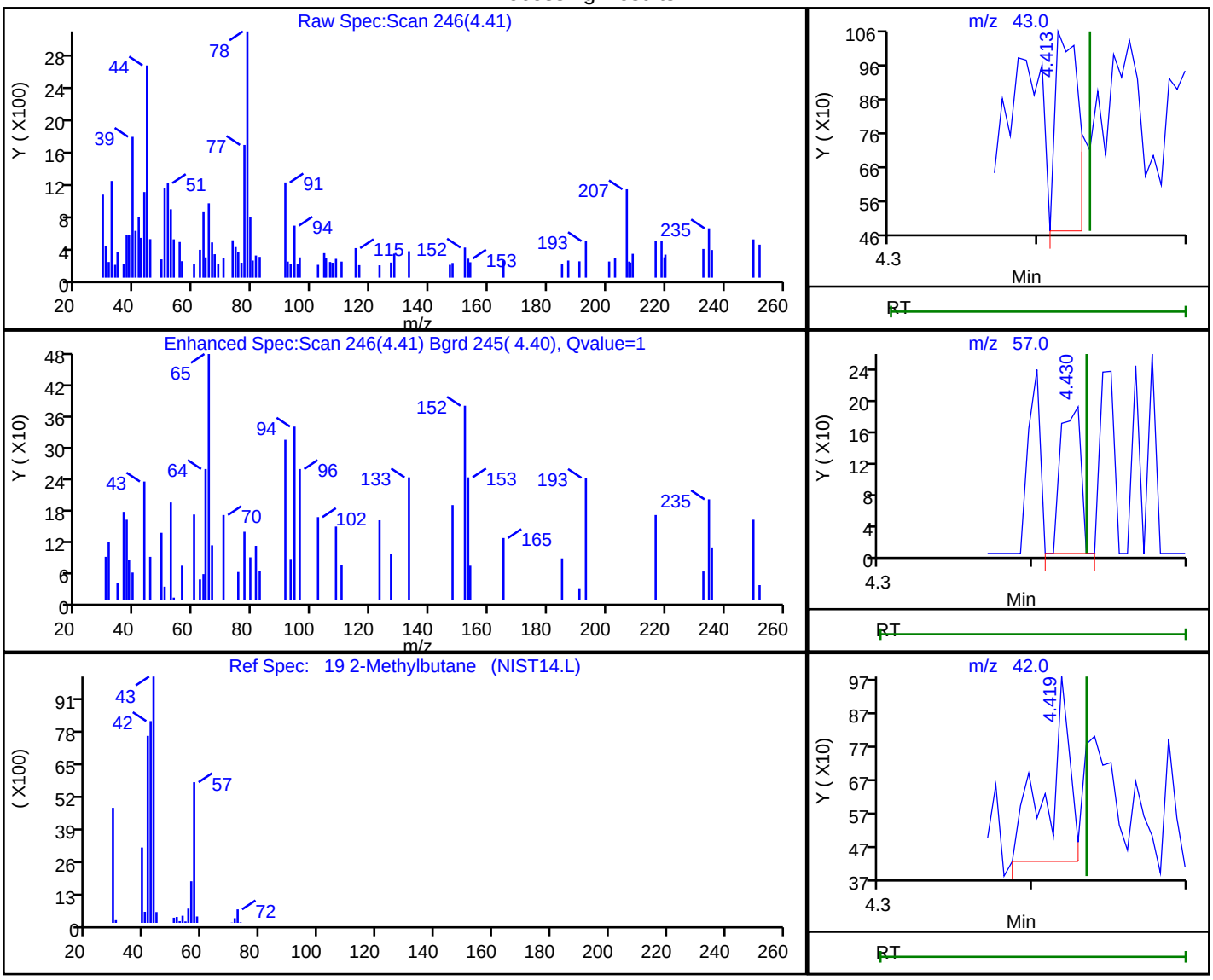
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK12.D				
Injection Date:	21-Feb-2019 00:43:30	Instrument ID:	MR		
Lims ID:	140-14309-A-12	Lab Sample ID:	140-14309-12		
Client ID:	10225				
Operator ID:	HMT	ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.41	43.00	639	0.016062
4.43	57.00	168	
4.42	42.00	573	

Reviewer: khachitpongpanits, 21-Feb-2019 13:22:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

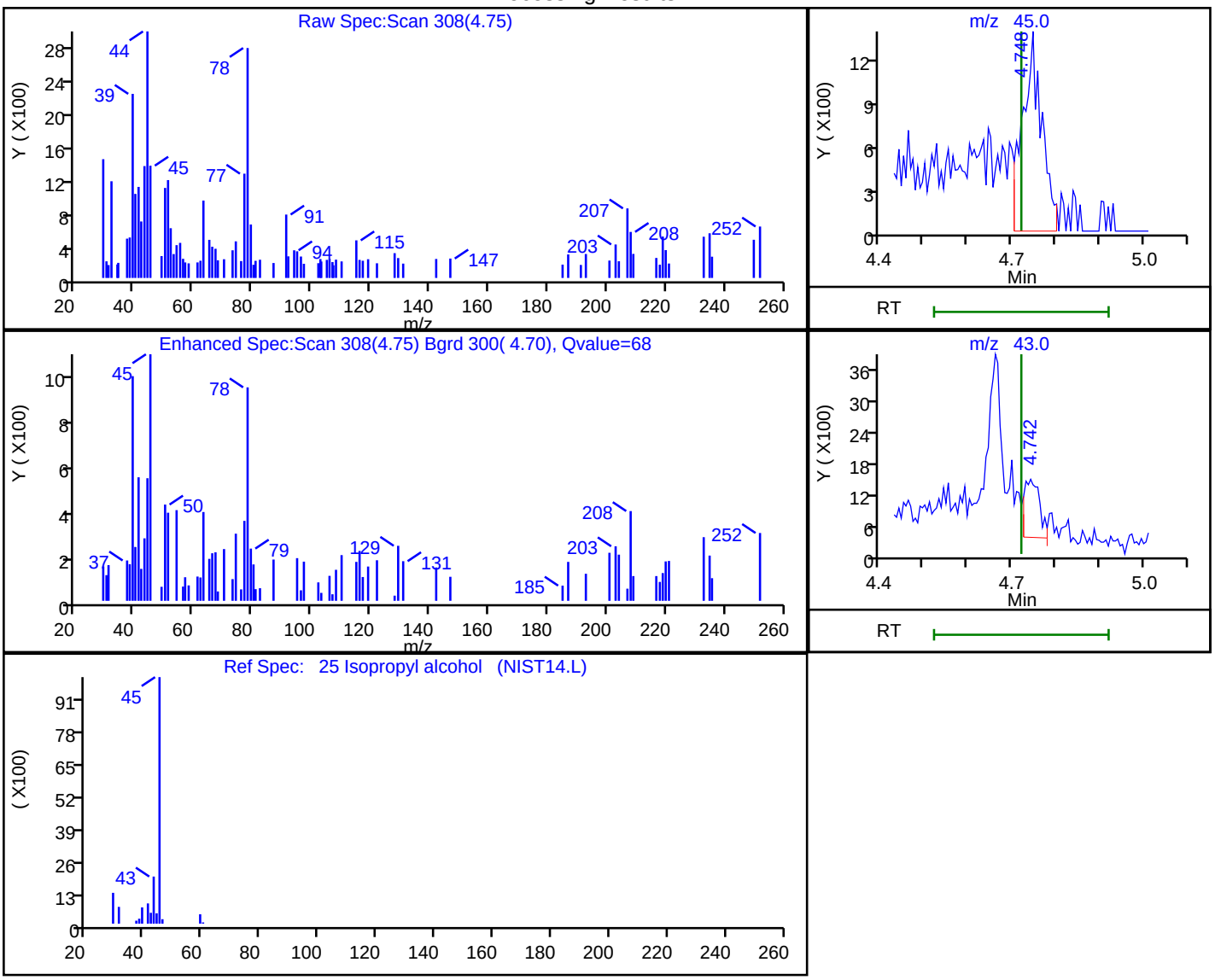
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK12.D				
Injection Date:	21-Feb-2019 00:43:30	Instrument ID:	MR		
Lims ID:	140-14309-A-12	Lab Sample ID:	140-14309-12		
Client ID:	10225				
Operator ID:	HMT	ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

25 Isopropyl alcohol, CAS: 67-63-0

Processing Results



RT	Mass	Response	Amount
4.75	45.00	4055	0.072050
4.74	43.00	2703	

Reviewer: khachitpongpanits, 21-Feb-2019 13:22:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11961 | Lab Sample ID: 140-14309-14
Matrix: Air | Lab File ID: 14309BK14.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 02:30
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11961 | Lab Sample ID: 140-14309-14
Matrix: Air | Lab File ID: 14309BK14.D
Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 02:30
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 11961 | Lab Sample ID: 140-14309-14

Matrix: Air | Lab File ID: 14309BK14.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 02:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1

SDG No.:

Client Sample ID: 11961 Lab Sample ID: 140-14309-14

Matrix: Air Lab File ID: 14309BK14.D

Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) Date Analyzed: 02/21/2019 02:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK14.D				
Lims ID:	140-14309-A-14				
Client ID:	11961				
Sample Type:	Client				
Inject. Date:	21-Feb-2019 02:30:30	ALS Bottle#:	16	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-020				
Misc. Info.:	11961				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 15:15:02	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 15:15:02		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	71	193630	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1144973	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.508	-0.005	90	1002548	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.227	-0.006	89	865407	4.06	

Reagents:

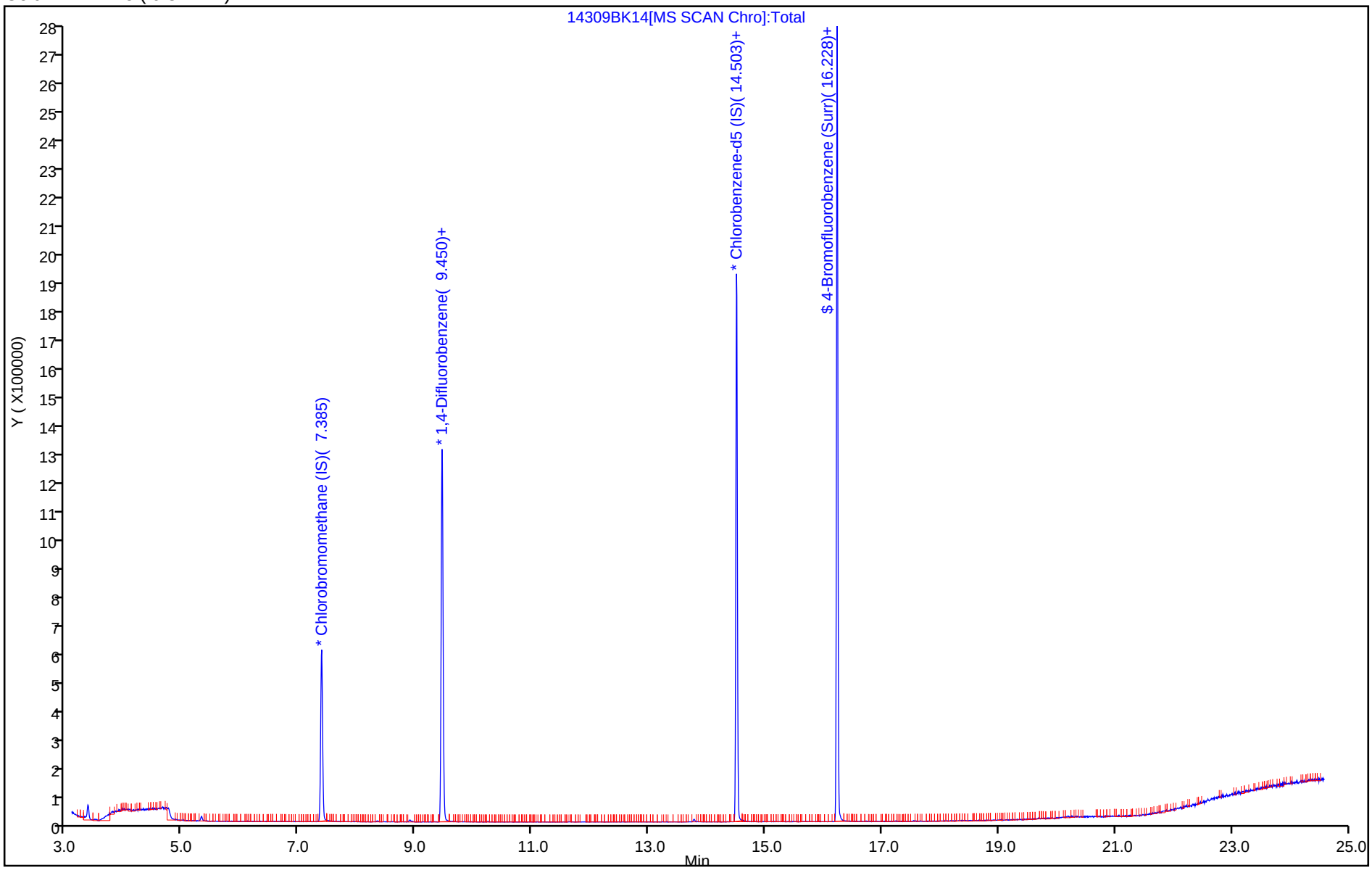
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 15:15:03 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK14.D				
Injection Date:	21-Feb-2019 02:30:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-14	Lab Sample ID:	140-14309-14	Worklist Smp#:	20
Client ID:	11961				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



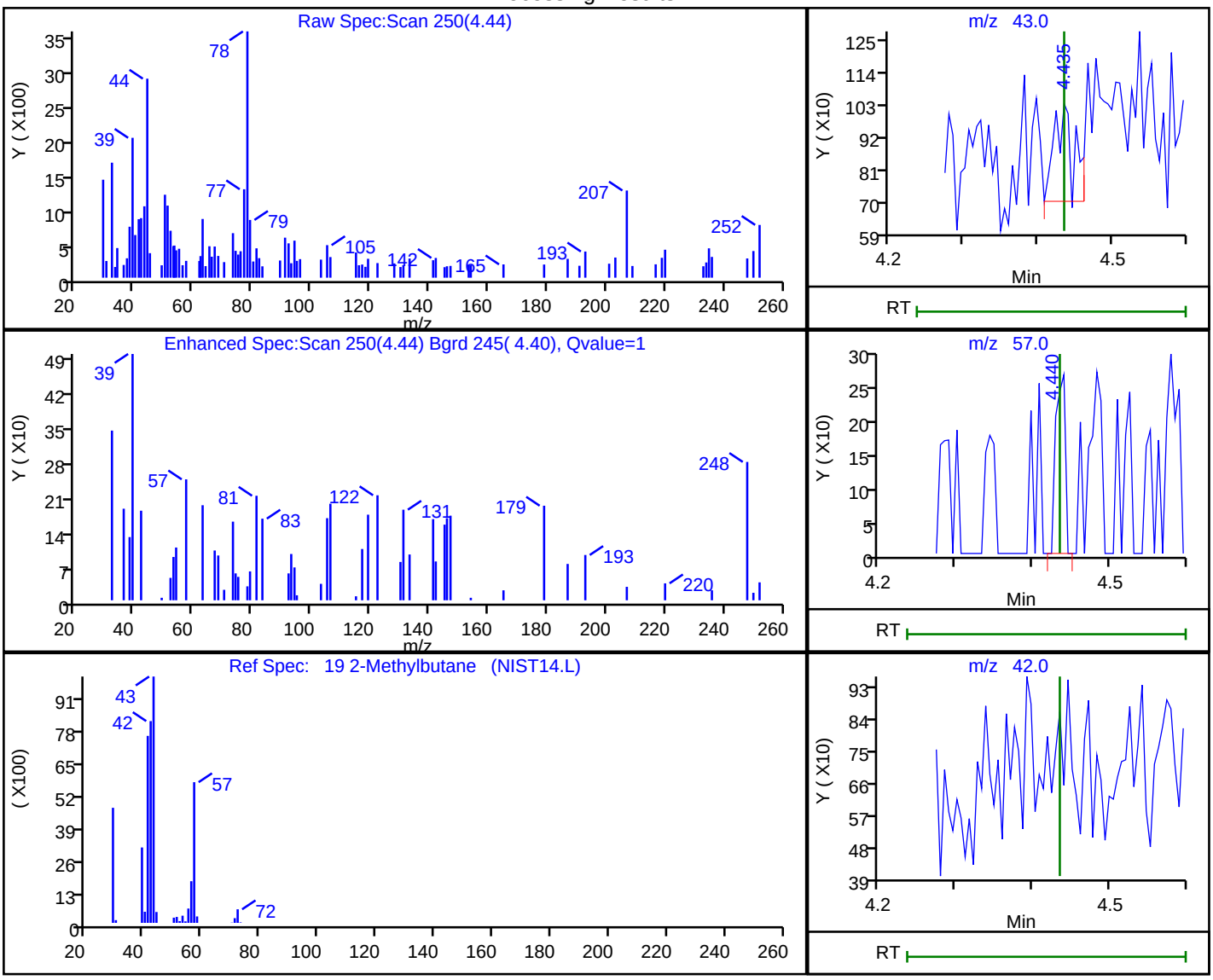
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK14.D				
Injection Date:	21-Feb-2019 02:30:30	Instrument ID:	MR		
Lims ID:	140-14309-A-14	Lab Sample ID:	140-14309-14		
Client ID:	11961				
Operator ID:	HMT	ALS Bottle#:	16	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.44	43.00	620	0.016012
4.44	57.00	232	
4.44	42.00	0	

Reviewer: khachitpongpanits, 21-Feb-2019 15:14:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

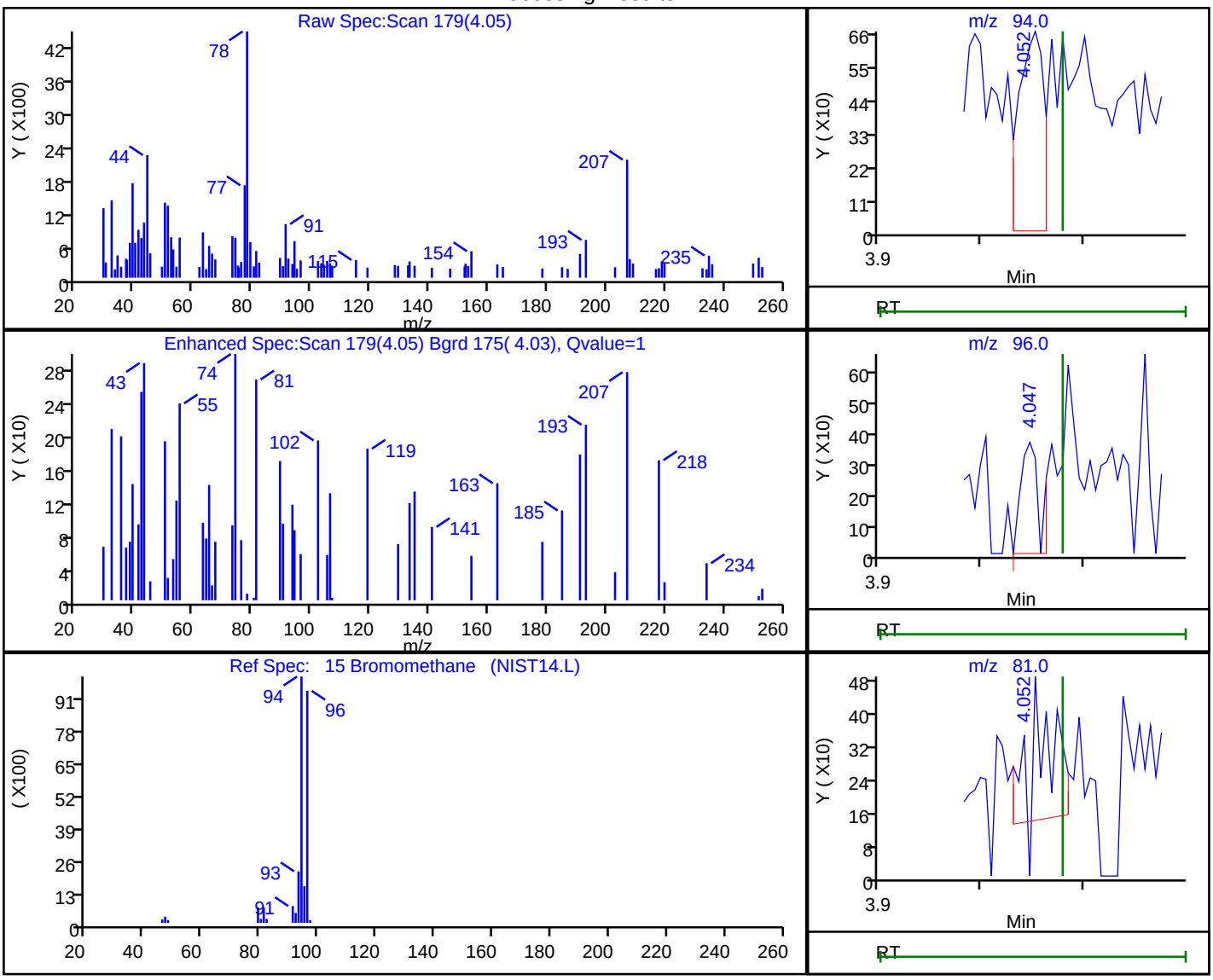
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK14.D				
Injection Date:	21-Feb-2019 02:30:30	Instrument ID:	MR		
Lims ID:	140-14309-A-14	Lab Sample ID:	140-14309-14		
Client ID:	11961				
Operator ID:	HMT	ALS Bottle#:	16	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.05	94.00	1148	0.019197
4.05	96.00	461	
4.05	81.00	524	

Reviewer: khachitpongpanits, 21-Feb-2019 15:14:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

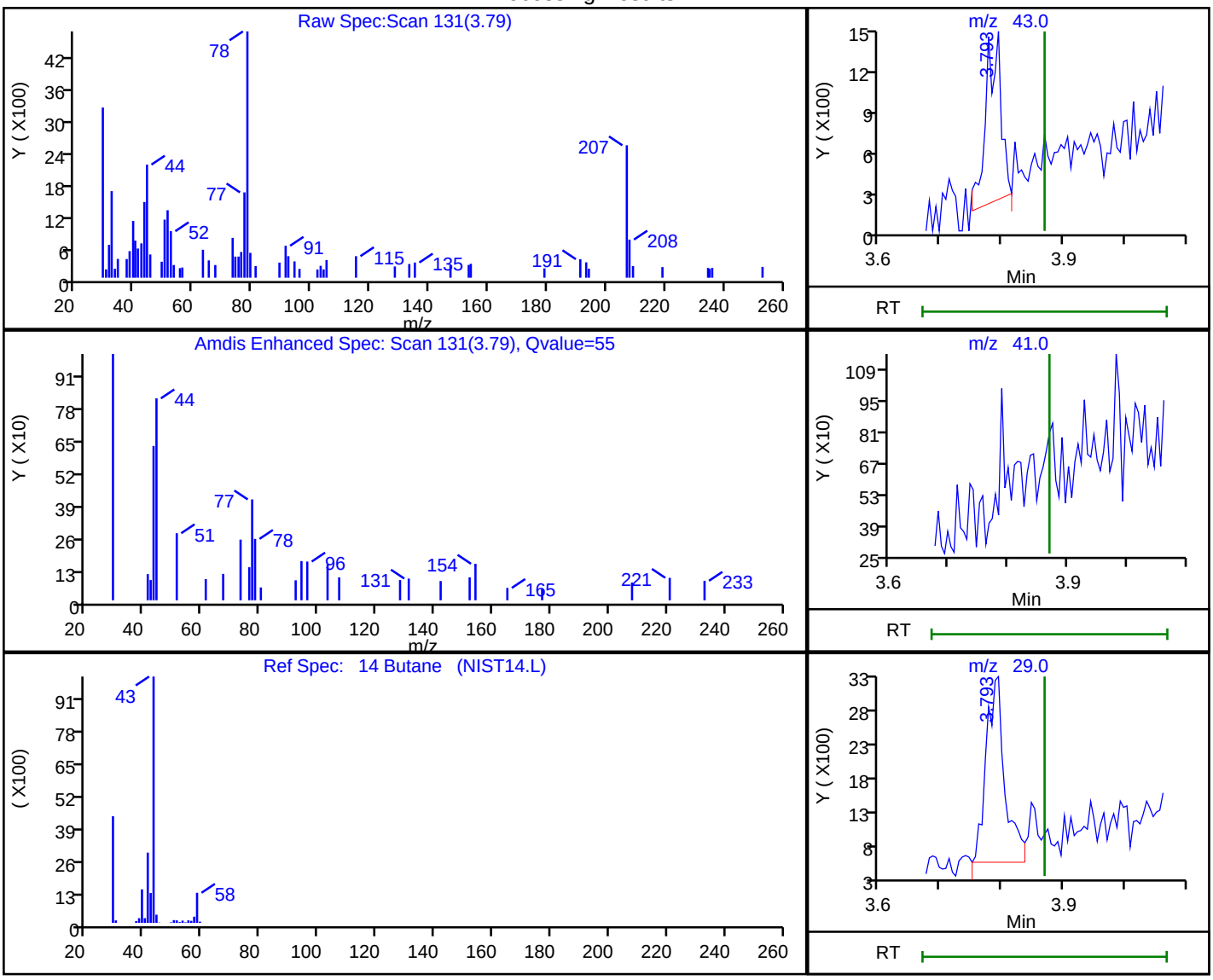
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK14.D				
Injection Date:	21-Feb-2019 02:30:30	Instrument ID:	MR		
Lims ID:	140-14309-A-14	Lab Sample ID:	140-14309-14		
Client ID:	11961				
Operator ID:	HMT	ALS Bottle#:	16	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	2063	0.037644
3.87	41.00	0	
3.79	29.00	5646	

Reviewer: khachitpongpanits, 21-Feb-2019 15:14:34

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10384 | Lab Sample ID: 140-14309-15

Matrix: Air | Lab File ID: 14309BK15.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 03:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10384
Lab Sample ID: 140-14309-15
Matrix: Air
Lab File ID: 14309BK15.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/21/2019 03:23
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27747
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 10384 | Lab Sample ID: 140-14309-15

Matrix: Air | Lab File ID: 14309BK15.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 03:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27747 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1
SDG No.:
Client Sample ID: 10384 Lab Sample ID: 140-14309-15
Matrix: Air Lab File ID: 14309BK15.D
Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) Date Analyzed: 02/21/2019 03:23
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27747 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK15.D				
Lims ID:	140-14309-A-15				
Client ID:	10384				
Sample Type:	Client				
Inject. Date:	21-Feb-2019 03:23:30	ALS Bottle#:	1	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010859-021				
Misc. Info.:	10384				
Operator ID:	HMT	Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Feb-2019 16:05:58	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0314				
First Level Reviewer: khachitpongpanits		Date:	21-Feb-2019 16:05:58		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.390	-0.005	70	196981	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1162413	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.508	-0.006	91	1018100	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.227	-0.006	89	868122	4.01	

Reagents:

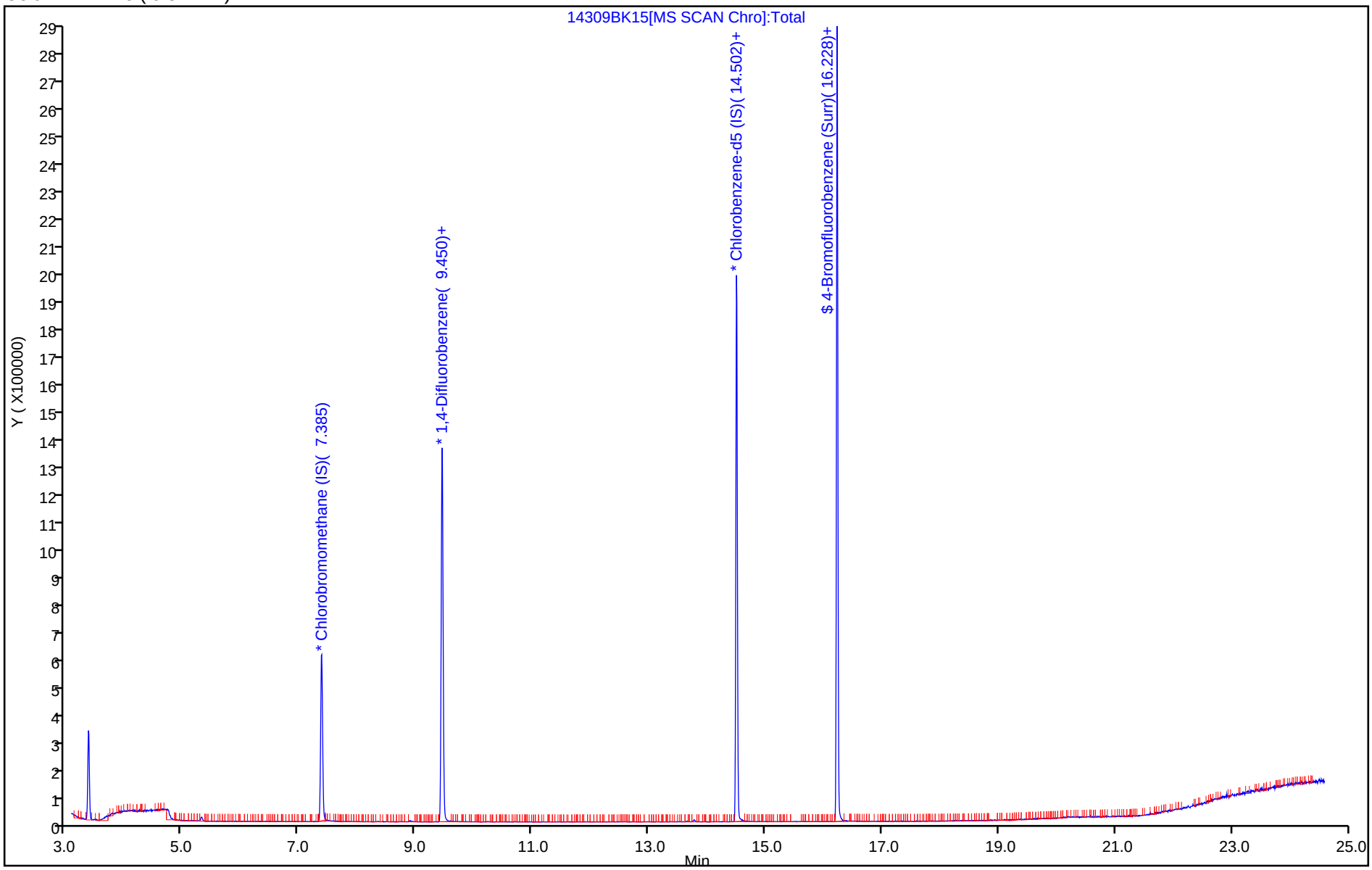
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 21-Feb-2019 16:05:59 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK15.D				
Injection Date:	21-Feb-2019 03:23:30	Instrument ID:	MR	Operator ID:	HMT
Lims ID:	140-14309-A-15	Lab Sample ID:	140-14309-15	Worklist Smp#:	21
Client ID:	10384				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



