

FINAL
LETTER REPORT FOR

FALL 2017
RESIDENTIAL WELLS INTERIM MONITORING
and
OPERATIONS AND MAINTENANCE OF RESIDENTIAL WELL GAC SYSTEMS

ATLAS "D" MISSILE SITE 4—LARAMIE COUNTY, WYOMING

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September 2018



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LIST OF ACRONYMS

ECS	Espinoza Consulting Services
EPA	U.S. Environmental Protection Agency
DoD	U.S. Department of Defense
FUDS	Formerly Used Defense Site
GAC	Granular Activated Carbon
ID	Identification
LTMP	Long-Term Monitoring Program
MCL	EPA Primary Drinking Water Maximum Contaminant Level
O & M	Operations Maintenance
RMC	RMC Consultants, Inc.
Site 4	The Former Atlas “D” Missile Site 4, F.E. Warren Air Force Base, Laramie County, Wyoming
TCE	Trichloroethene
TCRA	Time-Critical Response Action
TestAmerica	TestAmerica Laboratory in Arvada, Colorado
USACE	U.S. Army Corps of Engineers
µg/L	micrograms per liter
VOC	Volatile Organic Compound



1 INTRODUCTION

Espinoza Consulting Services (ECS) and RMC Consultants, Inc. (RMC) have prepared this letter report to document the 2017 Residential Wells Interim Monitoring/GAC Systems Operations and Maintenance (O&M) activities for the former Atlas “D” Missile Site 4, F.E. Warren Air Force Base, Laramie County, Wyoming (Site 4). This work is being conducted for the United States Army Corps of Engineers (USACE), Omaha District under Contract Number W9128F-15-C-0009.

Atlas “D” Missile Site 4 is a Formerly Used Defense Site (FUDS) (FUDS Identification Number B08WY046702), previously under the command of F.E. Warren Air Force Base. The USACE, Omaha District, is managing the environmental cleanup of contamination that is a result of former activity at the site. The site is located approximately 18 miles west of Cheyenne and one mile south of the town of Granite, Wyoming. Contaminated groundwater is present in a plume extending at least 10 miles downgradient (east) from the site. The site vicinity is illustrated in Figure 1. Groundwater flow direction in the area is from west to east.

1.1 PURPOSE AND SCOPE

The purpose of this letter report is to document field activities performed by ECS and RMC during the Fall of 2017 in support of the Residential Well Interim Monitoring and O&M Tasks at Atlas Site 4, and to present the analytical laboratory results for samples collected at the site.

The scope of the Interim Monitoring for 2017 involved collecting groundwater samples from 15 residential wells located along Otto Road (Laramie County Road 225), which extends along the approximate north edge of the groundwater contaminant plume. Two of the 15 residential wells located along Otto Road (at the Van Goethen and Hardy properties) are included in the Time-Critical Response Action (TCRA) program in effect for contaminated water supplies at the site; samples were also collected from the treatment systems that are in place at these two properties.

The O&M scope for 2017 included replacing the granular activated carbon (GAC) and changing out the water filters in each of the treatment systems for the two residential wells mentioned above.

1.2 SITE BACKGROUND

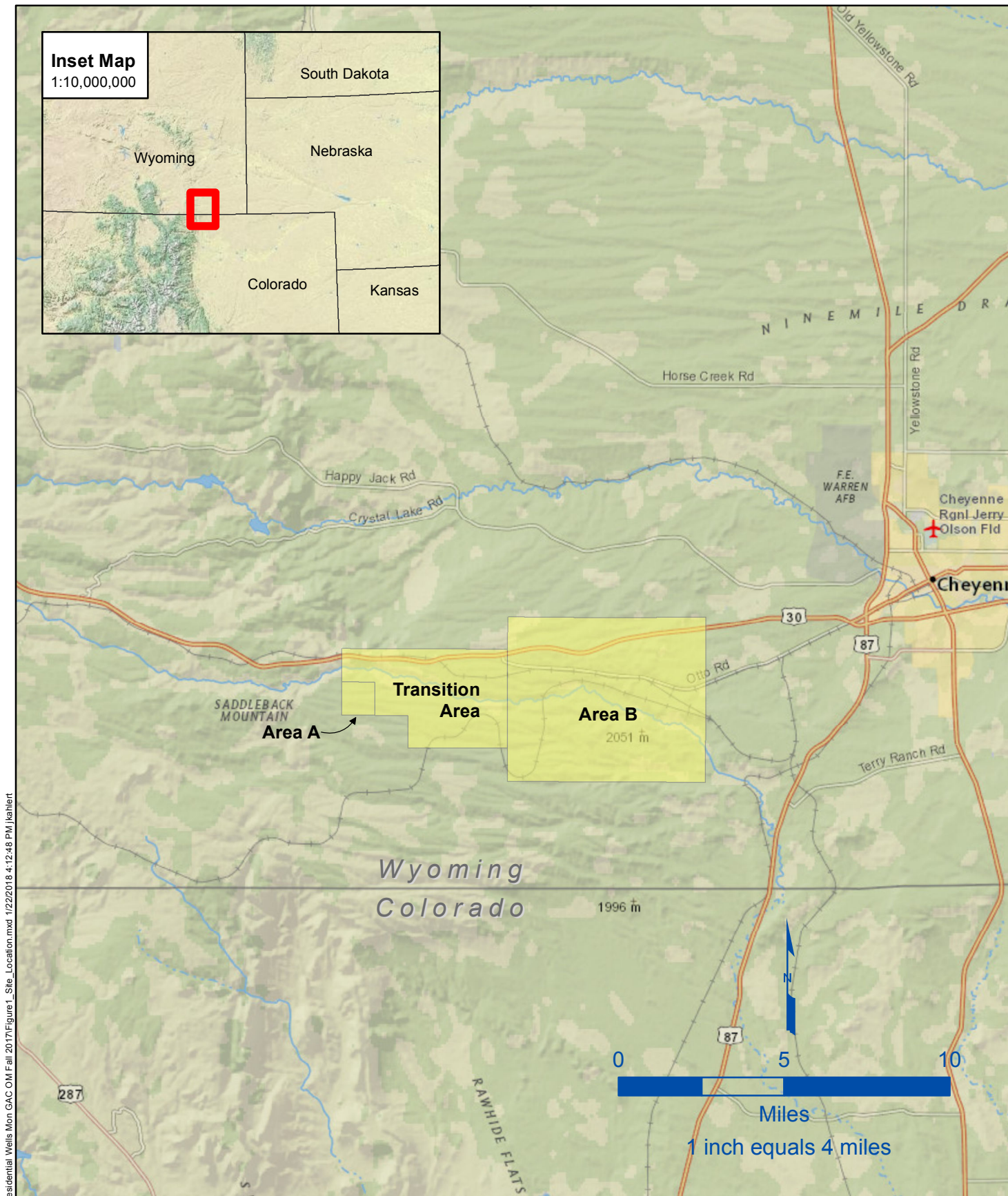
Site 4 is located at the western edge of the High Plains Aquifer, which includes the saturated portions of the Tertiary system White River and Ogallala Formations in this area. Environmental investigation of Site 4 began in 2002 after subsurface contamination was identified in two main areas associated with the site: the former missile site and the uppermost aquifer beneath the area, downgradient of the missile site (i.e., the High Plains Aquifer beneath the Belvoir Ranch and adjacent areas). Missile readiness exercises conducted by the Air Force during the late 1950s and early 1960s resulted in indeterminate quantities of the compound trichloroethene (TCE) being discharged to the surface soil. Infiltration of this compound through the soil has resulted in groundwater contamination beneath and downgradient of the former missile site.

Groundwater flow direction in the area is from west to east. TCE has been detected in samples collected from wells located up to 10 miles east of the former Missile Site. The USACE has installed water treatment systems at two residences where domestic wells were contaminated with TCE at concentrations above the U.S. Environmental Protection Agency (EPA) maximum contaminant limit (MCL) of 5 micrograms per liter (µg/L). The USACE has also installed a large treatment system at the City of Cheyenne’s R.L. Sherard Water treatment plant. The USACE is performing additional investigations of the groundwater contamination.



Additional background information regarding the Atlas “D” Missile Site 4 groundwater contamination studies may be found in site reports located at www.atlassite4.com, such as:

- Final Time Critical Response Action Installation Report for Residential Water Treatment Units and First Quarter Residential Well Sampling Results, F.E. Warren Air Force Base Former Atlas “D” Missile Site 4 Laramie County, Wyoming (RMC/Versar, 2009)
- Final 2013 Annual Long-Term Monitoring Report, Former Atlas “D” Missile Site 4, F.E. Warren Air Force Base, Laramie County, Wyoming (Versar/RMC, 2015)
- Final Letter Report for Long-Term Monitoring Program, Fall 2014, Interim Residential Groundwater Monitoring Report, Atlas “D” Missile Site 4 – Laramie County, Wyoming (Versar/RMC, 2015)
- Final Data Synthesis, Evaluation, and Interpretation Technical Memorandum, April 2015, Revision 00, Former Atlas “D” Missile Site, Laramie County, WY (Foster Wheeler/Bay West, 2015)
- Final Letter Report for Fall 2015 Residential Wells Interim Monitoring and Operations and Maintenance of Residential Well GAC Systems, Atlas “D” Missile Site 4 – Laramie County, Wyoming (ECS/RMC, 2017)
- Final Letter Report for Fall 2016 Residential Wells Interim Monitoring and Operations and Maintenance of Residential Well GAC Systems, Atlas “D” Missile Site 4 – Laramie County, Wyoming (ECS/RMC, 2017)



US Army Corps
of Engineers
Omaha District



Site Location Map
FORMER ATLAS D MISSILE SITE 4
LARAMIE COUNTY, WYOMING

FIGURE 1

Data Sources: National Geographic
Society; and RMC Consultants, Inc.



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2 O & M ACTIVITIES – FALL 2017

The O&M activities for Fall 2017 consisted of collecting water samples from the residential water treatment systems at the Hardy (1521 Otto Road) and Van Goethen (1531 Otto Road) residential properties. Groundwater sample collection logs for all samples are included in Appendix A. Work also included the removal and replacement of spent GAC at each of the residential water treatment systems. The spent GAC waste was removed from the site and is staged at Launch and Service Building 2 awaiting disposal.

2.1 RESIDENTIAL WATER TREATMENT SYSTEM SAMPLING AND ANALYSIS

Treatment system sample collection was conducted on October 6, 2017, at the Van Goethen property (well ID is "Van Goethen #1" or "VG") and at the Hardy residence (well ID is "Farrell #1" or "Farrell"). Three water samples were collected at each system: an influent (untreated water) sample, an intermediate sample (water that has passed through the primary granular activated carbon [GAC] treatment vessel), and an effluent sample (water that has passed through the primary and the secondary GAC treatment vessels). The samples were submitted to TestAmerica Laboratory in Arvada, Colorado (TestAmerica) for volatile organic compound (VOC) analysis by Method SW8260B. These samples were hand-delivered to the laboratory on the morning of October 9, 2017. The laboratory analytical data reports are included in Appendix B. A data quality review and assessment are included in Appendix C. Appendix D contains the Daily Quality Control Reports that document each day's field activities.

Analytical results are summarized below:

Table 1. Summary of VOC Results for Residential Treatment Systems						
Analyte	FEW4- VG#1-INF (µg/L)	FEW4- VG#1-INT (µg/L)	FEW4- VG#1-EFF (µg/L)	FEW4- FARRELL#1- INF (µg/L)	FEW4- FARRELL#1- INT (µg/L)	FEW4- FARRELL#1- EFF (µg/L)
Trichloroethene	4.9	ND	ND	0.62 J	ND	ND

Notes: ND = Not detected

J = estimated concentration that is above the method detection limit and below the quantitation (reporting) limit

TCE was detected at 4.9 µg/L in the influent sample (untreated water) collected from the Van Goethen water treatment system (sample FEW4-VG#1-INF). The TCE concentration in a blind duplicate (sample FEW4-GUN CLUB#1-INF) collected from the influent sampling port was 4.5 µg/L. TCE was not detected at a concentration above the EPA MCL of 5 µg/L in the samples collected from the Van Goethen treatment system or in any of the samples collected during the 2017 interim monitoring event.

TCE was also detected in the influent sample from the Hardy residential treatment system (sample FEW4-FARRELL#1-INF) at an estimated concentration of 0.62 J µg/L, and in the corresponding blind duplicate (sample FEW4-HARDY#1-INF) at an estimated concentration of 0.64 J µg/L, both below the MCL.

Notification letters regarding these analytical results and letters documenting electricity use reimbursement were mailed to both homeowners on March 28, 2018. Copies of the cover letters are included in Appendix E.



Table 2 below presents a summary of TCE results for untreated (influent) samples collected from the two residential treatment system wells since Fall of 2012. The TCE concentrations for both locations have decreased over this time period.

Table 2. Summary of Residential Treatment System Influent Sample TCE Results 2012-2017		
Sample Date	Hardy Residence (Well ID: Farrell #1) TCE Concentration (µg/L)	Van Goethen Residence (Well ID: Van Goethen #1) TCE Concentration (µg/L)
October 2012	18	29
June 2013	8.4	24
October 2013	5.5	25
June 2014	3.6	22
November 2014	2.8	17
September 2015	1.7	12
October 2016	0.92 J	7.3
October 2017	0.62 J	4.9

Note: J = Estimated: The analyte was positively identified; the quantitation is an estimation

Gray shading indicates the result exceeds the EPA MCL of 5 µg/L

2.2 RESIDENTIAL WATER TREATMENT SYSTEM GAC MAINTENANCE

ECS and RMC personnel replaced the activated carbon material in the primary and secondary vessels of the Van Goethen treatment system on December 28 and 29, 2017, and the Hardy treatment system on December 30, 2017. Each of the residential water treatment systems was still effectively removing TCE from the influent water in 2017, as evidenced by the non-detect values for the intermediate sampling ports.

The total water flow through each treatment unit was recorded. As of December 28, 2017, the water treatment system at the Van Goethen residence has treated 3,227,544 gallons. The average treatment volume between October 2016 and December 2017 is 651 gallons per day. As of December 30, 2017, the



water treatment system at the Hardy residence has treated 679,855 gallons. The average treatment volume between October 2016 and December 2017 is 178 gallons per day.