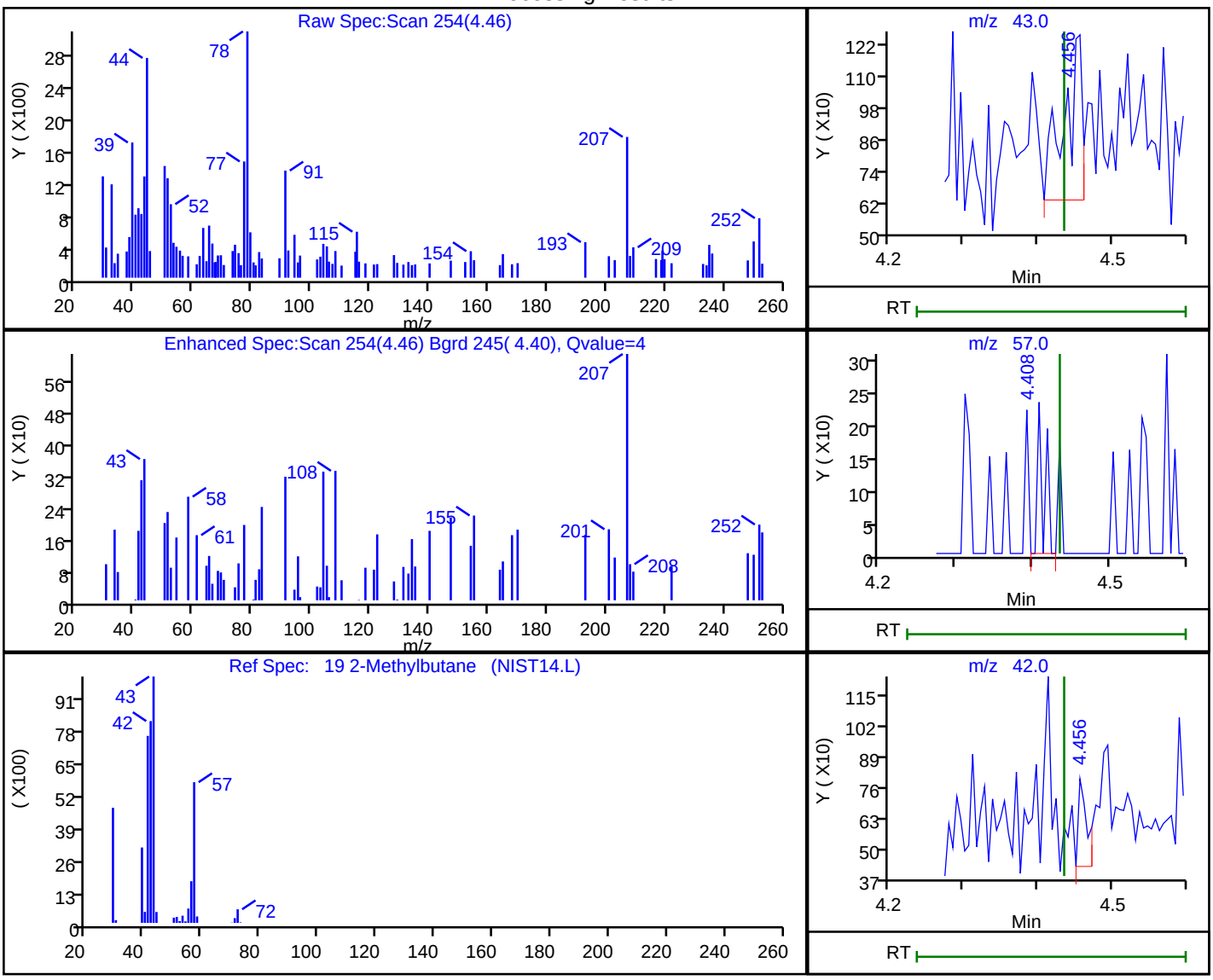
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK15.D				
Injection Date:	21-Feb-2019 03:23:30	Instrument ID:	MR		
Lims ID:	140-14309-A-15	Lab Sample ID:	140-14309-15		
Client ID:	10384				
Operator ID:	HMT	ALS Bottle#:	1	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.46	43.00	1047	0.026580
4.41	57.00	139	
4.46	42.00	303	

Reviewer: khachitpongpanits, 21-Feb-2019 16:05:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

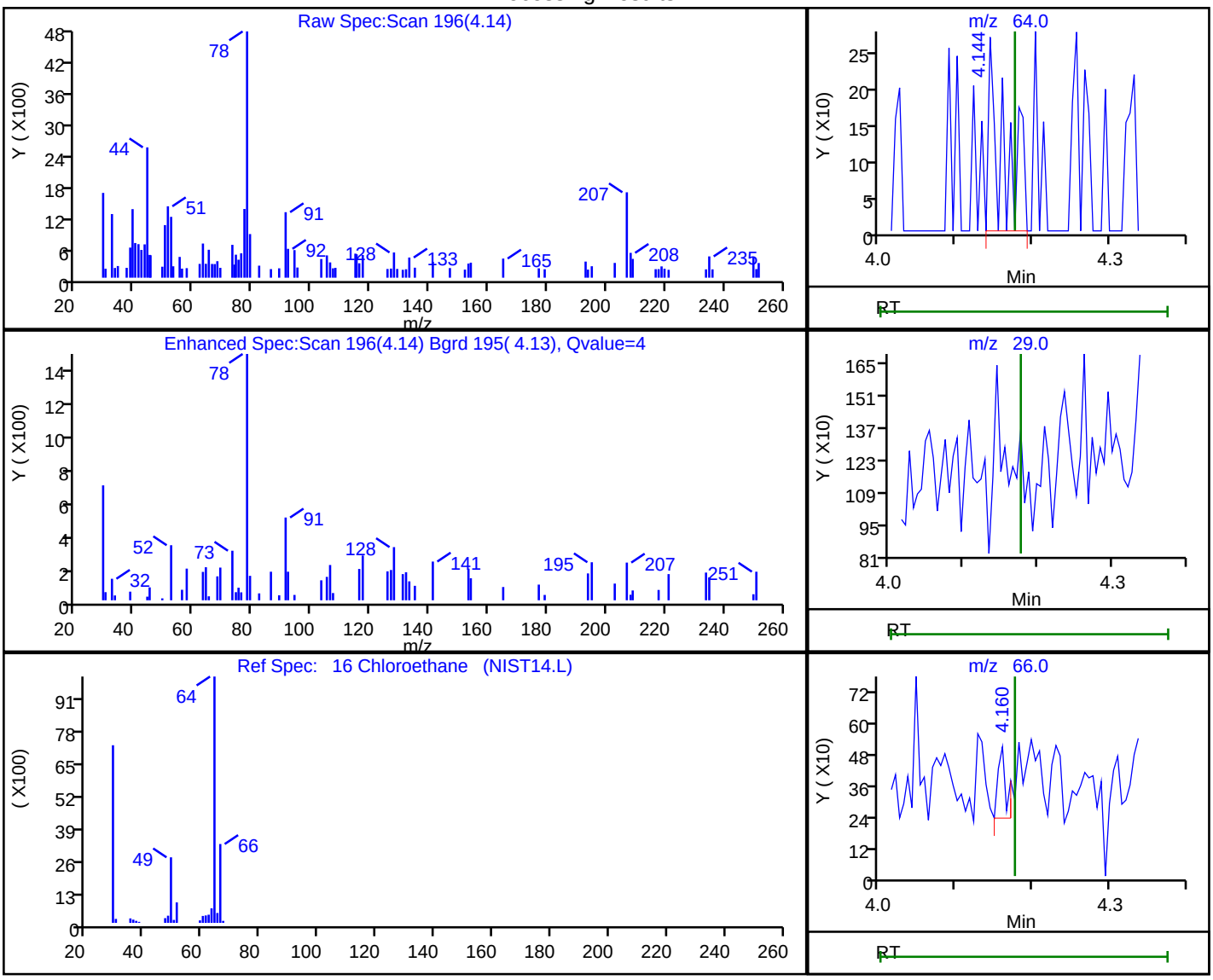
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK15.D				
Injection Date:	21-Feb-2019 03:23:30	Instrument ID:	MR		
Lims ID:	140-14309-A-15	Lab Sample ID:	140-14309-15		
Client ID:	10384				
Operator ID:	HMT	ALS Bottle#:	1	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.14	64.00	358	0.014628
4.18	29.00	0	
4.16	66.00	209	

Reviewer: khachitpongpanits, 21-Feb-2019 16:05:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

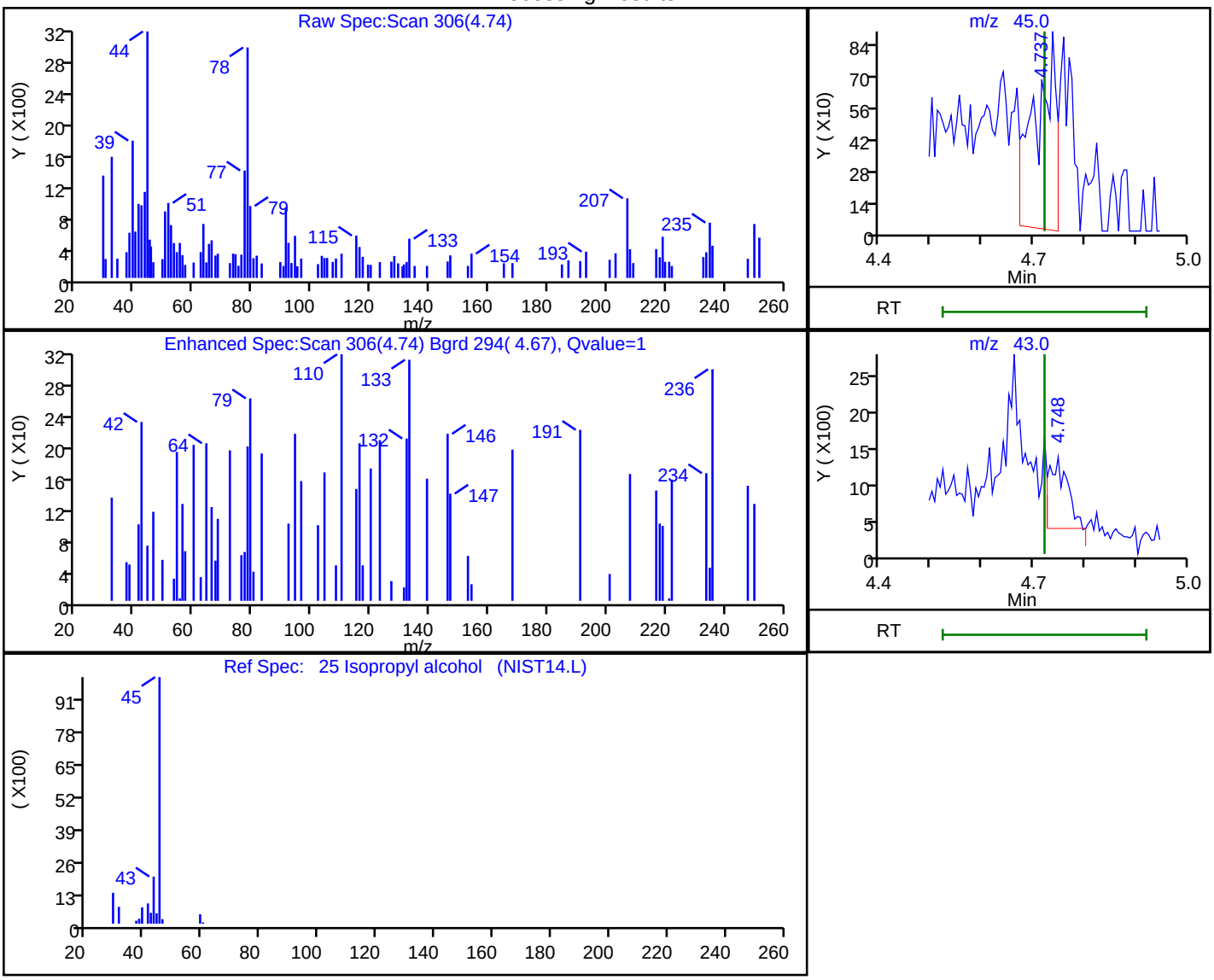
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10859.b\14309BK15.D				
Injection Date:	21-Feb-2019 03:23:30	Instrument ID:	MR		
Lims ID:	140-14309-A-15	Lab Sample ID:	140-14309-15		
Client ID:	10384				
Operator ID:	HMT	ALS Bottle#:	1	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

25 Isopropyl alcohol, CAS: 67-63-0

Processing Results



RT	Mass	Response	Amount
4.74	45.00	2549	0.045743
4.75	43.00	2454	

Reviewer: khachitpongpanits, 21-Feb-2019 16:05:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 11172 | Lab Sample ID: 140-14309-16

Matrix: Air | Lab File ID: 14309BK16R.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27748 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-14309-1

SDG No.:

Client Sample ID: 11172 | Lab Sample ID: 140-14309-16

Matrix: Air | Lab File ID: 14309BK16R.D

Analysis Method: TO 15 LL | Date Collected: 02/18/2019 13:00

Sample wt/vol: 500(mL) | Date Analyzed: 02/21/2019 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 27748 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville
Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11172
Lab Sample ID: 140-14309-16
Matrix: Air
Lab File ID: 14309BK16R.D
Analysis Method: TO 15 LL
Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL)
Date Analyzed: 02/21/2019 11:53
Soil Aliquot Vol:
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-5 ID: 0.32(mm)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 27748
Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-14309-1
SDG No.:
Client Sample ID: 11172 Lab Sample ID: 140-14309-16
Matrix: Air Lab File ID: 14309BK16R.D
Analysis Method: TO 15 LL Date Collected: 02/18/2019 13:00
Sample wt/vol: 500(mL) Date Analyzed: 02/21/2019 11:53
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 27748 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10860.b\14309BK16R.D				
Lims ID:	140-14309-A-16				
Client ID:	11172				
Sample Type:	Client				
Inject. Date:	21-Feb-2019 11:53:30	ALS Bottle#:	7	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0010860-004				
Misc. Info.:	11172				
Operator ID:		Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190218-10860.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	22-Feb-2019 10:57:59	Calib Date:	17-Nov-2018 03:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0313				
First Level Reviewer: khachitpongpanits		Date:	22-Feb-2019 11:01:09		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.385	-0.001	70	213392	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.455	-0.005	95	1269183	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	91	1111038	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	931043	3.94	
110 Dodecane	57	20.089	20.094	-0.005	87	6969	0.0315	

Reagents:

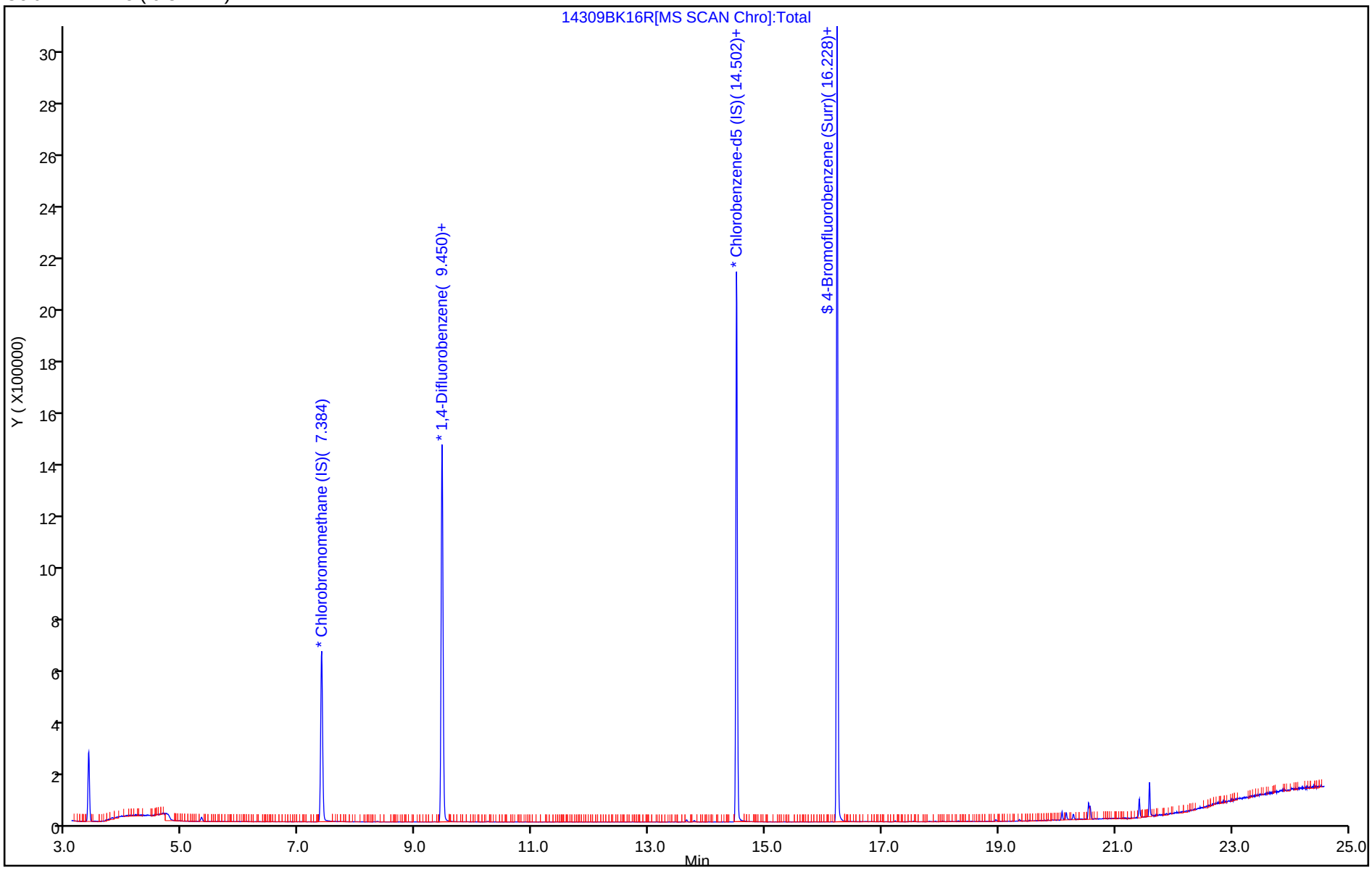
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 22-Feb-2019 11:01:10 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10860.b\14309BK16R.D				
Injection Date:	21-Feb-2019 11:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-14309-A-16	Lab Sample ID:	140-14309-16	Worklist Smp#:	4
Client ID:	11172				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



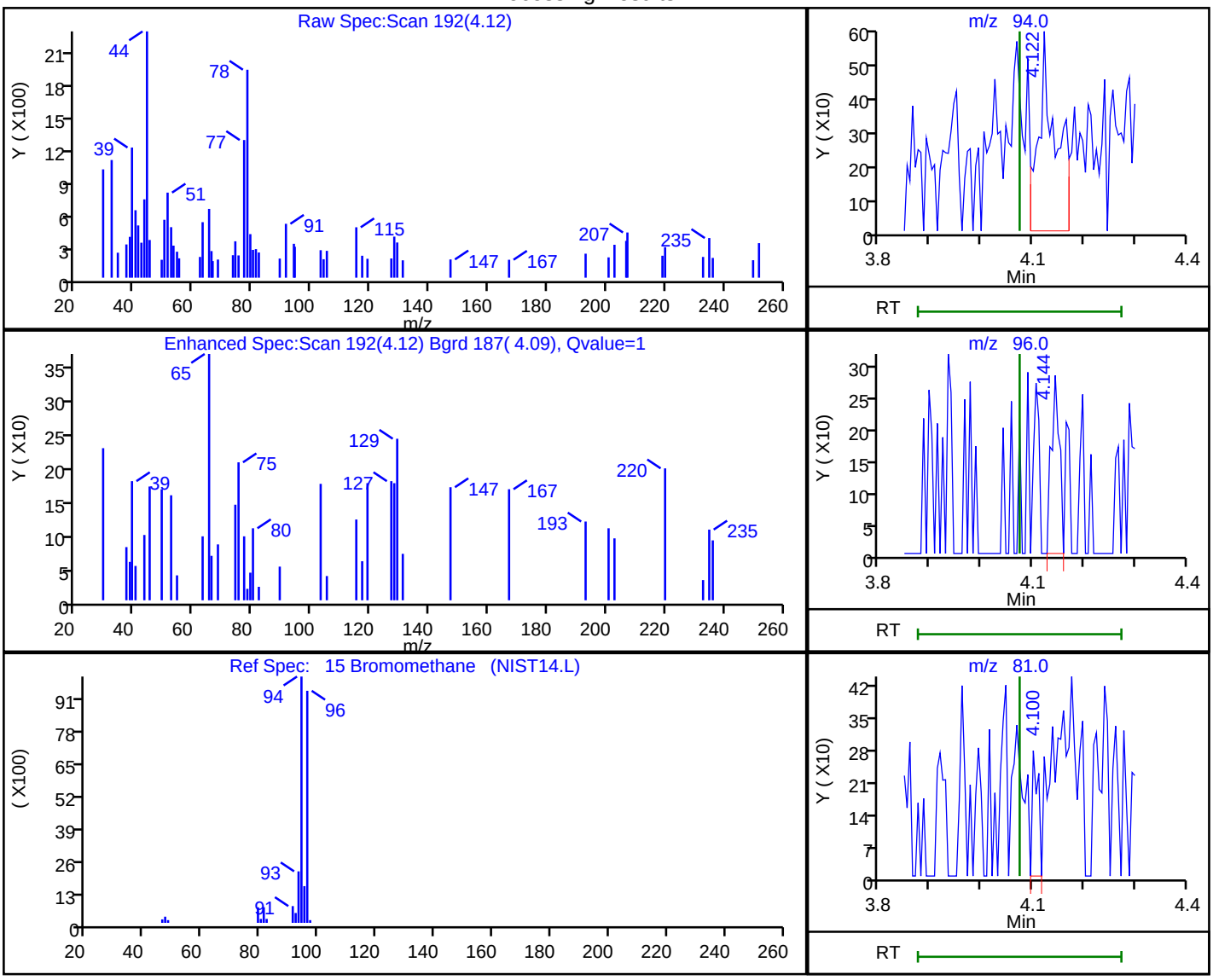
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190218-10860.b\14309BK16R.D				
Injection Date:	21-Feb-2019 11:53:30	Instrument ID:	MR		
Lims ID:	140-14309-A-16	Lab Sample ID:	140-14309-16		
Client ID:	11172				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.12	94.00	1396	0.021182
4.14	96.00	313	
4.10	81.00	221	

Reviewer: tajh, 21-Feb-2019 12:34:22

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-14803-1

SDG No.:

Client Sample ID: 11127 Lab Sample ID: 140-14803-1

Matrix: Air Lab File ID: D01L14803.D

Analysis Method: TO-15 Date Collected: 03/30/2019 13:30

Sample wt/vol: 200(mL) Date Analyzed: 04/01/2019 11:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 28826 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND	*	2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-14803-1

SDG No.:

Client Sample ID: 11127 Lab Sample ID: 140-14803-1

Matrix: Air Lab File ID: D01L14803.D

Analysis Method: TO-15 Date Collected: 03/30/2019 13:30

Sample wt/vol: 200(mL) Date Analyzed: 04/01/2019 11:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 28826 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-14803-1

SDG No.:

Client Sample ID: 11127 Lab Sample ID: 140-14803-1

Matrix: Air Lab File ID: D01L14803.D

Analysis Method: TO-15 Date Collected: 03/30/2019 13:30

Sample wt/vol: 200(mL) Date Analyzed: 04/01/2019 11:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 28826 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190329-11281.b\D01L14803.D				
Lims ID:	140-14803-A-1				
Client ID:	11127				
Sample Type:	Client				
Inject. Date:	01-Apr-2019 11:24:30	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0011281-005				
Misc. Info.:	11127				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\chromna\Knoxville\ChromData\MG\20190329-11281.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	02-Apr-2019 10:13:12	Calib Date:	11-Jan-2019 21:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0338				
First Level Reviewer: khachitpongpanits		Date:	02-Apr-2019 10:14:37		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.199	9.205	-0.006	95	267893	4.00	
* 2 1,4-Difluorobenzene	114	11.373	11.378	-0.005	97	1767351	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.059	16.059	0.000	93	1651174	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.687	17.687	0.000	80	1351142	3.99	
33 Carbon disulfide	76	6.746	6.746	0.000	99	12347	0.0430	

Reagents:

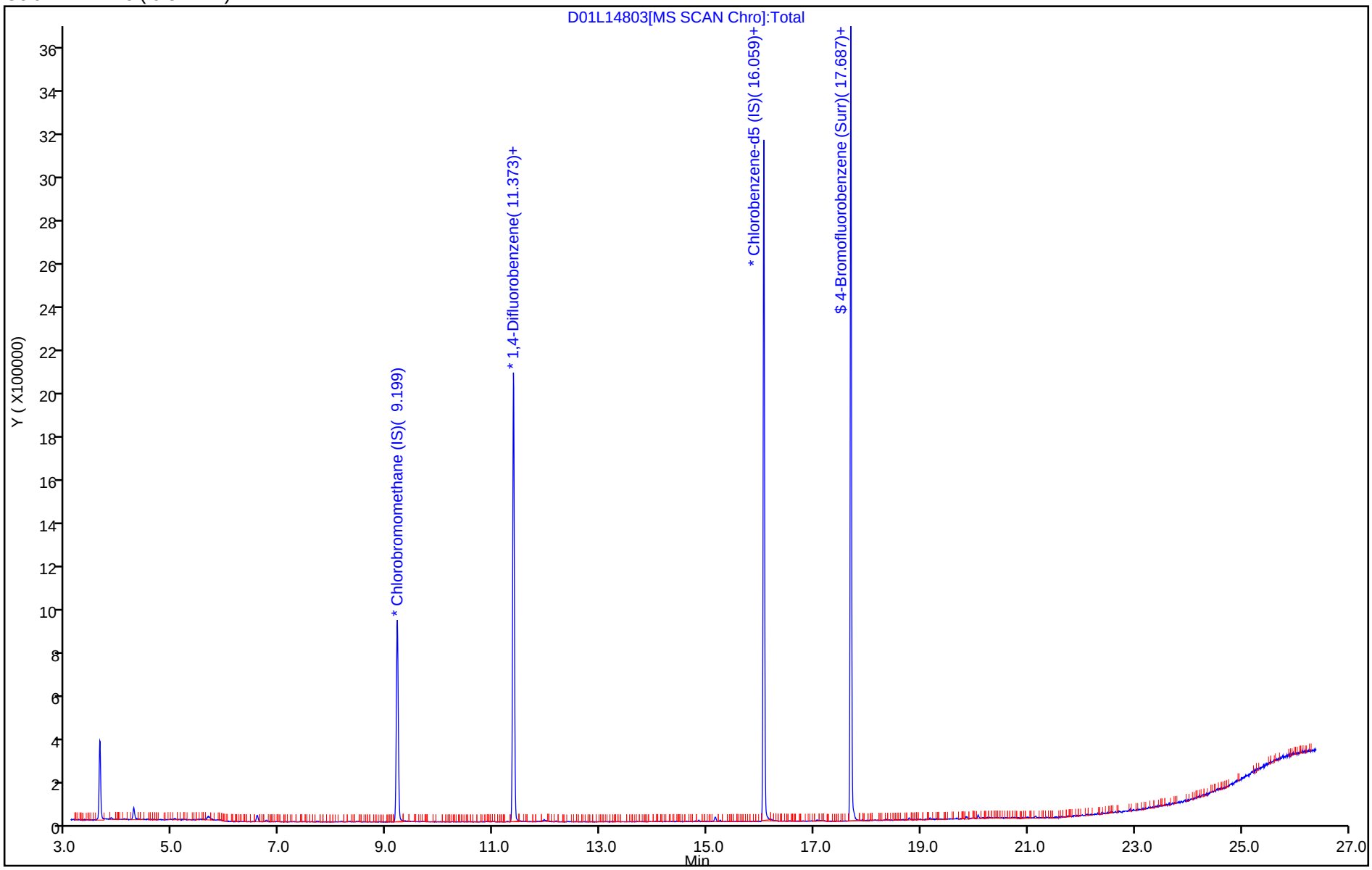
40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 02-Apr-2019 10:14:37 Chrom Revision: 2.3 24-Mar-2019 20:11:04

TestAmerica Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190329-11281.b\D01L14803.D				
Injection Date:	01-Apr-2019 11:24:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-14803-A-1	Lab Sample ID:	140-14803-1	Worklist Smp#:	5
Client ID:	11127				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



5/9/2019

Memorandum

November 18, 2019

To:	Chuck Ahrens, GHD	Ref. No.:	003978-20
From:	Grant Anderson/sb/20	Tel:	(651) 639-0913

Subject: **Analytical Results and Reduced Data Validation**
Air Sampling Event
Wausau Superfund Site – Wausau, Wisconsin
September 2019

1. Introduction

The following document details a reduced validation of analytical results for air samples collected in support of the air monitoring program at the Wausau Superfund Site in Wausau, Wisconsin in September 2019. Samples were submitted to Eurofins TestAmerica (TestAmerica) located in Knoxville, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services, Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS) samples, and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled:

i) "National Functional Guidelines for Organic Superfund Methods Data Review," EPA-540-R-2017-002, January 2017

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were analyzed within the required holding times.

All air samples were collected in summa canisters and delivered at room temperature.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5. Laboratory Control Sample (LCS) Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. The LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Field QA/QC Samples

The field QA/QC consisted of a field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, a field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The relative percent difference (RPD) associated with the duplicate sample results must be less than 50 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
September 2019

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
IA-190924-RA-01	200 E Wausau Ave - Showroom	air	09/25/2019	16:48	Select VOCs	
IA-190924-RA-02	2103 N 3rd St	air	09/25/2019	17:35	Select VOCs	
OA-190924-RA-01	Outdoor Air near 2103 N 3rd St	air	09/25/2019	17:35	Select VOCs	
SS-190925-RA-01	200 E Wausau Ave - Showroom	air	09/25/2019	17:08	Select VOCs	
SS-190925-RA-02	200 E Wausau Ave - South Storage	air	09/25/2019	17:29	Select VOCs	
SS-190925-RA-03	200 E Wausau Ave - South Storage	air	09/25/2019	17:29	Select VOCs	duplicate
SS-190925-RA-04	2103 N 3rd St	air	09/25/2019	17:55	Select VOCs	

Notes:

VOC - Volatile Organic Compounds
Select VOCs - cis-1,2-dichlorothene, tetrachloroethene, trichloroethene, vinyl chloride

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
September 2019

Location ID:		**200 E Wausau Ave - Showroom**	**200 E Wausau Ave - Showroom**	**200 E Wausau Ave - Showroom**	**200 E Wausau Ave - Showroom**
Sample Name:		**IA-190924-RA-01**	**SS-190925-RA-01**	**SS-190925-RA-02**	**SS-190925-RA-03**
Sample Date:		**09/25/2019**	**09/25/2019**	**09/25/2019**	**09/25/2019**
					Duplicate
Parameters	**Unit**				
Volatile Organic Compounds					
cis-1,2-Dichloroethene	ppbv	0.080 U	0.80 U	0.27 J	0.27 J
Tetrachloroethene	ppbv	0.32	170	35	33
Trichloroethene	ppbv	0.016 J	6.8	2.0	1.9
Vinyl chloride	ppbv	0.040 U	0.40 U	0.40 U	0.40 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	3.2 U	1.1 J	1.1 J
Tetrachloroethene	µg/m3	2.2	1100	240	220
Trichloroethene	µg/m3	0.088 J	37	11	10
Vinyl chloride	µg/m3	0.10 U	1.0 U	1.0 U	1.0 U

Table 2

Validated Analytical Results Summary
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
September 2019

Location ID:		**2103 N 3rd St**	**2103 N 3rd St**	**Outdoor Air near 2103 N 3rd St**
Sample Name:		**IA-190924-RA-02**	**SS-190925-RA-04**	**OA-190924-RA-01**
Sample Date:		**09/25/2019**	**09/25/2019**	**09/25/2019**
Parameters	**Unit**			
Volatile Organic Compounds				
cis-1,2-Dichloroethene	ppbv	0.080 U	0.80 U	0.080 U
Tetrachloroethene	ppbv	0.10	0.16 J	0.038 J
Trichloroethene	ppbv	0.0072 J	0.40 U	0.040 U
Vinyl chloride	ppbv	0.040 U	0.40 U	0.040 U
cis-1,2-Dichloroethene	µg/m3	0.32 U	3.2 U	0.32 U
Tetrachloroethene	µg/m3	0.69	1.1 J	0.26 J
Trichloroethene	µg/m3	0.039 J	2.1 U	0.21 U
Vinyl chloride	µg/m3	0.10 U	1.0 U	0.10 U

Note:

U - Not detected at the associated reporting limit
J - Estimated concentration

Table 3

Analytical Method and Holding Time Criteria
Air Sampling Event
Wausau Superfund Site
Wausau, Wisconsin
September 2019

			Holding Time	
Parameter	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Volatile Organic Compounds (VOC)	TO-15	Air	-	30

Notes:

- -

Method References:

TO-15 - "Compendium of Methods for the Determination of Toxic Organic Compounds in Air", EPA 625/R 96/010b, January 1999.

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ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-16803-1
Client Project/Site: Wausau Vapor Sampling

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Diane Lange

Authorized for release by:
10/11/2019 2:57:31 PM
Diana Lange, Project Management Assistant II
diane.lange@testamericainc.com

Designee for

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 140-16803-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative
140-16803-1

Comments
No additional comments.