3 RESIDENTIAL WELL INTERIM MONITORING ACTIVITIES – FALL 2017

Fall 2017 Residential Wells Interim Monitoring activities consisted of groundwater sample collection from 15 of the 18 residential wells included on the schedule, including the two TCRA program wells described above in Section 2. The groundwater samples were analyzed for 52 VOCs by Method SW8260B by Test America laboratory in Wheat Ridge, Colorado, a Department of Defense (DoD) Environmental Laboratory Accreditation Program-certified laboratory. These activities are described below.

3.1 SAMPLE COLLECTION AND ANALYSIS PROCEDURES

To ensure residential groundwater users are not exposed to chlorinated solvents above the MCL, groundwater samples were collected from 15 residential wells (domestic wells) that are included in the Long-Term Monitoring Program (LTMP) schedule. These drinking water wells are located at residential properties predominantly along Otto Road. Two of these properties/wells (the Bert McGee #8 and the Fritz Ley #1 wells) are located along a small side road near the west end of Otto Road. Additionally, three samples were collected from the water treatment system for the Finnerty #1 well located on the Dyson property. This GAC treatment system was installed by the property owner in 2013; and samples were collected from the influent (pre-treatment), intermediate, and effluent (post-treatment) sample ports on the Finnerty #1 system.

Each well was purged for approximately 15 minutes prior to sample collection. Standard field water quality parameters were recorded at each well. Groundwater sample collection logs are included in Appendix A. All samples were collected over the period of October 6 and 7, 2017.

3.2 ANALYTICAL RESULTS

As shown in Table 3 below, TCE was detected in samples from three wells: the Boyd #3, the Finnerty #1, and the Welty #2 wells. One of the three TCE detections (Welty #2) was reported as an estimated concentration (0.37 J $\mu\text{g/L}$) below the limit of quantitation (LOQ) (1 $\mu\text{g/L}$ for TCE) and below the TCE MCL of 5 $\mu\text{g/L}$. The Boyd #3 concentration of 1.0 $\mu\text{g/L}$ was at the LOQ and the Finnerty #1 concentration of 1.4 $\mu\text{g/L}$ was slightly above the LOQ, but both were below the TCE MCL of 5 $\mu\text{g/L}$. The TCE concentration in a blind duplicate sample (FEW4-DYSON#1-INF) was 1.6 $\mu\text{g/L}$.

Residential well sampling locations are shown in Figure 2. Figure 2 also shows the analytical result for TCE for each Fall 2017 residential well sampled during this event.

Acetone was detected at low estimated values in samples collected from three of the 15 residential wells. Acetone is a commonly used compound in the laboratory and its detection is believed to be the result of laboratory contamination and not indicative of groundwater contamination.

3.3 VARIANCE FROM WORK PLAN

The following work plan variances associated with implementing the 2017 Residential Well Interim Monitoring/GAC Systems O&M activities are noted below:

- The work scope for sampling the residential wells requires that each well be allowed to discharge for approximately 15 minutes prior to sample collection. The samples are to be collected from a suitable water system spigot or sample port. The intent is to remove any stagnant water from system lines prior to sample collection and to obtain a sample that is representative of the subsurface water supplying the well. Therefore, samples should be collected before the water supply enters any associated holding tanks or cisterns.

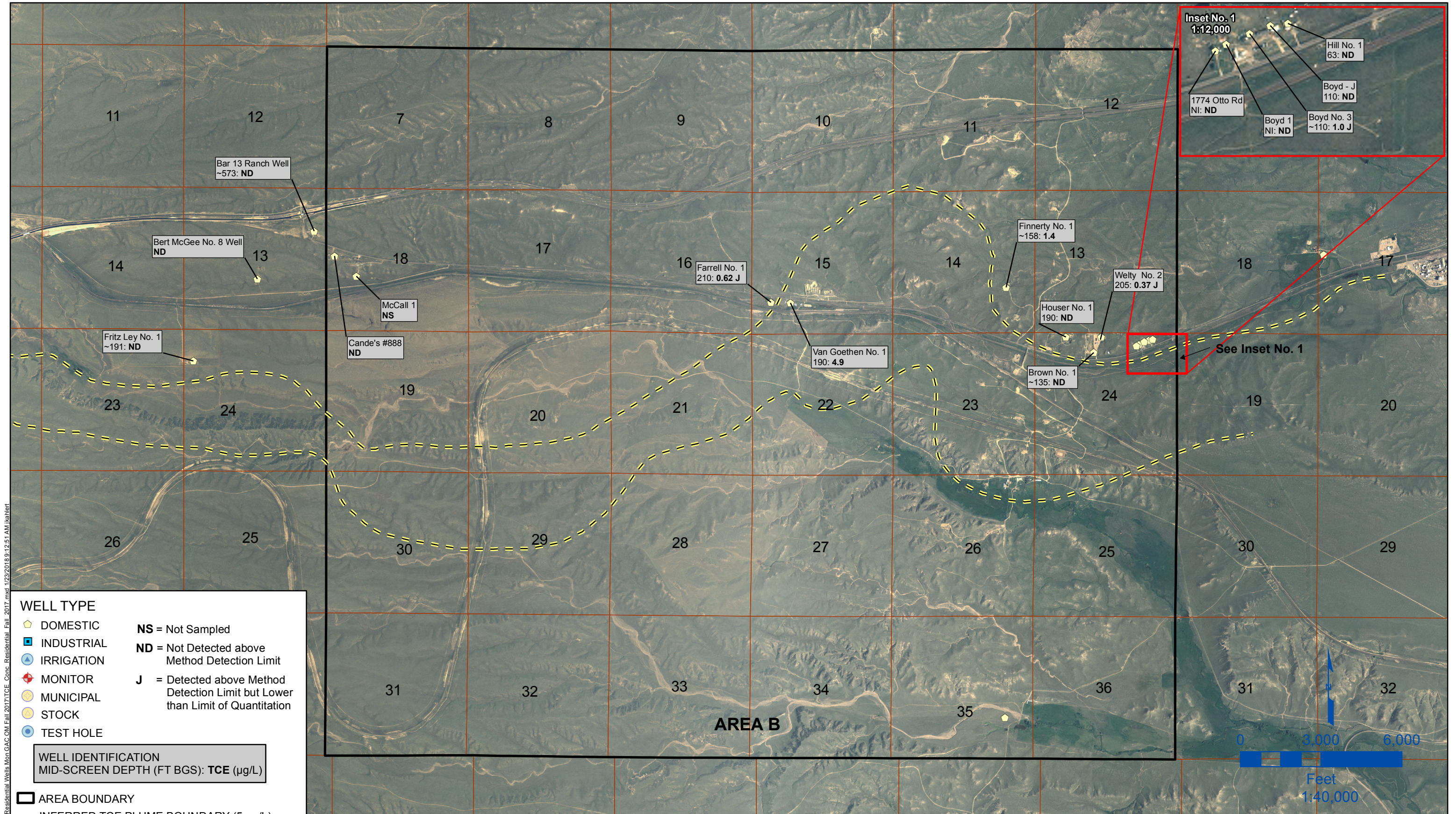


Deviation from these procedures occurred with one of the samples collected. Due to the equipment configuration at the well on the Fritz Ley property, the water sample FEW4-FritzLey #1 had to be obtained from a pipe at the wellhead. Additionally, limited parameter readings were obtained and the well was purged for only five minutes prior to sample collection because the well has a history of running dry.

- A sample could not be obtained from the McCall #1 well due to inoperation of equipment, perhaps a failed pump or capacitor. For approximately one hour on October 6, 2017, the ECS field crew attempted to obtain a sample without success. Inspection of the well system revealed that all of the valves inside the well house were open as was the nearby sampling spigot. The pressure tank was empty. The ECS crew observed that the condition of the wellhead appeared to be undamaged. The crew confirmed that there was electrical power to the controls in the well house. The ECS field crew returned to the McCall property in the afternoon and performed further troubleshooting activities with Mr. Kelly McCall, but again no sample could be collected.
- Two of the wells identified in the work plan (Coulson #1 and 7-H) as part of the residential well sampling program were not sampled as Mr. Dalton Coulson opted to not sign the access agreement provided by the USACE.
- During GAC removal and replacement in the secondary vessel of the Van Goethen treatment system, the vessel was inadvertently damaged and a leak was detected at the base of the vessel when the crew proceeded with flushing carbon dust from the vessel. The vessel was re-drained and inspected. Fittings on the base were found to be loose. Repairs were made but the leak persisted. To ensure water was being supplied to the residence, the secondary vessel was taken off-line and a particulate filter installed.



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G:\W\ind\ind\Atlas 2016\Residential Wells Mon GAC OM Fall 2017\TCE Conc Residential Fall 2017.mxd 1/23/2018 9:12:51 AM lhart



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Table 3. Summary of VOC Results for Residential Wells		
Sample Name	Trichloroethene Result (µg/L)	Acetone Result (µg/L)
FEW4- FRITZ LEY #1	ND	ND
FEW4-1774 OTTO	ND	ND
FEW4-BAR 13 RANCH	ND	ND
FEW4-BERT McGEE #8	ND	2.1 J
FEW4-BOYD-1	ND	ND
FEW4-BOYD-3	1.0 J	3.0 J
FEW4-BOYD-J	ND	ND
FEW4-BROWN #1	ND	ND
FEW4-CANDES #888	ND	1.9 J
FEW4-FINNERTY #1	1.4	ND
FEW4-FINNERTY #1-INT*	ND	ND
FEW4-FINNERTY#1-EFF*	ND	ND
FEW4-HILL #1	ND	ND
FEW4-HOUSER #1	ND	ND
FEW4-McCALL #1	NS	NS
FEW4-WELTY #2	0.37 J	ND

* Denotes sample collected from treatment system installed by water system owner; i.e., treated water collected for sample

Notes: ND = Not detected
NS = Not Sampled

J = Estimated: The analyte was positively identified; the quantitation is an estimation

Although acetone was detected as estimated concentrations, this compound is a common laboratory contaminant and its detection in the samples collected from the residential wells is attributed to laboratory contamination and is not indicative of groundwater contamination.

The Finnerty #1 is the designation given to the domestic well located on the Dyson property. A duplicate (FEW4-Dyson #1) of the influent was collected and the reported TCE concentration was 1.6 µg/L.

A sample could not be obtained from the McCall #1 well due to no water availability and no electricity to the pump.



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4 REFERENCES

AMEC Foster Wheeler and Bay West, LLC. (Foster Wheeler/Bay West), 2015. Final Data Synthesis, Evaluation, and Interpretation Technical Memorandum, April 2015, Revision 00, Former Atlas “D” Missile Site, Laramie County, Wyoming.

Espinoza Consulting Services and RMC Consultants, Inc. (ECS/RMC), 2015. Final Uniform Federal Policy – Quality Assurance Project Plan, Interim Monitoring of Residential Wells and Operation & Maintenance of Residential Well GAC Systems, Atlas “D” Missile Site 4 – Laramie County, Wyoming. September 25.

Espinoza Consulting Services and RMC Consultants, Inc. (ECS/RMC), 2017. Final Letter Report for Fall 2015 Residential Wells Interim Monitoring and Operations and Maintenance of Residential Well GAC Systems, Atlas “D” Missile Site 4 – Laramie County, Wyoming.

Versar, Inc. and RMC Consultants, Inc. (Versar/RMC), 2009. Final Time Critical Response Action Installation Report for Residential Water Treatment Units and First Quarter Residential Well Sampling Results, F.E. Warren Air Force Base Former Atlas “D” Missile Site 4 Laramie County, Wyoming.

Versar, Inc. and RMC Consultants, Inc. (Versar/RMC), 2015. Final 2013 Annual Long-Term Monitoring Report, Former Atlas “D” Missile Site 4, F.E. Warren Air Force Base, Laramie County, Wyoming.

Versar, Inc. and RMC Consultants, Inc. (Versar/RMC), 2015. Final Letter Report for Long-Term Monitoring Program, Fall 2014, Interim Residential Groundwater Monitoring Report, Atlas “D” Missile Site 4 - Laramie County, Wyoming.



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APPENDIX A

Groundwater Sampling Logs
(See electronic files on CD)



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GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 53°F, 36mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: 1774 Otto

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~ Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1004	Basin	purging						
1005		8	7.56	-226.8	10.90	7.67	456	0.36
1008		32	8.64	-216.7	10.84	7.42	667	0.22
1011		56	8.61	-216.4	10.90	7.42	674	0.31
1014		80	8.61	-216.5	10.95	7.47	596	0.29
1019		120	8.59	-224.2	10.98	7.48	559	0.38
1025	collect sample	FEW4-1774 OTTO						

*Sampled from end of
dedicated garden hose*

Sampling Equipment: _____

Analysis to be performed and Number of Containers:

VOC 3 Preservative HCl

Comments: Flow rate = 8 gpm.

Sampler Signature(s): Ben Noller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 6, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 50°F, 10 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Bar 13 Ranch

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~ Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1025	Begin purging							
1028		22.5	7.97	-309.2	11.22	7.44	230	1.19
1031		45	7.73	-312.4	12.10	7.29	310	1.23
1035		75	7.40	-331.4	12.93	7.58	311	0.89
1038		97.5	7.16	-337.6	13.17	7.67	312	0.55
1041		120	6.98	-338.6	13.30	7.68	312	0.51
1045	Collect sample FEW4 - BAR 13 RANCH							

Sampling Equipment: Collected from frost-free spigot

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 7.5 gpm.