Receipt
The samples were received on 9/30/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): IA-190924-RA-02 (140-16803-2). The container labels has no ID, while the COC lists IA-190924-RA-02. The sample was matched by the canister asset number.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by Eurofins TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: IA-190924-RA-01 — Lab Sample ID: 140-16803-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.32		0.080	0.0070	ppb v/v	1.53		TO 15 LL	Total/NA
Trichloroethene	0.016	J	0.040	0.0060	ppb v/v	1.53		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.2		0.54	0.047	ug/m3	1.53		TO 15 LL	Total/NA
Trichloroethene	0.088	J	0.21	0.032	ug/m3	1.53		TO 15 LL	Total/NA

Client Sample ID: IA-190924-RA-02 — Lab Sample ID: 140-16803-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.10		0.080	0.0070	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.0072	J	0.040	0.0060	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.69		0.54	0.047	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.039	J	0.21	0.032	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: OA-190924-RA-01 — Lab Sample ID: 140-16803-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.038	J	0.080	0.0070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.26	J	0.54	0.047	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-190925-RA-01 — Lab Sample ID: 140-16803-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	200	E	0.80	0.070	ppb v/v	1.75		TO 15 LL	Total/NA
Trichloroethene	6.8		0.40	0.060	ppb v/v	1.75		TO 15 LL	Total/NA
Tetrachloroethene - DL	170		2.3	0.20	ppb v/v	1.75		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1400	E	5.4	0.47	ug/m3	1.75		TO 15 LL	Total/NA
Trichloroethene	37		2.1	0.32	ug/m3	1.75		TO 15 LL	Total/NA
Tetrachloroethene - DL	1100		16	1.4	ug/m3	1.75		TO 15 LL	Total/NA

Client Sample ID: SS-190925-RA-02 — Lab Sample ID: 140-16803-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.27	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	35		0.80	0.070	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.0		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1	J	3.2	0.40	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	240		5.4	0.47	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	11		2.1	0.32	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-190925-RA-03 — Lab Sample ID: 140-16803-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.27	J	0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	33		0.80	0.070	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.9		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1	J	3.2	0.40	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: SS-190925-RA-03 (Continued) — Lab Sample ID: 140-16803-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	220		5.4	0.47	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	10		2.1	0.32	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SS-190925-RA-04 — Lab Sample ID: 140-16803-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.16	J	0.80	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.1	J	5.4	0.47	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: IA-190924-RA-01

Lab Sample ID: 140-16803-1
Matrix: Air

Date Collected: 09/25/19 16:48
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.010	ppb v/v			10/01/19 20:18	1.53
Tetrachloroethene	**0.32**		0.080	0.0070	ppb v/v			10/01/19 20:18	1.53
Trichloroethene	**0.016**	**J**	0.040	0.0060	ppb v/v			10/01/19 20:18	1.53
Vinyl chloride	ND		0.040	0.026	ppb v/v			10/01/19 20:18	1.53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.040	ug/m3			10/01/19 20:18	1.53
Tetrachloroethene	**2.2**		0.54	0.047	ug/m3			10/01/19 20:18	1.53
Trichloroethene	**0.088**	**J**	0.21	0.032	ug/m3			10/01/19 20:18	1.53
Vinyl chloride	ND		0.10	0.066	ug/m3			10/01/19 20:18	1.53

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*10/01/19 20:18*	*1.53*

Client Sample ID: IA-190924-RA-02

Lab Sample ID: 140-16803-2
Matrix: Air

Date Collected: 09/25/19 17:35
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.010	ppb v/v			10/01/19 21:22	1
Tetrachloroethene	**0.10**		0.080	0.0070	ppb v/v			10/01/19 21:22	1
Trichloroethene	**0.0072**	**J**	0.040	0.0060	ppb v/v			10/01/19 21:22	1
Vinyl chloride	ND		0.040	0.026	ppb v/v			10/01/19 21:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.040	ug/m3			10/01/19 21:22	1
Tetrachloroethene	**0.69**		0.54	0.047	ug/m3			10/01/19 21:22	1
Trichloroethene	**0.039**	**J**	0.21	0.032	ug/m3			10/01/19 21:22	1
Vinyl chloride	ND		0.10	0.066	ug/m3			10/01/19 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*10/01/19 21:22*	*1*

Client Sample ID: OA-190924-RA-01

Lab Sample ID: 140-16803-3
Matrix: Air

Date Collected: 09/25/19 17:35
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.010	ppb v/v			10/01/19 22:24	1
Tetrachloroethene	**0.038**	**J**	0.080	0.0070	ppb v/v			10/01/19 22:24	1
Trichloroethene	ND		0.040	0.0060	ppb v/v			10/01/19 22:24	1
Vinyl chloride	ND		0.040	0.026	ppb v/v			10/01/19 22:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.040	ug/m3			10/01/19 22:24	1
Tetrachloroethene	**0.26**	**J**	0.54	0.047	ug/m3			10/01/19 22:24	1
Trichloroethene	ND		0.21	0.032	ug/m3			10/01/19 22:24	1
Vinyl chloride	ND		0.10	0.066	ug/m3			10/01/19 22:24	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: OA-190924-RA-01

Lab Sample ID: 140-16803-3
Matrix: Air

Date Collected: 09/25/19 17:35
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 6L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140		10/01/19 22:24	1

Client Sample ID: SS-190925-RA-01

Lab Sample ID: 140-16803-4
Matrix: Air

Date Collected: 09/25/19 17:08
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.10	ppb v/v			10/01/19 23:17	1.75
Tetrachloroethene	**200**	**E**	0.80	0.070	ppb v/v			10/01/19 23:17	1.75
Trichloroethene	**6.8**		0.40	0.060	ppb v/v			10/01/19 23:17	1.75
Vinyl chloride	ND		0.40	0.26	ppb v/v			10/01/19 23:17	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.40	ug/m3			10/01/19 23:17	1.75
Tetrachloroethene	**1400**	**E**	5.4	0.47	ug/m3			10/01/19 23:17	1.75
Trichloroethene	**37**		2.1	0.32	ug/m3			10/01/19 23:17	1.75
Vinyl chloride	ND		1.0	0.66	ug/m3			10/01/19 23:17	1.75

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140		10/01/19 23:17	1.75

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**170**		2.3	0.20	ppb v/v			10/03/19 05:50	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**1100**		16	1.4	ug/m3			10/03/19 05:50	1.75

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		60 - 140		10/03/19 05:50	1.75

Client Sample ID: SS-190925-RA-02

Lab Sample ID: 140-16803-5
Matrix: Air

Date Collected: 09/25/19 17:29
Date Received: 09/30/19 10:00
Sample Container: Flow Controller

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.27**	**J**	0.80	0.10	ppb v/v			10/02/19 00:10	1
Tetrachloroethene	**35**		0.80	0.070	ppb v/v			10/02/19 00:10	1
Trichloroethene	**2.0**		0.40	0.060	ppb v/v			10/02/19 00:10	1
Vinyl chloride	ND		0.40	0.26	ppb v/v			10/02/19 00:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.1**	**J**	3.2	0.40	ug/m3			10/02/19 00:10	1
Tetrachloroethene	**240**		5.4	0.47	ug/m3			10/02/19 00:10	1
Trichloroethene	**11**		2.1	0.32	ug/m3			10/02/19 00:10	1
Vinyl chloride	ND		1.0	0.66	ug/m3			10/02/19 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140		10/02/19 00:10	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: SS-190925-RA-03

Lab Sample ID: 140-16803-6

Date Collected: 09/25/19 17:29
Matrix: Air
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.27**	**J**	0.80	0.10	ppb v/v			10/02/19 01:02	1
Tetrachloroethene	**33**		0.80	0.070	ppb v/v			10/02/19 01:02	1
Trichloroethene	**1.9**		0.40	0.060	ppb v/v			10/02/19 01:02	1
Vinyl chloride	ND		0.40	0.26	ppb v/v			10/02/19 01:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.1**	**J**	3.2	0.40	ug/m3			10/02/19 01:02	1
Tetrachloroethene	**220**		5.4	0.47	ug/m3			10/02/19 01:02	1
Trichloroethene	**10**		2.1	0.32	ug/m3			10/02/19 01:02	1
Vinyl chloride	ND		1.0	0.66	ug/m3			10/02/19 01:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*10/02/19 01:02*	*1*

Client Sample ID: SS-190925-RA-04

Lab Sample ID: 140-16803-7

Date Collected: 09/25/19 17:55
Matrix: Air
Date Received: 09/30/19 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.80	0.10	ppb v/v			10/02/19 01:56	1
Tetrachloroethene	**0.16**	**J**	0.80	0.070	ppb v/v			10/02/19 01:56	1
Trichloroethene	ND		0.40	0.060	ppb v/v			10/02/19 01:56	1
Vinyl chloride	ND		0.40	0.26	ppb v/v			10/02/19 01:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		3.2	0.40	ug/m3			10/02/19 01:56	1
Tetrachloroethene	**1.1**	**J**	5.4	0.47	ug/m3			10/02/19 01:56	1
Trichloroethene	ND		2.1	0.32	ug/m3			10/02/19 01:56	1
Vinyl chloride	ND		1.0	0.66	ug/m3			10/02/19 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*10/02/19 01:56*	*1*

Default Detection Limits

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units
cis-1,2-Dichloroethene	0.080	0.010	ppb v/v
cis-1,2-Dichloroethene	0.32	0.040	ug/m3
Tetrachloroethene	0.080	0.0070	ppb v/v
Tetrachloroethene	0.54	0.047	ug/m3
Trichloroethene	0.040	0.0060	ppb v/v
Trichloroethene	0.21	0.032	ug/m3
Vinyl chloride	0.040	0.026	ppb v/v
Vinyl chloride	0.10	0.066	ug/m3

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**							
140-16803-1	IA-190924-RA-01	105							
140-16803-2	IA-190924-RA-02	109							
140-16803-3	OA-190924-RA-01	100							
140-16803-4	SS-190925-RA-01	98							
140-16803-4 - DL	SS-190925-RA-01	92							
140-16803-5	SS-190925-RA-02	96							
140-16803-6	SS-190925-RA-03	95							
140-16803-7	SS-190925-RA-04	97							
LCS 140-33983/1002	Lab Control Sample	101							
LCS 140-33984/1002	Lab Control Sample	101							
MB 140-33983/4	Method Blank	93							
MB 140-33984/4	Method Blank	91							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-33983/4
Matrix: Air
Analysis Batch: 33983

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.010	ppb v/v			10/01/19 12:36	1
Tetrachloroethene	ND		0.080	0.0070	ppb v/v			10/01/19 12:36	1
Trichloroethene	ND		0.040	0.0060	ppb v/v			10/01/19 12:36	1
Vinyl chloride	ND		0.040	0.026	ppb v/v			10/01/19 12:36	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.040	ug/m3			10/01/19 12:36	1
Tetrachloroethene	ND		0.54	0.047	ug/m3			10/01/19 12:36	1
Trichloroethene	ND		0.21	0.032	ug/m3			10/01/19 12:36	1
Vinyl chloride	ND		0.10	0.066	ug/m3			10/01/19 12:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*10/01/19 12:36*	*1*

Lab Sample ID: LCS 140-33983/1002
Matrix: Air
Analysis Batch: 33983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	1.00	1.06		ppb v/v		106	70 - 130
Tetrachloroethene	1.00	1.09		ppb v/v		109	70 - 130
Trichloroethene	1.00	1.07		ppb v/v		107	70 - 130
Vinyl chloride	1.00	1.19		ppb v/v		119	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	4.0	4.22		ug/m3		106	70 - 130
Tetrachloroethene	6.8	7.38		ug/m3		109	70 - 130
Trichloroethene	5.4	5.77		ug/m3		107	70 - 130
Vinyl chloride	2.6	3.04		ug/m3		119	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*

Lab Sample ID: MB 140-33984/4
Matrix: Air
Analysis Batch: 33984

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.080	0.010	ppb v/v			10/02/19 14:21	1
Tetrachloroethene	ND		0.080	0.0070	ppb v/v			10/02/19 14:21	1
Trichloroethene	ND		0.040	0.0060	ppb v/v			10/02/19 14:21	1
Vinyl chloride	ND		0.040	0.026	ppb v/v			10/02/19 14:21	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.32	0.040	ug/m3			10/02/19 14:21	1
Tetrachloroethene	ND		0.54	0.047	ug/m3			10/02/19 14:21	1
Trichloroethene	ND		0.21	0.032	ug/m3			10/02/19 14:21	1
Vinyl chloride	ND		0.10	0.066	ug/m3			10/02/19 14:21	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		60 - 140		10/02/19 14:21	1

Lab Sample ID: LCS 140-33984/1002
Matrix: Air
Analysis Batch: 33984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	2.00	1.67		ppb v/v		84	70 - 130
Tetrachloroethene	2.00	1.76		ppb v/v		88	70 - 130
Trichloroethene	2.00	1.73		ppb v/v		87	70 - 130
Vinyl chloride	2.00	1.92		ppb v/v		96	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	7.9	6.64		ug/m3		84	70 - 130
Tetrachloroethene	14	11.9		ug/m3		88	70 - 130
Trichloroethene	11	9.32		ug/m3		87	70 - 130
Vinyl chloride	5.1	4.90		ug/m3		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		60 - 140

QC Association Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Air - GC/MS VOA

Analysis Batch: 33983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-16803-1	IA-190924-RA-01	Total/NA	Air	TO 15 LL	
140-16803-2	IA-190924-RA-02	Total/NA	Air	TO 15 LL	
140-16803-3	OA-190924-RA-01	Total/NA	Air	TO 15 LL	
140-16803-4	SS-190925-RA-01	Total/NA	Air	TO 15 LL	
140-16803-5	SS-190925-RA-02	Total/NA	Air	TO 15 LL	
140-16803-6	SS-190925-RA-03	Total/NA	Air	TO 15 LL	
140-16803-7	SS-190925-RA-04	Total/NA	Air	TO 15 LL	
MB 140-33983/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-33983/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 33984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-16803-4 - DL	SS-190925-RA-01	Total/NA	Air	TO 15 LL	
MB 140-33984/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-33984/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: IA-190924-RA-01 — Lab Sample ID: 140-16803-1

Date Collected: 09/25/19 16:48
Date Received: 09/30/19 10:00
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.53	765 mL	500 mL	33983	10/01/19 20:18	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: IA-190924-RA-02 — Lab Sample ID: 140-16803-2

Date Collected: 09/25/19 17:35
Date Received: 09/30/19 10:00
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	33983	10/01/19 21:22	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: OA-190924-RA-01 — Lab Sample ID: 140-16803-3

Date Collected: 09/25/19 17:35
Date Received: 09/30/19 10:00
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	33983	10/01/19 22:24	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SS-190925-RA-01 — Lab Sample ID: 140-16803-4

Date Collected: 09/25/19 17:08
Date Received: 09/30/19 10:00
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.75	87.5 mL	500 mL	33983	10/01/19 23:17	S1K	TAL KNX
	Instrument ID: MH									
Total/NA	Analysis	TO 15 LL	DL	1.75	30 mL	500 mL	33984	10/03/19 05:50	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SS-190925-RA-02 — Lab Sample ID: 140-16803-5

Date Collected: 09/25/19 17:29
Date Received: 09/30/19 10:00
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	33983	10/02/19 00:10	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SS-190925-RA-03 — Lab Sample ID: 140-16803-6

Date Collected: 09/25/19 17:29
Date Received: 09/30/19 10:00
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	33983	10/02/19 01:02	S1K	TAL KNX
	Instrument ID: MH									

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Client Sample ID: SS-190925-RA-04 — Lab Sample ID: 140-16803-7

Date Collected: 09/25/19 17:55 — **Matrix: Air**
Date Received: 09/30/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	33983	10/02/19 01:56	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-33983/4

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	33983	10/01/19 12:36	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: Method Blank — Lab Sample ID: MB 140-33984/4

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	33984	10/02/19 14:21	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-33983/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	33983	10/01/19 10:30	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 140-33984/1002

Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	33984	10/02/19 10:57	S1K	TAL KNX
	Instrument ID: MH									

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Laboratory: Eurofins TestAmerica, Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	998044300	08-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	cis-1,2-Dichloroethene
TO 15 LL		Air	Tetrachloroethene
TO 15 LL		Air	Trichloroethene
TO 15 LL		Air	Vinyl chloride

Method Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job ID: 140-16803-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-16803-1	IA-190924-RA-01	Air	09/25/19 16:48	09/30/19 10:00	Air Canister (6-Liter) #11700
140-16803-2	IA-190924-RA-02	Air	09/25/19 17:35	09/30/19 10:00	Air Canister (6-Liter) #09761
140-16803-3	OA-190924-RA-01	Air	09/25/19 17:35	09/30/19 10:00	Air Canister (6-Liter) #10711
140-16803-4	SS-190925-RA-01	Air	09/25/19 17:08	09/30/19 10:00	Air Canister (1-Liter) #11723
140-16803-5	SS-190925-RA-02	Air	09/25/19 17:29	09/30/19 10:00	
140-16803-6	SS-190925-RA-03	Air	09/25/19 17:29	09/30/19 10:00	Air Canister (1-Liter) #11807
140-16803-7	SS-190925-RA-04	Air	09/25/19 17:55	09/30/19 10:00	Air Canister (1-Liter) #11890

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Phone 865-291-3000
Fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

eurofins | Environment Testing TestAmerica

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact Information	Client Project Manager: Chuck Ahrens	Samples Collected By: Ryan Tamot	COC No: 1 of 1 COCs
Company Name: GHD	Phone: 651 639 0913		
Address: 1801 Old Highway 8 Nw Suite 114	Email:		For Lab Use Only:
City/State/Zip St Paul MN 55112			Walk-in Client:
Phone: 651-639-0913	Site Contact:		Lab Sampling:
FAX:	Tel/Fax		
Project Name: Warsaw	Analysis Turnaround Time		Job / SDG No.:
Site/Location: Warsaw	Standard (Specific): X		(See below for Add'l Items)
P O #	Rush (Specifiy):		

Sample Identification	Sample Start Date	Time Start	Sample End Date	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-14/15 (Standard / Low Level)	TO-15 SIM	EPA 3C	EPA 25C	ASTM D-1946	EPA 15/16	Other (Please specify in notes section)	Sample Type	Indoor Air/Ambient Air	Sub-Slab	Soil Gas	Soil Vapor Extraction (SVE)	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
IA-190924-RA-01	9/24/19	1828	9/25/19	1648	-29	-5	09656	11700	X								X						
IA-190924-RA-02	9/24/19	1851	9/25/19	1735	-30	-8	11506	09761	X								X						
OA-190924-RA-01	9/24/19	1842	9/25/19	1735	-28	-4	09953	10711	X								X						
SS-190925-RA-01	9/25/19	1659	9/25/19	1708	-26	-5	11951	11723	X									X					
SS-190925-RA-02	9/25/19	1718	9/25/19	1729	-15	5	11135	11792	X									X					Flow controller not working
SS-190925-RA-03	9/25/19	1718	9/25/19	1729	-29	-5	11992	11807	X									X					properly
SS-190925-RA-04	9/25/19	1743	9/25/19	1755	-28	-5	09956	11890	X									X					
CUSTODY SEALS INTACT																							
RECEIVED AMBIENT																							
BKD 9-30-19		2DAY																					

1 BOX/1 COOLER FEDX# 77634805 0972 M

7 CANS/7 FLOWS 3F, 4R

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Pressure (inches of Hg)			
Start	Interior	Ambient	
Stop			

140-16803 Chain of Custody

Special Instructions/QC Requirements & Comments:
Only analyze for PCE, TCE, Cis 12DCE, Vinyl Chloride

Samples Shipped by:	Date / Time: 9/26/19 1600	Samples Received by:
Samples Relinquished by:	Date / Time:	Received by: [signature] ETA TNX 9-30-19 10:00
Relinquished by:	Date / Time:	Received by:

Lab Use Only: Shipper Name: Opened by: Condition:

Form No. CA-C-WI-003, Rev. 2.13, dated 4/10/2019

Loc: 140
16803

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓		✓	☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓	✓		☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓	✓		☑ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

7. IA-190924-RA-02, NO ID ON SAMPLE, MATCHED BY CANISTER ASSET NUMBER

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14003779 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 9-30-19

QA026R32.doc, 062719

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 9/30/2019

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-16803-a-1	11700	16411	B	6	-7.1	15:13	2.4
HMT	140-16803-a-2	09761	16411	B	6	-6.8	15:14	
HMT	140-16803-a-3	10711	16429	B	6	-6.5	15:15	
HMT	140-16803-a-4	11723	16568	B	1	-8.9	15:16	3.4
HMT	140-16803-a-5	11135	16568	B	1	-6.0	15:17	
HMT	140-16803-a-6	11807	16568	B	1	-6.1	15:18	
HMT	140-16803-a-7	11890	16631	B	1	-5.4	15:19	

□ Receiving –Air Can –Calve Open (NCM #_____)
□ Air - Can P -24 to -25 " - Flow Contr. Works (NCM#_____)
□ Air - Can P -24 to -25 " - Flow Contr. Faulty (NCM#_____)
□ Air - Can P Out -26" - Flow Contr. Works (NCM#_____)
□ Air - Can P Out -26" - Flow Contr. Faulty (NCM#_____)
□ Air - Can P Low -24 to -25 " - Grab Sample (NCM#_____)
□ Air - Can P Low -26 "- Grab Sample (NCM#_____)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16411-1

SDG No.:

Client Sample ID: 09784 Lab Sample ID: 140-16411-5

Matrix: Air Lab File ID: H23L16411.D

Analysis Method: TO 15 LL Date Collected: 08/22/2019 17:40

Sample wt/vol: 500(mL) Date Analyzed: 08/24/2019 02:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32868 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16411-1

SDG No.:

Client Sample ID: 09784 Lab Sample ID: 140-16411-5

Matrix: Air Lab File ID: H23L16411.D

Analysis Method: TO 15 LL Date Collected: 08/22/2019 17:40

Sample wt/vol: 500(mL) Date Analyzed: 08/24/2019 02:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32868 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND	*	0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND	*	2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16411-1

SDG No.:

Client Sample ID: 09784 Lab Sample ID: 140-16411-5

Matrix: Air Lab File ID: H23L16411.D

Analysis Method: TO 15 LL Date Collected: 08/22/2019 17:40

Sample wt/vol: 500(mL) Date Analyzed: 08/24/2019 02:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32868 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	0.21		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		1.0	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND	*	0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16411-1

SDG No.:

Client Sample ID: 09784 Lab Sample ID: 140-16411-5

Matrix: Air Lab File ID: H23L16411.D

Analysis Method: TO 15 LL Date Collected: 08/22/2019 17:40

Sample wt/vol: 500(mL) Date Analyzed: 08/24/2019 02:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32868 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\H23L16411.D				
Lims ID:	140-16411-A-5				
Client ID:	09784				
Sample Type:	Client				
Inject. Date:	24-Aug-2019 02:42:30	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0012811-021				
Misc. Info.:	09784				
Operator ID:		Instrument ID:	MR		
Method:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	26-Aug-2019 14:16:53	Calib Date:	12-Aug-2019 23:20:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MR\20190812-12700.b\RH12IC08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0306				

First Level Reviewer: khachitpongpanits Date: 26-Aug-2019 14:16:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.539	8.539	0.000	97	185016	4.00	
* 2 1,4-Difluorobenzene	114	10.771	10.771	0.000	95	1089315	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.565	15.570	-0.005	89	918492	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.210	17.231	-0.021	94	546215	3.45	
7 Propene	41	3.443	3.437	0.006	94	24169	0.2756	7
31 Methylene Chloride	84	5.977	5.966	0.011	95	13962	0.2135	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

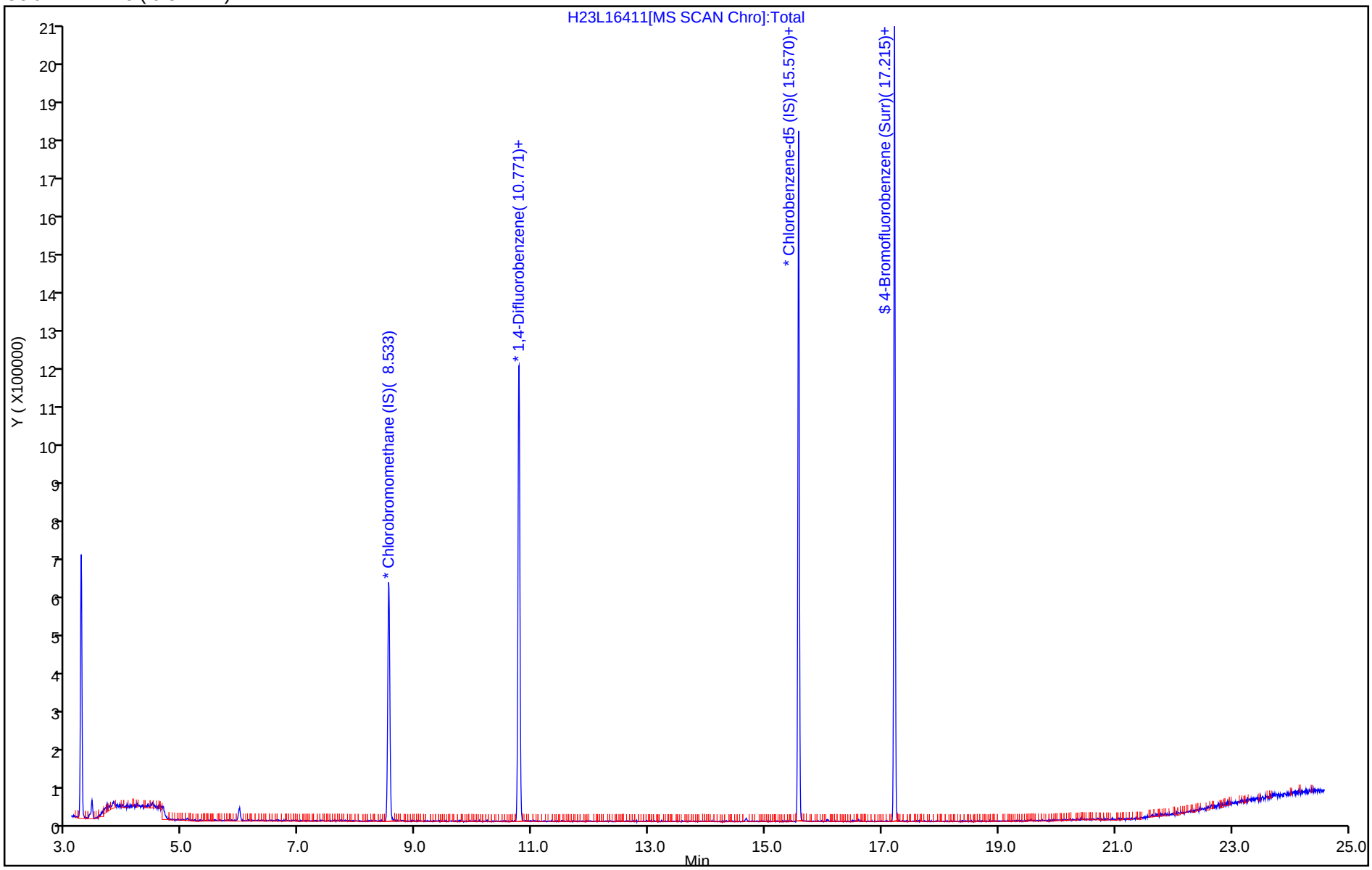
40MXISSURP_00004 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 26-Aug-2019 14:16:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\H23L16411.D				
Injection Date:	24-Aug-2019 02:42:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-16411-A-5	Lab Sample ID:	140-16411-5	Worklist Smp#:	21
Client ID:	09784				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



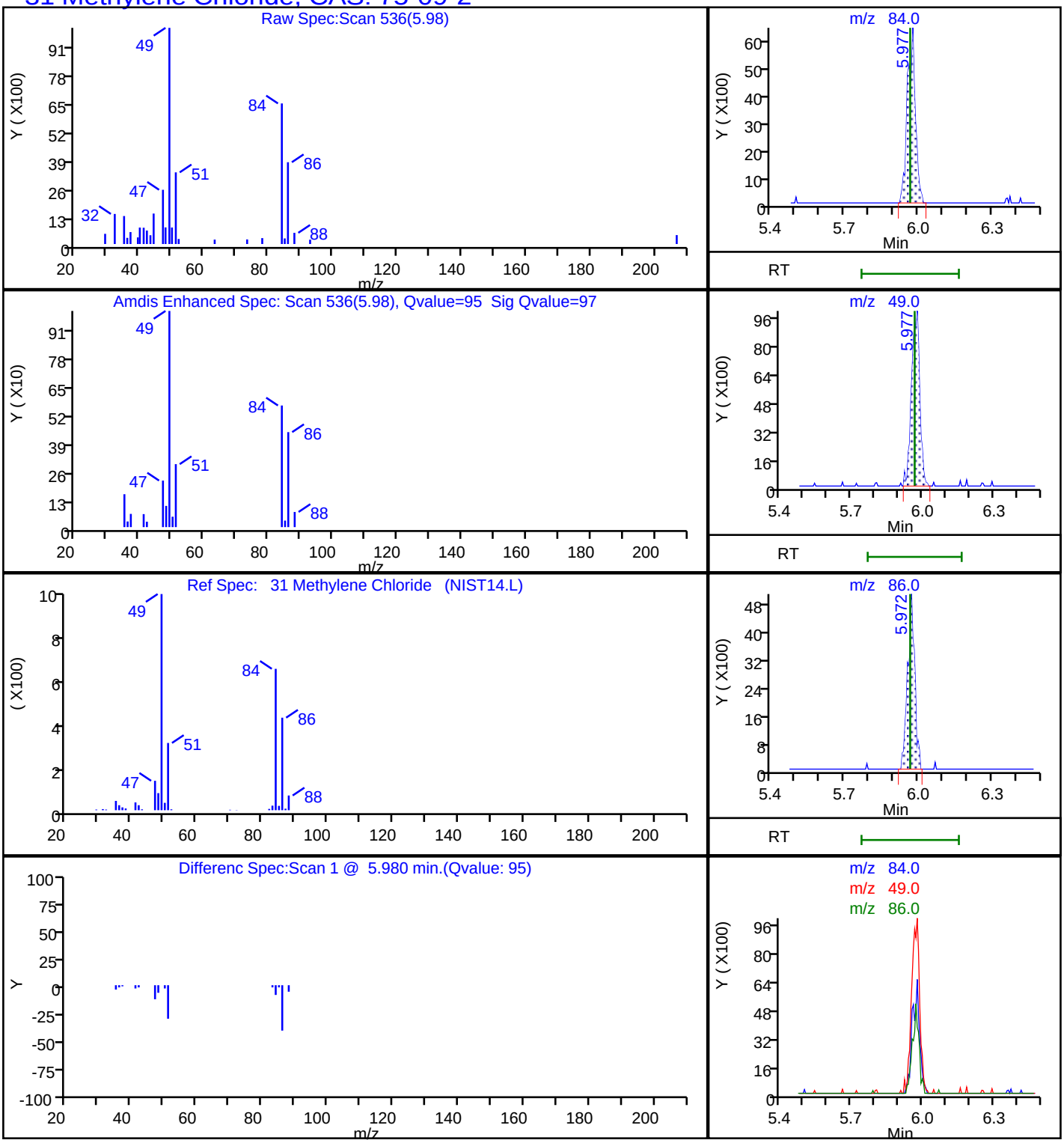
10/11/2019

Report Date: 26-Aug-2019 14:16:54 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\H23L16411.D				
Injection Date:	24-Aug-2019 02:42:30	Instrument ID:	MR		
Lims ID:	140-16411-A-5	Lab Sample ID:	140-16411-5		
Client ID:	09784				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



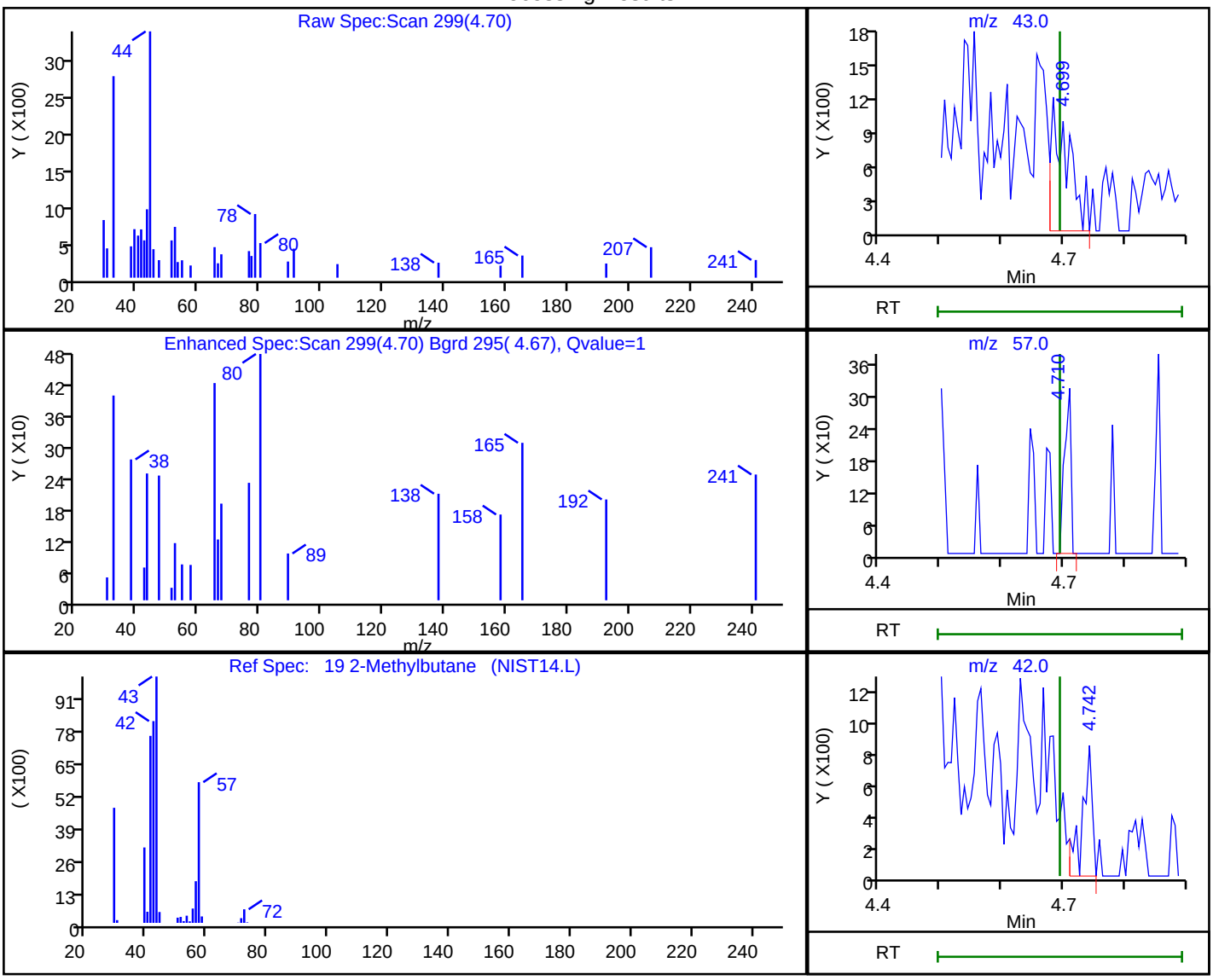
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\H23L16411.D				
Injection Date:	24-Aug-2019 02:42:30	Instrument ID:	MR		
Lims ID:	140-16411-A-5	Lab Sample ID:	140-16411-5		
Client ID:	09784				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.70	43.00	2187	0.028013
4.71	57.00	227	
4.74	42.00	905	

Reviewer: khachitpongpanits, 26-Aug-2019 14:16:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

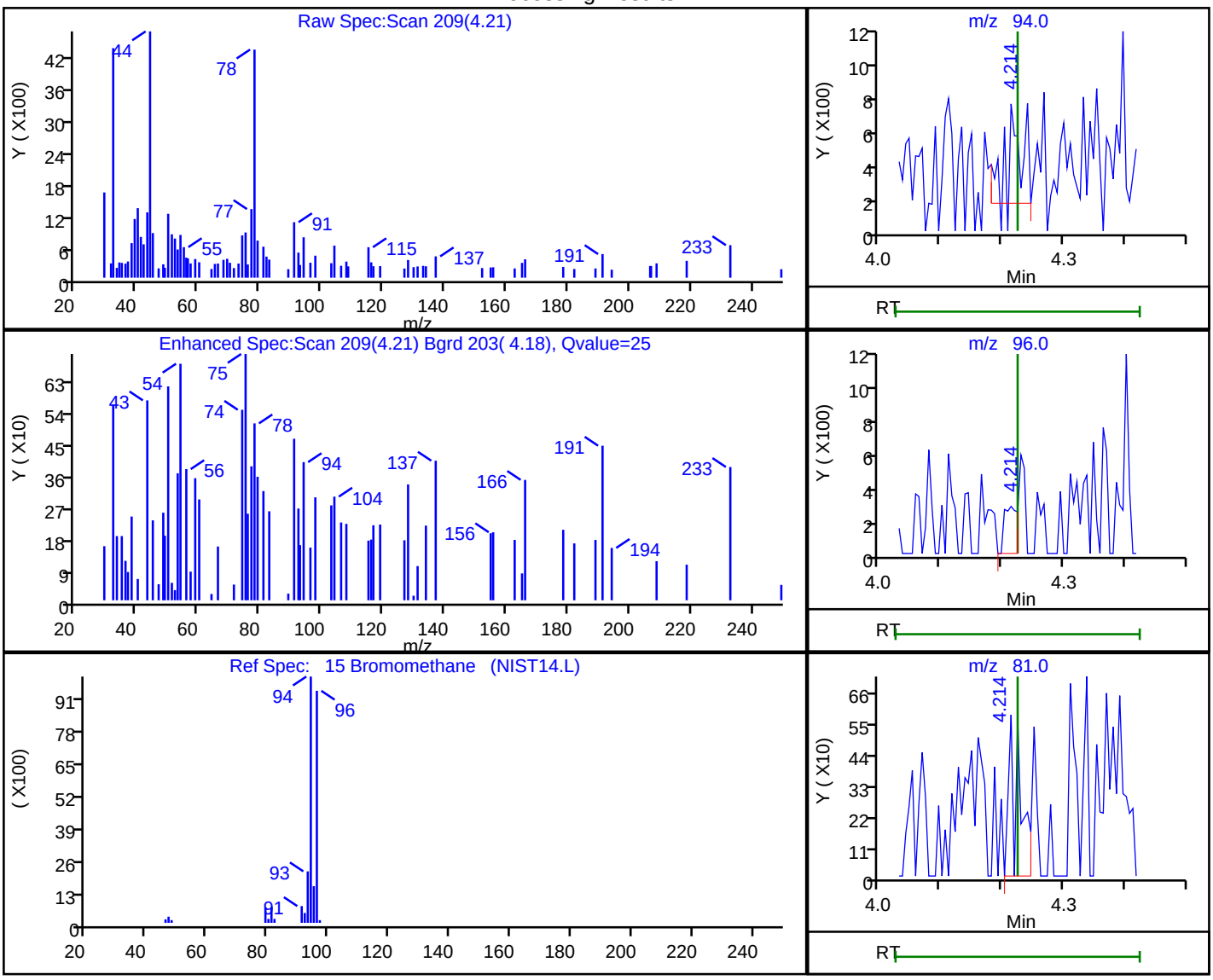
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\H23L16411.D				
Injection Date:	24-Aug-2019 02:42:30	Instrument ID:	MR		
Lims ID:	140-16411-A-5	Lab Sample ID:	140-16411-5		
Client ID:	09784				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.21	94.00	1014	0.017572
4.21	96.00	421	
4.21	81.00	717	

Reviewer: khachitpongpanits, 26-Aug-2019 14:16:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

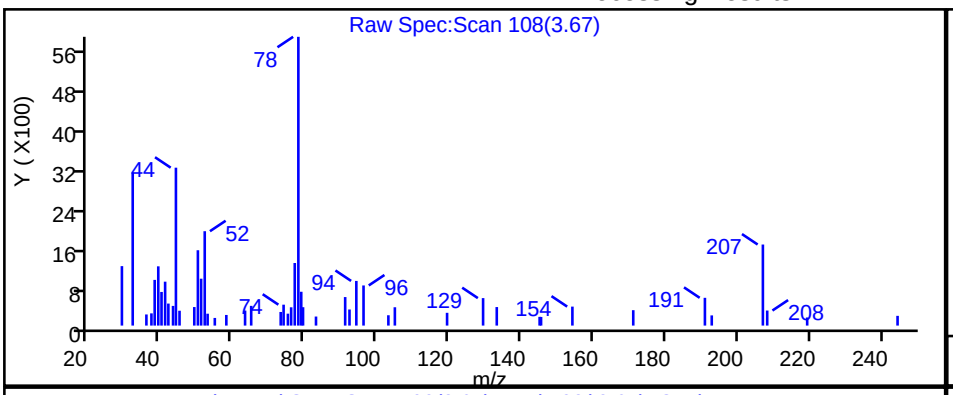
User Disabled Compound Report

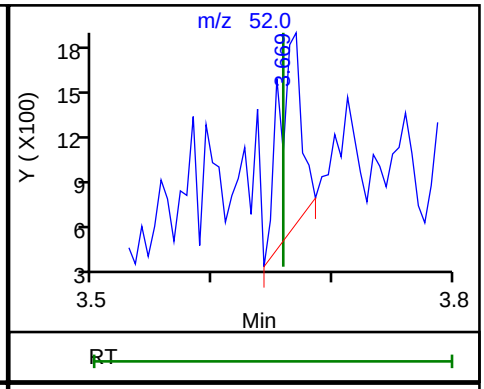
Eurofins TestAmerica, Knoxville

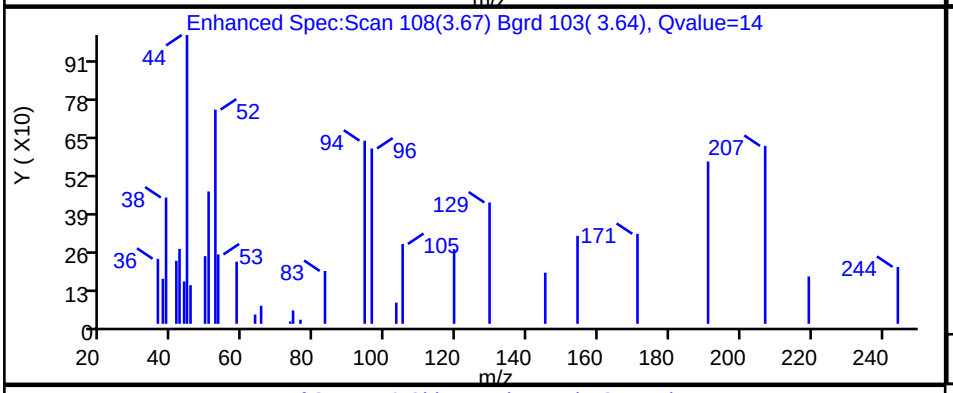
Data File:	\\chromna\Knoxville\ChromData\MR\20190821-12811.b\H23L16411.D				
Injection Date:	24-Aug-2019 02:42:30	Instrument ID:	MR		
Lims ID:	140-16411-A-5	Lab Sample ID:	140-16411-5		
Client ID:	09784				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

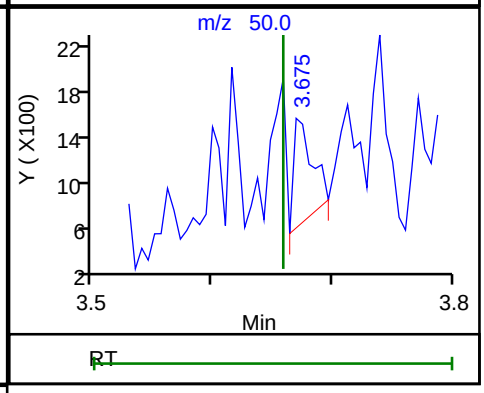
9 Chloromethane, CAS: 74-87-3

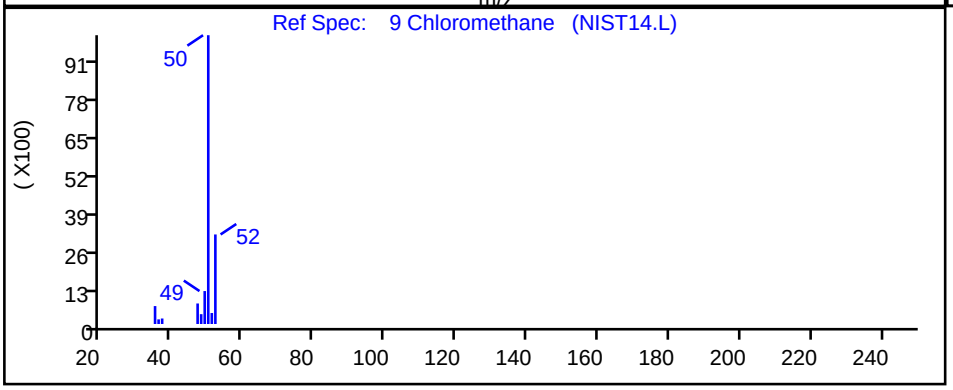
Processing Results











RT	Mass	Response	Amount
3.67	52.00	1692	0.078727
3.67	50.00	956	

Reviewer: khachitpongpanits, 26-Aug-2019 14:16:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16429-1

SDG No.:

Client Sample ID: 10259 Lab Sample ID: 140-16429-1

Matrix: Air Lab File ID: H26L16429.D

Analysis Method: TO 15 LL Date Collected: 08/24/2019 14:25

Sample wt/vol: 500(mL) Date Analyzed: 08/27/2019 02:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32865 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadine	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16429-1

SDG No.:

Client Sample ID: 10259 Lab Sample ID: 140-16429-1

Matrix: Air Lab File ID: H26L16429.D

Analysis Method: TO 15 LL Date Collected: 08/24/2019 14:25

Sample wt/vol: 500(mL) Date Analyzed: 08/27/2019 02:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32865 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16429-1

SDG No.:

Client Sample ID: 10259 Lab Sample ID: 140-16429-1

Matrix: Air Lab File ID: H26L16429.D

Analysis Method: TO 15 LL Date Collected: 08/24/2019 14:25

Sample wt/vol: 500(mL) Date Analyzed: 08/27/2019 02:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32865 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		1.0	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16429-1

SDG No.:

Client Sample ID: 10259 Lab Sample ID: 140-16429-1

Matrix: Air Lab File ID: H26L16429.D

Analysis Method: TO 15 LL Date Collected: 08/24/2019 14:25

Sample wt/vol: 500(mL) Date Analyzed: 08/27/2019 02:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 32865 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MH\20190821-12808.b\H26L16429.D				
Lims ID:	140-16429-A-1				
Client ID:	10259				
Sample Type:	Client				
Inject. Date:	27-Aug-2019 02:57:30	ALS Bottle#:	1	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0012808-021				
Misc. Info.:	10259				
Operator ID:	HMT	Instrument ID:	MH		

Method:	\\chromna\Knoxville\ChromData\MH\20190821-12808.b\MH_TO15.m		
Limit Group:	MSA TO14A_15 Routine ICAL		
Last Update:	27-Aug-2019 01:39:20	Calib Date:	14-May-2019 01:46:30
Integrator:	RTE	ID Type:	Deconvolution ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromna\Knoxville\ChromData\MH\20190513-11710.b\HE13IC08.D		

Column 1 :	RTX-5 (0.32 mm)	Det: MS SCAN
Process Host:	CTX0338	

First Level Reviewer: khachitpongpanits Date: 27-Aug-2019 14:50:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.609	8.603	0.006	92	178611	4.00	
* 2 1,4-Difluorobenzene	114	10.816	10.815	0.001	95	871429	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.596	15.596	0.000	90	653774	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.271	17.266	0.005	96	445595	4.00	
7 Propene	41	3.544	3.546	0.000	99	19524	0.3976	
31 Methylene Chloride	84	6.071	6.069	0.005	98	13192	0.1793	
33 Carbon disulfide	76	6.226	6.230	0.000	94	4162	0.0211	
45 1,1,1-Trichloroethane	97	9.642	9.653	-0.005	96	3304	0.0216	

Reagents:

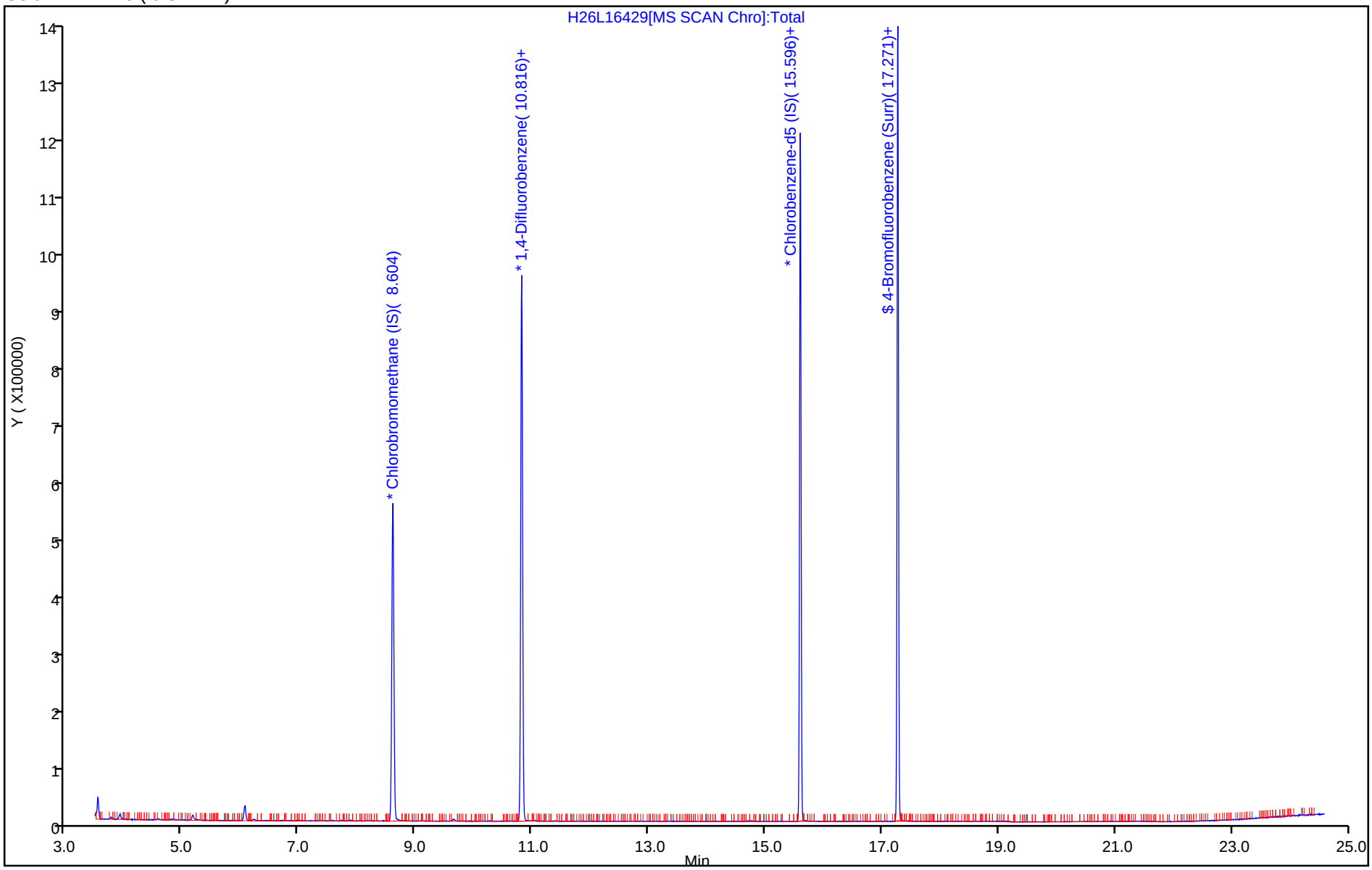
40MXISSURP_00004 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 27-Aug-2019 14:50:29 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MH\20190821-12808.b\H26L16429.D				
Injection Date:	27-Aug-2019 02:57:30	Instrument ID:	MH	Operator ID:	HMT
Lims ID:	140-16429-A-1	Lab Sample ID:	140-16429-1	Worklist Smp#:	21
Client ID:	10259				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MH_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



10/11/2019

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16568-1

SDG No.:

Client Sample ID: 11851 Lab Sample ID: 140-16568-1

Matrix: Air Lab File ID: I09L16568.D

Analysis Method: TO-15 Date Collected: 09/08/2019 14:25

Sample wt/vol: 200(mL) Date Analyzed: 09/09/2019 15:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 33287 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16568-1

SDG No.:

Client Sample ID: 11851 Lab Sample ID: 140-16568-1

Matrix: Air Lab File ID: I09L16568.D

Analysis Method: TO-15 Date Collected: 09/08/2019 14:25

Sample wt/vol: 200(mL) Date Analyzed: 09/09/2019 15:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 33287 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND	*	1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16568-1

SDG No.:

Client Sample ID: 11851 Lab Sample ID: 140-16568-1

Matrix: Air Lab File ID: I09L16568.D

Analysis Method: TO-15 Date Collected: 09/08/2019 14:25

Sample wt/vol: 200(mL) Date Analyzed: 09/09/2019 15:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 33287 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	1.0		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND	*	2.5	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\I09L16568.D				
Lims ID:	140-16568-A-1				
Client ID:	11851				
Sample Type:	Client				
Inject. Date:	09-Sep-2019 15:25:30	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0012962-008				
Misc. Info.:	11851				
Operator ID:	HMT	Instrument ID:	MH		
Method:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\MH_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Sep-2019 11:03:08	Calib Date:	27-Aug-2019 22:47:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MH\20190826-12863.b\HH27ICL8.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0321				

First Level Reviewer: khachitpongpanits Date: 11-Sep-2019 11:03:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.609	8.609	0.000	90	245434	4.00	
* 2 1,4-Difluorobenzene	114	10.816	10.816	0.000	95	1221277	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.596	15.596	0.000	94	909498	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.266	17.266	0.000	95	639453	4.05	
19 2-Methylbutane	43	4.805	4.805	0.000	72	1421	0.0256	
21 Trichlorofluoromethane	101	5.017	5.014	0.000	72	2344	0.008323	
31 Methylene Chloride	84	6.066	6.071	-0.005	98	33084	0.4049	
40 Hexane	56	7.865	7.854	0.006	82	2271	0.0426	
73 Tetrachloroethene	129	14.764	14.764	0.000	87	861	0.008500	

Reagents:

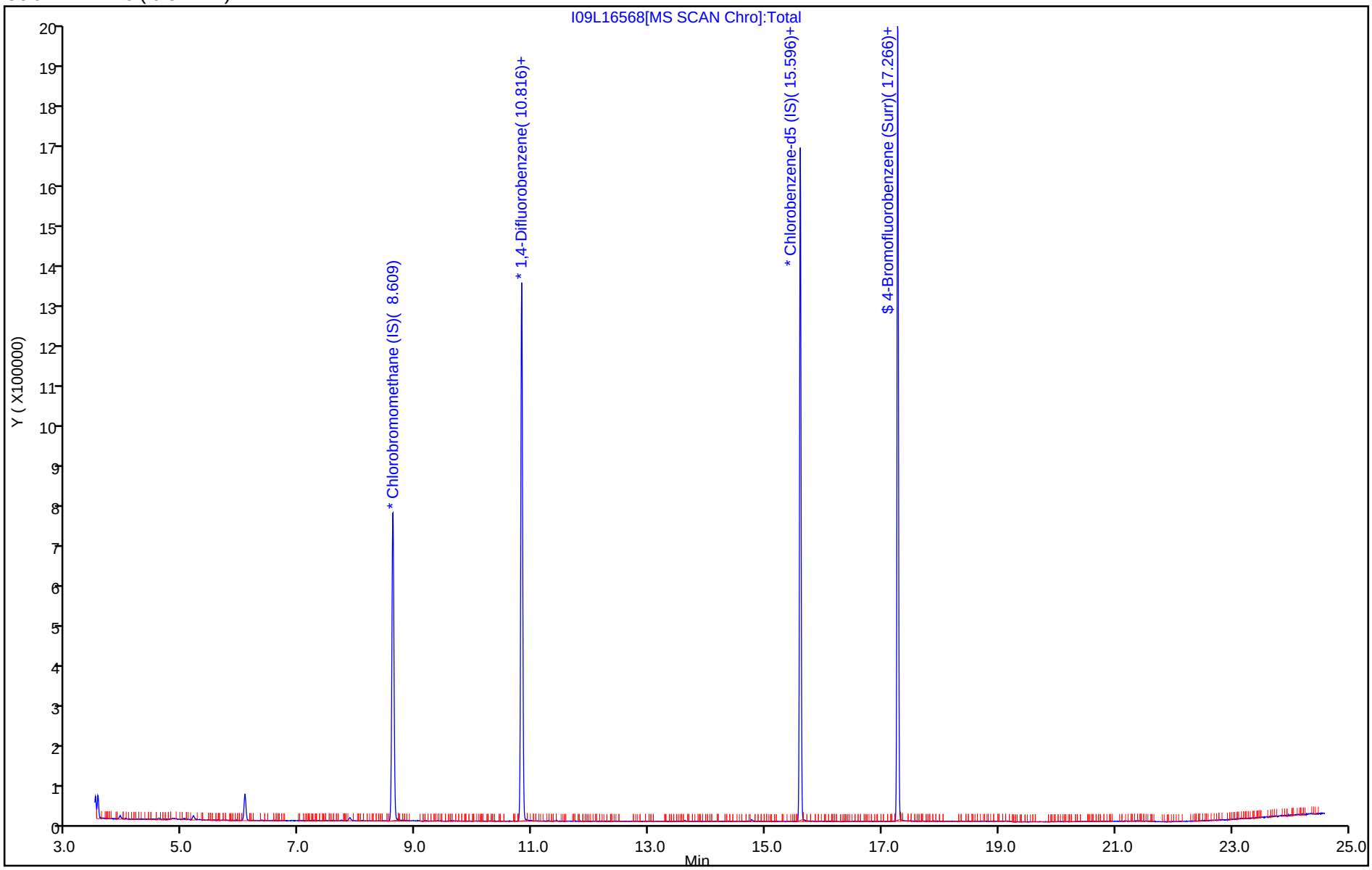
40MXISSURP_00004 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 11-Sep-2019 11:03:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\I09L16568.D				
Injection Date:	09-Sep-2019 15:25:30	Instrument ID:	MH	Operator ID:	HMT
Lims ID:	140-16568-A-1	Lab Sample ID:	140-16568-1	Worklist Smp#:	8
Client ID:	11851				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MH_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



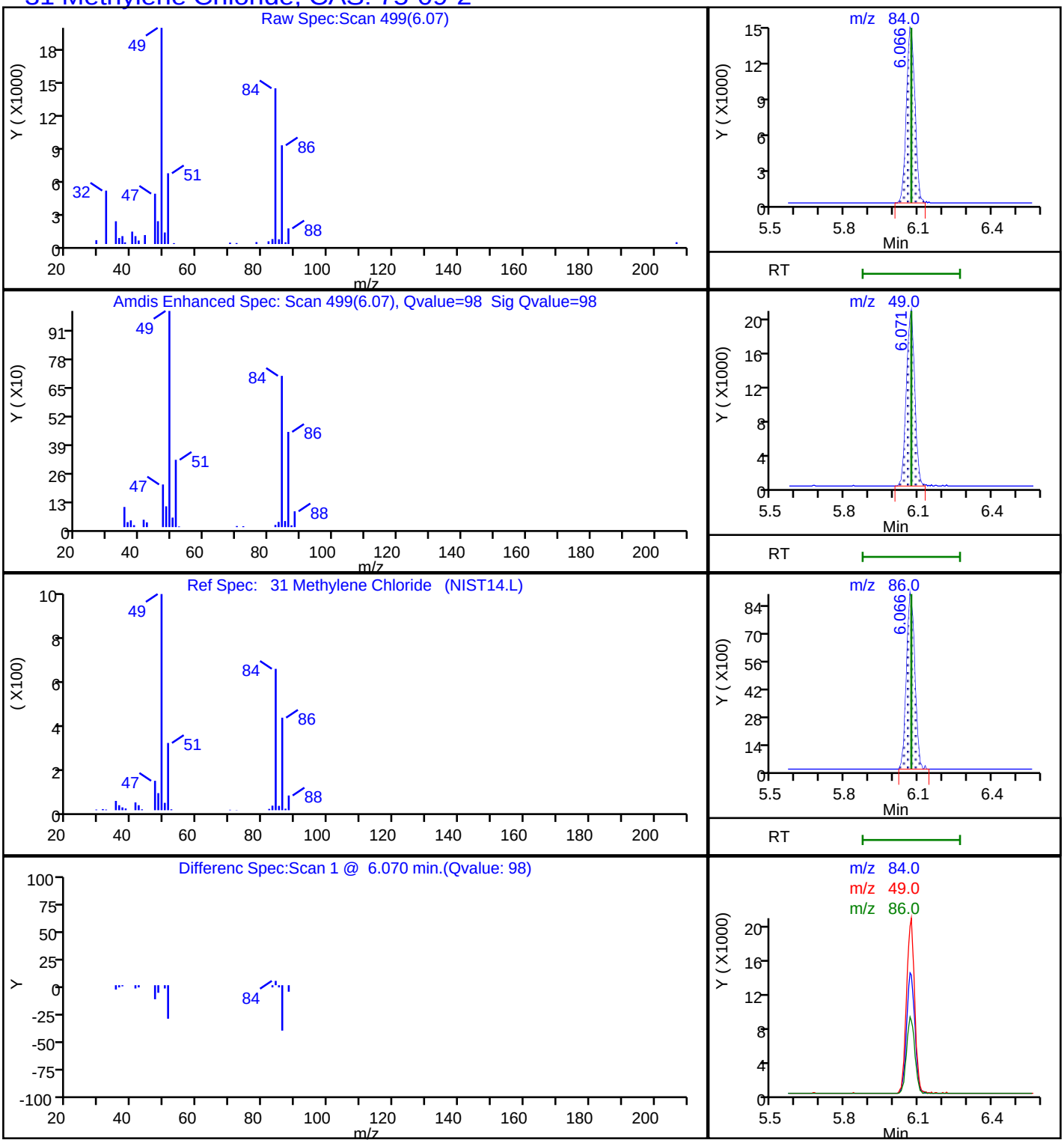
10/11/2019

Report Date: 11-Sep-2019 11:03:09 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\I09L16568.D				
Injection Date:	09-Sep-2019 15:25:30	Instrument ID:	MH		
Lims ID:	140-16568-A-1	Lab Sample ID:	140-16568-1		
Client ID:	11851				
Operator ID:	HMT	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MH_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



Eurofins TestAmerica, Knoxville

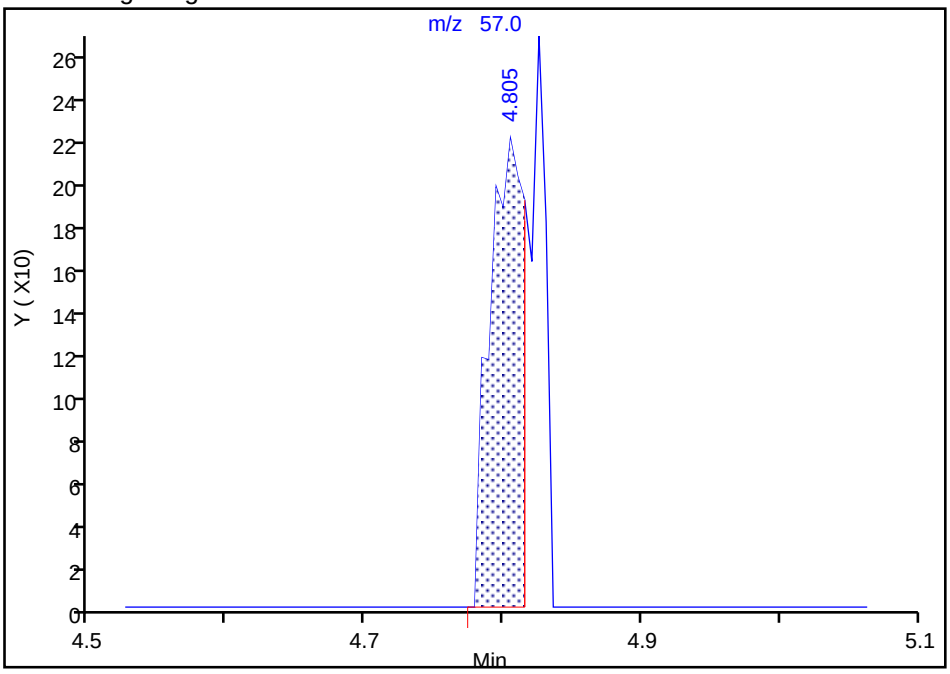
Data File:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\I09L16568.D				
Injection Date:	09-Sep-2019 15:25:30	Instrument ID:	MH		
Lims ID:	140-16568-A-1	Lab Sample ID:	140-16568-1		
Client ID:	11851				
Operator ID:	HMT	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MH_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Signal: 2

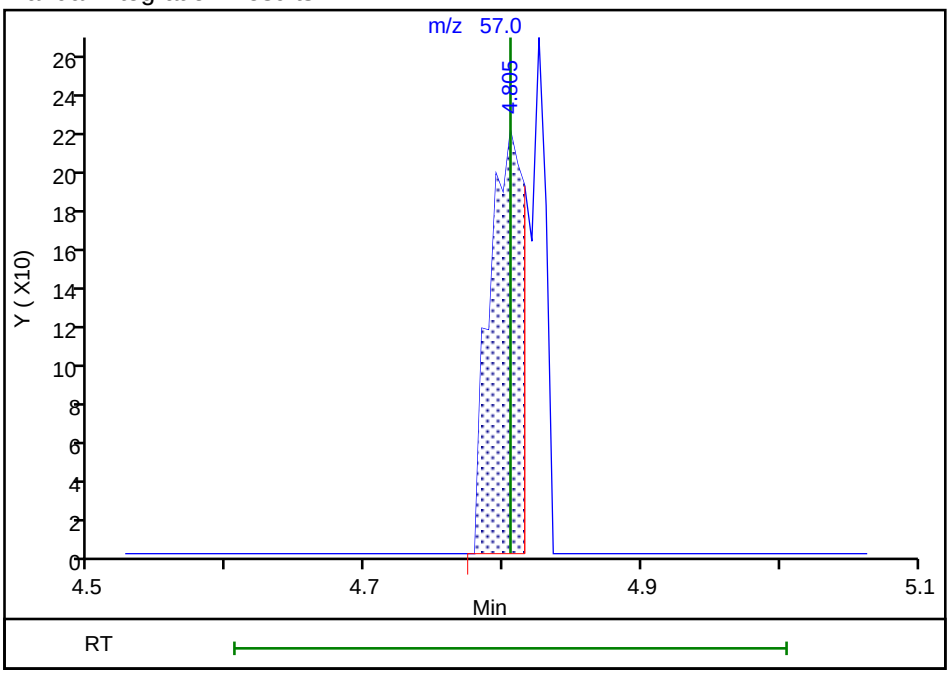
Processing Integration Results

RT: 4.80
Area: 372
Amount: 0.025558
Amount Units: ppb v/v



Manual Integration Results

RT: 4.80
Area: 372
Amount: 0.025558
Amount Units: ppb v/v



Reviewer: khachitpongpanits, 11-Sep-2019 11:02:35
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Knoxville