Sampler Signature(s): Ben Noller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 6, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 56°F, 8 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Bert McGee #8

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1208	<u>Begin</u>	<u>Purging</u>						
<u>1215</u>		<u>6</u>	<u>8.94</u>	<u>-343.1</u>	<u>12.68</u>	<u>7.95</u>	<u>302</u>	<u>0.62</u>
<u>1218</u>		<u>15</u>	<u>8.39</u>	<u>-338.5</u>	<u>13.02</u>	<u>7.90</u>	<u>299</u>	<u>2.04</u>
<u>1221</u>		<u>24</u>	<u>8.44</u>	<u>-337.0</u>	<u>13.03</u>	<u>7.90</u>	<u>298</u>	<u>0.42</u>
<u>1224</u>		<u>33</u>	<u>8.38</u>	<u>-335.1</u>	<u>13.05</u>	<u>7.91</u>	<u>297</u>	<u>0.39</u>
<u>1228</u>		<u>45</u>	<u>8.40</u>	<u>-333.9</u>	<u>13.11</u>	<u>7.93</u>	<u>296</u>	<u>0.43</u>
<u>1233</u>	<u>Collect sample FEW4-BERT MCGEE #8</u>							

*Sampled from frost-free
 spigot near barn.*

Sampling Equipment: _____

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 3 gpm

Sampler Signature(s): Bert McGee

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 58°F, 23 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Boyd-1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1035	Begin	purging						
1037		12	5.28	-220.7	29.40	7.41	536	1.79
1040		30	6.43	-244.6	26.66	7.44	530	4.79
1043		48	6.93	-251.0	23.08	7.41	554	6.49
1046		66	7.09	-251.2	21.74	7.36	565	3.88
1049		90	7.11	-251.4	21.00	7.34	559	2.72
1055	Collect sample FEW4-BOYD-1							

collected from frost-free
 spigot near horse corral.

Sampling Equipment: _____

Analysis to be performed and Number of Containers:

VOC 3 Preservative HCl

Comments: Flow rate = 6 gpm. (5 gallons in 50 seconds)
Water is considerably warmer here than at any other well
sampled. It is not an equipment malfunction - the water
is warm to the touch. No heat trace observed.

Sampler Signature(s): Ben Noller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 58°F, 23 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Boyd-3

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1108	Basin	Purging						
1109		8.6	9.73	-246.4	11.48	7.66	271	0.15
1112		34.4	9.39	-239.2	11.47	7.62	272	0.18
1115		60.2	9.25	-237.6	11.51	7.62	272	0.57
1118		86	9.23	-236.7	11.55	7.63	272	0.80
1121		111.8	9.28	-236.2	11.54	7.64	272	0.34
1123		129	9.28	-234.2	11.56	7.65	271	0.42
1130	Collect sample	FEW4-BOYD-3						
1133	Collect sample	FEW4-BOYD-3-MS						
1136	Collect sample	FEW4-BOYD-3-MSD						

Collected from frost-free
 seep off northeast
 corner of house.

Sampling Equipment: _____

Analysis to be performed and Number of Containers:
 VOC 3*3 Preservative HCl

Comments: Flow rate = 8.6 gpm. (5 gallons in 35 seconds)

Sampler Signature(s): Ben Noller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 63°F, 16 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Boyd-J

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1203	Begin	purging						
1205		11	9.35	-219.9	11.75	7.78	308	0.20
1208		27.5	8.82	-219.5	11.87	7.68	309	0.22
1211		44	9.05	-218.0	11.32	7.64	346	0.15
1214		60.5	8.87	-218.8	11.60	7.66	334	0.18
1218		82.5	9.05	-217.4	11.31	7.64	349	0.14
1224	Collect sample FEW4-BOYD-J							

Sampling Equipment: Collected from frost-free spigot on north side of house.

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 5.5 gpm.

Sampler Signature(s): Ben Nobler

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 54°F, 36 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Brown #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
0858	Begin	purging						
0900		8	9.06	-230.6	11.70	7.75	268	0.46
0903		20	8.46	-224.8	11.92	7.67	267	0.99
0906		32	8.74	-225.0	11.31	7.67	266	0.52
0909		44	8.70	-225.5	11.71	7.70	268	1.20
0913		60	8.72	-224.8	11.30	7.69	267	0.17
0920	Collect sample	FEW4-BROWN#1						

collected from frost-free spigot north of house.

Sampling Equipment: _____

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rates 4 gpm.

Sampler Signature(s): Ben Noller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 6, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 61°F, 28 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Candes #888

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1317	Begin	purging						
1318		10	8.11	-358.1	10.65	8.00	322	0.45
1321		40	7.56	-339.6	12.57	7.90	323	0.49
1324		70	7.50	-333.0	13.18	7.93	323	0.41
1327		100	7.47	-328.0	13.40	7.92	323	1.66
1330		130	7.46	-324.1	13.52	7.92	323	1.31
1333		160	7.46	-320.6	13.58	7.91	323	1.43
1338	Collect sample FEW4-CANDES#888							

Sampling Equipment: collected from frost-free spigot

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 10 gpm.

Sampler Signature(s): Be Noller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 6, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 59°F, 21 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Farrell #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1407	Begin	purging						
1408		8	10.68	-321.5	9.70	7.70	565	0.58
1411		24	10.38	-290.4	10.38	7.54	559	1.58
1414		56	9.60	-290.7	10.59	7.56	524	11.4
1419		96	9.28	-289.4	10.86	7.58	471	13.0
1422		120	9.75	-288.0	10.63	7.62	413	22.8
1427		160	10.20	-280.2	10.72	7.62	425	9.54
1435	Collect sample FEW4-FARRELL#1-INF							
1437	Collect sample FEW4-HARDY#1-INF							
1440	Collect sample FEW4-FARRELL#2-INT							
1445	Collect sample FEW4-FARRELL#1-EFF							

Sampling Equipment: collected from sample ports on treatment system.

Analysis to be performed and Number of Containers:
 VOC 3+4 Preservative HCl

Comments: Flow rate = 8 gpm.

Sampler Signature(s): Ben Koller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 6, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Partly sunny, 55°F, 35mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Finnerty #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1714	Begin	Purge						
1718		30	9.41	-273.8	11.17	7.89	306	1.00
1721		52.5	9.10	-266.7	10.72	7.81	305	0.31
1724		75	8.64	-266.9	10.75	7.83	305	0.77
1727		97.5	9.34	-261.8	10.73	7.84	305	0.26
1730		120	9.36	-258.2	10.74	7.85	304	0.23
1733	Collect sample FEW4-FINNERTY#1-INF							
1833	Collect sample FEW4-DYSON#1-INF							
1737	Collect sample FEW4-FINNERTY#1-INT							
1740	Collect sample FEW4-FINNERTY#1-EFF							

Collected from sample ports on treatment system

Sampling Equipment: _____

Analysis to be performed and Number of Containers:
 VOC 3*4 Preservative HCl

Comments: Flow rate = 7.5 gpm.
Performed some minor repair work on the system piping to try and stop some dripping.

Sampler Signature(s): Ben Moller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 4, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 53°F, 20mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Fritz Ley #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1117	Begin purging.							
1118		9	10.61	-333.5	9.56	8.03	309	0.87
1120		27	9.80	-323.1	9.85	7.64	327	0.43
1122		45	9.84	-322.9	9.87	7.65	324	0.47
1125	Collect sample	FEW4-FRITZ LEY #1						

Sampling Equipment: Sampled from pipe at wellhead.

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 9 gpm. Collected only limited parameter readings and purged for only 5 minutes because this well has a history of running dry.
Lifting pipe at wellhead triggers pump float switches.

Sampler Signature(s): Ben Holler

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 66°F, 21 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Hill #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1250	Begin	purging						
1252		13.4	8.59	-227.3	10.89	7.50	669	0.22
1255		33.5	8.28	-230.4	10.95	7.41	664	0.20
1258		53.6	8.30	-227.5	10.96	7.38	658	0.32
1301		73.7	8.26	-225.5	11.01	7.38	643	0.31
1305		100.5	8.27	-224.5	11.06	7.39	629	0.68
1307		113.9	8.26	-224.2	11.10	7.39	623	0.40
1312	Collect sample FEW4-HILL#1							

Sampling Equipment: collected from frost-free spigot, north side of garage.

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 6.7 gpm. (5 gallons in 45 seconds)

Sampler Signature(s): Ben Holler

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 50°F, 30mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Houser #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
0812	Begin purging							
0814		24	9.57	-214.4	11.31	7.58	266	2.08
0817		60	9.62	-222.4	11.30	7.60	266	2.02
0820		96	9.57	-221.5	11.33	7.65	265	1.62
0823		132	9.58	-222.5	11.34	7.69	265	1.42
0826		168	9.57	-224.5	11.35	7.72	266	1.55
0828		192	9.58	-225.6	11.36	7.74	266	0.93
0835	Collect sample FEW4-HOUSE #1							

collected from
 Sampling Equipment: frost-free spigot.

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 12 gpm. (5 gallons in 25 seconds)

Sampler Signature(s): Ben Koller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells

Project No.: 2015-146

Site Name: Atlas D Missile Site 4 – Cheyenne, WY

Field Crew: BLN, JWM

Sampling Date October 10, 2017

Weather:

Analytical Instruments: pH: YSI 556

Specific Conductivity: YSI 556

Temp: YSI 556

ORP: YSI 556

D.O: YSI 556

Turbidity: Hach 2100Q

Purging Equipment: Dedicated Submersible

Well ID: McCall #1

CASING VOLUME CALCULATION

Type of Well: Domestic

$$(TD(ft) - DTW(ft)) \times \text{gal/ft} = 1 \text{ casing volume (gals)}$$

Well Depth/Diameter:

[illegible]

Sampling Equipment: _____

Analysis to be performed and Number of Containers:

VOC _____ Preservative HCl

Comments: Could not obtain sample due to inoperation of
equipment (perhaps a failed pump or capacitor).

Sampler Signature(s): Ben Koller

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 10, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Partly sunny, 58°F, 35 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Van Goethen #1

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
1527	Begin	purging						
1529		18	9.74	-271.4	11.23	7.75	344	0.40
1534		63	8.56	-270.8	11.18	7.74	306	0.52
1537		90	9.42	-268.1	10.70	7.74	305	0.23
1540		117	9.32	-267.4	10.65	7.75	305	0.21
1543		144	9.62	-265.0	10.66	7.77	307	0.15
1547	Collect sample FEW4-VG#1-INF							
1548	Collect sample FEW4-GUNCLUB#1-INF							
1549	Collect sample FEW4-VG#1-INF-MS							
1551	Collect sample FEW4-VG#1-INF-MSD							
1553	Collect sample FEW4-VG#1-INF							
1556	Collect sample FEW4-VG#1-EFF							

Collected from sample ports on system.

Sampling Equipment: _____

Analysis to be performed and Number of Containers:
 VOC 3*6 Preservative HCl

Comments: Flow rate = 9 gpm.

Sampler Signature(s): Ben Holler

GROUNDWATER SAMPLING LOG

Project Name: Interim Monitoring – Residential Wells
 Site Name: Atlas D Missile Site 4 – Cheyenne, WY
 Sampling Date: October 7, 2017

Project No.: 2015-146
 Field Crew: BLN, JWM
 Weather: Sunny, 54°F, 36 mph winds

Analytical Instruments: pH: YSI 556
 Temp: YSI 556
 D.O.: YSI 556

Specific Conductivity: YSI 556
 ORP: YSI 556
 Turbidity: Hach 2100Q
 Purging Equipment: Dedicated Submersible

Well ID: Welty #2

Type of Well: Domestic
 Well Depth/Diameter: _____

CASING VOLUME CALCULATION
 (TD(ft) – DTW(ft)) x _____ gal/ft = 1 casing volume (gals)

Time	Casing Volumes	~Gallons Removed	Diss. Oxygen (mg/l)	ORP (mV)	Temp (°C)	pH	Cond. $\mu S/cm$	Turbidity (NTUs)
0930	Begin	Purging						
0932		13.4	9.06	-225.7	12.09	7.83	269	0.19
0935		33.5	9.06	-221.3	11.90	7.76	269	0.15
0938		53.6	8.90	-220.2	11.81	7.75	269	0.18
0941		73.7	8.80	-221.1	11.79	7.77	268	1.39
0945		100.5	8.84	-223.7	11.80	7.79	268	0.22
0950	Collect sample	FEW4-WELTY#2						

Sampling Equipment: Collected from frost-free spigot west of house.

Analysis to be performed and Number of Containers:
 VOC 3 Preservative HCl

Comments: Flow rate = 6.7 gpm (5 gallons in 45 seconds).

Sampler Signature(s): Ken Noller



APPENDIX B

Laboratory Analytical Data Report
(See electronic files on CD)



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ANALYTICAL REPORT

Job Number: 280-102119-1

Job Description: ECS - Atlas D Missile Site 4

For:
Espinoza Consulting Services
2362 Coors Drive
Golden, CO 80401
Attention: Mr. Ben Noller



Approved for release.
Donna R Rydberg
Senior Project Manager
10/23/2017 1:02 PM

Donna R Rydberg, Senior Project Manager
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0192
donna.rydberg@testamericainc.com
10/23/2017

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com

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CASE NARRATIVE

Client: Espinoza Consulting Services

Project: ECS - Atlas D Missile Site 4

Report Number: 280-102119-1

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

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

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

RECEIPT

The samples were received on 10/9/2017 at 11:28 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 4.0° C, 4.5° C and 4.7° C.

Receipt Exceptions

The following MS/MSD samples were received with a sample collection time that varied from the parent samples: FEW4-VG#1-INF-MS (280-102119-9[MS]), FEW4-VG#1-INF-MSD (280-102119-9[MSD]), FEW4-BOYD-3-MS (280-102119-22[MS]) and FEW4-BOYD-3-MSD (280-102119-22[MSD]). The MS/MSD samples were logged with a matching sample collection date and time as the parent samples. The client was notified on 10/9/17.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples FEW4-BAR 13 RANCH (280-102119-1), FEW4-FRITZ LEY#1 (280-102119-2), FEW4-BERT MCGEE#8 (280-102119-3), FEW4-CANDES#888 (280-102119-4), FEW4-FARRELL#1-INF (280-102119-5), FEW4-HARDY#1-INF (280-102119-6), FEW4-FARRELL#1-INT (280-102119-7), FEW4-FARRELL#1-EFF (280-102119-8), FEW4-VG#1-INF (280-102119-9), FEW4-GUNCLUB#1-INF (280-102119-10), FEW4-VG#1-INT (280-102119-11), FEW4-VG#1-EFF (280-102119-12), FEW4-FINNERTY#1-INF (280-102119-13), FEW4-FINNERTY#1-INT (280-102119-14), FEW4-FINNERTY#1-EFF (280-102119-15), FEW4-DYSON#1-INF (280-102119-16), FEW4-HOUSER#1 (280-102119-17), FEW4-BROWN#1 (280-102119-18), FEW4-WELTY#2 (280-102119-19), FEW4-1774 OTTO (280-102119-20), FEW4-BOYD-1 (280-102119-21), FEW4-BOYD-3 (280-102119-22), FEW4-BOYD-J (280-102119-23), FEW4-HILL#1 (280-102119-24), FEW4-TB-20171006 (280-102119-25) and FEW4-TB-20171007 (280-102119-26) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 10/15/2017 and 10/16/2017.

Methylene Chloride was detected in method blank MB 280-391324/6 at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged "J" in accordance with the DoD QSM.

Methylene Chloride was detected in method blank MB 280-391346/6 at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged "J" in accordance with the DoD QSM.

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Instrument ID: VMS_H Analysis Batch Number: 390481Lab Sample ID: IC 280-390481/11 Client Sample ID: _____Date Analyzed: 10/09/17 09:22 Lab File ID: H0339.D GC Column: DB-624 (75.53 ID: 0.53 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrahydrofuran	5.69	Baseline	moanm	10/09/17 12:11

Lab Sample ID: IC 280-390481/12 Client Sample ID: _____Date Analyzed: 10/09/17 09:44 Lab File ID: H0340.D GC Column: DB-624 (75.53 ID: 0.53 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrahydrofuran	5.68	Baseline	moanm	10/09/17 12:11

SAMPLE SUMMARY

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-102119-1	FEW4-BAR 13 RANCH	Water	10/06/2017 1045	10/09/2017 1128
280-102119-2	FEW4-FRITZ LEY#1	Water	10/06/2017 1125	10/09/2017 1128
280-102119-3	FEW4-BERT MCGEE#8	Water	10/06/2017 1233	10/09/2017 1128
280-102119-4	FEW4-CANDES#888	Water	10/06/2017 1338	10/09/2017 1128
280-102119-5	FEW4-FARRELL#1-INF	Water	10/06/2017 1435	10/09/2017 1128
280-102119-6	FEW4-HARDY#1-INF	Water	10/06/2017 1437	10/09/2017 1128
280-102119-7	FEW4-FARRELL#1-INT	Water	10/06/2017 1440	10/09/2017 1128
280-102119-8	FEW4-FARRELL#1-EFF	Water	10/06/2017 1445	10/09/2017 1128
280-102119-9	FEW4-VG#1-INF	Water	10/06/2017 1547	10/09/2017 1128
280-102119-9MS	FEW4-VG#1-INF-MS	Water	10/06/2017 1547	10/09/2017 1128
280-102119-9MSD	FEW4-VG#1-INF-MSD	Water	10/06/2017 1547	10/09/2017 1128
280-102119-10	FEW4-GUNCLUB#1-INF	Water	10/06/2017 1548	10/09/2017 1128
280-102119-11	FEW4-VG#1-INT	Water	10/06/2017 1553	10/09/2017 1128
280-102119-12	FEW4-VG#1-EFF	Water	10/06/2017 1556	10/09/2017 1128
280-102119-13	FEW4-FINNERTY#1-INF	Water	10/06/2017 1733	10/09/2017 1128
280-102119-14	FEW4-FINNERTY#1-INT	Water	10/06/2017 1737	10/09/2017 1128
280-102119-15	FEW4-FINNERTY#1-EFF	Water	10/06/2017 1740	10/09/2017 1128
280-102119-16	FEW4-DYSON#1-INF	Water	10/06/2017 1833	10/09/2017 1128
280-102119-17	FEW4-HOUSER#1	Water	10/07/2017 0835	10/09/2017 1128
280-102119-18	FEW4-BROWN#1	Water	10/07/2017 0920	10/09/2017 1128
280-102119-19	FEW4-WELTY#2	Water	10/07/2017 0950	10/09/2017 1128
280-102119-20	FEW4-1774 OTTO	Water	10/07/2017 1025	10/09/2017 1128
280-102119-21	FEW4-BOYD-1	Water	10/07/2017 1055	10/09/2017 1128
280-102119-22	FEW4-BOYD-3	Water	10/07/2017 1130	10/09/2017 1128
280-102119-22MS	FEW4-BOYD-3-MS	Water	10/07/2017 1130	10/09/2017 1128
280-102119-22MSD	FEW4-BOYD-3-MSD	Water	10/07/2017 1130	10/09/2017 1128
280-102119-23	FEW4-BOYD-J	Water	10/07/2017 1224	10/09/2017 1128
280-102119-24	FEW4-HILL#1	Water	10/07/2017 1312	10/09/2017 1128
280-102119-25TB	FEW4-TB-20171006	Water	10/02/2017 0000	10/09/2017 1128
280-102119-26TB	FEW4-TB-20171007	Water	10/02/2017 0000	10/09/2017 1128

EXECUTIVE SUMMARY - Detections

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-102119-3 Acetone	FEW4-BERT MCGEE#8	2.1	J	10	ug/L	8260B
280-102119-4 Acetone	FEW4-CANDES#888	1.9	J	10	ug/L	8260B
280-102119-5 Trichloroethene	FEW4-FARRELL#1-INF	0.62	J	1.0	ug/L	8260B
280-102119-6 Trichloroethene	FEW4-HARDY#1-INF	0.64	J	1.0	ug/L	8260B
280-102119-9 Trichloroethene	FEW4-VG#1-INF	4.9		1.0	ug/L	8260B
280-102119-10 Trichloroethene	FEW4-GUNCLUB#1-INF	4.5		1.0	ug/L	8260B
280-102119-13 Trichloroethene	FEW4-FINNERTY#1-INF	1.4		1.0	ug/L	8260B
280-102119-16 Trichloroethene	FEW4-DYSON#1-INF	1.6		1.0	ug/L	8260B
280-102119-19 Trichloroethene	FEW4-WELTY#2	0.37	J	1.0	ug/L	8260B
280-102119-22 Acetone	FEW4-BOYD-3	3.0	J	10	ug/L	8260B
Trichloroethene		1.0		1.0	ug/L	8260B

METHOD SUMMARY

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Purge and Trap	TAL DEN		SW846 5030B

Lab References:

TAL DEN = TestAmerica Denver

Method References:

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

METHOD / ANALYST SUMMARY

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Method	Analyst	Analyst ID
SW846 8260B	Moan, Matthew R	MRM

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BAR 13 RANCH

Lab Sample ID: 280-102119-1

Date Sampled: 10/06/2017 1045

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0637.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1242

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1242

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BAR 13 RANCH

Lab Sample ID: 280-102119-1

Date Sampled: 10/06/2017 1045

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0637.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1242			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1242				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	104		85 - 114
Dibromofluoromethane (Surr)	108		80 - 119
1,2-Dichloroethane-d4 (Surr)	96		81 - 118
Toluene-d8 (Surr)	96		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FRITZ LEY#1

Lab Sample ID: 280-102119-2

Date Sampled: 10/06/2017 1125

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0638.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1304

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1304

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FRITZ LEY#1

Lab Sample ID: 280-102119-2

Date Sampled: 10/06/2017 1125

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0638.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1304			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1304				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	112		80 - 119
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BERT MCGEE#8

Lab Sample ID: 280-102119-3

Date Sampled: 10/06/2017 1233

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0639.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1326

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1326

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	2.1	J	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BERT MCGEE#8

Lab Sample ID: 280-102119-3

Date Sampled: 10/06/2017 1233

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0639.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1326			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1326				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
Toluene-d8 (Surr)	94		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-CANDES#888

Lab Sample ID: 280-102119-4

Date Sampled: 10/06/2017 1338

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0640.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1348

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1348

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	1.9	J	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-CANDES#888

Lab Sample ID: 280-102119-4

Date Sampled: 10/06/2017 1338

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0640.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1348			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1348				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FARRELL#1-INF

Lab Sample ID: 280-102119-5

Date Sampled: 10/06/2017 1435

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0641.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1410

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1410

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FARRELL#1-INF

Lab Sample ID: 280-102119-5

Date Sampled: 10/06/2017 1435

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0641.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1410

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1410

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.62	J	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	109		80 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-HARDY#1-INF

Lab Sample ID: 280-102119-6

Date Sampled: 10/06/2017 1437

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0648.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1643

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1643

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-HARDY#1-INF

Lab Sample ID: 280-102119-6

Client Matrix: Water

Date Sampled: 10/06/2017 1437

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0648.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1643			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1643				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.64	J	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	113		80 - 119
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Toluene-d8 (Surr)	96		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FARRELL#1-INT

Lab Sample ID: 280-102119-7

Date Sampled: 10/06/2017 1440

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0649.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1704

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1704

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FARRELL#1-INT

Lab Sample ID: 280-102119-7

Date Sampled: 10/06/2017 1440

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0649.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1704			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1704				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	111		80 - 119
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FARRELL#1-EFF

Lab Sample ID: 280-102119-8

Date Sampled: 10/06/2017 1445

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0650.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1726

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1726

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FARRELL#1-EFF

Lab Sample ID: 280-102119-8

Client Matrix: Water

Date Sampled: 10/06/2017 1445

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0650.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1726			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1726				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	96		85 - 114
Dibromofluoromethane (Surr)	106		80 - 119
1,2-Dichloroethane-d4 (Surr)	94		81 - 118
Toluene-d8 (Surr)	90		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-VG#1-INF

Lab Sample ID: 280-102119-9

Date Sampled: 10/06/2017 1547

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0636.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1221

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1221

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-VG#1-INF

Lab Sample ID: 280-102119-9

Client Matrix: Water

Date Sampled: 10/06/2017 1547

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0636.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1221			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1221				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	4.9		0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	111		80 - 119
1,2-Dichloroethane-d4 (Surr)	95		81 - 118
Toluene-d8 (Surr)	97		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-GUNCLUB#1-INF

Lab Sample ID: 280-102119-10

Date Sampled: 10/06/2017 1548

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0651.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1748

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1748

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-GUNCLUB#1-INF

Lab Sample ID: 280-102119-10

Client Matrix: Water

Date Sampled: 10/06/2017 1548

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0651.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1748			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1748				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	4.5		0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	113		80 - 119
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-VG#1-INT

Lab Sample ID: 280-102119-11

Date Sampled: 10/06/2017 1553

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0652.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1811

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1811

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-VG#1-INT

Lab Sample ID: 280-102119-11

Client Matrix: Water

Date Sampled: 10/06/2017 1553

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0652.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1811			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1811				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-VG#1-EFF

Lab Sample ID: 280-102119-12

Date Sampled: 10/06/2017 1556

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0653.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1833

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1833

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-VG#1-EFF

Lab Sample ID: 280-102119-12

Client Matrix: Water

Date Sampled: 10/06/2017 1556

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0653.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1833			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1833				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	114		80 - 119
1,2-Dichloroethane-d4 (Surr)	106		81 - 118
Toluene-d8 (Surr)	96		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FINNERTY#1-INF

Lab Sample ID: 280-102119-13

Date Sampled: 10/06/2017 1733

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0654.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1854

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1854

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FINNERTY#1-INF

Lab Sample ID: 280-102119-13

Client Matrix: Water

Date Sampled: 10/06/2017 1733

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0654.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1854			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1854				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	1.4		0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	96		85 - 114
Dibromofluoromethane (Surr)	108		80 - 119
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
Toluene-d8 (Surr)	92		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FINNERTY#1-INT

Lab Sample ID: 280-102119-14

Date Sampled: 10/06/2017 1737

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0655.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1916

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1916

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FINNERTY#1-INT

Lab Sample ID: 280-102119-14

Client Matrix: Water

Date Sampled: 10/06/2017 1737

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0655.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1916			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1916				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
Toluene-d8 (Surr)	92		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FINNERTY#1-EFF

Lab Sample ID: 280-102119-15

Date Sampled: 10/06/2017 1740

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0668.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 0925

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 0925

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-FINNERTY#1-EFF

Lab Sample ID: 280-102119-15

Date Sampled: 10/06/2017 1740

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0668.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 0925			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 0925				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	112		80 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
Toluene-d8 (Surr)	97		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-DYSON#1-INF

Lab Sample ID: 280-102119-16

Date Sampled: 10/06/2017 1833

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0669.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 0948

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 0948

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-DYSON#1-INF

Lab Sample ID: 280-102119-16

Client Matrix: Water

Date Sampled: 10/06/2017 1833

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0669.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 0948			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 0948				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	1.6		0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	104		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	95		81 - 118
Toluene-d8 (Surr)	97		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-Houser#1

Lab Sample ID: 280-102119-17

Date Sampled: 10/07/2017 0835

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0670.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1010

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1010

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-HOUSER#1

Lab Sample ID: 280-102119-17

Client Matrix: Water

Date Sampled: 10/07/2017 0835

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0670.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1010			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1010				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
Toluene-d8 (Surr)	94		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BROWN#1

Lab Sample ID: 280-102119-18

Date Sampled: 10/07/2017 0920

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0671.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1032

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1032

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BROWN#1

Lab Sample ID: 280-102119-18

Client Matrix: Water

Date Sampled: 10/07/2017 0920

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0671.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1032			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1032				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 114
Dibromofluoromethane (Surr)	109		80 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-WELTY#2

Lab Sample ID: 280-102119-19

Date Sampled: 10/07/2017 0950

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0672.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1053

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1053

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-WELTY#2

Lab Sample ID: 280-102119-19

Client Matrix: Water

Date Sampled: 10/07/2017 0950

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0672.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1053			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1053				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.37	J	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	96		85 - 114
Dibromofluoromethane (Surr)	108		80 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
Toluene-d8 (Surr)	93		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-1774 OTTO

Lab Sample ID: 280-102119-20

Date Sampled: 10/07/2017 1025

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0673.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1115

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1115

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-1774 OTTO

Lab Sample ID: 280-102119-20

Client Matrix: Water

Date Sampled: 10/07/2017 1025

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0673.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1115			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1115				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	113		80 - 119
1,2-Dichloroethane-d4 (Surr)	102		81 - 118
Toluene-d8 (Surr)	97		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BOYD-1

Lab Sample ID: 280-102119-21

Client Matrix: Water

Date Sampled: 10/07/2017 1055

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0674.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1136

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1136

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BOYD-1

Lab Sample ID: 280-102119-21

Client Matrix: Water

Date Sampled: 10/07/2017 1055

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0674.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1136

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1136

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	110		80 - 119
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
Toluene-d8 (Surr)	93		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BOYD-3

Lab Sample ID: 280-102119-22

Date Sampled: 10/07/2017 1130

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0675.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1158

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1158

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	3.0	J	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BOYD-3