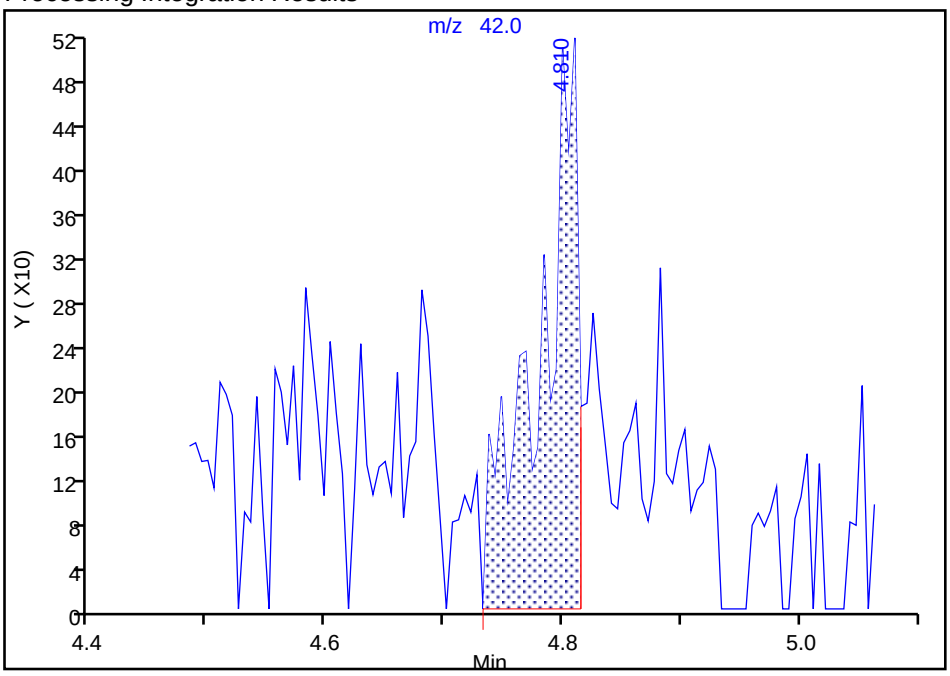
Data File:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\I09L16568.D				
Injection Date:	09-Sep-2019 15:25:30	Instrument ID:	MH		
Lims ID:	140-16568-A-1	Lab Sample ID:	140-16568-1		
Client ID:	11851				
Operator ID:	HMT	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MH_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Signal: 3

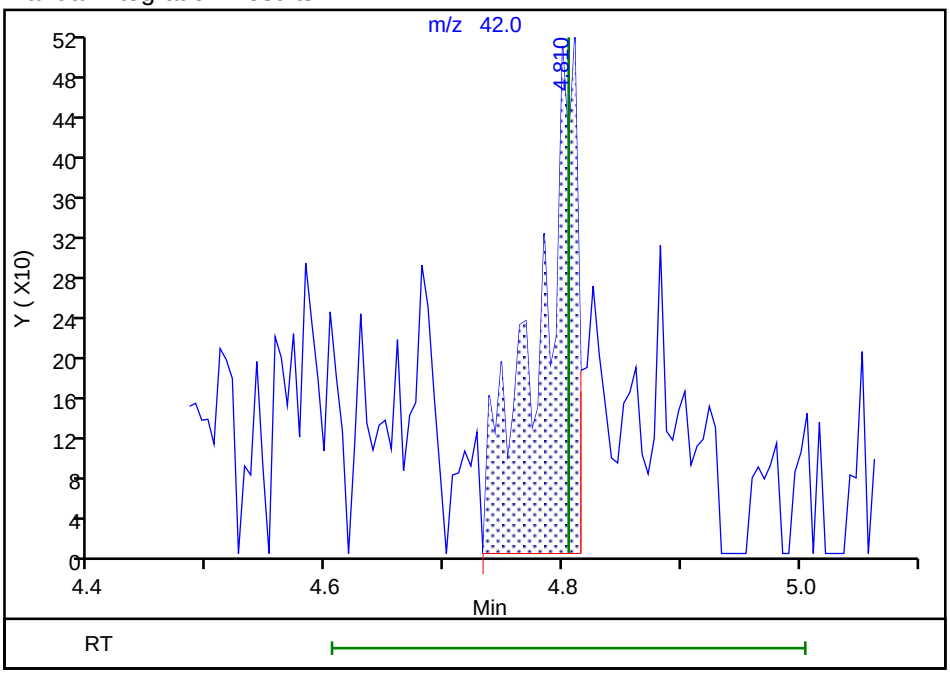
RT: 4.81
Area: 1176
Amount: 0.025558
Amount Units: ppb v/v

Processing Integration Results



RT: 4.81
Area: 1176
Amount: 0.025558
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 11-Sep-2019 11:02:35
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

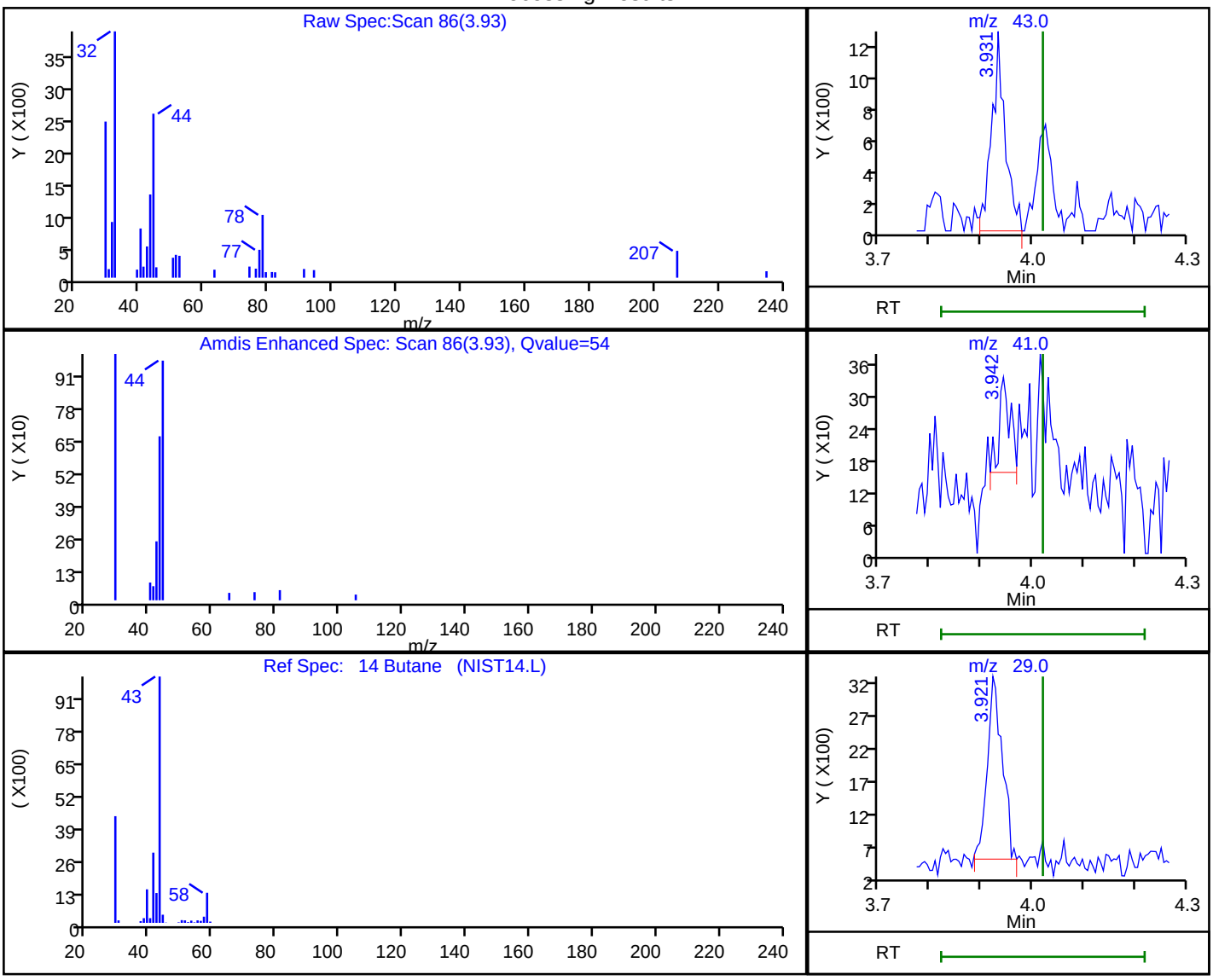
User Disabled Compound Report

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MH\20190905-12962.b\I09L16568.D				
Injection Date:	09-Sep-2019 15:25:30	Instrument ID:	MH		
Lims ID:	140-16568-A-1	Lab Sample ID:	140-16568-1		
Client ID:	11851				
Operator ID:	HMT	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MH_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.93	43.00	2356	0.034738
3.94	41.00	266	
3.92	29.00	5648	

Reviewer: tajh, 10-Sep-2019 09:41:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16631-1

SDG No.:

Client Sample ID: 11890 Lab Sample ID: 140-16631-1

Matrix: Air Lab File ID: I13L16631.D

Analysis Method: TO-15 Date Collected: 09/12/2019 15:00

Sample wt/vol: 200(mL) Date Analyzed: 09/14/2019 02:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 33484 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16631-1

SDG No.:

Client Sample ID: 11890 Lab Sample ID: 140-16631-1

Matrix: Air Lab File ID: I13L16631.D

Analysis Method: TO-15 Date Collected: 09/12/2019 15:00

Sample wt/vol: 200(mL) Date Analyzed: 09/14/2019 02:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 33484 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-16631-1

SDG No.:

Client Sample ID: 11890 Lab Sample ID: 140-16631-1

Matrix: Air Lab File ID: I13L16631.D

Analysis Method: TO-15 Date Collected: 09/12/2019 15:00

Sample wt/vol: 200(mL) Date Analyzed: 09/14/2019 02:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 33484 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		2.5	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File:	\\chromna\Knoxville\ChromData\MG\20190912-13038.b\I13L16631.D				
Lims ID:	140-16631-A-1				
Client ID:	11890				
Sample Type:	Client				
Inject. Date:	14-Sep-2019 02:40:30	ALS Bottle#:	14	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0013038-021				
Misc. Info.:	11890				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\chromna\Knoxville\ChromData\MG\20190912-13038.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Sep-2019 14:39:45	Calib Date:	06-Sep-2019 21:05:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Knoxville\ChromData\MG\20190906-12979.b\GI06LVL08.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	CTX0333				
First Level Reviewer: khachitpongpanits		Date:	16-Sep-2019 14:40:35		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.065	9.065	0.000	98	251195	4.00	
* 2 1,4-Difluorobenzene	114	11.238	11.243	-0.005	95	1414973	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.935	15.935	0.000	88	1224509	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.568	17.569	-0.001	88	830185	3.88	

Reagents:

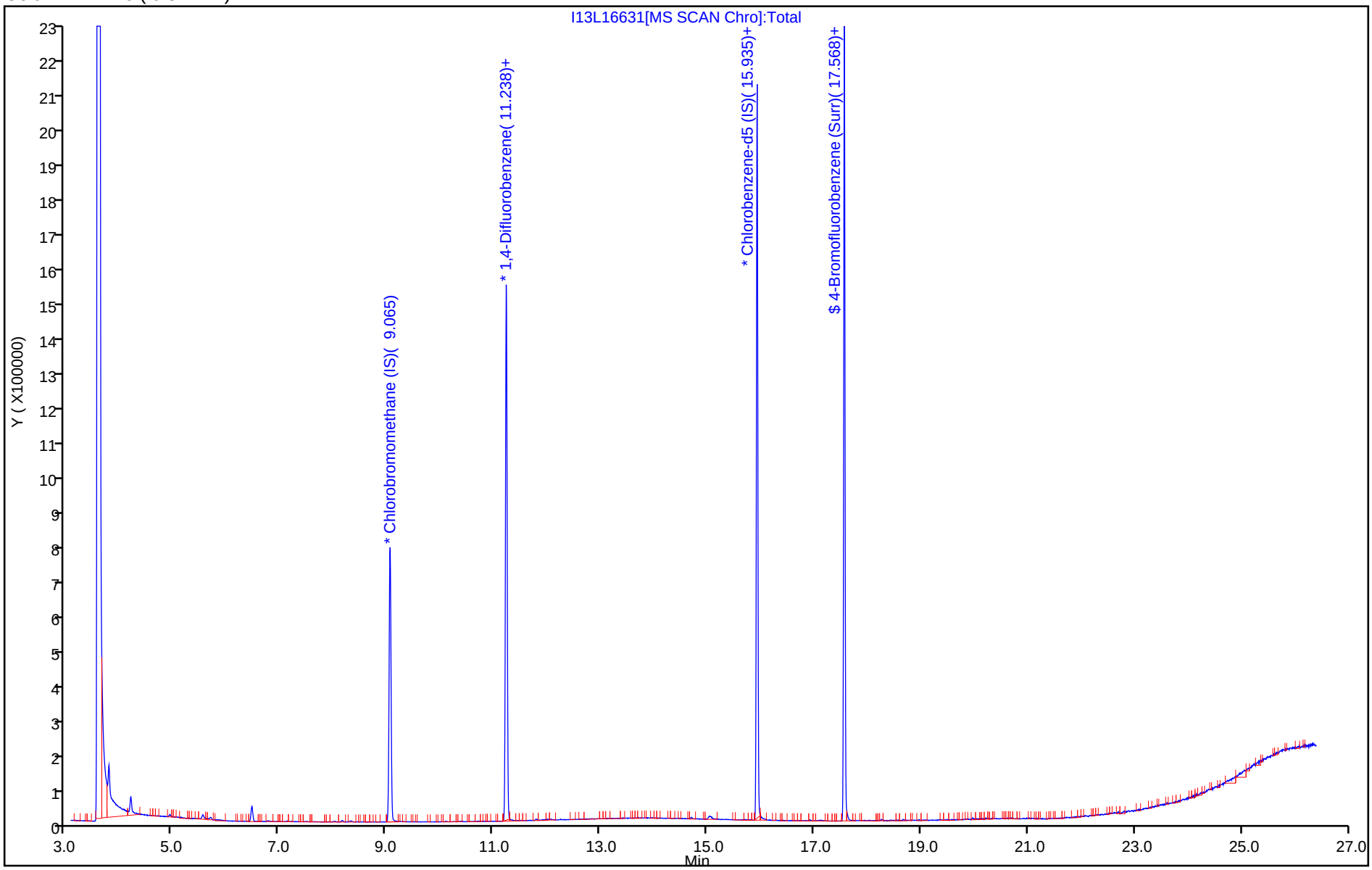
40MXISSURP_00004 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 16-Sep-2019 14:40:35 Chrom Revision: 2.3 22-Aug-2019 12:55:36

Eurofins TestAmerica, Knoxville

Data File:	\\chromna\Knoxville\ChromData\MG\20190912-13038.b\I13L16631.D				
Injection Date:	14-Sep-2019 02:40:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-16631-A-1	Lab Sample ID:	140-16631-1	Worklist Smp#:	21
Client ID:	11890				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



10/11/2019

Summa Canister Dilution Worksheet

Client: GHD Services Inc.
Project/Site: Wausau Vapor Sampling

Job No.: 140-16803-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Pressure Gauge ID	Date	Analyst Initals
140-16803-1	6	2.4	0.76	4.58	2.4	1.16	6.98		1.53	1.53	G5	09/30/19 15:18	AFB
140-16803-4	1	3.4	0.70	0.70	3.4	1.23	1.23		1.75	1.75	G5	09/30/19 15:18	AFB

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg
Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig
Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)
14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

Appendix B

Stratigraphic Logs

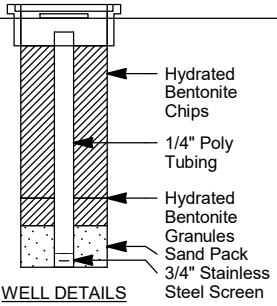
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E1
DATE COMPLETED: 6 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Asphalt	0.50
2	SM-SAND, silty, trace gravel, fine to medium grained, brown, moist	
4		
6	- decreasing silt at 6.0ft BGS	
8	SW-SAND, with gravel, fine to coarse grained, brown, moist to saturated	8.00
10		
12		
14	- saturated at 15.0ft BGS	
16		
18		
20	END OF BOREHOLE @ 20.0ft BGS	20.00
22	Collect water sample from 15'-19'	
24		
26		
28		
30		
32		
34		
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probe



WELL DETAILS
Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules
Sand Pack:
7.50 to 9.00ft BGS
Material: Sand

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.5		0.0
2	P/S	1.5		0.0
3	P/S	1.0		0.0
4	P/S	1.0		0.0
5	P/S	1.0		0.0
6	P/S	1.0		0.0
7	P/S	0.5		0.0
8	P/S	0.5		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

OVERBURDEN LOG 003978.GPJ CRA_CORP.GDT 4/2/20

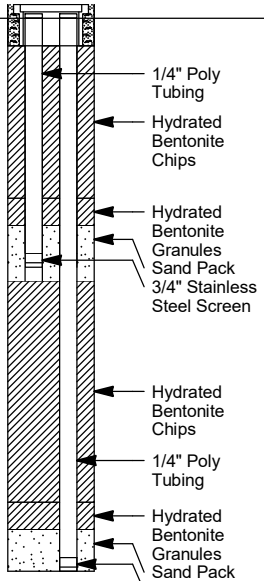
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E2
DATE COMPLETED: 7 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
2	SW/SM-SAND, silty, with gravel, fine to coarse grained, brown, moist	
4		
6		
8		
10		
12		
14		
	- no silt at 15.0ft BGS	
16		
18		
20		
22		
24		
	- saturated at 25.0ft BGS	
26		
28		
30	END OF BOREHOLE @ 30.0ft BGS	30.00
32	Collect water sample from 25'-29'	
34		
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probes



WELL DETAILS
Screened interval:
19.50 to 20.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
17.50 to 18.50ft BGS
Material: Bentonite Granules
Sand Pack:
18.50 to 20.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 17.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.5		0.0
2	P/S	1.5		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.0
5	P/S	1.5		0.0
6	P/S	1.5		0.0
7	P/S	2.0		0.0
8	P/S	2.0		0.0
9	P/S	0.3		0.0
10	P/S	0.3		0.0
(11)	P/S	0.5		0.0
12	P/S	0.5		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

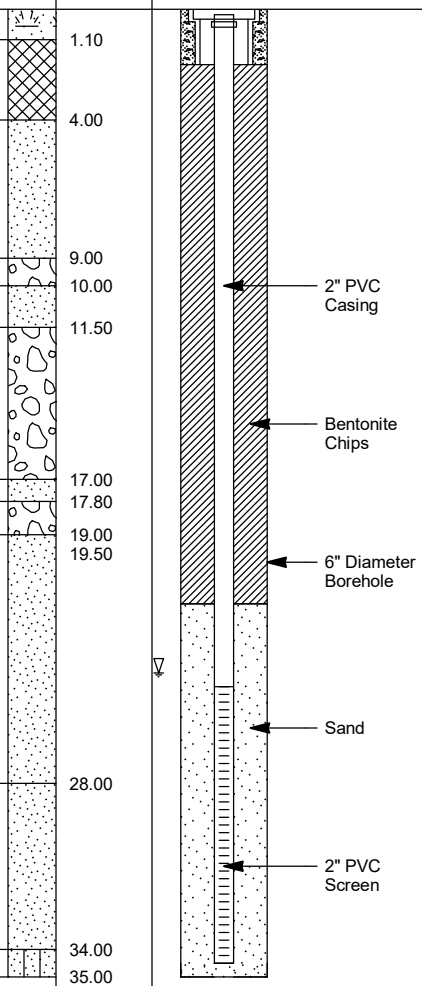
CHEMICAL ANALYSIS ( )

STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E24AR
DATE COMPLETED: 16 August 2012
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Field

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil, silty, with sand, trace gravel, brown, dry to moist	1.10
	FILL, mixed sand and gravel, with silt, light reddish brown, dry	4.00
	SP-SAND, with gravel, fine grained, trace silt, light reddish brown, moist	9.00
	GC-Gravel and Cobbles, clayey, cobble and gravel fragments, whitish pink, slow drilling, the sample is hot to the touch, dry to moist	10.00
	SP-SAND, with gravel and cobbles, fine to medium grained, dark reddish brown, moist	11.50
	GC-Gravel and Cobbles, clayey, gravel and cobble fragments, whitish pink, slow drilling, moist	17.00
	SP-SAND, gravelly, fine to medium grained, light reddish brown, moist	17.80
	GC-Gravel and Cobbles, clayey, gravel and cobble fragments, whitish pink, slow drilling, moist	19.00
	SP-SAND, gravelly, fine to medium grained, light reddish brown, moist to saturated	19.50
	-with gravel	
	SP-SAND, fine to medium grained, trace silt, light reddish brown, saturated	28.00
	SM-SAND, with silt, with gravel, fine grained, dark reddish brown, saturated	34.00
	END OF BOREHOLE @ 35.0ft BGS	35.00



WELL DETAILS
Screened interval:
34.00 to 34.50ft BGS
Length: 0.5ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
2.00 to 21.50ft BGS
Material: Bentonite Chips
Sand Pack:
21.50 to 35.00ft BGS
Material: Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1		4.0		0
2		5.0		0
3		5.0		0
4		5.0		0
5		7.0		0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.
WATER FOUND ∇

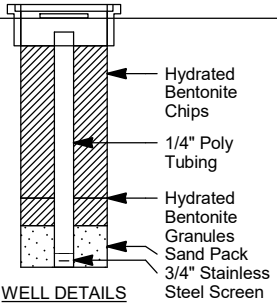
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E3
DATE COMPLETED: 7 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
2, 4, 6	SM-SAND, silty, trace gravel, fine to coarse grained, dark brown, moist	
8, 10, 12, 14, 16, 18	SW-SAND, trace gravel, fine to coarse grained, brown, moist	7.50
20	- saturated at 20.0ft BGS	20.00
22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48	END OF BOREHOLE @ 25.0ft BGS Collect water sample from 20'-24'	

Soil Gas Probe



WELL DETAILS
Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules
Sand Pack:
7.50 to 9.00ft BGS
Material: Sand

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.5		0.0
2	P/S	1.5		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.0
5	P/S	1.5		0.0
6	P/S	1.5		0.0
7	P/S	1.5		0.0
8	P/S	1.5		0.0
9	P/S	0.5		0.0
10	P/S	0.5		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

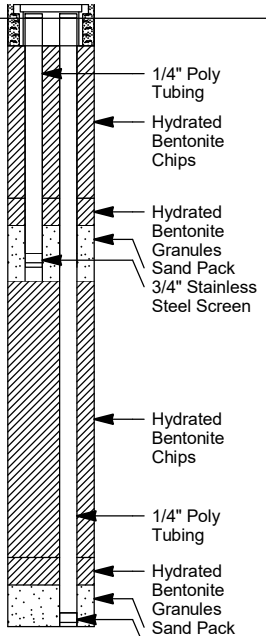
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E4
DATE COMPLETED: 7 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	CL-CLAY, sandy, low plasticity, brown/red, moist	
	SW/SM-SAND, silty, gravelly, fine to coarse grained, brown, moist	3.00
	- less silt at 15.0ft BGS	
	- saturated at 28.0ft BGS	
	END OF BOREHOLE @ 30.0ft BGS	30.00
	Collect water sample from 28'-32'	

Soil Gas Probes



WELL DETAILS
Screened interval:
21.50 to 22.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
19.50 to 20.50ft BGS
Material: Bentonite Granules
Sand Pack:
20.50 to 22.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 19.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	2.0		0.0
2	P/S	2.0		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.0
5	P/S	1.5		0.0
6	P/S	1.5		0.0
7	P/S	0.5		0.0
8	P/S	0.5		0.0
9	P/S	0.5		0.0
10	P/S	0.5		0.0
11	P/S	0.0		-
12	P/S	0.0		-

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

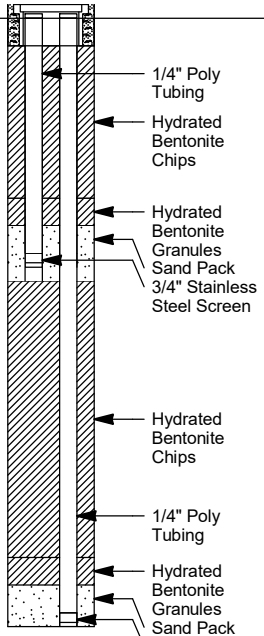
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E5
DATE COMPLETED: 7 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R.Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	SM-SAND, silty, fine to medium grained, brown, saturated (snow melt)	
	SW-SAND, fine to coarse grained, brown, moist - increasing gravel at 8.0ft BGS - saturated at 25.0ft BGS	5.00
	END OF BOREHOLE @ 30.0ft BGS Collect water sample from 25'-29'	30.00

Soil Gas Probes



WELL DETAILS
Screened interval:
21.50 to 22.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
19.50 to 20.50ft BGS
Material: Bentonite Granules
Sand Pack:
20.50 to 22.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 19.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	2.0		0.0
2	P/S	2.0		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.1
5	P/S	1.5		0.1
6	P/S	1.5		0.0
7	P/S	1.0		0.0
8	P/S	1.0		0.0
9	P/S	0.3		0.0
10	P/S	0.3		0.0
(11)	P/S	0.3		0.0
12	P/S	0.3		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 003978.GPJ CRA_CORP.GDT 4/2/20

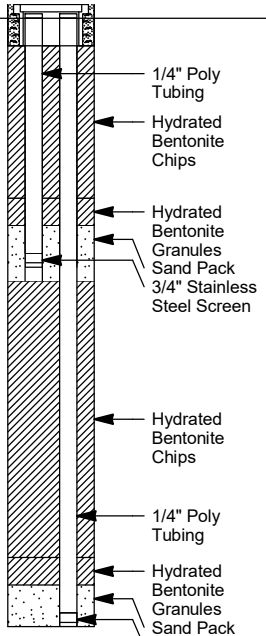
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E6
DATE COMPLETED: 7 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
2	SM-SAND, silty, trace gravel, fine to medium grained, brown, moist	
4		
6	SW-SAND, trace gravel, fine to coarse grained, brown, moist	5.00
8		
10		
12		
14		
16		
18		
20		
22		
24	- saturated at 25.0ft BGS	
26		
28		
30	END OF BOREHOLE @ 30.0ft BGS	30.00
32	Collect water sample from 25'-29'	
34		
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probes



WELL DETAILS
Screened interval:
21.50 to 22.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
19.50 to 20.50ft BGS
Material: Bentonite Granules
Sand Pack:
20.50 to 22.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 19.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.5		0.0
2	P/S	1.5		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.0
5	P/S	1.0		0.0
6	P/S	1.0		0.0
7	P/S	1.5		0.0
8	P/S	1.5		0.0
9	P/S	0.5		0.0
10	P/S	0.5		0.0
(11)	P/S	0.0		-
12	P/S	0.0		-

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS ( )

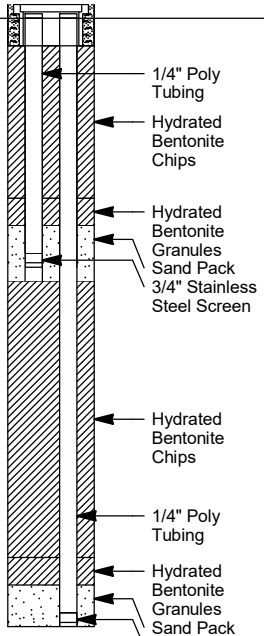
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E7
DATE COMPLETED: 7 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
2	SW-SAND, gravelly, trace silt, fine to coarse grained, brown, moist	
4		
6		
8		
10		
12		
14		
16		
18		
20		
22		
24		
26	- saturated at 26.0ft BGS	
28		
30	END OF BOREHOLE @ 30.0ft BGS	30.00
32	Collect water sample from 26'-30'	
34		
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probes



WELL DETAILS
Screened interval:
21.50 to 22.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
19.50 to 20.50ft BGS
Material: Bentonite Granules
Sand Pack:
20.50 to 22.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 19.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.0		0.0
2	P/S	1.0		0.2
3	P/S	1.0		0.2
4	P/S	1.0		0.1
5	P/S	1.0		0.0
6	P/S	1.0		0.0
7	P/S	1.0		0.0
8	P/S	1.0		0.0
9	P/S	0.5		0.0
10	P/S	0.5		0.0
11	P/S	0.0		-
12	P/S	0.0		-

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

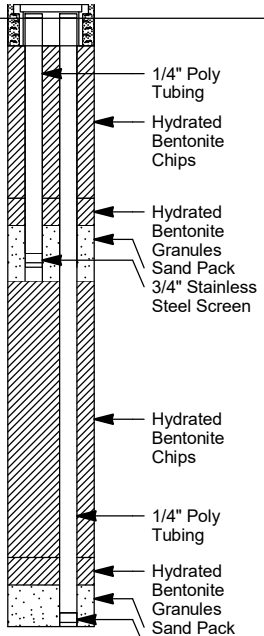
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E8
DATE COMPLETED: 6 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
2	SW-SAND, gravel, trace silt, fine to coarse grained, brown, moist	
4		
6		
8		
10		
12		
14		
16		
18		
20		
22		
24		
26	- saturated at 26.0ft BGS	
28		
30	END OF BOREHOLE @ 30.0ft BGS	30.00
32	Collect water sample from 26'-30'	
34	PID stopped working.	
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probes



WELL DETAILS
Screened interval:
21.50 to 22.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
19.50 to 20.50ft BGS
Material: Bentonite Granules
Sand Pack:
20.50 to 22.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 19.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.0		0.0
2	P/S	1.0		0.2
3	P/S	1.0		0.2
4	P/S	1.0		0.1
5	P/S	2.0		0.0
6	P/S	2.0		0.0
7	P/S	1.0		-
8	P/S	1.0		-
9	P/S	1.0		-
10	P/S	1.0		-
11	P/S	1.0		-
12	P/S	1.0		-

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

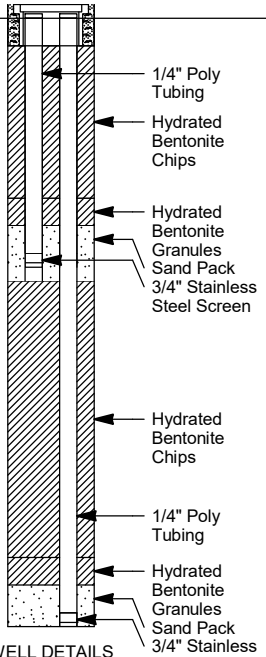
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: E9
DATE COMPLETED: 6 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
2	SW-SAND, gravelly, trace silt, fine to coarse grained, brown, moist	
4		
6		
8		
10		
12		
14		
16		
18		
20		
22		
24	- saturated at 24.5ft BGS	
26		
28		
30	END OF BOREHOLE @ 30.0ft BGS	30.00
32	Collect water sample from 24'-28'	
34		
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probes



WELL DETAILS
Screened interval:
21.50 to 22.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
19.50 to 20.50ft BGS
Material: Bentonite Granules
Sand Pack:
20.50 to 22.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 19.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.5		0.0
2	P/S	1.5		0.0
3	P/S	1.0		0.8
4	P/S	1.0		1.4
5	P/S	1.0		1.2
6	P/S	1.0		0.9
7	P/S	1.0		0.2
8	P/S	1.0		0.2
9	P/S	1.0		0.0
10	P/S	1.0		0.0
11	P/S	0.3		0.0
12	P/S	0.3		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

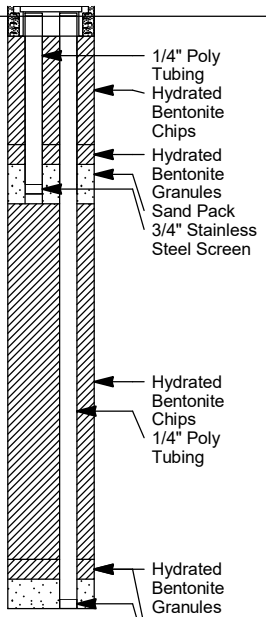
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W1
DATE COMPLETED: 8 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
	SW-SAND, fine to coarse grained, brown, moist	
5		
10		
15		
	- increasing gravel at 17.0ft BGS	
20		
	- no gravel at 24.0ft BGS	
25		
30		
	- saturated at 33.0ft BGS	
35	END OF BOREHOLE @ 35.0ft BGS	35.00
	Collect water sample from 33'-35'	
40		
45		
50		
55		
60		
65		