Lab Sample ID: 280-102119-22

Client Matrix: Water

Date Sampled: 10/07/2017 1130

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0675.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1158			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1158				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	1.0		0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	116		80 - 119
1,2-Dichloroethane-d4 (Surr)	102		81 - 118
Toluene-d8 (Surr)	96		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BOYD-J

Lab Sample ID: 280-102119-23

Date Sampled: 10/07/2017 1224

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0676.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1220

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1220

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-BOYD-J

Lab Sample ID: 280-102119-23

Client Matrix: Water

Date Sampled: 10/07/2017 1224

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0676.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1220			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1220				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 114
Dibromofluoromethane (Surr)	112		80 - 119
1,2-Dichloroethane-d4 (Surr)	102		81 - 118
Toluene-d8 (Surr)	95		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-HILL#1

Lab Sample ID: 280-102119-24

Date Sampled: 10/07/2017 1312

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391346

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0677.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/16/2017 1241

Final Weight/Volume: 20 mL

Prep Date: 10/16/2017 1241

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-HILL#1

Lab Sample ID: 280-102119-24

Client Matrix: Water

Date Sampled: 10/07/2017 1312

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0677.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 1241			Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 1241				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 114
Dibromofluoromethane (Surr)	112		80 - 119
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Toluene-d8 (Surr)	96		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-TB-20171006

Lab Sample ID: 280-102119-25TB

Date Sampled: 10/02/2017 0000

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0642.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1431

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1431

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-TB-20171006

Lab Sample ID: 280-102119-25TB

Client Matrix: Water

Date Sampled: 10/02/2017 0000

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0642.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1431			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1431				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	109		80 - 119
1,2-Dichloroethane-d4 (Surr)	96		81 - 118
Toluene-d8 (Surr)	93		89 - 112

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-TB-20171007

Lab Sample ID: 280-102119-26TB

Date Sampled: 10/02/2017 0000

Client Matrix: Water

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-391324

Instrument ID: VMS_H

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: H0643.D

Dilution: 1.0

Initial Weight/Volume: 20 mL

Analysis Date: 10/15/2017 1453

Final Weight/Volume: 20 mL

Prep Date: 10/15/2017 1453

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.80	U	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0

Analytical Data

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Client Sample ID: FEW4-TB-20171007

Lab Sample ID: 280-102119-26TB

Client Matrix: Water

Date Sampled: 10/02/2017 0000

Date Received: 10/09/2017 1128

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	H0643.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1453			Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1453				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	109		80 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
Toluene-d8 (Surr)	94		89 - 112

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Surrogate Recovery Report**8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
280-102119-1	FEW4-BAR 13 RANCH	108	96	96	104
280-102119-2	FEW4-FRITZ LEY#1	112	100	95	101
280-102119-3	FEW4-BERT MCGEE#8	110	98	94	98
280-102119-4	FEW4-CANDES#888	110	101	95	99
280-102119-5	FEW4-FARRELL#1-I NF	109	99	95	99
280-102119-6	FEW4-HARDY#1-INF	113	101	96	100
280-102119-7	FEW4-FARRELL#1-I NT	111	101	95	99
280-102119-8	FEW4-FARRELL#1-E FF	106	94	90	96
280-102119-9	FEW4-VG#1-INF	111	95	97	102
280-102119-10	FEW4-GUNCLUB#1-I NF	113	101	95	100
280-102119-11	FEW4-VG#1-INT	110	98	95	99
280-102119-12	FEW4-VG#1-EFF	114	106	96	101
280-102119-13	FEW4-FINNERTY#1-I NF	108	98	92	96
280-102119-14	FEW4-FINNERTY#1-I NT	110	100	92	97
280-102119-15	FEW4-FINNERTY#1- EFF	112	99	97	101
280-102119-16	FEW4-DYSON#1-INF	110	95	97	104
280-102119-17	FEW4-Houser#1	110	98	94	102
280-102119-18	FEW4-BROWN#1	109	99	95	103
280-102119-19	FEW4-WELTY#2	108	99	93	96
280-102119-20	FEW4-1774 OTTO	113	102	97	102
280-102119-21	FEW4-BOYD-1	110	98	93	98
280-102119-22	FEW4-BOYD-3	116	102	96	102
280-102119-23	FEW4-BOYD-J	112	102	95	103
280-102119-24	FEW4-HILL#1	112	101	96	103

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Surrogate Recovery Report**8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
280-102119-25	FEW4-TB-20171006	109	96	93	99
280-102119-26	FEW4-TB-20171007	109	99	94	97
MB 280-391324/6		110	100	97	104
MB 280-391346/6		109	97	95	102
LCS 280-391324/4		106	100	100	95
LCS 280-391346/4		111	105	103	98
280-102119-9 MS	FEW4-VG#1-INF-MS MS	108	98	102	94
280-102119-22 MS	FEW4-BOYD-3-MS MS	115	110	104	99
280-102119-9 MSD	FEW4-VG#1-INF-MS D MSD	110	104	101	91
280-102119-22 MSD	FEW4-BOYD-3-MSD MSD	111	105	101	92

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Method Blank - Batch: 280-391324

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-391324/6
 Client Matrix: Water
 Dilution: 1.0
 Analysis Date: 10/15/2017 1026
 Prep Date: 10/15/2017 1026
 Leach Date: N/A

Analysis Batch: 280-391324
 Prep Batch: N/A
 Leach Batch: N/A
 Units: ug/L

Instrument ID: VMS_H
 Lab File ID: H0631.D
 Initial Weight/Volume: 20 mL
 Final Weight/Volume: 20 mL

Analyte	Result	Qual	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.372	J	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Method Blank - Batch: 280-391324

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-391324/6
 Client Matrix: Water
 Dilution: 1.0
 Analysis Date: 10/15/2017 1026
 Prep Date: 10/15/2017 1026
 Leach Date: N/A

Analysis Batch: 280-391324
 Prep Batch: N/A
 Leach Batch: N/A
 Units: ug/L

Instrument ID: VMS_H
 Lab File ID: H0631.D
 Initial Weight/Volume: 20 mL
 Final Weight/Volume: 20 mL

Analyte	Result	Qual	DL	LOQ
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	104	85 - 114
Dibromofluoromethane (Surr)	110	80 - 119
1,2-Dichloroethane-d4 (Surr)	100	81 - 118
Toluene-d8 (Surr)	97	89 - 112

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Control Sample - Batch: 280-391324

Method: 8260B

Preparation: 5030B

Lab Sample ID:	LCS 280-391324/4	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	H0630.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1004	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1004				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	22.3	112	39 - 160	
Benzene	5.00	5.52	110	79 - 120	
Bromoform	5.00	5.08	102	66 - 130	
Bromomethane	5.00	4.92	98	53 - 141	
2-Butanone (MEK)	20.0	21.1	105	56 - 143	
Carbon disulfide	5.00	5.40	108	64 - 133	
Carbon tetrachloride	5.00	5.35	107	72 - 136	
Chlorobenzene	5.00	4.96	99	82 - 118	
Chlorobromomethane	5.00	5.44	109	78 - 123	
Chlorodibromomethane	5.00	4.86	97	74 - 126	
Chloroethane	5.00	4.64	93	60 - 138	
Chloroform	5.00	5.21	104	79 - 124	
Chloromethane	5.00	4.62	92	50 - 139	
cis-1,2-Dichloroethene	5.00	5.41	108	78 - 123	
cis-1,3-Dichloropropene	5.00	4.87	97	75 - 124	
Cyclohexane	5.00	5.31	106	71 - 130	
1,2-Dibromo-3-Chloropropane	5.00	4.93	99	62 - 128	J
1,2-Dibromoethane	5.00	5.00	100	77 - 121	
1,2-Dichlorobenzene	5.00	4.86	97	80 - 119	
1,3-Dichlorobenzene	5.00	4.91	98	80 - 119	
1,4-Dichlorobenzene	5.00	4.64	93	79 - 118	
Dichlorobromomethane	5.00	5.31	106	79 - 125	
Dichlorodifluoromethane	5.00	4.47	89	32 - 152	
1,1-Dichloroethane	5.00	5.19	104	77 - 125	
1,2-Dichloroethane	5.00	4.93	99	73 - 128	
1,1-Dichloroethene	5.00	5.24	105	71 - 131	
1,2-Dichloropropane	5.00	5.18	104	78 - 122	
Ethylbenzene	5.00	4.93	99	79 - 121	
2-Hexanone	20.0	20.3	102	57 - 139	
Isopropylbenzene	5.00	4.73	95	72 - 131	
Methyl acetate	25.0	25.2	101	56 - 136	
Methylene Chloride	5.00	5.17	103	74 - 124	
4-Methyl-2-pentanone (MIBK)	20.0	23.0	115	67 - 130	
Methyl tert-butyl ether	5.00	5.33	107	71 - 124	
m-Xylene & p-Xylene	5.00	5.00	100	80 - 121	
o-Xylene	5.00	4.98	100	78 - 122	
Styrene	5.00	4.88	98	78 - 123	
1,1,2,2-Tetrachloroethane	5.00	4.72	94	71 - 121	
Tetrachloroethene	5.00	5.07	101	74 - 129	
Toluene	5.00	5.29	106	80 - 121	
trans-1,2-Dichloroethene	5.00	5.58	112	75 - 124	
trans-1,3-Dichloropropene	5.00	4.86	97	73 - 127	
1,2,3-Trichlorobenzene	5.00	4.61	92	69 - 129	
1,2,4-Trichlorobenzene	5.00	4.66	93	69 - 130	
1,1,1-Trichloroethane	5.00	5.32	106	74 - 131	
1,1,2-Trichloroethane	5.00	5.19	104	80 - 119	

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Control Sample - Batch: 280-391324

Method: 8260B

Preparation: 5030B

Lab Sample ID:	LCS 280-391324/4	Analysis Batch:	280-391324	Instrument ID:	VMS_H
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	H0630.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	10/15/2017 1004	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	10/15/2017 1004				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Trichloroethene	5.00	5.34	107	79 - 123	
Trichlorofluoromethane	5.00	4.98	100	65 - 141	
Vinyl chloride	5.00	4.81	96	58 - 137	
Surrogate		% Rec		Acceptance Limits	
4-Bromofluorobenzene (Surr)		95		85 - 114	
Dibromofluoromethane (Surr)		106		80 - 119	
1,2-Dichloroethane-d4 (Surr)		100		81 - 118	
Toluene-d8 (Surr)		100		89 - 112	

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-391324

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1515
Prep Date: 10/15/2017 1515
Leach Date: N/A

Analysis Batch: 280-391324
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0644.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

MSD Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1537
Prep Date: 10/15/2017 1537
Leach Date: N/A

Analysis Batch: 280-391324
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0645.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acetone	116	130	39 - 160	11	20		
Benzene	109	112	79 - 120	2	20		
Bromoform	103	110	66 - 130	6	20		
Bromomethane	98	98	53 - 141	0	20		
2-Butanone (MEK)	115	112	56 - 143	2	20		
Carbon disulfide	106	107	64 - 133	1	20		
Carbon tetrachloride	105	108	72 - 136	3	20		
Chlorobenzene	102	103	82 - 118	1	20		
Chlorobromomethane	111	116	78 - 123	4	20		
Chlorodibromomethane	100	104	74 - 126	5	20		
Chloroethane	91	91	60 - 138	0	20		
Chloroform	106	110	79 - 124	3	20		
Chloromethane	93	90	50 - 139	3	20		
cis-1,2-Dichloroethene	107	112	78 - 123	4	20		
cis-1,3-Dichloropropene	98	101	75 - 124	3	20		
Cyclohexane	103	103	71 - 130	0	20		
1,2-Dibromo-3-Chloropropane	99	108	62 - 128	8	20	J	
1,2-Dibromoethane	100	106	77 - 121	5	20		
1,2-Dichlorobenzene	98	100	80 - 119	2	20		
1,3-Dichlorobenzene	99	100	80 - 119	1	20		
1,4-Dichlorobenzene	93	95	79 - 118	2	20		
Dichlorobromomethane	110	116	79 - 125	6	20		
Dichlorodifluoromethane	88	83	32 - 152	5	20		
1,1-Dichloroethane	105	107	77 - 125	1	20		
1,2-Dichloroethane	102	109	73 - 128	6	20		
1,1-Dichloroethene	106	106	71 - 131	0	20		
1,2-Dichloropropane	106	109	78 - 122	3	20		
Ethylbenzene	101	101	79 - 121	0	20		
2-Hexanone	101	105	57 - 139	4	20		
Isopropylbenzene	93	91	72 - 131	2	20		
Methyl acetate	95	103	56 - 136	8	20		
Methylene Chloride	100	103	74 - 124	4	20	J	
4-Methyl-2-pentanone (MIBK)	121	121	67 - 130	0	20		

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-391324

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1515
Prep Date: 10/15/2017 1515
Leach Date: N/A

Analysis Batch: 280-391324
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0644.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

MSD Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1537
Prep Date: 10/15/2017 1537
Leach Date: N/A

Analysis Batch: 280-391324
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0645.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Methyl tert-butyl ether	107	114	71 - 124	7	20		
m-Xylene & p-Xylene	100	102	80 - 121	2	20		
o-Xylene	103	103	78 - 122	0	20		
Styrene	101	103	78 - 123	2	20		
1,1,2,2-Tetrachloroethane	90	98	71 - 121	8	20		
Tetrachloroethene	101	101	74 - 129	0	20		
Toluene	109	109	80 - 121	0	20		
trans-1,2-Dichloroethene	109	114	75 - 124	4	20		
trans-1,3-Dichloropropene	99	103	73 - 127	5	20		
1,2,3-Trichlorobenzene	97	99	69 - 129	2	20		
1,2,4-Trichlorobenzene	95	98	69 - 130	2	20		
1,1,1-Trichloroethane	106	106	74 - 131	0	20		
1,1,2-Trichloroethane	112	114	80 - 119	2	20		
Trichloroethene	106	100	79 - 123	3	20		
Trichlorofluoromethane	98	98	65 - 141	0	20		
Vinyl chloride	93	92	58 - 137	1	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	94	91	85 - 114
Dibromofluoromethane (Surr)	108	110	80 - 119
1,2-Dichloroethane-d4 (Surr)	98	104	81 - 118
Toluene-d8 (Surr)	102	101	89 - 112

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-391324

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1515
Prep Date: 10/15/2017 1515
Leach Date: N/A

Units: ug/L

MSD Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1537
Prep Date: 10/15/2017 1537
Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	6.4	U	20.0	20.0	23.2	26.0
Benzene	0.40	U	5.00	5.00	5.46	5.58
Bromoform	0.40	U	5.00	5.00	5.17	5.50
Bromomethane	0.80	U	5.00	5.00	4.89	4.88
2-Butanone (MEK)	4.0	U	20.0	20.0	22.9	22.4
Carbon disulfide	1.6	U	5.00	5.00	5.29	5.37
Carbon tetrachloride	0.40	U	5.00	5.00	5.25	5.39
Chlorobenzene	0.40	U	5.00	5.00	5.08	5.13
Chlorobromomethane	0.20	U	5.00	5.00	5.56	5.80
Chlorodibromomethane	0.40	U	5.00	5.00	4.98	5.22
Chloroethane	1.6	U	5.00	5.00	4.57	4.55
Chloroform	0.40	U	5.00	5.00	5.32	5.49
Chloromethane	0.80	U	5.00	5.00	4.64	4.49
cis-1,2-Dichloroethene	0.40	U	5.00	5.00	5.34	5.58
cis-1,3-Dichloropropene	0.40	U	5.00	5.00	4.92	5.07
Cyclohexane	0.80	U	5.00	5.00	5.14	5.16
1,2-Dibromo-3-Chloropropane	1.6	U	5.00	5.00	4.97	J 5.40
1,2-Dibromoethane	0.40	U	5.00	5.00	5.01	5.28
1,2-Dichlorobenzene	0.40	U	5.00	5.00	4.91	5.01
1,3-Dichlorobenzene	0.40	U	5.00	5.00	4.94	4.98
1,4-Dichlorobenzene	0.40	U	5.00	5.00	4.65	4.77
Dichlorobromomethane	0.40	U	5.00	5.00	5.49	5.80
Dichlorodifluoromethane	0.80	U	5.00	5.00	4.39	4.16
1,1-Dichloroethane	0.80	U	5.00	5.00	5.26	5.34
1,2-Dichloroethane	0.40	U	5.00	5.00	5.10	5.44
1,1-Dichloroethene	0.80	U	5.00	5.00	5.30	5.28
1,2-Dichloropropane	0.40	U	5.00	5.00	5.32	5.46
Ethylbenzene	0.40	U	5.00	5.00	5.07	5.07
2-Hexanone	4.0	U	20.0	20.0	20.1	21.0
Isopropylbenzene	0.40	U	5.00	5.00	4.64	4.53
Methyl acetate	4.0	U	25.0	25.0	23.8	25.8
Methylene Chloride	0.80	U	5.00	5.00	4.98	J 5.17
4-Methyl-2-pentanone (MIBK)	3.2	U	20.0	20.0	24.2	24.3
Methyl tert-butyl ether	0.80	U	5.00	5.00	5.33	5.70
m-Xylene & p-Xylene	0.80	U	5.00	5.00	5.00	5.12
o-Xylene	0.40	U	5.00	5.00	5.15	5.13
Styrene	0.40	U	5.00	5.00	5.03	5.14
1,1,2,2-Tetrachloroethane	0.80	U	5.00	5.00	4.52	4.90
Tetrachloroethene	0.40	U	5.00	5.00	5.07	5.05
Toluene	0.40	U	5.00	5.00	5.45	5.47
trans-1,2-Dichloroethene	0.40	U	5.00	5.00	5.44	5.68
trans-1,3-Dichloropropene	0.40	U	5.00	5.00	4.93	5.17
1,2,3-Trichlorobenzene	0.80	U	5.00	5.00	4.87	4.97

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-391324**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 280-102119-9 Units: ug/L
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1515
Prep Date: 10/15/2017 1515
Leach Date: N/A

MSD Lab Sample ID: 280-102119-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/15/2017 1537
Prep Date: 10/15/2017 1537
Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,2,4-Trichlorobenzene	0.80	U	5.00	5.00	4.77	4.88
1,1,1-Trichloroethane	0.40	U	5.00	5.00	5.31	5.31
1,1,2-Trichloroethane	0.80	U	5.00	5.00	5.61	5.71
Trichloroethene	4.9		5.00	5.00	10.2	9.92
Trichlorofluoromethane	0.80	U	5.00	5.00	4.90	4.88
Vinyl chloride	0.20	U	5.00	5.00	4.66	4.61

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Method Blank - Batch: 280-391346

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-391346/6
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 0758
Prep Date: 10/16/2017 0758
Leach Date: N/A

Analysis Batch: 280-391346
Prep Batch: N/A
Leach Batch: N/A
Units: ug/L

Instrument ID: VMS_H
Lab File ID: H0664.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	Result	Qual	DL	LOQ
Acetone	6.4	U	1.9	10
Benzene	0.40	U	0.16	1.0
Bromoform	0.40	U	0.19	1.0
Bromomethane	0.80	U	0.21	2.0
2-Butanone (MEK)	4.0	U	1.8	6.0
Carbon disulfide	1.6	U	0.45	2.0
Carbon tetrachloride	0.40	U	0.19	2.0
Chlorobenzene	0.40	U	0.17	1.0
Chlorobromomethane	0.20	U	0.10	1.0
Chlorodibromomethane	0.40	U	0.17	1.0
Chloroethane	1.6	U	0.41	2.0
Chloroform	0.40	U	0.16	1.0
Chloromethane	0.80	U	0.30	2.0
cis-1,2-Dichloroethene	0.40	U	0.15	1.0
cis-1,3-Dichloropropene	0.40	U	0.16	1.0
Cyclohexane	0.80	U	0.28	2.0
1,2-Dibromo-3-Chloropropane	1.6	U	0.81	5.0
1,2-Dibromoethane	0.40	U	0.18	1.0
1,2-Dichlorobenzene	0.40	U	0.13	1.0
1,3-Dichlorobenzene	0.40	U	0.16	1.0
1,4-Dichlorobenzene	0.40	U	0.16	1.0
Dichlorobromomethane	0.40	U	0.17	1.0
Dichlorodifluoromethane	0.80	U	0.31	2.0
1,1-Dichloroethane	0.80	U	0.16	1.0
1,2-Dichloroethane	0.40	U	0.13	1.0
1,1-Dichloroethene	0.80	U	0.14	1.0
1,2-Dichloropropane	0.40	U	0.13	1.0
1,4-Dioxane	160	U	71	220
Ethylbenzene	0.40	U	0.16	1.0
2-Hexanone	4.0	U	1.4	5.0
Isopropylbenzene	0.40	U	0.19	1.0
Methyl acetate	4.0	U	1.6	5.0
Methylcyclohexane	0.80	U	0.36	2.0
Methylene Chloride	0.392	J	0.32	5.0
4-Methyl-2-pentanone (MIBK)	3.2	U	1.0	5.0
Methyl tert-butyl ether	0.80	U	0.25	5.0
m-Xylene & p-Xylene	0.80	U	0.34	2.0
o-Xylene	0.40	U	0.19	1.0
Styrene	0.40	U	0.17	1.0
1,1,2,2-Tetrachloroethane	0.80	U	0.20	1.0
Tetrachloroethene	0.40	U	0.20	1.0
Toluene	0.40	U	0.17	1.0
trans-1,2-Dichloroethene	0.40	U	0.15	1.0
trans-1,3-Dichloropropene	0.40	U	0.19	1.0
1,2,3-Trichlorobenzene	0.80	U	0.18	1.0

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Method Blank - Batch: 280-391346

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 280-391346/6
 Client Matrix: Water
 Dilution: 1.0
 Analysis Date: 10/16/2017 0758
 Prep Date: 10/16/2017 0758
 Leach Date: N/A

Analysis Batch: 280-391346
 Prep Batch: N/A
 Leach Batch: N/A
 Units: ug/L

Instrument ID: VMS_H
 Lab File ID: H0664.D
 Initial Weight/Volume: 20 mL
 Final Weight/Volume: 20 mL

Analyte	Result	Qual	DL	LOQ
1,2,4-Trichlorobenzene	0.80	U	0.32	1.0
1,1,1-Trichloroethane	0.40	U	0.16	1.0
1,1,2-Trichloroethane	0.80	U	0.32	1.0
Trichloroethene	0.40	U	0.16	1.0
Trichlorofluoromethane	0.80	U	0.29	2.0
1,1,2-Trichlorotrifluoroethane	1.6	U	0.79	3.0
Vinyl chloride	0.20	U	0.10	1.5

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	102	85 - 114
Dibromofluoromethane (Surr)	109	80 - 119
1,2-Dichloroethane-d4 (Surr)	97	81 - 118
Toluene-d8 (Surr)	95	89 - 112

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Control Sample - Batch: 280-391346

Method: 8260B

Preparation: 5030B

Lab Sample ID:	LCS 280-391346/4	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	H0663.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 0736	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 0736				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	21.7	109	39 - 160	
Benzene	5.00	5.81	116	79 - 120	
Bromoform	5.00	5.53	111	66 - 130	
Bromomethane	5.00	5.18	104	53 - 141	
2-Butanone (MEK)	20.0	23.1	116	56 - 143	
Carbon disulfide	5.00	5.83	117	64 - 133	
Carbon tetrachloride	5.00	5.82	116	72 - 136	
Chlorobenzene	5.00	5.39	108	82 - 118	
Chlorobromomethane	5.00	5.80	116	78 - 123	
Chlorodibromomethane	5.00	5.17	103	74 - 126	
Chloroethane	5.00	4.78	96	60 - 138	
Chloroform	5.00	5.64	113	79 - 124	
Chloromethane	5.00	4.72	94	50 - 139	
cis-1,2-Dichloroethene	5.00	5.77	115	78 - 123	
cis-1,3-Dichloropropene	5.00	5.23	105	75 - 124	
Cyclohexane	5.00	5.66	113	71 - 130	
1,2-Dibromo-3-Chloropropane	5.00	5.31	106	62 - 128	
1,2-Dibromoethane	5.00	5.40	108	77 - 121	
1,2-Dichlorobenzene	5.00	5.02	100	80 - 119	
1,3-Dichlorobenzene	5.00	5.07	101	80 - 119	
1,4-Dichlorobenzene	5.00	4.94	99	79 - 118	
Dichlorobromomethane	5.00	5.86	117	79 - 125	
Dichlorodifluoromethane	5.00	4.70	94	32 - 152	
1,1-Dichloroethane	5.00	5.57	111	77 - 125	
1,2-Dichloroethane	5.00	5.42	108	73 - 128	
1,1-Dichloroethene	5.00	5.67	113	71 - 131	
1,2-Dichloropropane	5.00	5.54	111	78 - 122	
Ethylbenzene	5.00	5.40	108	79 - 121	
2-Hexanone	20.0	22.4	112	57 - 139	
Isopropylbenzene	5.00	4.96	99	72 - 131	
Methyl acetate	25.0	27.6	111	56 - 136	
Methylene Chloride	5.00	5.47	109	74 - 124	
4-Methyl-2-pentanone (MIBK)	20.0	23.4	117	67 - 130	
Methyl tert-butyl ether	5.00	5.84	117	71 - 124	
m-Xylene & p-Xylene	5.00	5.28	106	80 - 121	
o-Xylene	5.00	5.22	104	78 - 122	
Styrene	5.00	5.32	106	78 - 123	
1,1,2,2-Tetrachloroethane	5.00	4.90	98	71 - 121	
Tetrachloroethene	5.00	5.43	109	74 - 129	
Toluene	5.00	5.74	115	80 - 121	
trans-1,2-Dichloroethene	5.00	5.78	116	75 - 124	
trans-1,3-Dichloropropene	5.00	5.25	105	73 - 127	
1,2,3-Trichlorobenzene	5.00	4.95	99	69 - 129	
1,2,4-Trichlorobenzene	5.00	4.85	97	69 - 130	
1,1,1-Trichloroethane	5.00	5.77	115	74 - 131	
1,1,2-Trichloroethane	5.00	5.42	108	80 - 119	

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Control Sample - Batch: 280-391346

Method: 8260B

Preparation: 5030B

Lab Sample ID:	LCS 280-391346/4	Analysis Batch:	280-391346	Instrument ID:	VMS_H
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	H0663.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	10/16/2017 0736	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	10/16/2017 0736				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Trichloroethene	5.00	5.86	117	79 - 123	
Trichlorofluoromethane	5.00	5.24	105	65 - 141	
Vinyl chloride	5.00	4.90	98	58 - 137	
Surrogate		% Rec		Acceptance Limits	
4-Bromofluorobenzene (Surr)		98		85 - 114	
Dibromofluoromethane (Surr)		111		80 - 119	
1,2-Dichloroethane-d4 (Surr)		105		81 - 118	
Toluene-d8 (Surr)		103		89 - 112	

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-391346

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 280-102119-22
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1347
Prep Date: 10/16/2017 1347
Leach Date: N/A

Analysis Batch: 280-391346
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0680.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

MSD Lab Sample ID: 280-102119-22
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1409
Prep Date: 10/16/2017 1409
Leach Date: N/A

Analysis Batch: 280-391346
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0681.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acetone	144	132	39 - 160	8	20		
Benzene	109	111	79 - 120	2	20		
Bromoform	108	110	66 - 130	1	20		
Bromomethane	92	95	53 - 141	3	20		
2-Butanone (MEK)	108	110	56 - 143	1	20		
Carbon disulfide	102	105	64 - 133	3	20		
Carbon tetrachloride	101	104	72 - 136	3	20		
Chlorobenzene	97	103	82 - 118	6	20		
Chlorobromomethane	112	118	78 - 123	5	20		
Chlorodibromomethane	101	105	74 - 126	4	20		
Chloroethane	88	88	60 - 138	0	20		
Chloroform	107	111	79 - 124	4	20		
Chloromethane	85	90	50 - 139	5	20		
cis-1,2-Dichloroethene	107	114	78 - 123	6	20		
cis-1,3-Dichloropropene	98	101	75 - 124	3	20		
Cyclohexane	97	102	71 - 130	4	20		
1,2-Dibromo-3-Chloropropane	101	105	62 - 128	4	20		
1,2-Dibromoethane	103	109	77 - 121	6	20		
1,2-Dichlorobenzene	94	95	80 - 119	1	20		
1,3-Dichlorobenzene	90	93	80 - 119	3	20		
1,4-Dichlorobenzene	91	94	79 - 118	3	20		
Dichlorobromomethane	112	117	79 - 125	4	20		
Dichlorodifluoromethane	82	85	32 - 152	4	20		
1,1-Dichloroethane	104	107	77 - 125	3	20		
1,2-Dichloroethane	107	108	73 - 128	1	20		
1,1-Dichloroethene	100	102	71 - 131	2	20		
1,2-Dichloropropane	106	110	78 - 122	4	20		
Ethylbenzene	95	100	79 - 121	6	20		
2-Hexanone	113	116	57 - 139	3	20		
Isopropylbenzene	86	89	72 - 131	3	20		
Methyl acetate	110	105	56 - 136	4	20		
Methylene Chloride	102	104	74 - 124	2	20		
4-Methyl-2-pentanone (MIBK)	126	126	67 - 130	1	20		