Soil Gas Probes



WELL DETAILS
Screened interval:
29.50 to 30.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
27.50 to 28.50ft BGS
Material: Bentonite Granules
Sand Pack:
28.50 to 30.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 27.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.0		0.0
2	P/S	1.0		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.0
5	P/S	1.5		0.0
6	P/S	1.5		0.0
7	P/S	1.0		0.0
8	P/S	1.0		0.0
9	P/S	0.5		0.0
10	P/S	0.5		0.0
11	P/S	1.0		0.0
12	P/S	1.0		0.0
13	P/S	1.5		0.0
14	P/S	1.5		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

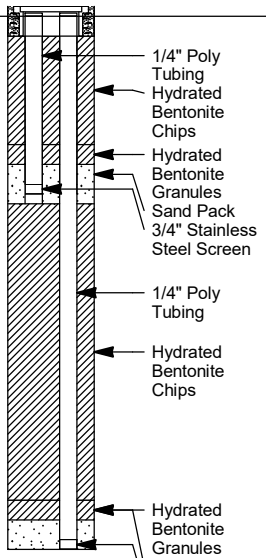
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W2
DATE COMPLETED: 9 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: K. Jenkin

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Asphalt	0.50
	SW-SAND, fine to coarse grained, brown, moist	
5	- no gravel at 5.0ft BGS	
	- 1' of fine grained sand at 8.0ft BGS	
	- becoming medium grained at 9.0ft BGS	
10	- 3" thick cobble, dark, hard at 11.5ft BGS	
	- occasional 1"-3" gravel layers at 12.0ft BGS	
15		
20		
25		
30	- saturated at 30.0ft BGS	
35	END OF BOREHOLE @ 35.0ft BGS	35.00
	Collect water sample from 31'-35'	
40		
45		
50		
55		
60		
65		

Soil Gas Probes



WELL DETAILS
Screened interval:
26.50 to 27.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
24.50 to 25.50ft BGS
Material: Bentonite Granules
Sand Pack:
25.50 to 27.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 24.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S			0.0
2	P/S			0.0
3	P/S			0.0
4	P/S			0.0
5	P/S			0.0
6	P/S			0.0
7	P/S			0.0
8	P/S			0.0
9	P/S			0.0
10	P/S			0.0
11	P/S			0.0
12	P/S			0.0
13	P/S			0.0
14	P/S			0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

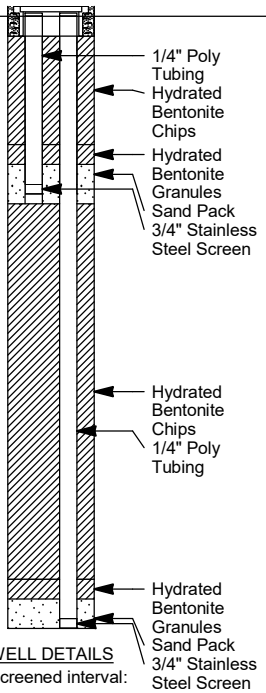
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W3
DATE COMPLETED: 9 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: K. Jenkin

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	1.00
	SW-SAND, fine to coarse grained, brown, moist	
5	- occasional gravel at 6.0ft BGS	
10	- no gravel at 10.0ft BGS	
15		
20		
25		
30	- occasional gravel at 28.0ft BGS	
35	- saturated at 34.0ft BGS	
	END OF BOREHOLE @ 38.0ft BGS	38.00
40	Collect water sample from 34'-38'	
45		
50		
55		
60		
65		

Soil Gas Probes



WELL DETAILS
Screened interval:
30.50 to 31.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
28.50 to 29.50ft BGS
Material: Bentonite Granules
Sand Pack:
29.50 to 31.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 28.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	2.0		
2	P/S	2.0		
3	P/S	3.0		0.0
4	P/S	3.0		0.0
5	P/S	2.0		0.0
6	P/S	2.0		0.0
7	P/S	1.5		0.0
8	P/S	1.5		0.0
9	P/S	3.0		0.0
10	P/S	3.0		0.0
11	P/S	2.0		0.0
12	P/S	2.0		0.0
13	P/S	1.0		0.0
14	P/S	1.0		0.0
15	P/S	1.0		0.0
16	P/S	1.0		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

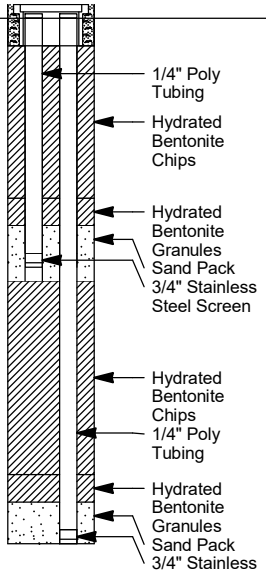
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W4
DATE COMPLETED: 9 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: K. Jenkin

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Gravelly Topsoil	1.00
2	SW-SAND, fine to coarse grained, brown, moist, very gravelly	
4		
6		
8	- becoming light brown, decreasing gravel, coarse grained at 8.0ft BGS	
10	- saturated at 9.0ft BGS	
12		
14		
16		
18		
20		
22		
24		
26	END OF BOREHOLE @ 25.0ft BGS	25.00
28	Collect water sample from 23'-25'	
30		
32		
34		
36		
38		
40		
42		
44		
46		
48		

Soil Gas Probes



WELL DETAILS
Screened interval:
18.50 to 19.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
16.50 to 17.50ft BGS
Material: Bentonite Granules
Sand Pack:
17.50 to 19.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 16.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	2.5		0.0
2	P/S	2.5		0.0
3	P/S	1.5		0.0
4	P/S	1.5		0.0
5	P/S	2.5		0.0
6	P/S	2.5		0.0
7	P/S	2.5		0.0
8	P/S	2.5		0.0
9	P/S	0.0		-
10	P/S	0.0		-

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

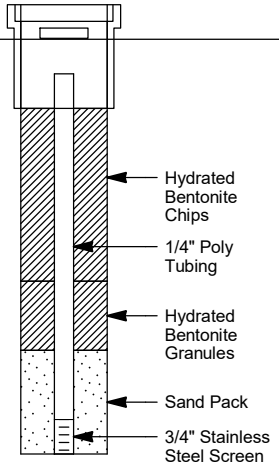
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W5
DATE COMPLETED: 9 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: K. Jenkin

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil	0.50
	SM-SAND, with silt, fine to medium grained, brown, moist	
2		
4		
	- light brown, medium to coarse grained at 5.0ft BGS	
6		
8		
	- saturated at 9.0ft BGS	
10		
12		
14		
	END OF BOREHOLE @ 15.0ft BGS	15.00
16	Collect water sample from 10'-12'	
18		

Soil Gas Probe



WELL DETAILS
Screened interval:
5.50 to 6.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
3.50 to 4.50ft BGS
Material: Bentonite Granules
Sand Pack:
4.50 to 6.00ft BGS
Material: Sand

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S			0.0
2	P/S			0.0
3	P/S			0.0
4	P/S			0.0
5	P/S			0.0
6	P/S			0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

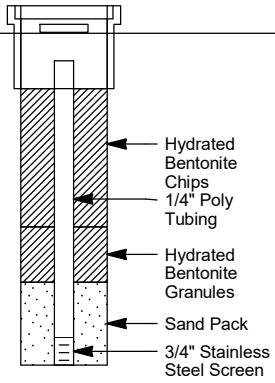
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W6
DATE COMPLETED: 9 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: K. Jenkin

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Topsoil with gravel	0.50
	SW-SAND, fine to coarse grained, brown, moist	
2	- becoming coarse grained at 2.5ft BGS	
4		
6		
8	- light brown, coarse grained at 9.0ft BGS - saturated at 9.5ft BGS	
10		
12		
14	- light brownish orange, no gravel at 14.0ft BGS	
16		
18		
20	END OF BOREHOLE @ 20.0ft BGS Collect water sample from 10'-12'	20.00
22		
24		

Soil Gas Probe



WELL DETAILS
Screened interval:
5.50 to 6.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
3.50 to 4.50ft BGS
Material: Bentonite Granules
Sand Pack:
4.50 to 6.00ft BGS
Material: Sand

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	1.5		0.0
2	P/S	2.5		0.0
3	P/S	2.0		0.0
4	P/S	2.0		0.0
5	P/S	2.0		0.0
6	P/S	2.0		0.0
7	P/S	2.0		0.0
8	P/S	2.0		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

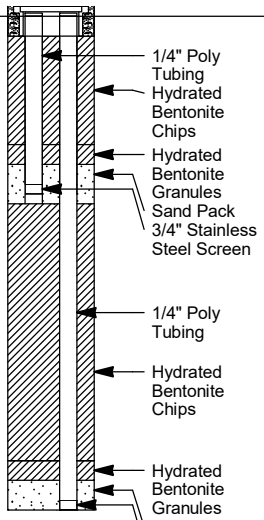
STRATIGRAPHIC LOG

PROJECT NAME: Wausau Water Supply NPL Site
PROJECT NUMBER: 3978
CLIENT: PRP Group
LOCATION: Wausau, Wisconsin

HOLE DESIGNATION: W7
DATE COMPLETED: 10 March 2017
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: K. Jenkin

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Gravelly topsoil. brown, moist	0.50
	SW-SAND, gravelly, fine to coarse grained, brown, moist	
	- increasing gravel size at 22.0ft BGS	
	- saturated at 28.0ft BGS	
	END OF BOREHOLE @ 35.0ft BGS	35.00
	Collect water sample from 29'-32'	

Soil Gas Probes



WELL DETAILS
Screened interval:
24.50 to 25.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
22.50 to 23.50ft BGS
Material: Bentonite Granules
Sand Pack:
23.50 to 25.00ft BGS
Material: Sand

Screened interval:
8.50 to 9.00ft BGS
Length: 0.5ft
Diameter: 0.8in
Material: Stainless Steel
Seal:
9.50 to 22.50ft BGS
Material: Bentonite Chips
Sand Pack:
7.50 to 9.50ft BGS
Material: Sand

Seal:
6.50 to 7.50ft BGS
Material: Bentonite Granules

Seal:
1.00 to 6.50ft BGS
Material: Bentonite Chips

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' Value	PID (PPM)
1	P/S	2.0		0.0
2	P/S	2.0		0.0
3	P/S	2.0		0.0
4	P/S	2.0		0.0
5	P/S	2.5		0.0
6	P/S	2.5		0.0
7	P/S	2.5		0.0
8	P/S	2.5		0.0
9	P/S	3.0		0.0
10	P/S	3.0		0.0
11	P/S	3.0		0.0
12	P/S	3.0		0.0
13	P/S	2.0		0.0
14	P/S	2.0		0.0

NOTES: THIS BORING LOG NOT TO BE USED SEPARATELY FROM THIS REPORT.

CHEMICAL ANALYSIS

Appendix C

VI Investigation Documentation

JOB NAME: Vansau

JOB NUMBER: 3978

DATE: 3/8/17

SAMPLER: RA

Probe Name: E35

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09673
Valve Number: 10933
Valve Flow Rate: 200 ml/min

Summa Canister Pressures:
Before Sampling: -28.5 @ 12:09
After Sampling: -5 @ 1235

Well Volume: 300
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: 0.0
After Purge: 0.0

Vacuum Test:
Pressure/Length: -14 for 1 min

Helium Test:
Helium Before Purge: 0.0
Discharge During Purge: 0.0
Helium After Purge: 0.0
Helium in Shroud 58 %

Sample Time: 1235
SAMPLIE NUMBER: G-170308-RA-01
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/9/17

SAMPLER: 12A

Probe Name: E-25

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11148
Valve Number: 10110
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @1248
After Sampling: -5 @1318

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -19 for 1min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 58%

Sample Time: 1318
SAMPLIE NUMBER: 6-170309-PA-02
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 3/9/17

SAMPLER: RA

Probe Name: E-2D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10770
Valve Number: 1114
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -27 @ 1248
After Sampling: -5 @ 1218

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -12 hg 1 min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 58%

Sample Time: 12:18
SAMPLIE NUMBER: 0-170309-RA-03
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/9/17

SAMPLER: RA

Probe Name: E45

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10306
Valve Number: 10927
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 13:57
After Sampling: -5 @ 17:38

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -12 for 1 min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 627

Sample Time: 1435
SAMPLIE NUMBER: G-170309-RA-04
QA/QC:

NOTES:

JOB NAME: Wayne

JOB NUMBER: 3978

DATE: 3/8/11

SAMPLER: RA

Probe Name: E4D

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10273
Valve Number: 10392
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -28.5 @ 1357
After Sampling: -5 @ 1438

Well Volume: 300ml
Purge Volume/Rate 800ml/@ 200ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -10 for 1min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 62%

Sample Time: 1438
SAMPLIE NUMBER: 6-170309-RA-05
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 3/9/17

SAMPLER: RA

Probe Name: E-15

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10298
Valve Number: 09956
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1447
After Sampling: -6 @ 15:17

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -15 in/min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 64%

Sample Time: 1517
SAMPLIE NUMBER: 67703009-RA-06
QA/QC:

NOTES:

JOB NAME: 3978

JOB NUMBER: Warsaw

DATE: 3/19/17

SAMPLER: RA

Probe Name: E-55

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10514
Valve Number: 10613
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -27 @ 8:10
After Sampling: -5 @ 837

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -12 for 1 min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 687

Sample Time: 8:37
SAMPLIE NUMBER: G-170310-RA-07
QA/QC: _____

NOTES:

9

JOB NAME: Wasco

JOB NUMBER: 8978

DATE: 3/10/17

SAMPLER: RA

Probe Name: E.50

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10554
Valve Number: 11114
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 8:10
After Sampling: -5 @ 8:37

Well Volume: 300ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -14 for 1 min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 68%

Sample Time: 8:37
SAMPLIE NUMBER: G-170310-RA-08
QA/QC:

NOTES:

JOB NAME: Wasa

JOB NUMBER: 3978

DATE: 3/10/17

SAMPLER: RA

Probe Name: E65

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10482
Valve Number: 10673
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: >30" @ 857
After Sampling: -5 @ 930

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200 ml/min

PID Readings:
Start of Purge: 0.1
After Purge: 0

Vacuum Test:
Pressure/Length: 12 for 1 min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 700 ppm * check connections and retest. 0 after 2nd time
Helium in Shroud 52%

Sample Time: 930
SAMPLIE NUMBER: G-170310-RA-09
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/10/17

SAMPLER: RA

Probe Name: E-60

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Duplicate

Tank Number:	10704	09722
Valve Number:	11091	11516
Valve Flow Rate:	200	200

Summa Canister Pressures:

Before Sampling:	-30 @ 857	-29 @ 857
After Sampling:	-5 @ 929	-5 @ 927

Well Volume: 300 ml

Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: 12 for 1 min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 52%

Sample Time:
SAMPLIE NUMBER: 929 G-1703/4-RA-10
QA/QC: 927 G-1703/4-RA-11 Dup

NOTES:

JOB NAME: Wasco

JOB NUMBER: 3968

DATE: 3/10/17

SAMPLER: RA

Probe Name: E-75

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09785
Valve Number: 10674
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 956
After Sampling: _____

Well Volume: 300 ml
Purge Volume/Rate ~~400~~ 800 @ 200 ml/min

PID Readings:
Start of Purge: 0.0
After Purge: 0.0

Vacuum Test:
Pressure/Length: -14 for 1 min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 62%

Sample Time: _____
SAMPLIE NUMBER: ~~G170310-RA-12~~
QA/QC: _____

NOTES: NA - water in line

JOB NAME: Wansee

JOB NUMBER: 8978

DATE: 3/10/17

SAMPLER: RA

Probe Name: E-7D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10042
Valve Number: 10893
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 956
After Sampling: -5 @ 1023

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200ml/min.

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -11 for 1 min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 62%

Sample Time: 1027
SAMPLIE NUMBER: G170310-RA-1.2
QA/QC: _____

NOTES:

JOB NAME: Wa-Sec

JOB NUMBER: 3978

DATE: 3/10/17

SAMPLER: PA

Probe Name: E-85

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10764
Valve Number: 09884
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1041
After Sampling: -5 @ 1110

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -13 Hg. 1 min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 63%

Sample Time: 1110
SAMPLIE NUMBER: G170310-PA-13
QA/QC: _____

NOTES:

JOB NAME: Wa-Sar

JOB NUMBER: 3978

DATE: 3/16/17

SAMPLER: RA

Probe Name: E-8 D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09979
Valve Number: 10083
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1041
After Sampling: -5 @ 11:10

Well Volume: 300 ml
Purge Volume/Rate 800ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -14 for 1min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: ✓
Helium After Purge: Ø
Helium in Shroud 63%

Sample Time: 11:10
SAMPLIE NUMBER: G-170310-RA.14
QA/QC: _____

NOTES:

JOB NAME: Watson

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: E-95

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11167
Valve Number: 10614
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1135
After Sampling: -5 @ 1230

Well Volume: 300
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: NA
After Purge: NA

Vacuum Test:
Pressure/Length: -15 for 1 min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 60%

Sample Time: 1200
SAMPLIE NUMBER: G-170310-RA-15
QA/QC:

NOTES:

PID stopped working

JOB NAME: Wasco

JOB NUMBER: 3928

DATE: 3/11/17

SAMPLER: RA

Probe Name: E-9D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10179
Valve Number: 10677
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1135
After Sampling: -5 @ 1205

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: ~~0~~ NA
After Purge: ~~0~~ NA

Vacuum Test:
Pressure/Length: -11 for 1 min

Helium Test:
Helium Before Purge: ~~0~~
Discharge During Purge: ~~0~~
Helium After Purge: ~~0~~
Helium in Shroud 60%

Sample Time: 1205
SAMPLIE NUMBER: G-170310-RA-16
QA/QC: _____

NOTES:

PID stopped working

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: PV

Probe Name: OA

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10967
Valve Number: 7617
Valve Flow Rate: 2 yhr

Summa Canister Pressures:
Before Sampling: -30 @ 1240 on 3/17
After Sampling: -6 @ 1145 on 3/14

Well Volume: NA
Purge Volume/Rate

PID Readings:
Start of Purge:
After Purge:

Vacuum Test:
Pressure/Length:

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1145
SAMPLIE NUMBER: OA-170313-RA-01
QA/QC:

NOTES:

JOB NAME: Wrasse

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RA

Probe Name: Outdoor Air Clinic

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09615
Valve Number: 11581
Valve Flow Rate: 24L

Summa Canister Pressures:
Before Sampling: -24 @ 19:10
After Sampling: -6 @ 1110

Well Volume: _____
Purge Volume/Rate _____

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: _____
Helium After Purge: _____
Helium in Shroud _____

Sample Time: 1110
SAMPLIE NUMBER: OA-170404-RA-02
QA/QC: _____

NOTES:

JOB NAME: Nausau

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: IA North Building

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10165
Valve Number: 09866
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -28 @ 12:10 on 3/13
After Sampling: -6 @ 1145 on 3/14

Well Volume: NA
Purge Volume/Rate

PID Readings:
Start of Purge:
After Purge:

Vacuum Test:
Pressure/Length:

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1145
SAMPLIE NUMBER: IA-170313-RA-01
QA/QC:

NOTES:

JOB NAME: Wasson

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: IA 2 south building

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10848
Valve Number: 10620
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -30 @ 1245 3/13
After Sampling: -5 @ 1150 3/14

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge:
After Purge:

Vacuum Test:
Pressure/Length:

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1150
SAMPLIE NUMBER: IA-170314-RA-02
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RA

Probe Name: Indoor Air @ Clinic

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11233
Valve Number: 11568
Valve Flow Rate: 2 L/hr

Summa Canister Pressures:
Before Sampling: -30 @ 1350
After Sampling: -6 @ 1115

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1115
SAMPLIE NUMBER: IA-170404-RA-03
QA/QC:

NOTES:

JOB NAME: Wasco

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RA

Probe Name: IA 1901 N 2nd St

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10682
Valve Number: 09954
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -30 @ 1510
After Sampling: -1 @ 1640

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: NP

Helium Test:
Helium Before Purge: NA
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1640
SAMPLIE NUMBER: IA-170404-RA-04
QA/QC:

NOTES:

JOB NAME: [illegible]

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RA

Probe Name: IA 1917 N 2nd St

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11157
Valve Number: 11504
Valve Flow Rate: 24 hr

Summa Canister Pressures:
Before Sampling: -30 @ 1600
After Sampling: -10 @ 1130

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: —

Helium Test:
Helium Before Purge: NA
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1130
SAMPLIE NUMBER: IA-170404-RA-05
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RA

Probe Name: IA-6 1915 N 2.2 W

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10622
Valve Number: 11263
Valve Flow Rate: 24 hr

Summa Canister Pressures:
Before Sampling: -30 @ 1725
After Sampling: -3 @ 1550

Well Volume: NA
Purge Volume/Rate _____

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1550
SAMPLIE NUMBER: IA-170404-RA-06
QA/QC: _____

NOTES:

JOB NAME: Warsa

JOB NUMBER: 3977

DATE: 3/13/17

SAMPLER: RA

Probe Name: SS-1 North side of south building

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11303
Valve Number: 1104
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1406
After Sampling: -5 @ 1436

Well Volume: NA
Purge Volume/Rate

PID Readings:
Start of Purge: 36
After Purge: 1.6

Vacuum Test:
Pressure/Length: -14 for 1 min

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud

} water dri

Sample Time: 1436
SAMPLIE NUMBER: SS-170313-RA01
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/13/17

SAMPLER: RA

Probe Name: SS-2 middle on south bulkhead

Temperature: 1
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10377
Valve Number: 10910
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29.0 1415
After Sampling: -5.0 1445

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge: 0.6
After Purge: 0.0

Vacuum Test:
Pressure/Length: -12 hr 1m

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud
} water dam

Sample Time: 1445
SAMPLIE NUMBER: SS-170313-Ph02
QA/QC:

NOTES:

4 poles from the south side
- ~~east~~ west side of center rack

JOB NAME: [illegible]

JOB NUMBER: 397Y

DATE: 3/13/17

SAMPLER: RA

Probe Name: SS-3 south side of south building

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10551
Valve Number: 10388
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1430
After Sampling: -5 @ 1450

Well Volume:
Purge Volume/Rate [illegible]

PID Readings:
Start of Purge: 1.6
After Purge: 1.6

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud
} [illegible]

Sample Time: 1450
SAMPLIE NUMBER: SS-170313 RA 03
QA/QC:

NOTES:

JOB NAME: Wanser

JOB NUMBER: 3978

DATE: 3/13/17

SAMPLER: RA

Probe Name: ~~SS~~ SS-4 south west side of north bldg.

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 079978
Valve Number: 10678
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @1503
After Sampling: -5 @1552

Well Volume: _____
Purge Volume/Rate _____

PID Readings:
Start of Purge: 0.0
After Purge: 0.0

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge: _____
Discharge During Purge: _____
Helium After Purge: _____
Helium in Shroud _____
} under dam

Sample Time: 1552
SAMPLIE NUMBER: SS-170313-RA-04
QA/QC: _____

NOTES:

JOB NAME: Wasco

JOB NUMBER: 8978

DATE: 3/13/17

SAMPLER: [illegible]

Probe Name: SS-5 east side of work building

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10640
Valve Number: 09574
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1528
After Sampling: -5 @ 1604

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge: 0.0
After Purge: 0.0

Vacuum Test:
Pressure/Length: -11 hr/min

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud
} water dam

Sample Time: 1604
SAMPLIE NUMBER: SS-170313-QA-05
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 9/4/17

SAMPLER: RA

Probe Name: SS-6 Dental Clinic

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10237
Valve Number: 10115
Valve Flow Rate: 200 ml/min

Summa Canister Pressures:
Before Sampling: -29 @ 1356
After Sampling: -6 @ 1425

Well Volume:
Purge Volume/Rate } purge 1 min with PID

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud
} water dam

Sample Time: 1425
SAMPLIE NUMBER: SS-170904-RA.06
QA/QC:

NOTES: Collected in furnace room

JOB NAME: Hanson

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RA

Probe Name: SS-07 1901 N 2nd St

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09917
Valve Number: 09894
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1454
After Sampling: -5 @ 1530

Well Volume: _____
Purge Volume/Rate _____

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -14 for 1 min

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1530
SAMPLIE NUMBER: SS-170404-RA-07
QA/QC: _____

NOTES:
Concrete was 2" thick
unable to set a vapor pin

collected in basement

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 4/4/17

SAMPLER: RL

Probe Name: SS-8 1917 N 26 St

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10680
Valve Number: 09897
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1555
After Sampling: -10 @ 1648

Well Volume:
Purge Volume/Rate: purge 1 min with PID

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -15 for 1 min

Helium Test:
Helium Before Purge: water dam
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1648
SAMPLIE NUMBER: SS-170404-RA-08
QA/QC:

NOTES: 2" thick concrete

collected in living room

JOB NAME: Wausau

JOB NUMBER: 3478

DATE: 4/4/17

SAMPLER: RA

Probe Name: SS-9 1915 N 2nd St | IA-6

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10068 | 10022
Valve Number: 11441 | 11203
Valve Flow Rate: 200 | 24hr

Summa Canister Pressures:
Before Sampling: -30 @ 1722 | -30 @ 1725
After Sampling: -5 @ 1752 | -3 @ 1550

Well Volume:
Purge Volume/Rate

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -15 hr 1min

Helium Test:
Helium Before Purge: Water dam
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1752 | 1550
SAMPLIE NUMBER: SS-170404-RA-9 | IA-170404-RA-06
QA/QC:

NOTES:

2" thick concrete

collected in living room

JOB NAME: Lawson

JOB NUMBER: 3978

DATE: 3/13/17

SAMPLER: RA

Probe Name: W-25

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10157
Valve Number: 10611
Valve Flow Rate: 20.

Summa Canister Pressures:
Before Sampling: -29 @ 1634
After Sampling: -5 @ 1659

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200 ml/min

PID Readings:
Start of Purge: 0.0
After Purge: 0.0

Vacuum Test:
Pressure/Length: -13 for 1min

Helium Test:
Helium Before Purge: ~~604~~ Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 604

Sample Time: 1659
SAMPLIE NUMBER: G-170313-RA-17
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/17/17

SAMPLER: RA

Probe Name: W-2D

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 1024
Valve Number: 1100
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1634
After Sampling: -5 @ 1659

Well Volume: 3 min
Purge Volume/Rate 800 @ 200 ml/min

PID Readings:
Start of Purge: 0.0
After Purge: 0.0

Vacuum Test:
Pressure/Length: -11 for 1 min

Helium Test:
Helium Before Purge: 60.1 g
Discharge During Purge: g
Helium After Purge: g
Helium in Shroud 60.1

Sample Time: 1659
SAMPLIE NUMBER: G-176313-RA-18
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 3/13/17

SAMPLER: RA

Probe Name: W-15

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10118
Valve Number: 1112
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1715
After Sampling: -6 @ 1750

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -12 in/min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 51.3

Sample Time: 1750
SAMPLIE NUMBER: G-170317-RA-19
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 3/13/17

SAMPLER: RA

Probe Name: W.1D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10105
Valve Number: 10671
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1715
After Sampling: -5 @ 1742

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 513

Sample Time: 1742
SAMPLIE NUMBER: G-170313-RA-020
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 5978

DATE: 3/17/17

SAMPLER: RA

Probe Name: W-55

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11473
Valve Number: 10547
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 9:04
After Sampling: -6 @ 934

Well Volume: 300 ml
Purge Volume/Rate 300 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 54%

Sample Time: 934
SAMPLIE NUMBER: G-170314-RA-21
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: W-65

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10389
Valve Number: 10031
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -28 @ 916
After Sampling: -5 @ 945

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200 ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -13 in /min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 59%

Sample Time: 945
SAMPLIE NUMBER: G-170314-RA-22
QA/QC:

NOTES:

JOB NAME: Wasau

JOB NUMBER: 3928

DATE: 3/14/17

SAMPLER: RS

Probe Name: W.75

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11559
Valve Number: 10958
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 10:00
After Sampling: -5 @ 10:27

Well Volume: 300 ml
Purge Volume/Rate 800 ml @ 200 ml/min

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -13 ft/min

Helium Test:
Helium Before Purge: Ø
Discharge During Purge: Ø
Helium After Purge: Ø
Helium in Shroud 53%

Sample Time: 1027
SAMPLIE NUMBER: G-170314-RA-23
QA/QC:

NOTES:

JOB NAME: Watson

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: W-7D

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11235
Valve Number: 10844
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1100
After Sampling: -5 @ 1027

Well Volume: 300 ml
Purge Volume/Rate 200 ml/min · 300 ml

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -14 in/min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 53%

Sample Time: 1027
SAMPLIE NUMBER: 6-170314-RA-24
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3778

DATE: 3/14/17

SAMPLER: RA

Probe Name: W45

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10397
Valve Number: 11441
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1013
After Sampling: -5 @ 1048

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -13 for 1min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 58%

Sample Time: 1045
SAMPLIE NUMBER: G170314RA25
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: W-40

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11562
Valve Number: 11113
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 1013
After Sampling: -5 @ 1045

Well Volume: 300ml
Purge Volume/Rate 800ml @ 200ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -11 for 1min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 58%

Sample Time: 1045
SAMPLIE NUMBER: G-170314-RA-26
QA/QC: _____

NOTES:

JOB NAME: Wansen

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: W-35

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11047
Valve Number: 10958
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -30 @ 11:02
After Sampling: -5 1130

Well Volume: 300 ml
Purge Volume/Rate 800 @ 200ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -14 for 1min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 60%

Sample Time: 1130
SAMPLIE NUMBER: 6-170314-RA-27
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 3/14/17

SAMPLER: RA

Probe Name: V-3D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10230
Valve Number: 10844
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 11:02
After Sampling: -5 @ 1130

Well Volume: 300
Purge Volume/Rate 800 @ 200 ml/min

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -10 in/min

Helium Test:
Helium Before Purge: 0
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 60%

Sample Time: 1130
SAMPLIE NUMBER: G-170314-RA-2D
QA/QC: _____

NOTES:

JOB NAME: hrayar

JOB NUMBER: 3978

DATE: 5/15/17

SAMPLER: RA

Probe Name: OA @ 1917 N 2nd St

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11218
Valve Number: 10429
Valve Flow Rate: 24

Summa Canister Pressures:
Before Sampling: -30 @ 1320
After Sampling: -10 @ 1000 5/16/17

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: ∅
After Purge: ∅

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 10:00
SAMPLIE NUMBER: OA.170515-RA.01
QA/QC: _____

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 5/15/17

SAMPLER: RA

Probe Name: IA @ 1905 N 2.8 ft

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: ~~10449~~ 09963
Valve Number: 10449
Valve Flow Rate: 2 hr

Summa Canister Pressures:
Before Sampling: -30 @ 1100
After Sampling: -10 @ 8:05

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 805
SAMPLIE NUMBER: IA-170515-RA-01
QA/QC: _____

NOTES:
Concrete - 2-3" thick

JOB NAME: 3978

JOB NUMBER: Wausa

DATE: 5/15/17

SAMPLER: RA

Probe Name: IA Basement @ 1917 N 2.1 L

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10207
Valve Number: 11550
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -30 @ 1315
After Sampling: 0 1018

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: _____
Discharge During Purge: _____
Helium After Purge: _____
Helium in Shroud ↓

Sample Time: 10:18
SAMPLIE NUMBER: IA-170515-RA02
QA/QC: _____

NOTES: 8 hr regulator was used instead of 24hr

JOB NAME: Wasau

JOB NUMBER: 397Y

DATE: 5/15/17

SAMPLER: RA

Probe Name: IA mainlevel @ 1917 N 2nd St

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: ~~10435~~ 09601
Valve Number: 10435
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -30 @ 1315
After Sampling: -5 @ 1030

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1030
SAMPLIE NUMBER: IA-170515-RA03
QA/QC: _____

NOTES:

JOB NAME: Wasco

JOB NUMBER: 3978

DATE: 5/15/17

SAMPLER: RA

Probe Name: IA - 1909 2.1 st N

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10032
Valve Number: 11467
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -29 @ 1640
After Sampling: -6 @ 1540

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 15:40
SAMPLIE NUMBER: IA-170515-RA-04
QA/QC: _____

NOTES:

K. Tche

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 5/15/17

SAMPLER: RA

Probe Name: SS @ 1905 N 2nd St

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11032
Valve Number: 11098
Valve Flow Rate: 200 ml/m

Summa Canister Pressures:
Before Sampling: >-30 @ 1045
After Sampling: -10 @ 1110

Well Volume:
Purge Volume/Rate

purge 1min with PID

PID Readings:
Start of Purge: 0.1
After Purge: 0.1

Vacuum Test:
Pressure/Length: -15' for 1min

Helium Test:
Helium Before Purge:
Discharge During Purge:
Helium After Purge:
Helium in Shroud

water dam

Sample Time: 1110
SAMPLIE NUMBER: SS-170515-RA-01
QA/QC:

NOTES:

JOB NAME: 3978

JOB NUMBER: Wausau

DATE: 3/16/17

SAMPLER: RA

Probe Name: SS e 1917 2nd Ave N

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10213
Valve Number: 09897
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1026
After Sampling: -5 @ 1052

Well Volume:
Purge Volume/Rate } purge 1 min with PID

PID Readings:
Start of Purge: 0
After Purge: 0

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge: Water down
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1052
SAMPLIE NUMBER: SS-170516-RA.02
QA/QC:

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 5/16/17

SAMPLER: RA

Probe Name: SS. 1909 N 2.1 SL

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10715
Valve Number: 10085
Valve Flow Rate: 200

Summa Canister Pressures:
Before Sampling: -29 @ 1542
After Sampling: -6 @ 1610

Well Volume: _____ } 1 min with PID
Purge Volume/Rate _____

PID Readings:
Start of Purge: 0.3
After Purge: 0.3

Vacuum Test:
Pressure/Length: -12 for 1 min

Helium Test:
Helium Before Purge: _____
Discharge During Purge: _____ } Water down
Helium After Purge: _____
Helium in Shroud _____

Sample Time: 1610
SAMPLIE NUMBER: SS-170516-RA03
QA/QC: _____

NOTES:

2-3" concrete

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: Clinic IA

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 10989
Valve Number: 7076
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -27 @ 14:42
After Sampling: -6 @ 1224

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1442
SAMPLIE NUMBER: IA-170731-RA-01
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: IA main level 1917 2nd St

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 11007
Valve Number: 7461
Valve Flow Rate: 24 hr

Summa Canister Pressures:
Before Sampling: 15:26 -30
After Sampling: -8 @ 12:31

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 15:26
SAMPLIE NUMBER: IA-170731-A-02
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: IA Basement - 1917 2-6 SL

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 11213
Valve Number: 7283
Valve Flow Rate: 24L

Summa Canister Pressures:
Before Sampling: 1530 @ -30
After Sampling: -9 @ 1231

Well Volume: NA
Purge Volume/Rate

PID Readings:
Start of Purge: NA
After Purge:

Vacuum Test:
Pressure/Length: NP

Helium Test:
Helium Before Purge: NA
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1530
SAMPLIE NUMBER: IA-170731RA-03
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RL

Probe Name: IA 1915 N 2nd St main level

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 11645
Valve Number: 11584
Valve Flow Rate: ~~11584~~ 100

Summa Canister Pressures:
Before Sampling: -30 @ 1600
After Sampling: -7 @ 1514

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1600
SAMPLIE NUMBER: IA-170731-KA-04
QA/QC:

3:00

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RK

Probe Name: IA @ 1909 2nd St

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 09877
Valve Number: 7616
Valve Flow Rate: 24L

Summa Canister Pressures:
Before Sampling: ~~[illegible]~~ >30 @ 1625 7/31/17
After Sampling: -6 @ ~~[illegible]~~ 1520 8/1/17

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1625
SAMPLIE NUMBER: IA-170731-RA-05
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: IA @ 1901 2nd St

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW M
Humidity: 52

Tank Number: 10561
Valve Number: 8797
Valve Flow Rate: 24L.