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-391346

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 280-102119-22
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1347
Prep Date: 10/16/2017 1347
Leach Date: N/A

Analysis Batch: 280-391346
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0680.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

MSD Lab Sample ID: 280-102119-22
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1409
Prep Date: 10/16/2017 1409
Leach Date: N/A

Analysis Batch: 280-391346
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: VMS_H
Lab File ID: H0681.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Methyl tert-butyl ether	116	119	71 - 124	2	20		
m-Xylene & p-Xylene	93	101	80 - 121	7	20		
o-Xylene	96	102	78 - 122	6	20		
Styrene	95	103	78 - 123	8	20		
1,1,2,2-Tetrachloroethane	98	98	71 - 121	0	20		
Tetrachloroethene	93	99	74 - 129	6	20		
Toluene	107	110	80 - 121	3	20		
trans-1,2-Dichloroethene	106	111	75 - 124	5	20		
trans-1,3-Dichloropropene	101	111	73 - 127	10	20		
1,2,3-Trichlorobenzene	96	98	69 - 129	2	20		
1,2,4-Trichlorobenzene	90	95	69 - 130	5	20		
1,1,1-Trichloroethane	101	105	74 - 131	4	20		
1,1,2-Trichloroethane	110	110	80 - 119	0	20		
Trichloroethene	105	107	79 - 123	1	20		
Trichlorofluoromethane	91	95	65 - 141	4	20		
Vinyl chloride	86	89	58 - 137	4	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
4-Bromofluorobenzene (Surr)	99		92	85 - 114			
Dibromofluoromethane (Surr)	115		111	80 - 119			
1,2-Dichloroethane-d4 (Surr)	110		105	81 - 118			
Toluene-d8 (Surr)	104		101	89 - 112			

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-391346

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 280-102119-22 Units: ug/L
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1347
Prep Date: 10/16/2017 1347
Leach Date: N/A

MSD Lab Sample ID: 280-102119-22
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1409
Prep Date: 10/16/2017 1409
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	3.0 J	20.0	20.0	31.8	29.3
Benzene	0.40 U	5.00	5.00	5.43	5.57
Bromoform	0.40 U	5.00	5.00	5.42	5.48
Bromomethane	0.80 U	5.00	5.00	4.58	4.73
2-Butanone (MEK)	4.0 U	20.0	20.0	21.6	21.9
Carbon disulfide	1.6 U	5.00	5.00	5.09	5.25
Carbon tetrachloride	0.40 U	5.00	5.00	5.05	5.20
Chlorobenzene	0.40 U	5.00	5.00	4.87	5.17
Chlorobromomethane	0.20 U	5.00	5.00	5.60	5.88
Chlorodibromomethane	0.40 U	5.00	5.00	5.05	5.26
Chloroethane	1.6 U	5.00	5.00	4.38	4.38
Chloroform	0.40 U	5.00	5.00	5.33	5.55
Chloromethane	0.80 U	5.00	5.00	4.25	4.48
cis-1,2-Dichloroethene	0.40 U	5.00	5.00	5.37	5.69
cis-1,3-Dichloropropene	0.40 U	5.00	5.00	4.92	5.07
Cyclohexane	0.80 U	5.00	5.00	4.86	5.08
1,2-Dibromo-3-Chloropropane	1.6 U	5.00	5.00	5.06	5.25
1,2-Dibromoethane	0.40 U	5.00	5.00	5.16	5.46
1,2-Dichlorobenzene	0.40 U	5.00	5.00	4.68	4.73
1,3-Dichlorobenzene	0.40 U	5.00	5.00	4.51	4.66
1,4-Dichlorobenzene	0.40 U	5.00	5.00	4.53	4.68
Dichlorobromomethane	0.40 U	5.00	5.00	5.61	5.85
Dichlorodifluoromethane	0.80 U	5.00	5.00	4.12	4.27
1,1-Dichloroethane	0.80 U	5.00	5.00	5.18	5.34
1,2-Dichloroethane	0.40 U	5.00	5.00	5.34	5.41
1,1-Dichloroethene	0.80 U	5.00	5.00	5.01	5.12
1,2-Dichloropropane	0.40 U	5.00	5.00	5.28	5.50
Ethylbenzene	0.40 U	5.00	5.00	4.74	5.02
2-Hexanone	4.0 U	20.0	20.0	22.6	23.2
Isopropylbenzene	0.40 U	5.00	5.00	4.29	4.43
Methyl acetate	4.0 U	25.0	25.0	27.5	26.3
Methylene Chloride	0.80 U	5.00	5.00	5.12	5.22
4-Methyl-2-pentanone (MIBK)	3.2 U	20.0	20.0	25.1	25.3
Methyl tert-butyl ether	0.80 U	5.00	5.00	5.82	5.95
m-Xylene & p-Xylene	0.80 U	5.00	5.00	4.67	5.03
o-Xylene	0.40 U	5.00	5.00	4.82	5.12
Styrene	0.40 U	5.00	5.00	4.77	5.15
1,1,2,2-Tetrachloroethane	0.80 U	5.00	5.00	4.88	4.90
Tetrachloroethene	0.40 U	5.00	5.00	4.67	4.94
Toluene	0.40 U	5.00	5.00	5.33	5.49
trans-1,2-Dichloroethene	0.40 U	5.00	5.00	5.30	5.57
trans-1,3-Dichloropropene	0.40 U	5.00	5.00	5.06	5.57
1,2,3-Trichlorobenzene	0.80 U	5.00	5.00	4.81	4.90

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-391346**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 280-102119-22 Units: ug/L
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1347
Prep Date: 10/16/2017 1347
Leach Date: N/A

MSD Lab Sample ID: 280-102119-22
Client Matrix: Water
Dilution: 1.0
Analysis Date: 10/16/2017 1409
Prep Date: 10/16/2017 1409
Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,2,4-Trichlorobenzene	0.80	U	5.00	5.00	4.50	4.74
1,1,1-Trichloroethane	0.40	U	5.00	5.00	5.03	5.24
1,1,2-Trichloroethane	0.80	U	5.00	5.00	5.48	5.48
Trichloroethene	1.0		5.00	5.00	6.29	6.38
Trichlorofluoromethane	0.80	U	5.00	5.00	4.54	4.75
Vinyl chloride	0.20	U	5.00	5.00	4.28	4.45

DATA REPORTING QUALIFIERS

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Lab Section	Qualifier	Description
GC/MS VOA	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	U	Undetected at the Limit of Detection.

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:280-391324					
LCS 280-391324/4	Lab Control Sample	T	Water	8260B	
MB 280-391324/6	Method Blank	T	Water	8260B	
280-102119-1	FEW4-BAR 13 RANCH	T	Water	8260B	
280-102119-2	FEW4-FRITZ LEY#1	T	Water	8260B	
280-102119-3	FEW4-BERT MCGEE#8	T	Water	8260B	
280-102119-4	FEW4-CANDES#888	T	Water	8260B	
280-102119-5	FEW4-FARRELL#1-INF	T	Water	8260B	
280-102119-6	FEW4-HARDY#1-INF	T	Water	8260B	
280-102119-7	FEW4-FARRELL#1-INT	T	Water	8260B	
280-102119-8	FEW4-FARRELL#1-EFF	T	Water	8260B	
280-102119-9	FEW4-VG#1-INF	T	Water	8260B	
280-102119-9MS	Matrix Spike	T	Water	8260B	
280-102119-9MSD	Matrix Spike Duplicate	T	Water	8260B	
280-102119-10	FEW4-GUNCLUB#1-INF	T	Water	8260B	
280-102119-11	FEW4-VG#1-INT	T	Water	8260B	
280-102119-12	FEW4-VG#1-EFF	T	Water	8260B	
280-102119-13	FEW4-FINNERTY#1-INF	T	Water	8260B	
280-102119-14	FEW4-FINNERTY#1-INT	T	Water	8260B	
280-102119-25TB	FEW4-TB-20171006	T	Water	8260B	
280-102119-26TB	FEW4-TB-20171007	T	Water	8260B	
Analysis Batch:280-391346					
LCS 280-391346/4	Lab Control Sample	T	Water	8260B	
MB 280-391346/6	Method Blank	T	Water	8260B	
280-102119-15	FEW4-FINNERTY#1-EFF	T	Water	8260B	
280-102119-16	FEW4-DYSON#1-INF	T	Water	8260B	
280-102119-17	FEW4-HOUSER#1	T	Water	8260B	
280-102119-18	FEW4-BROWN#1	T	Water	8260B	
280-102119-19	FEW4-WELTY#2	T	Water	8260B	
280-102119-20	FEW4-1774 OTTO	T	Water	8260B	
280-102119-21	FEW4-BOYD-1	T	Water	8260B	
280-102119-22	FEW4-BOYD-3	T	Water	8260B	
280-102119-22MS	Matrix Spike	T	Water	8260B	
280-102119-22MSD	Matrix Spike Duplicate	T	Water	8260B	
280-102119-23	FEW4-BOYD-J	T	Water	8260B	
280-102119-24	FEW4-HILL#1	T	Water	8260B	

Report Basis

T = Total

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Laboratory Chronicle

Lab ID: 280-102119-1

Client ID: FEW4-BAR 13 RANCH

Sample Date/Time: 10/06/2017 10:45 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-1		280-391324		10/15/2017 12:42	1	TAL DEN	MRM
A:8260B	280-102119-C-1		280-391324		10/15/2017 12:42	1	TAL DEN	MRM

Lab ID: 280-102119-2

Client ID: FEW4-FRITZ LEY#1

Sample Date/Time: 10/06/2017 11:25 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-2		280-391324		10/15/2017 13:04	1	TAL DEN	MRM
A:8260B	280-102119-C-2		280-391324		10/15/2017 13:04	1	TAL DEN	MRM

Lab ID: 280-102119-3

Client ID: FEW4-BERT MCGEE#8

Sample Date/Time: 10/06/2017 12:33 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-3		280-391324		10/15/2017 13:26	1	TAL DEN	MRM
A:8260B	280-102119-C-3		280-391324		10/15/2017 13:26	1	TAL DEN	MRM

Lab ID: 280-102119-4

Client ID: FEW4-CANDES#888

Sample Date/Time: 10/06/2017 13:38 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-4		280-391324		10/15/2017 13:48	1	TAL DEN	MRM
A:8260B	280-102119-A-4		280-391324		10/15/2017 13:48	1	TAL DEN	MRM

Lab ID: 280-102119-5

Client ID: FEW4-FARRELL#1-INF

Sample Date/Time: 10/06/2017 14:35 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-5		280-391324		10/15/2017 14:10	1	TAL DEN	MRM
A:8260B	280-102119-A-5		280-391324		10/15/2017 14:10	1	TAL DEN	MRM

Lab ID: 280-102119-6

Client ID: FEW4-HARDY#1-INF

Sample Date/Time: 10/06/2017 14:37 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-6		280-391324		10/15/2017 16:43	1	TAL DEN	MRM
A:8260B	280-102119-B-6		280-391324		10/15/2017 16:43	1	TAL DEN	MRM

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Laboratory Chronicle

Lab ID: 280-102119-7

Client ID: FEW4-FARRELL#1-INT

Sample Date/Time: 10/06/2017 14:40 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-7		280-391324		10/15/2017 17:04	1	TAL DEN	MRM
A:8260B	280-102119-A-7		280-391324		10/15/2017 17:04	1	TAL DEN	MRM

Lab ID: 280-102119-8

Client ID: FEW4-FARRELL#1-EFF

Sample Date/Time: 10/06/2017 14:45 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-8		280-391324		10/15/2017 17:26	1	TAL DEN	MRM
A:8260B	280-102119-A-8		280-391324		10/15/2017 17:26	1	TAL DEN	MRM

Lab ID: 280-102119-9

Client ID: FEW4-VG#1-INF

Sample Date/Time: 10/06/2017 15:47 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-E-9		280-391324		10/15/2017 12:21	1	TAL DEN	MRM
A:8260B	280-102119-E-9		280-391324		10/15/2017 12:21	1	TAL DEN	MRM

Lab ID: 280-102119-9

Client ID: FEW4-VG#1-INF-MS

Sample Date/Time: 10/06/2017 15:47 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-9 MS		280-391324		10/15/2017 15:15	1	TAL DEN	MRM
A:8260B	280-102119-C-9 MS		280-391324		10/15/2017 15:15	1	TAL DEN	MRM

Lab ID: 280-102119-9

Client ID: FEW4-VG#1-INF-MSD

Sample Date/Time: 10/06/2017 15:47 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-9 MSD		280-391324		10/15/2017 15:37	1	TAL DEN	MRM
A:8260B	280-102119-C-9 MSD		280-391324		10/15/2017 15:37	1	TAL DEN	MRM

Lab ID: 280-102119-10

Client ID: FEW4-GUNCLUB#1-INF

Sample Date/Time: 10/06/2017 15:48 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-10		280-391324		10/15/2017 17:48	1	TAL DEN	MRM
A:8260B	280-102119-B-10		280-391324		10/15/2017 17:48	1	TAL DEN	MRM

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Laboratory Chronicle

Lab ID: 280-102119-11

Client ID: FEW4-VG#1-INT

Sample Date/Time: 10/06/2017 15:53 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-11		280-391324		10/15/2017 18:11	1	TAL DEN	MRM
A:8260B	280-102119-B-11		280-391324		10/15/2017 18:11	1	TAL DEN	MRM