Summa Canister Pressures:
Before Sampling: -27 @ 1700 7/31/17
After Sampling: -5 @ 1840 8/1/17

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1700
SAMPLIE NUMBER: IA-170731-RA-06
QA/QC:

NOTES:

radon system was on

JOB NAME: Krause

JOB NUMBER: 3928

DATE: 7/31/17

SAMPLER: RD

Probe Name: Outdoor air @ 1917 N 2nd St - under garage overhang

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 09528
Valve Number: 7156
Valve Flow Rate: 24 hr

Summa Canister Pressures:
Before Sampling: -30 @ 1520 7/31/17
After Sampling: -7 @ 1515 8/1/17

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1520
SAMPLIE NUMBER: OA-170731-RA-01
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/1/17

SAMPLER: RA

Probe Name: E25 E20

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10341 10960
Valve Number: 11433 10914
Valve Flow Rate: 100 100

Summa Canister Pressures:
Before Sampling: 730 > 30 @ 9:34
After Sampling: ~~[illegible]~~ -18 -12 @ 9:42

Well Volume:
Purge Volume/Rate 4 min @ 200 ml/min

PID Readings:
Start of Purge: Ø Ø
After Purge: Ø Ø

Vacuum Test:
Pressure/Length: -16 for 1 min -17 for 1 min

Helium Test:
Helium Before Purge: ~~531~~ 0 Ø
Discharge During Purge: Ø Ø
Helium After Purge: Ø Ø
Helium in Shroud 531

Sample Time: 9:42 9:42
SAMPLIE NUMBER: G170801-RA-01 RA-02
QA/QC:

NOTES:

JOB NAME: Wasco

JOB NUMBER: 3978

DATE: 8/1/17

SAMPLER: RA

Probe Name: E4S E 4D

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09643 11495
Valve Number: 10767 11062
Valve Flow Rate: ~~200~~ 100 200

Summa Canister Pressures:
Before Sampling: >30 @ 10:04 -30 @ 1004
After Sampling: ~~30 @ 10:04~~ -5 @ 1010
-10 @ 10:14

Well Volume: _____
Purge Volume/Rate 4 min @ 200 ml/min " "

PID Readings:
Start of Purge: Ø Ø
After Purge: Ø Ø

Vacuum Test:
Pressure/Length: -10 for 1 min -1 for 1 min

Helium Test:
Helium Before Purge: ~~051.9~~
Discharge During Purge: Ø Ø
Helium After Purge: Ø Ø
Helium in Shroud 51.9 Ø

Sample Time: 10:14 10:10
SAMPLIE NUMBER: G-170801-RA-03 G-170801-RA-04
QA/QC: _____

NOTES:

JOB NAME: Warsaw

JOB NUMBER: 3978

DATE: 8/11/7

SAMPLER: RC

Probe Name: E5s 5s (D-p) E5D

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number:	10753	09636	10754
Valve Number:	17728	10110	10019
Valve Flow Rate:	200	100	100

Summa Canister Pressures:

Before Sampling:	-29 @ 1044	-28 @ 1044	-28 @ 1044
After Sampling:	-5 @ 1053	-3 @ 1051	-5 @ 1054

Well Volume:
Purge Volume/Rate 4 min @ 200 ml/min

PID Readings:

Start of Purge:	0.1	0.1	0.1
After Purge:	0.3	0.3	0.4

Vacuum Test:

Pressure/Length:	-14 fr 1 min	-14 fr 1 min	-16 fr 1 min

Helium Test:

Helium Before Purge:	Ø	Ø	Ø
Discharge During Purge:	Ø	Ø	Ø
Helium After Purge:	Ø	Ø	Ø
Helium in Shroud	53.6	53.6	53.6

Sample Time:	1053	1051	1054
SAMPLIE NUMBER:	G-170801-RA-05	-06 (D-p)	-07
QA/QC:			

NOTES:

JOB NAME: Lawson

JOB NUMBER: 3978

DATE: 8/11/17

SAMPLER: RA

Probe Name: B15 Duplicate

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11554 11545
Valve Number: 10246 11246
Valve Flow Rate: 100 100

Summa Canister Pressures:
Before Sampling: -30 @ 1120 -29 @ 1120
After Sampling: -5 @ 1130 -5 @ 1130

Well Volume: _____
Purge Volume/Rate 4 min @ 200 ml/min

PID Readings:
Start of Purge: 0.2 0.2
After Purge: 0.2 0.2

Vacuum Test:
Pressure/Length: -8 for 1 min -8 for 1 min

Helium Test:
Helium Before Purge: ~~57.1~~ Ø
Discharge During Purge: _____ Ø
Helium After Purge: _____ Ø
Helium in Shroud 57.1

Sample Time: 11:30 11:30
SAMPLIE NUMBER: G-170801-RA-08 -09 (Dup)
QA/QC: _____

NOTES:

JOB NAME: Warsa

JOB NUMBER: 3978

DATE: 8/11/17

SAMPLER: RA

Probe Name: E95 E9D

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11578 11124
Valve Number: 09897 7504
Valve Flow Rate: 100 100

Summa Canister Pressures:
Before Sampling: -30 @ 1250 -30 @ 1250
After Sampling: -5 @ 1302 -5 @ 1257

Well Volume:
Purge Volume/Rate 4min @ 200ml/min

PID Readings:
Start of Purge: 0.0 0.4
After Purge: 0.0 0.4

Vacuum Test:
Pressure/Length: -12 for 1min -12 for 1min

Helium Test:
Helium Before Purge: ~~54.1~~ Ø Ø
Discharge During Purge: Ø Ø
Helium After Purge: Ø Ø
Helium in Shroud 54.1

Sample Time: 1302 1257
SAMPLIE NUMBER: G-170811-RA-10 G-170811-RA-11
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/1/17

SAMPLER: RA

Probe Name: ESS ESD

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 12520 10746
Valve Number: 11432 10934
Valve Flow Rate: 100 100

Summa Canister Pressures:
Before Sampling: -<30 @1323 -29 @1323
After Sampling: -5 @1329 -5 @1334

Well Volume:
Purge Volume/Rate 4min @ 200ml/min " "

PID Readings:
Start of Purge: 0.4 0.1
After Purge: 0.3 0.2

Vacuum Test:
Pressure/Length: -8 fr 1min -14 fr 1min

Helium Test:
Helium Before Purge: ∅ ∅
Discharge During Purge: ∅ ∅
Helium After Purge: ∅ ∅
Helium in Shroud 57.1

Sample Time: 13:29 1334
SAMPLIE NUMBER: G-170801-RA12 RA-13
QA/QC:

NOTES:

JOB NAME:	Wausau	
JOB NUMBER:	3978	
DATE:	8/1/17	
SAMPLER:	RA	
Probe Name:	E75	E70
Temperature:		
Barometric Pressure:		
Wind Speed/Direction:		
Humidity:		
Tank Number:	09750	11593
Valve Number:	9957	10958
Valve Flow Rate:	100	100
Summa Canister Pressures:		
Before Sampling:		-30@1354
After Sampling:		-5@1403
Well Volume:	See notes	
Purge Volume/Rate	4 min @ 200ml/min	4 min @ 200ml/min
PID Readings:		
Start of Purge:	0.1	0.1
After Purge:	NA	0.1
Vacuum Test:		
Pressure/Length:	-14 for 1min	-14 for 1min
Helium Test:		
Helium Before Purge:	Ø	Ø
Discharge During Purge:	Ø	Ø
Helium After Purge:	Ø	Ø
Helium in Shroud	66.4	66.4
Sample Time:		1403
SAMPLIE NUMBER:	~~6-170801-RA-14~~	6-170801-RA-15
QA/QC:		

NOTES:

While purging well - noticed water in tubing - screen must be submerged

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: Clinic Sub slab

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 09666
Valve Number: 11438
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -30 @ 1448
After Sampling: -5 @ 1458

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0.2
After Purge: 0.2

Vacuum Test:
Pressure/Length: -14 for 1min

Helium Test:
Helium Before Purge: Waterdam
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1415
SAMPLIE NUMBER: SS-170731-RA-01
QA/QC: _____

NOTES: Abandoned

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: SS @ 1917 2.5 st

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11572
Valve Number: 10670
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -27.5 @ 15:31
After Sampling: -5 @ 1543

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -14 for 1 min

Helium Test:
Helium Before Purge: Water dam
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1543
SAMPLIE NUMBER: SS-170731-RA-02
QA/QC: _____

NOTES: Abandoned

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: SS ~~RA~~ 1915 N 2nd st

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 09742
Valve Number: ~~11728~~ 11128
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -28 @ 16:02
After Sampling: -5 @ 1613

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -15 for 1 m.

Helium Test:
Helium Before Purge: NA water dam
Discharge During Purge: ↓
Helium After Purge:
Helium in Shroud

Sample Time: 1613
SAMPLIE NUMBER: SS-170731-RA-03
QA/QC:

NOTES: Abandoned

JOB NAME: Watson

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: SS- @ 1909 2nd St

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 10795
Valve Number: 09570
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -30 @ 1628
After Sampling: -5 @ 1639

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: Ø
After Purge: Ø

Vacuum Test:
Pressure/Length: -15 for 1 min.

Helium Test:
Helium Before Purge: Water Dam
Discharge During Purge: ↓
Helium After Purge:
Helium in Shroud

Sample Time: 1639
SAMPLIE NUMBER: SS-170731-RA-04
QA/QC:

NOTES:

Abandoned

JOB NAME: Wasco

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RD

Probe Name: SS @ 1901 2nd St

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: ~~10561~~ RC 09642
Valve Number: ~~8797~~ 11091
Valve Flow Rate: ~~24~~ 100

Summa Canister Pressures: RC
Before Sampling: ~~-27 @ 1700~~ -30 @ 1701
After Sampling: -5 @ 1712

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0 NA
After Purge: 0 ↓

Vacuum Test:
Pressure/Length: -13 for 1 min

Helium Test:
Helium Before Purge: NA water dam
Discharge During Purge: ↓
Helium After Purge:
Helium in Shroud

Sample Time: 1712
SAMPLIE NUMBER: SS-170731-RA-05
QA/QC:

NOTES:

Radon system is on.

Abandoned

JOB NAME: Walsco

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: IA - Bulk, A

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 10637
Valve Number: 7589
Valve Flow Rate: 24

Summa Canister Pressures:
Before Sampling: -30 @ 1750
After Sampling: -5 @ 1656

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1750
SAMPLIE NUMBER: IA-17-731-RA07
QA/QC:

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: IA Building B

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 1299
Valve Number: 7580
Valve Flow Rate: 24hr

Summa Canister Pressures:
Before Sampling: -30 @ 1900 7/31/17
After Sampling: -10 @ 1500 8/1/17

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: NA
After Purge: ↓

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1800
SAMPLIE NUMBER: IA-170731-RA-08
QA/QC:

NOTES:

JOB NAME: Wasson

JOB NUMBER: 3978

DATE: 7/31/17

SAMPLER: RA

Probe Name: OA - Regnl

Temperature: 82
Barometric Pressure: 29.96
Wind Speed/Direction: WSW 14
Humidity: 52

Tank Number: 10229
Valve Number: 7786
Valve Flow Rate: 24

Summa Canister Pressures:
Before Sampling: -26 @ 1757 7/31/17
After Sampling: -5 @ 1425 8/1/17

Well Volume: _____
Purge Volume/Rate _____

PID Readings:
Start of Purge: NA
After Purge: NA

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NP
Discharge During Purge: _____
Helium After Purge: _____
Helium in Shroud _____

Sample Time: 1757
SAMPLIE NUMBER: OA-170731-RA-02
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/1/17

SAMPLER: RL

Probe Name: W15/P

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

	S	S	D
Tank Number:	11140	11557 (Dup)	10980
Valve Number:	7439	7552	10616
Valve Flow Rate:	100	100	100
Summa Canister Pressures:			
Before Sampling:	-25@1734	-28@1734	-28@1734
After Sampling:	-5@1742	-5 1744	-5@1744
Well Volume:			
Purge Volume/Rate	4 min @ 200 ml/min	"	" " "
PID Readings:			
Start of Purge:	0.4	0.4	0.9
After Purge:	0.2	0.2	1.0
Vacuum Test:			
Pressure/Length:	-12 fr/min	-12 fr/min	-14 fr/min
Helium Test:			
Helium Before Purge:	Ø	Ø	Ø
Discharge During Purge:	Ø	Ø	Ø
Helium After Purge:	Ø	Ø	Ø
Helium in Shroud	57.6		
Sample Time:	6-170801-RA-16	RA-17	RA-18
SAMPLIE NUMBER:	17:42	1749	1744
QA/QC:			

NOTES:

JOB NAME:	Warsa		
JOB NUMBER:	3978		
DATE:	8/1/17		
SAMPLER:	RL	WYS	
Probe Name:	WYS	D-P	YD
Temperature:			
Barometric Pressure:			
Wind Speed/Direction:			
Humidity:			
Tank Number:	11277	09791	10748
Valve Number:	09895	11010	09883
Valve Flow Rate:	100	100	100
Summa Canister Pressures:			
Before Sampling:	-30 @ 1814	-30 @ 1814	-27 @ 18:14
After Sampling:	-5 @ 1825	-5 @ 1821	-5 @ 18:23
Well Volume:			
Purge Volume/Rate	4 min @ 200 ml/min		4 min @ 200 ml/min
PID Readings:			
Start of Purge:	0.3	0.3	0.4
After Purge:	0.5	0.5	0.6
Vacuum Test:			
Pressure/Length:	-12 in Hg/min	-12 in Hg/min	-14 in Hg/min
Helium Test:			
Helium Before Purge:	~~60.1~~	Ø	Ø
Discharge During Purge:	Ø	Ø	Ø
Helium After Purge:	Ø	Ø	Ø
Helium in Shroud	60.1	60.1	60.1
Sample Time:	1825	1821	1823
SAMPLIE NUMBER:	G170801-RA-19	RA-20	RA-21
QA/QC:			

NOTES:

JOB NAME: Grassa

JOB NUMBER: 3978

DATE: 5/12/17

SAMPLER: RA

Probe Name: W75 70

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11267 09800
Valve Number: 10943 10074
Valve Flow Rate: 100 100

Summa Canister Pressures:
Before Sampling: -30 @ 7:39 -30 @ 7:39
After Sampling: -5 @ 7:54 -5 @ 7:49

Well Volume: _____
Purge Volume/Rate 4 min @ 200 ml/min " "

PID Readings:
Start of Purge: 0.8 1.0
After Purge: 0.7 1.0

Vacuum Test:
Pressure/Length: -12 hr/min -13 hr/min

Helium Test:
Helium Before Purge: Ø Ø
Discharge During Purge: Ø Ø
Helium After Purge: Ø Ø
Helium in Shroud 61.7

Sample Time: 7:54 7:49
SAMPLIE NUMBER: G-170802-RA-22 RA-23
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/2/17

SAMPLER: [illegible]

Probe Name: W5S

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11590
Valve Number: 11434
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -28 @ 808
After Sampling: -4 @ 819

Well Volume: _____
Purge Volume/Rate 4 min @ 200 ml/min

PID Readings:
Start of Purge: 0.7
After Purge: 0.7

Vacuum Test:
Pressure/Length: -12 for 1 min

Helium Test:
Helium Before Purge: ~~053.7~~
Discharge During Purge: 0
Helium After Purge: 0
Helium in Shroud 53.7

Sample Time: _____
SAMPLIE NUMBER: G170802 [illegible]-24
QA/QC: _____

NOTES:

JOB NAME: Wayne

JOB NUMBER: 3978

DATE: 8/2/17

SAMPLER: RW

Probe Name: W35 W30

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11517 10342
Valve Number: 11103 10677
Valve Flow Rate: 100 100

Summa Canister Pressures:
Before Sampling: -30 @ 8:33 -28 @ 8:33
After Sampling: -5 @ 8:43 -5 @ 8:43

Well Volume: _____
Purge Volume/Rate 4 min @ 200 ml/min 4 min @ 200 ml/min

PID Readings:
Start of Purge: 0.6 0.7
After Purge: 0.5 0.3

Vacuum Test:
Pressure/Length: -8 fr/min -14 fr/min

Helium Test:
Helium Before Purge: Ø Ø
Discharge During Purge: Ø Ø
Helium After Purge: Ø Ø
Helium in Shroud 59.4

Sample Time: _____
SAMPLIE NUMBER: G170802-RA-25 RA-26
QA/QC: _____

NOTES:

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/2/17

SAMPLER: RG

Probe Name: W25 20

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number:	10964	11111
Valve Number:	10904	10940
Valve Flow Rate:	100	100

Summa Canister Pressures:

Before Sampling:	-30 @ 9:07	-28 @ 9:04
After Sampling:	-5 @ 9:15	-5 @ 913

Well Volume:
Purge Volume/Rate 4 min @ 200 ml/min 4 min @ 200 ml/min

PID Readings:

Start of Purge:	0.7	~~1.6~~ 3.0
After Purge:	0.5	0.4

Vacuum Test:
Pressure/Length: -13 for 1 min -14 for 1 min

Helium Test:

Helium Before Purge:	Ø	Ø
Discharge During Purge:	Ø	Ø
Helium After Purge:	Ø	Ø
Helium in Shroud	55	

Sample Time:	915	913
SAMPLIE NUMBER:	G-170802-RA-27	RA-28
QA/QC:		

NOTES:

JOB NAME: Nassau

JOB NUMBER: 3978

DATE: 8/16/17

SAMPLER: RC

Probe Name: Building B SS-1

Temperature:
Barometric Pressure:
Wind Speed/Direction:
Humidity:

Tank Number: 11577
Valve Number: 18952
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -29 @ 1447
After Sampling: -5 @ 1456

Well Volume: NA
Purge Volume/Rate

PID Readings:
Start of Purge: 0.4
After Purge: 0.3

Vacuum Test:
Pressure/Length: NA

Helium Test:
Helium Before Purge: NA waterdam
Discharge During Purge:
Helium After Purge:
Helium in Shroud

Sample Time: 1456
SAMPLIE NUMBER: SS-170801-RA-06
QA/QC:

NOTES: Abandoned

JOB NAME: Warsaw

JOB NUMBER: ~~[illegible]~~ 3278

DATE: 8/11/17

SAMPLER: [illegible]

Probe Name: Building B SS-2

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10832
Valve Number: 10548
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -28 @ 1610
After Sampling: -5 @ 1620

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0.3
After Purge: 1.8

Vacuum Test:
Pressure/Length: -12 for 1 min

Helium Test:
Helium Before Purge: Water Dam
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1620
SAMPLIE NUMBER: SS-170801-KA-087
QA/QC: _____

NOTES: Abandoned

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/11/17

SAMPLER: RC

Probe Name: Bulb, B 553

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 11492
Valve Number: 11519
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -29e ~~1617~~ 1612
After Sampling: -5e 1622

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0.3
After Purge: 0.3

Vacuum Test:
Pressure/Length: -8 hr/in.

Helium Test:
Helium Before Purge: NA
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1622
SAMPLIE NUMBER: SS-170801-[illegible]
QA/QC: _____

NOTES: Abandoned

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/1/19

SAMPLER: RC

Probe Name: Building A SS 5

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10783
Valve Number: 09567
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -28@1703
After Sampling: -5@ 1712

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0.9
After Purge: 0.8

Vacuum Test:
Pressure/Length: -12 for 1 min

Helium Test:
Helium Before Purge: NA water dam
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 1712
SAMPLIE NUMBER: SS-170801-RA09
QA/QC: _____

NOTES: Abandoned

JOB NAME: Wausau

JOB NUMBER: 3978

DATE: 8/2/17

SAMPLER: RC

Probe Name: Building A SS-4

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: 10518
Valve Number: 09884
Valve Flow Rate: 100

Summa Canister Pressures:
Before Sampling: -30 @ 944
After Sampling: -5 @ 954

Well Volume: NA
Purge Volume/Rate ↓

PID Readings:
Start of Purge: 0.3
After Purge: 0.3

Vacuum Test:
Pressure/Length: -12 hr 1min

Helium Test:
Helium Before Purge: Water dam
Discharge During Purge: ↓
Helium After Purge: ↓
Helium in Shroud ↓

Sample Time: 954
SAMPLIE NUMBER: SS-170802-RA-10
QA/QC: _____

NOTES: Abandoned

JOB NAME: Wasu

JOB NUMBER: 3778

DATE: 8/21/17

SAMPLER: RA

Probe Name: W6

Temperature: _____
Barometric Pressure: _____
Wind Speed/Direction: _____
Humidity: _____

Tank Number: _____
Valve Number: _____
Valve Flow Rate: _____

Summa Canister Pressures:
Before Sampling: _____
After Sampling: _____

Well Volume: _____
Purge Volume/Rate _____

PID Readings:
Start of Purge: _____
After Purge: _____

Vacuum Test:
Pressure/Length: _____

Helium Test:
Helium Before Purge: _____
Discharge During Purge: _____
Helium After Purge: _____
Helium in Shroud _____

Sample Time: _____
SAMPLIE NUMBER: _____
QA/QC: _____

NOTES:

Water in tubing. Unable to sample
- probe is submerged.

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180327-PA-01

Site Address: 1417 N 2nd St

Sample Canister Location: Basement

Sample Date: 3/27/18 Sampler: PA

Sample Time: Start: 1418 Stop: 935

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 10326

Flow Controller Serial No.: 8527

Were "Instructions to Occupants Building" followed?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70	31	70
Barometric Pressure	29.99		29.98	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-10
Time:	1418	935
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	6	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180327-RA-02

Site Address: 1917 N 2nd st

Sample Canister Location: main level

Sample Date: 3/27/18 Sampler: RA

Sample Time: Start: ~~1918~~ 1922 Stop: 935

Shipping Date: _____

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa ~~Canister~~/Other (specify):

_____

Canister Serial No.: 10720

Flow Controller Serial No.: 7027

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70	38	70
Barometric Pressure	29.99		29.98	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-5
Time:	1922	935
PID Reading:	0.0	0.0
Basement Depth (ft below grade):		
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions: _____

_____

_____

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180327-RA03

Site Address: 2108 N 3rd St

Sample Canister Location: ~~[illegible]~~ main

Sample Date: 3/27/18 Sampler: RA

Sample Time: Start: 1445 Stop: 930

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 11207

Flow Controller Serial No.: 7390

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70	38	70

Barometric Pressure 20.99 20.91

	Start	Stop
Canister Pressure Gauge Reading:	~~-27~~ -30	-10
Time:	1445	930
PID Reading:	~~60~~ 0	0
Basement Depth (ft below grade):	~~8~~ 8	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180327-RA-04

Site Address: 1909 N 2-1 St

Sample Canister Location: b Kitchen

Sample Date: 3/27/18 Sampler: RA

Sample Time: Start: 1648 Stop: 1545

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 10580

Flow Controller Serial No.: 7414

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70	50	70
Barometric Pressure	29.99		29.98	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-1
Time:	1648	1545
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	6	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions: painted inside of house last week

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180327VCA-05

Site Address: 1915 N 2-8st

Sample Canister Location: basement

Sample Date: 3/27/18 Sampler: [illegible]

Sample Time: Start: 1724 Stop: 1355

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 10258

Flow Controller Serial No.: 7274

Were "Instructions to Occupants Building" followed?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70	44	70
Barometric Pressure	29.99		29.98	

	Start	Stop
Canister Pressure Gauge Reading:	-30	0
Time:	1724	1355
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	6	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180327-RA-06

Site Address: 1901 N 2nd St

Sample Canister Location: Basement

Sample Date: 3/27/18 Sampler: RA

Sample Time: Start: 20:05 Stop: 1820

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 09734

Flow Controller Serial No.: 7052

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	35	70	50	70
Barometric Pressure	29.91		29.98	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-6
Time:	20:05	1825
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	7	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-180328-RA-07
Site Address: 1905 N 2nd St
Sample Canister Location: Kitchen

Sample Date: 3/28/18 Sampler: RA
Sample Time: Start: 1905 Stop: 1206
Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 3708
Flow Controller Serial No.: 7916

Were "Instructions to Occupants Building" followed?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	~~40~~ 48	70	–	–
Barometric Pressure	29.98			

	Start	Stop
Canister Pressure Gauge ~~Reading~~:	-30	~~1350~~ 0
Time:	1350	1206
PID Reading:	0	0
Basement Depth (ft below grade):		
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: OA-180328-RA-01

Site Address: ~~2108 N 3rd st~~ 1905 N 2nd st

Sample Canister Location: ~~Outside near driveway~~ back deck

Sample Date: ~~3/27/18~~ 3/28/18 Sampler: RA

Sample Time: Start: ~~1528~~ 1350 Stop: 1207

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 9937

Flow Controller Serial No.: 8741

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No NA

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38			
Barometric Pressure	29.99			

	Start	Stop
Canister Pressure Gauge Reading:	-28	-5
Time:	~~1528~~ 1350	1207
PID Reading:	0.0	0.0
Basement Depth (ft below grade):		
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building

C) Comments

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 3978

Site Name/Address: 1917 N 2nd St

Sample Identification Number: SS-180327-RA-01

Sample Canister Location: basement

Sample Date: 3/27/18 Sampler: RA

SS/SG Well Number: SS-1

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: — Decon Time: —

Canister Pressure: -30

Shut In Vacuum: -12 Purge Method: PID

Bottom Depth: Screened Interval:

Tubing Type: Nylaflow Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:	0:30	end			
Volume Purged (volume/total volume):					
PID Reading	6.7	4.2			

Notes:

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 10781

Flow Controller Serial No.: 11095

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

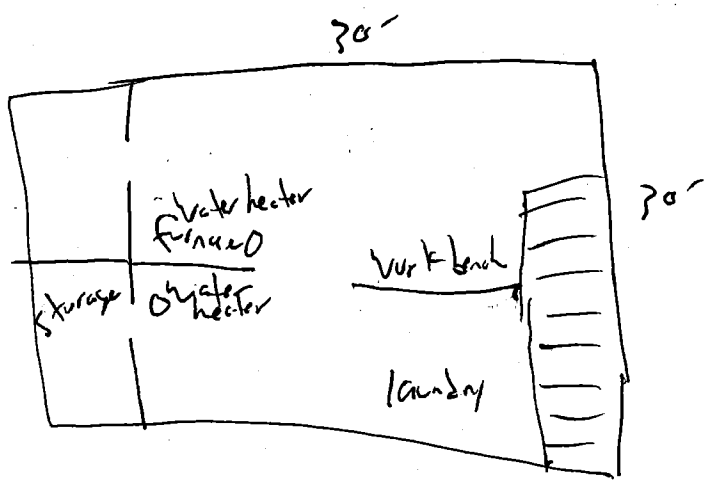
	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	R	–	–
Barometric Pressure	29.99		–	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-5
Sampling Time:	1354	1405
PID Reading:	6.7	3.6
Basement Depth (ft below grade):	4'	
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: _____

Provide Drawing of Sample Location(s) in Building (sub-slab)



C) Comments

Water dam

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 3778

Site Name/Address: 2108 N 3rd St

Sample Identification Number: SS-180327-RA-02

Sample Canister Location:

Sample Date: 3/27/18 Sampler: RA

SS/SG Well Number: SS-1

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Decon Time:

Canister Pressure: -27

Shut In Vacuum: -10 hr 1min Purge Method: PID

Bottom Depth: Screened Interval:

Tubing Type: Nylon Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:	0:30	end			
Volume Purged (volume/total volume):					
PID Reading	6.0	4.0			

Notes:

Shipping Date:

Canister Type: 400 mL – ~~1.0 L Summa Canister~~/6 L Summa Canister/Other (specify):

Canister Serial No.: 039831

Flow Controller Serial No.: 10955

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	39	70		
Barometric Pressure	29.91			

	Start	Stop
Canister Pressure Gauge Reading:	-27	-5
Sampling Time:	1503	1512
PID Reading:	6.0	4.0
Basement Depth (ft below grade):	8	
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

water dam

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 5978

Site Name/Address: 1909 N 2nd st

Sample Identification Number: SS-180327-RA-03

Sample Canister Location: basement

Sample Date: 3/27/18 Sampler: RA

SS/SG Well Number: SS1

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Decon Time:

Canister Pressure:

Shut In Vacuum: -10 in/min Purge Method: Pto

Bottom Depth: Screened Interval:

Tubing Type: Nylaflow Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:	0:30	0:60			
Volume Purged (volume/total volume):					
PID Reading	2.3	6.4			

Notes:

Shipping Date:

Canister Type: 400 mL / 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 1159

Flow Controller Serial No.: 1783

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70		
Barometric Pressure	29.99			

	Start	Stop
Canister Pressure Gauge Reading:	-30	-5
Sampling Time:	1628	1637
PID Reading:	2.8	
Basement Depth (ft below grade):	7	
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

water dam

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 3978

Site Name/Address: 1915 N 2.)51

Sample Identification Number: SS-190327-RA-04

Sample Canister Location: Basement

Sample Date: 3/27/19 Sampler: RA

SS/SG Well Number: SI-1

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Decon Time:

Canister Pressure: -27

Shut In Vacuum: -10 for 1min Purge Method: Pto

Bottom Depth: Screened Interval:

Tubing Type: Nylaflow Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:	0:50	0:52			
Volume Purged (volume/total volume):					
PID Reading	7.0	6.0			

Notes:

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 11674

Flow Controller Serial No.: 11102

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	38	70		
Barometric Pressure	29.99			

	Start	Stop
Canister Pressure Gauge Reading:	-27	-5
Sampling Time:	1707	1717
PID Reading:	7.0	6.0
Basement Depth (ft below grade):	6	
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

water dam

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 3978

Site Name/Address: 1905 N 2nd st

Sample Identification Number: SS-180328-RA-05

Sample Canister Location: basement

Sample Date: 3/28/18 Sampler: RA

SS/SG Well Number: SS-1

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: – Decon Time: –

Canister Pressure:

Shut In Vacuum: -10 for 1 min Purge Method: PID

Bottom Depth: Screened Interval:

Tubing Type: Nylaflow Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:	30 sec	end			
Volume Purged (volume/total volume):					
PID Reading	1.4	1.4			

Notes:

Shipping Date:

Canister Type: 400 mL / 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 09579

Flow Controller Serial No.: 10074

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☒ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	44	70		
Barometric Pressure	29.98			

	Start	Stop
Canister Pressure Gauge Reading:	-29	-5
Sampling Time:	1335	1345
PID Reading:	1.4	2.9
Basement Depth (ft below grade):	7	
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☐ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

Water dam

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 397p

Site Name/Address: 1901 N 2nd St

Sample Identification Number: SS-180328-[illegible]06

Sample Canister Location: basement

Sample Date: 3/28/18 Sampler: RL

SS/SG Well Number: SS1

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: — Decon Time: —

Canister Pressure: -29

Shut In Vacuum: -11 Purge Method: PID

Bottom Depth: Screened Interval:

Tubing Type: Nylaflow Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:	30 sec	end			
Volume Purged (volume/total volume):					
PID Reading	1.2	1.7			

Notes:

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa ~~Canister/6~~ L Summa Canister/Other (specify):

Canister Serial No.: 9807

Flow Controller Serial No.: 11785

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	50	70	50	70
Barometric Pressure	29.98		29.94	

	Start	Stop
Canister Pressure Gauge Reading:	-27	-5
Sampling Time:	1825	1836
PID Reading:	1.4	2.2
Basement Depth (ft below grade):	7	
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

Radon system turned off on 3/25/18.
Water dam

Make outdoor

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: OA-190425-KS-01

Site Address:

Sample Canister Location: Back porch, ~~[illegible]~~ under table

Sample Date: 4/25/19 Sampler: K. Jenkin

Sample Time: Start: 1345 Stop: 1050

Shipping Date: 4/29/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):
6L summa

Canister Serial No.: 09523

Flow Controller Serial No.: 8689

Were "Instructions to Occupants Building" followed?
☒ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	64°F ~~70's~~ KS	70	55°F	~~70~~ N/A
Barometric Pressure	29.84		29.81	

	Start	Stop
Canister Pressure Gauge Reading:	-29	-8.5
Time:	1345	1050
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	N/A	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: light rain + sprinkles overnight and during day, overcast, 50's + 60's

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Helke

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA - 190425-KJ-01

Site Address: 2103 N. 3rd St. Helke (Linke)

Sample Canister Location: living room

Sample Date: 4/25/19 Sampler: K. Jenkin

Sample Time: Start: 1340 Stop: 1045

Shipping Date: 4/29/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):
6L Summa

Canister Serial No.: 10731

Flow Controller Serial No.: 8752

Were "Instructions to Occupants Building" followed?
☒ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	64°F ~~70°F~~ KJ	70°F	55°F	70°F

Barometric Pressure 29.64 29.81

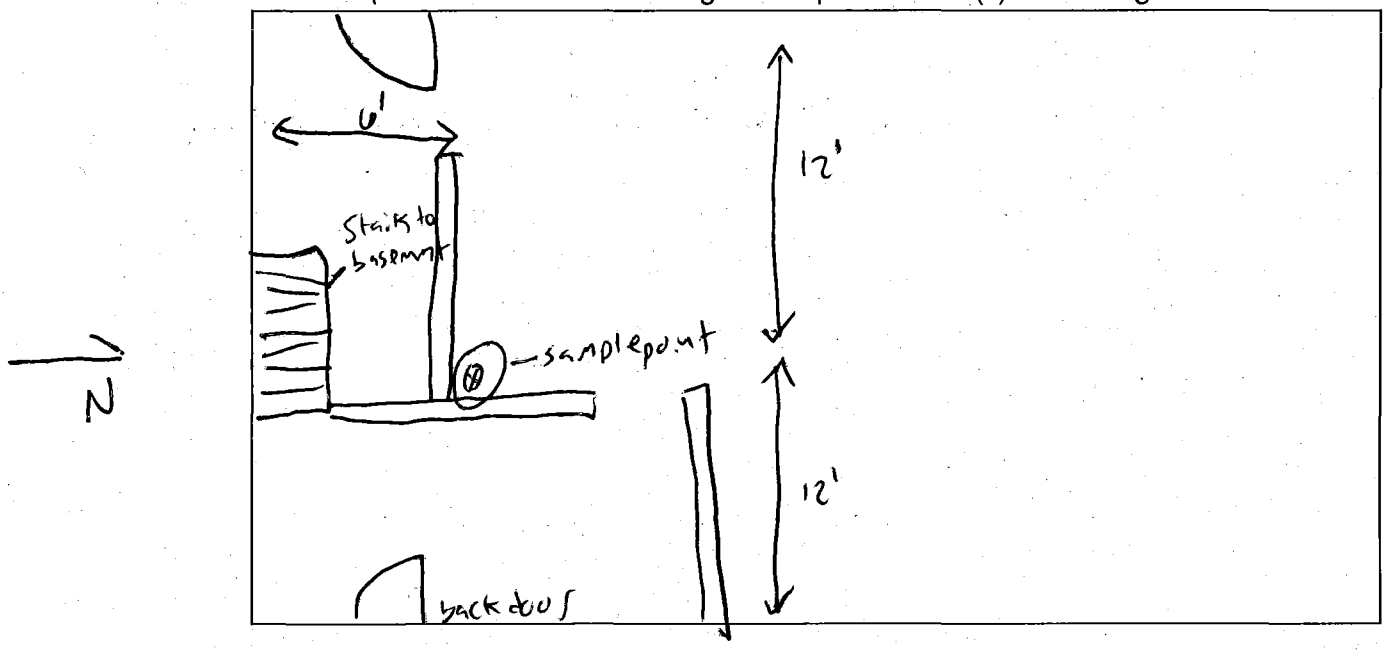
	Start	Stop
Canister Pressure Gauge Reading:	-30	-9
Time:	1340	1045
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	8	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: light rain & sprinkles overnight & throughout day, overcast, 50's-60's

Front door

Provide Drawing of Sample Location(s) in Building



C) Comments

Music Shop

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA - 1900425-KS-02

Site Address: 200 E. Wansam Ave

Sample Canister Location: display shelf in main sales floor, east side

Sample Date: 4-24 & 25-2019 Sampler: Ahrens, Jenkin

Sample Time: Start: 1530 Stop: 14:00

Shipping Date: 4/29/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):
6L Summa

Canister Serial No.: 11637

Flow Controller Serial No.: 7588

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	66°	70	55°	70°
Barometric Pressure	29.79		29.78	

	Start	Stop
Canister Pressure Gauge Reading:	-27	-6
Time:	1530	14:00
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	N/A	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: light rain + sprinkles overnight + throughout day, 50's + 60's, overcast

Provide Drawing of Sample Location(s) in Building

See questionnaire

C) Comments

Steffen upstairs

Indoor Air Sampling Field Data Sheet (Form SP-28)

A) General Information

Sample Identification Number: IA-190425-KJ-03

Site Address: Steffen

Sample Canister Location: upstairs dining room table

Sample Date: 4-25-19 Sampler: K. Senkin

Sample Time: Start: 1615 Stop: ~~1410~~ cea 1405

Shipping Date: 4/29/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify): 6L Summa

Canister Serial No.: 09983

Flow Controller Serial No.: 8780

Were "Instructions to Occupants Building" followed?
☒ Yes ☐ No

B) Sampling Information

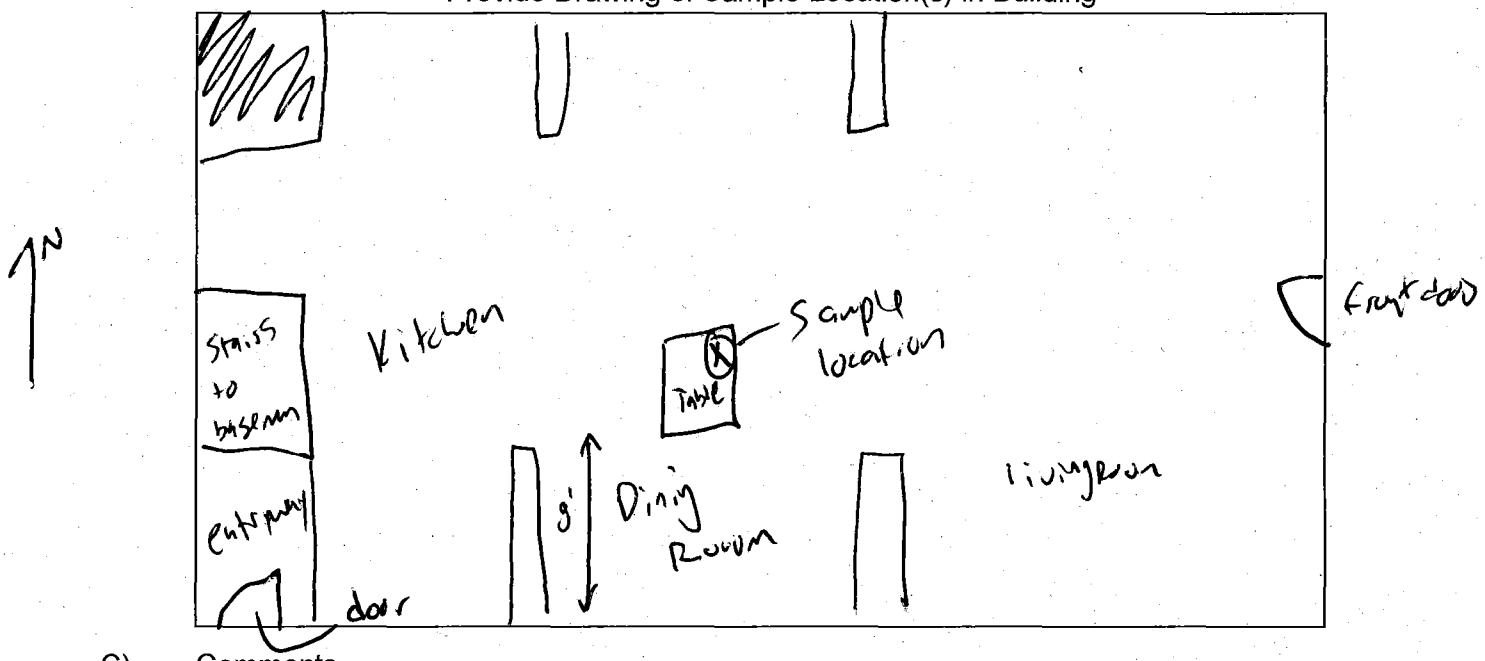
	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	66	70	55	70
Barometric Pressure	29.71		29.87	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-12
Time:	1615	1405
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	N/A	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: light rain, sprinkles overnight + throughout day, 50's-60's, overcast

Provide Drawing of Sample Location(s) in Building



C) Comments

Steffen downstairs

Indoor Air Sampling Field Data Sheet (Form SP-28)

A) General Information

Sample Identification Number: IA-190425-KJ-~~03~~ 04 cea

Site Address: Steffen - ~~[illegible]~~ cea

Sample Canister Location: Basement, on chair in center of room

Sample Date: 4-25-19 Sampler: K. Jenkin

Sample Time: Start: 1620 Stop: ~~[illegible]~~ 1410

Shipping Date: 4/29/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify): 6L Summa

Canister Serial No.: 10686

Flow Controller Serial No.: 7358

Were "Instructions to Occupants Building" followed?

☒ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	66	70	55	70
Barometric Pressure	29.71		29.81	

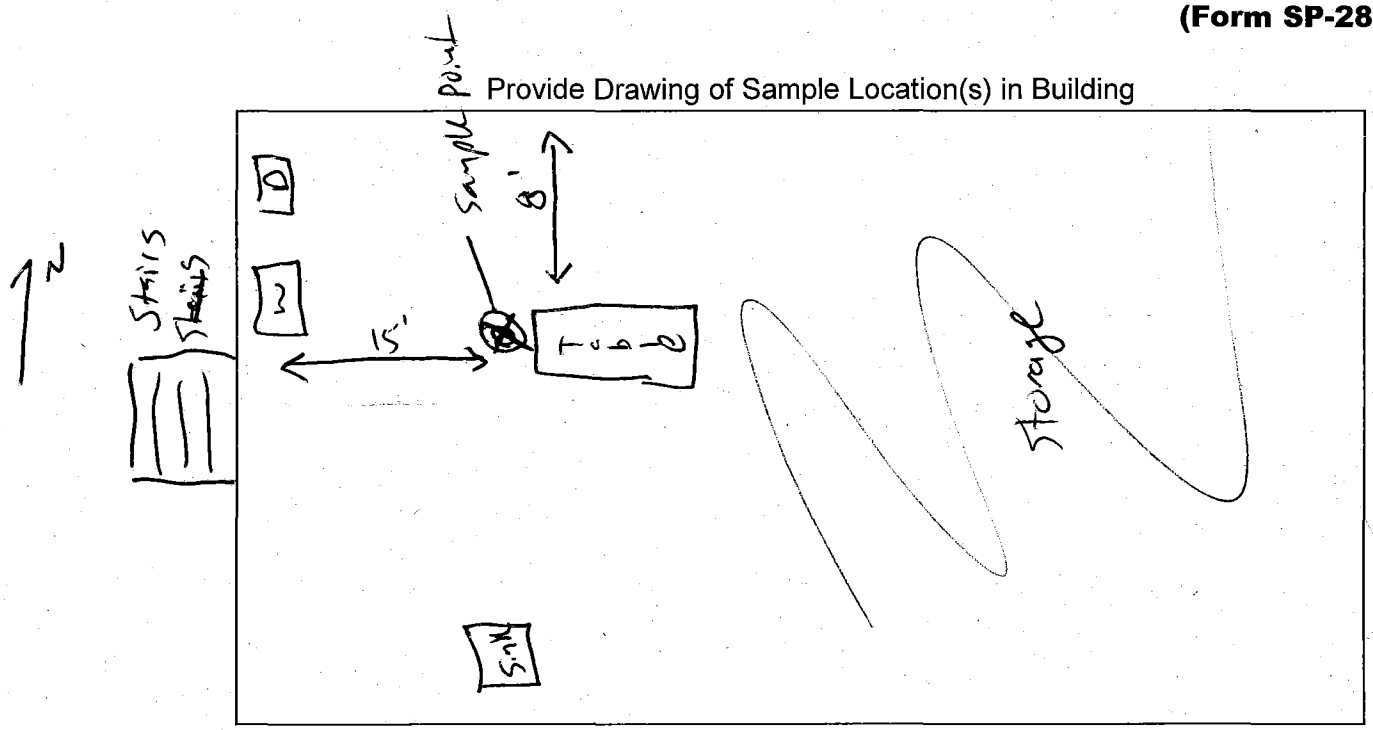
	Start	Stop
Canister Pressure Gauge Reading:	-28	-6
Time:	1620	1410
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	8	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?

☐ Yes ☒ No

Describe the general weather conditions: light rain, sprinkles overnight + throughout day, 50's-60's, overcast

Provide Drawing of Sample Location(s) in Building



C) Comments

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 003978-20

Site Name/Address: 2103 N. 3rd St.

Sample Identification Number: SS-190425-KJ-01

Sample Canister Location: Subslab

Sample Date: 4/25/19 Sampler: K. Jenkin

SS/SG Well Number:

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Decon Time:

Canister Pressure: -30 start @ 11:00, -5 end @ 11:12

Shut In Vacuum: 1/15 for 1 min. Purge Method: PID for 1min

Bottom Depth: Screened Interval:

Tubing Type: nylaflow Tubing Length: 1 foot

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

Stop Time: 11:12 @ -5

	Units	1	2	3	Total/ Average
Time:	Initial				End
Volume Purged (volume/total volume):					Post-Sample
PID Reading	0.0				0.0

Notes:
Ambient PID = 0.0 start time 11:00 end time 11:12

Shipping Date: 4/29/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):
1.0 L Summa

Canister Serial No.: 11621

Flow Controller Serial No.: 10953

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☒ Yes ☐ No

B) Sampling Information

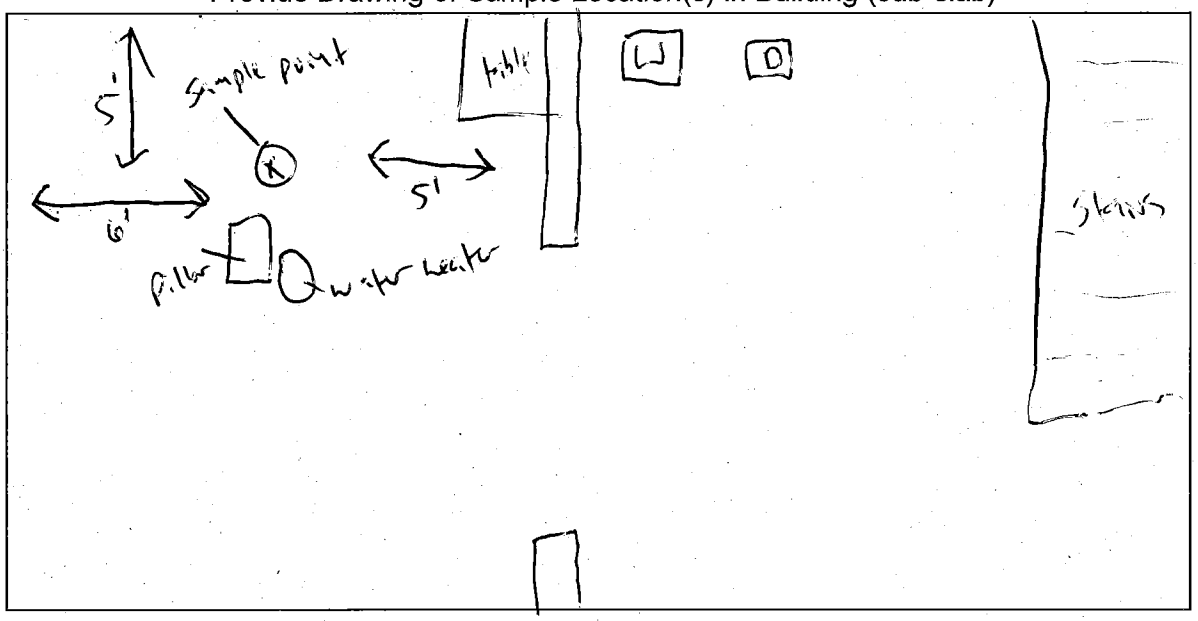
	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	65	70	55	70
Barometric Pressure	29.71		29.81	

	Start	Stop
Canister Pressure Gauge Reading:	-30	-5
Sampling Time:	1100	1112
PID Reading:	0.0	0.0
Basement Depth (ft below grade):	8	
Window Marked:	☐ Yes/☒ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: light rain & sprinkles overnight & throughout day, 50's-60's, overcast

Provide Drawing of Sample Location(s) in Building (sub-slab)



C) Comments

Subslab
~~Indoor Air~~ **Sampling Field Data Sheet**
(Form SP-28)

A) General Information

Sample Identification Number: SS-190425-KJ-02
Site Address: Music Shop 200 E Wausau Ave.
Sample Canister Location: Subslab - Showroom

Sample Date: 4/25/19 Sampler: K. Jankin
Sample Time: Start: 11:38 Stop: 11:48
Shipping Date: 4/29/19

Canister Type: 400 mL / 1.0 L Summa Canister / 6 L Summa Canister/Other (specify):
1L summa

Canister Serial No.: 11645
Flow Controller Serial No.: 11787

Were "Instructions to Occupants Building" followed?
☑ Yes ☐ No

Background PID - 0.0 Ambient
Leak check -12 psi 1 min

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	~~70~~ °F	70 °F	70°F	70°

Barometric Pressure 29.81 29.81

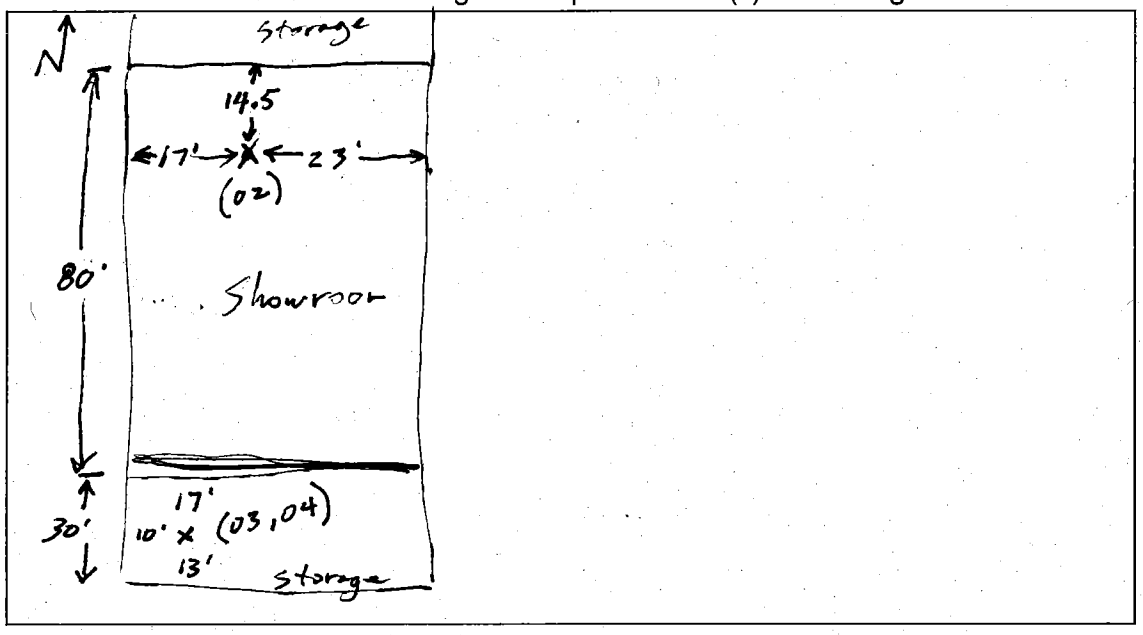
	Start	Stop
Canister Pressure Gauge Reading:	-27	-5
Time:	11:38	11:48
PID Reading:	0.0	0.1
Basement Depth (ft below grade):	NA - slab on grade	
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions: overcast, sprinkles, 50's-60's

Subslab
~~Indoor Air~~ **Sampling Field Data Sheet**
(Form SP-28)

Provide Drawing of Sample Location(s) in Building



C) Comments

~~Sub-Slab~~/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 3978

Site Name/Address: Music Store - Storage - South

Sample Identification Number: SS-190425-KJ-03
SS-190425-KJ-04 Dup.

Sample Canister Location: South Storage

Sample Date: 4/25/19 Sampler: K. Jenkin

SS/SG Well Number: —

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Ambient PID = 0.0 Decon Time:

Canister Pressure: pre -27 (03) -30 (04) Post -3 -7

Shut In Vacuum: Purge Method:

Bottom Depth: Screened Interval:

Tubing Type: Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

Leak Test -11 (03) for 1 min.
-15 (04) " 1 min.

	Units Initial	1 Post	2	3	Total/ Average
Time:	12:09	12:22			
Volume Purged (volume/total volume):					
PID Reading	0.3	0.0			

Notes:
Water dam - Start 12:11 Stop 12:21

Shipping Date:

Canister Type: 400 mL - 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 03 11577 11953
04 11870 11914

Flow Controller Serial No.:

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature				
Barometric Pressure				

	Start	Stop
Canister Pressure Gauge Reading:		
Sampling Time:		
PID Reading:		
Basement Depth (ft below grade):		
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☐ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

See other sub-slab data sheet

C) Comments

Sub-Slab/Soil Gas Sampling Field Data Sheet *Duplicate
(Form SP-30)

A) General Information

Project Number: 3978

Site Name/Address: Music shop

Sample Identification Number: RA-02 + RA-03 (Duplicate)

Sample Canister Location: back shop

Sample Date: 9/25/19 Sampler: RA

SS/SG Well Number:

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Decon Time:

Canister Pressure: reg -15 (11792) / reg -29 (11992)
(11135) - can # (11807) - can #

Shut In Vacuum: -12 for 1min Purge Method: PID (0.0 ppm)

Bottom Depth: Screened Interval:

Tubing Type: Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

Start 1718 end 1729

	Units	1	2	3	Total/ Average
Time:					
Volume Purged (volume/total volume):					
PID Reading					

Notes:
(11135) (11807)
Ending Pressures (5) + (-5)

Shipping Date: 9/26/19

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 11792 (02) + 11992 (03)

Flow Controller Serial No.: 11135 (02) 11807 (03

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	63°F	70°F	63°F	70°F
Barometric Pressure	29.70		29.70	

	Start	Stop
Canister Pressure Gauge Reading:	~15 / -29	5 / -5
Sampling Time:	1718	1729
PID Reading:	0	0
Basement Depth (ft below grade):		
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☒ Yes ☐ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 03978

Site Name/Address: Music Shop 200 E. Wausau Ave

Sample Identification Number: SS-190925 RA-01

Sample Canister Location: Main show room

Sample Date: 9/25/19 Sampler: RA

SS/SG Well Number:

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: Decon Time:

Canister Pressure: -26

Shut In Vacuum: -10 for 1 min Purge Method: PID

Bottom Depth: Screened Interval:

Tubing Type: nylaflow Tubing Length:

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

	Units	1	2	3	Total/ Average
Time:					
Volume Purged (volume/total volume):	30 sec				
PID Reading	1.0				

Notes:

Shipping Date:

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 11723

Flow Controller Serial No.: 11951

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature				
Barometric Pressure				

	Start	Stop
Canister Pressure Gauge Reading:	-26	-5
Sampling Time:	16:59	1708
PID Reading:	1.0	0.7
Basement Depth (ft below grade):		
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☒ Yes ☐ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)

C) Comments

Sub-Slab/Soil Gas Sampling Field Data Sheet
(Form SP-30)

A) General Information

Project Number: 3978

Site Name/Address: Helke

Sample Identification Number: SS-190925-EA-04

Sample Canister Location: by dryer

Sample Date: _____ Sampler: _____

SS/SG Well Number: _____

(Decon rate and time are for non-dedicated pumps, i.e., into tedlar bags)

Decon Rate: _____ Decon Time: _____

Canister Pressure: can 11890 -28 valve #09956

Shut In Vacuum: _____ Purge Method: _____

Bottom Depth: _____ Screened Interval: _____

Tubing Type: _____ Tubing Length: _____

Note: For ¼ inch dimeter tubing:
3/16" = 0.005 Liter
1/4" = 0.01 Liter
1/2" = 0.039 Liter

Start @ 1743

	Units	1	2	3	Total/ Average
Time:	1743				
Volume Purged (volume/total volume):					
PID Reading	0				

Notes:

Shipping Date: _____

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

Canister Serial No.: 11890

Flow Controller Serial No.: 09956

Were "Instructions to Occupants Building" followed (for sub-slab soil gas)?
☐ Yes ☐ No

B) Sampling Information

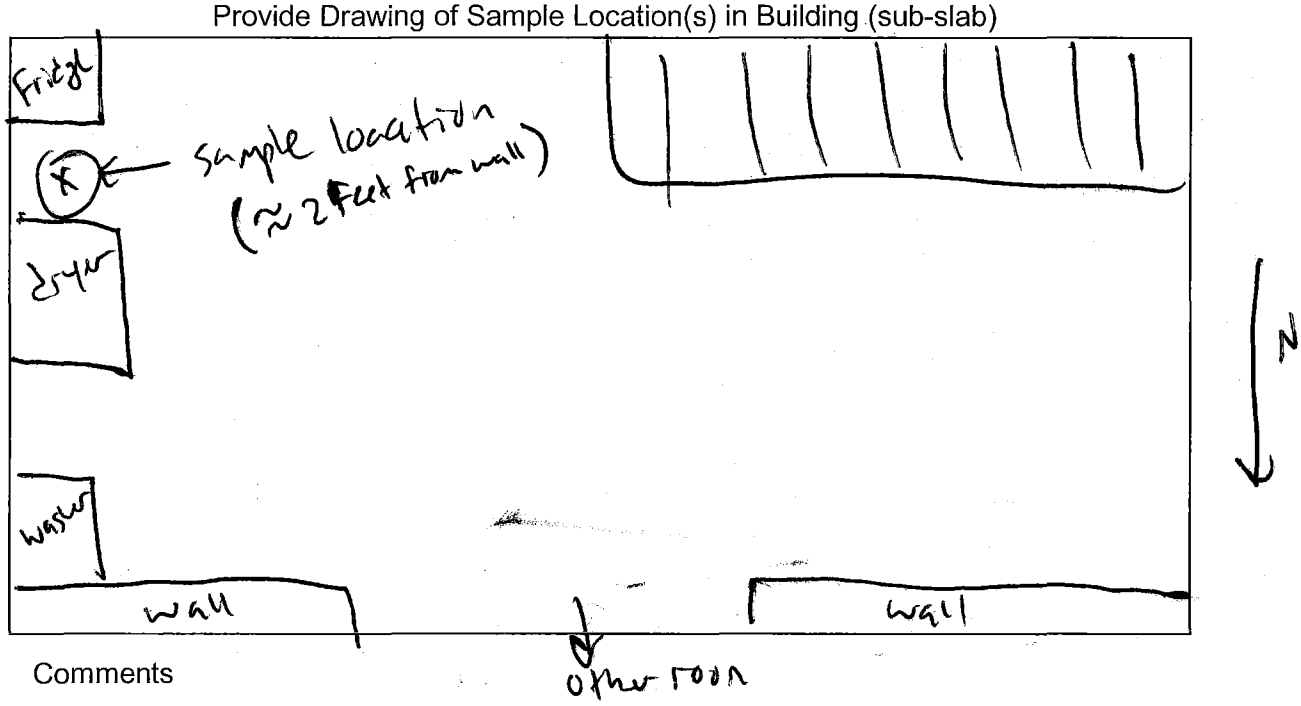
	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature	63°F	70°F	63°F	70°F
Barometric Pressure	29.70		29.70	

	Start	Stop
Canister Pressure Gauge Reading:	-28	-5
Sampling Time:	1743	1755
PID Reading:	0	0
Basement Depth (ft below grade):		
Window Marked:	☐ Yes/☐ No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☐ No

Describe the general weather conditions:

Provide Drawing of Sample Location(s) in Building (sub-slab)



C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-190924-RA-01

Site Address: Music shop

Sample Canister Location: main show room

Sample Date: 9/24/19 Sampler: RA

Sample Time: Start: 1828 Stop: 1648

Shipping Date: _____

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

_____

Canister Serial No.: 11700

Flow Controller Serial No.: 09656

Were "Instructions to Occupants Building" followed?
☑ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature				

Barometric Pressure _____ _____

	Start	Stop
Canister Pressure Gauge Reading:	-29	-5
Time:	1828	1648
PID Reading:	Ø	Ø
Basement Depth (ft below grade):		
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☑ No

Describe the general weather conditions: _____

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: IA-190924-RA-02

Site Address: Helke

Sample Canister Location: Kitchen

Sample Date: 9/24/19 Sampler: RA

Sample Time: Start: 1851 Stop: 1735

Shipping Date: _____

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

_____

Canister Serial No.: ~~11506~~ 09761

Flow Controller Serial No.: 11506

Were "Instructions to Occupants Building" followed?
❑ Yes ❑ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature				

Barometric Pressure _____ _____

	Start	Stop
Canister Pressure Gauge Reading:	-30	-8 @ 1735
Time:	1840	
PID Reading:	Ø	Ø
Basement Depth (ft below grade):		
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
❑ Yes ❑ No

Describe the general weather conditions: _____

_____

_____

Provide Drawing of Sample Location(s) in Building

C) Comments

Indoor Air Sampling Field Data Sheet
(Form SP-28)

A) General Information

Sample Identification Number: OA-190924-PA-01

Site Address: Helke

Sample Canister Location: ~~Kitchen~~ under patio table

Sample Date: 9/24/19 Sampler: _____

Sample Time: Start: 1842 Stop: _____

Shipping Date: _____

Canister Type: 400 mL – 1.0 L Summa Canister/6 L Summa Canister/Other (specify):

_____

Canister Serial No.: 10711

Flow Controller Serial No.: 09953

Were "Instructions to Occupants Building" followed?
☐ Yes ☐ No

B) Sampling Information

	Start		Stop	
	Ambient	Interior	Ambient	Interior
Temperature				

Barometric Pressure _____ _____

	Start	Stop
Canister Pressure Gauge Reading:	~~29~~ -28	-4
Time:	1842	1735
PID Reading:	0	0
Basement Depth (ft below grade):		
Window Marked:	Yes/No	

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?
☐ Yes ☒ No

Describe the general weather conditions: _____

Provide Drawing of Sample Location(s) in Building

C) Comments

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