Lab ID: 280-102119-12

Client ID: FEW4-VG#1-EFF

Sample Date/Time: 10/06/2017 15:56 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-12		280-391324		10/15/2017 18:33	1	TAL DEN	MRM
A:8260B	280-102119-C-12		280-391324		10/15/2017 18:33	1	TAL DEN	MRM

Lab ID: 280-102119-13

Client ID: FEW4-FINNERTY#1-INF

Sample Date/Time: 10/06/2017 17:33 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-13		280-391324		10/15/2017 18:54	1	TAL DEN	MRM
A:8260B	280-102119-B-13		280-391324		10/15/2017 18:54	1	TAL DEN	MRM

Lab ID: 280-102119-14

Client ID: FEW4-FINNERTY#1-INT

Sample Date/Time: 10/06/2017 17:37 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-14		280-391324		10/15/2017 19:16	1	TAL DEN	MRM
A:8260B	280-102119-C-14		280-391324		10/15/2017 19:16	1	TAL DEN	MRM

Lab ID: 280-102119-15

Client ID: FEW4-FINNERTY#1-EFF

Sample Date/Time: 10/06/2017 17:40 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-15		280-391346		10/16/2017 09:25	1	TAL DEN	MRM
A:8260B	280-102119-C-15		280-391346		10/16/2017 09:25	1	TAL DEN	MRM

Lab ID: 280-102119-16

Client ID: FEW4-DYSON#1-INF

Sample Date/Time: 10/06/2017 18:33 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-16		280-391346		10/16/2017 09:48	1	TAL DEN	MRM
A:8260B	280-102119-A-16		280-391346		10/16/2017 09:48	1	TAL DEN	MRM

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Laboratory Chronicle

Lab ID: 280-102119-17

Client ID: FEW4-HOUSER#1

Sample Date/Time: 10/07/2017 08:35 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-17		280-391346		10/16/2017 10:10	1	TAL DEN	MRM
A:8260B	280-102119-B-17		280-391346		10/16/2017 10:10	1	TAL DEN	MRM

Lab ID: 280-102119-18

Client ID: FEW4-BROWN#1

Sample Date/Time: 10/07/2017 09:20 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-18		280-391346		10/16/2017 10:32	1	TAL DEN	MRM
A:8260B	280-102119-C-18		280-391346		10/16/2017 10:32	1	TAL DEN	MRM

Lab ID: 280-102119-19

Client ID: FEW4-WELTY#2

Sample Date/Time: 10/07/2017 09:50 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-19		280-391346		10/16/2017 10:53	1	TAL DEN	MRM
A:8260B	280-102119-A-19		280-391346		10/16/2017 10:53	1	TAL DEN	MRM

Lab ID: 280-102119-20

Client ID: FEW4-1774 OTTO

Sample Date/Time: 10/07/2017 10:25 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-20		280-391346		10/16/2017 11:15	1	TAL DEN	MRM
A:8260B	280-102119-C-20		280-391346		10/16/2017 11:15	1	TAL DEN	MRM

Lab ID: 280-102119-21

Client ID: FEW4-BOYD-1

Sample Date/Time: 10/07/2017 10:55 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-21		280-391346		10/16/2017 11:36	1	TAL DEN	MRM
A:8260B	280-102119-B-21		280-391346		10/16/2017 11:36	1	TAL DEN	MRM

Lab ID: 280-102119-22

Client ID: FEW4-BOYD-3

Sample Date/Time: 10/07/2017 11:30 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-H-22		280-391346		10/16/2017 11:58	1	TAL DEN	MRM
A:8260B	280-102119-H-22		280-391346		10/16/2017 11:58	1	TAL DEN	MRM

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Laboratory Chronicle

Lab ID: 280-102119-22

Client ID: FEW4-BOYD-3-MS

Sample Date/Time: 10/07/2017 11:30 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-22 MS		280-391346		10/16/2017 13:47	1	TAL DEN	MRM
A:8260B	280-102119-C-22 MS		280-391346		10/16/2017 13:47	1	TAL DEN	MRM

Lab ID: 280-102119-22

Client ID: FEW4-BOYD-3-MSD

Sample Date/Time: 10/07/2017 11:30 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-22 MSD		280-391346		10/16/2017 14:09	1	TAL DEN	MRM
A:8260B	280-102119-C-22 MSD		280-391346		10/16/2017 14:09	1	TAL DEN	MRM

Lab ID: 280-102119-23

Client ID: FEW4-BOYD-J

Sample Date/Time: 10/07/2017 12:24 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-C-23		280-391346		10/16/2017 12:20	1	TAL DEN	MRM
A:8260B	280-102119-C-23		280-391346		10/16/2017 12:20	1	TAL DEN	MRM

Lab ID: 280-102119-24

Client ID: FEW4-HILL#1

Sample Date/Time: 10/07/2017 13:12 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-24		280-391346		10/16/2017 12:41	1	TAL DEN	MRM
A:8260B	280-102119-B-24		280-391346		10/16/2017 12:41	1	TAL DEN	MRM

Lab ID: 280-102119-25

Client ID: FEW4-TB-20171006

Sample Date/Time: 10/02/2017 00:00 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-A-25		280-391324		10/15/2017 14:31	1	TAL DEN	MRM
A:8260B	280-102119-A-25		280-391324		10/15/2017 14:31	1	TAL DEN	MRM

Lab ID: 280-102119-26

Client ID: FEW4-TB-20171007

Sample Date/Time: 10/02/2017 00:00 Received Date/Time: 10/09/2017 11:28

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-102119-B-26		280-391324		10/15/2017 14:53	1	TAL DEN	MRM
A:8260B	280-102119-B-26		280-391324		10/15/2017 14:53	1	TAL DEN	MRM

Quality Control Results

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 280-391324/6		280-391324		10/15/2017 10:26	1	TAL DEN	MRM
A:8260B	MB 280-391324/6		280-391324		10/15/2017 10:26	1	TAL DEN	MRM
P:5030B	MB 280-391346/6		280-391346		10/16/2017 07:58	1	TAL DEN	MRM
A:8260B	MB 280-391346/6		280-391346		10/16/2017 07:58	1	TAL DEN	MRM

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 280-391324/4		280-391324		10/15/2017 10:04	1	TAL DEN	MRM
A:8260B	LCS 280-391324/4		280-391324		10/15/2017 10:04	1	TAL DEN	MRM
P:5030B	LCS 280-391346/4		280-391346		10/16/2017 07:36	1	TAL DEN	MRM
A:8260B	LCS 280-391346/4		280-391346		10/16/2017 07:36	1	TAL DEN	MRM

Lab References:

TAL DEN = TestAmerica Denver

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MV-2cleve+AVA_00025	07/31/17	05/02/17	P&T Methanol, Lot 127999	10 mL	MV-568720_00016	202.5 uL	Acrolein	399.938 ug/mL
					MV-569724_00008	160 uL	Vinyl acetate	80 ug/mL
.MV-568720_00016	09/30/17		RESTEK, Lot A0125560		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569724_00008	07/31/17		RESTEK, Lot A0124520		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-2cleve+AVA_00029	11/30/17	10/02/17	P&T Methanol, Lot 127999	10 mL	MV-569724_00010	160 uL	Vinyl acetate	80 ug/mL
					(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569724_00010	11/30/17		RESTEK, Lot A0127538		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-568718-D_00006	03/31/20		RESTEK, Lot A0110961		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-568718-D_00008	03/31/21		RESTEK, Lot A0118105		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00086	03/21/18	09/21/17	P&T Methanol, Lot 127999	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
							1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
MV-BFB_00023							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
							BFB	50 ug/mL
.MV-ST5110N1_00065	11/30/17		Ultra Scientific, Lot CH-3248A		(Purchased Reagent)		BFB	2000 ug/mL
MV-Gas/Ket A_00062	12/14/17	06/14/17	P&T Methanol, Lot 127999	10 mL	MV-569721_00003	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722_00005	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorodifluoromethane	40 ug/mL
							Dichlorofluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
					MV-569727_00006	640 uL	Cyclohexanone	1600 ug/mL
.MV-569721_00003	11/30/18		RESTEK, Lot A0115554		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00005	11/30/19		RESTEK, Lot A0122964		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569727_00006	03/31/19		RESTEK, Lot A0118487		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
MV-Gas/Ket A_00065	03/23/18	09/23/17	P&T Methanol, Lot 127999	10 mL	MV-569721_00004	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722_00006	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Dichlorofluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
					MV-569727_00006	640 uL	Cyclohexanone	1600 ug/mL
.MV-569721_00004	01/31/20		RESTEK, Lot A0123890		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00006	01/31/20		RESTEK, Lot A0124278		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569727_00006	03/31/19		RESTEK, Lot A0118487		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
MV-Gas/Ket B_00035	12/14/17	06/14/17	P&T Methanol, Lot 127999	10 mL	MV-569721.sec_00004	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration					
					Reagent ID	Volume Added							
					MV-569722.sec_00003	160 uL	Bromomethane	40 ug/mL					
							Chloroethane	40 ug/mL					
							Chloromethane	40 ug/mL					
							Dichlorodifluoromethane	40 ug/mL					
							Trichlorofluoromethane	40 ug/mL					
							Vinyl chloride	40 ug/mL					
.MV-569721.sec_00004	03/31/19	RESTEK, Lot A0118013			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL					
							2-Hexanone	12500 ug/mL					
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL					
							Acetone	12500 ug/mL					
.MV-569722.sec_00003	11/30/18	RESTEK, Lot A0115484			(Purchased Reagent)		Bromomethane	2500 ug/mL					
							Chloroethane	2500 ug/mL					
							Chloromethane	2500 ug/mL					
							Dichlorodifluoromethane	2500 ug/mL					
							Trichlorofluoromethane	2500 ug/mL					
							Vinyl chloride	2500 ug/mL					
MV-Gas/Ket B_00037	02/24/18	08/24/17	P&T Methanol, Lot 127999	10 mL	MV-569721.sec_00005	128 uL	2-Butanone (MEK)	160 ug/mL					
							2-Hexanone	160 ug/mL					
							4-Methyl-2-pentanone (MIBK)	160 ug/mL					
							Acetone	160 ug/mL					
										MV-569722.sec_00004	160 uL	Bromomethane	40 ug/mL
												Chloroethane	40 ug/mL
												Chloromethane	40 ug/mL
												Dichlorodifluoromethane	40 ug/mL
												Trichlorofluoromethane	40 ug/mL
												Vinyl chloride	40 ug/mL
.MV-569721.sec_00005	01/31/20	RESTEK, Lot A0113880			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL					
							2-Hexanone	12500 ug/mL					
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL					
							Acetone	12500 ug/mL					
.MV-569722.sec_00004	01/31/20	RESTEK, Lot A0124116			(Purchased Reagent)		Bromomethane	2500 ug/mL					
							Chloroethane	2500 ug/mL					
							Chloromethane	2500 ug/mL					
							Dichlorodifluoromethane	2500 ug/mL					
							Trichlorofluoromethane	2500 ug/mL					
							Vinyl chloride	2500 ug/mL					
MV-Main A_00031	12/21/17	06/21/17	P&T Methanol, Lot 127999	20 mL	MV-569720_00003	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL					
							1,1,1-Trichloroethane	40 ug/mL					
							1,1,2,2-Tetrachloroethane	40 ug/mL					
							1,1,2-Trichloroethane	40 ug/mL					
							1,1,2-Trichlorotrifluoroethane	40 ug/mL					
							1,1-Dichloroethane	40 ug/mL					
							1,1-Dichloroethene	40 ug/mL					
							1,1-Dichloropropene	40 ug/mL					
							1,2,3-Trichlorobenzene	40 ug/mL					

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	800 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							2-Methyl-2-propanol	400 ug/mL
							3-Chloro-1-propene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Acrylonitrile	400 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chlorobromomethane	40 ug/mL
							Chlorodibromomethane	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dibromomethane	40 ug/mL
							Dichlorobromomethane	40 ug/mL
							Ethyl ether	40 ug/mL
							Ethyl methacrylate	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexane	40 ug/mL
							Iodomethane	40 ug/mL
							Isobutyl alcohol	1000 ug/mL
							Isopropylbenzene	40 ug/mL
							m-Xylene & p-Xylene	40 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Tetrahydrofuran	80 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							trans-1,4-Dichloro-2-butene	40 ug/mL
							Trichloroethene	40 ug/mL
					MV-CUS17739_00002	800 uL	1-Chlorohexane	40 ug/mL
							2-Pentanone	160 ug/mL
		sec-Butyl Alcohol	1200 ug/mL					
.MV-569720_00003	03/31/18	RESTEK, Lot A0118177			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2500 ug/mL	
						1,1,1-Trichloroethane	2500 ug/mL	
						1,1,2,2-Tetrachloroethane	2500 ug/mL	
						1,1,2-Trichloroethane	2500 ug/mL	
						1,1,2-Trichlorotrifluoroethane	2500 ug/mL	
						1,1-Dichloroethane	2500 ug/mL	
						1,1-Dichloroethene	2500 ug/mL	
						1,1-Dichloropropene	2500 ug/mL	
						1,2,3-Trichlorobenzene	2500 ug/mL	
						1,2,3-Trichloropropane	2500 ug/mL	
						1,2,4-Trichlorobenzene	2500 ug/mL	
						1,2,4-Trimethylbenzene	2500 ug/mL	
						1,2-Dibromo-3-Chloropropane	2500 ug/mL	
						1,2-Dibromoethane	2500 ug/mL	
						1,2-Dichlorobenzene	2500 ug/mL	
						1,2-Dichloroethane	2500 ug/mL	
						1,2-Dichloropropane	2500 ug/mL	
						1,3,5-Trimethylbenzene	2500 ug/mL	
						1,3-Dichlorobenzene	2500 ug/mL	
						1,3-Dichloropropane	2500 ug/mL	
						1,4-Dichlorobenzene	2500 ug/mL	
						1,4-Dioxane	50000 ug/mL	
						2,2-Dichloropropane	2500 ug/mL	
						2-Chlorotoluene	2500 ug/mL	
						2-Methyl-2-propanol	25000 ug/mL	
						3-Chloro-1-propene	2500 ug/mL	
						4-Chlorotoluene	2500 ug/mL	
						4-Isopropyltoluene	2500 ug/mL	
						Acrylonitrile	25000 ug/mL	
						Benzene	2500 ug/mL	
						Bromobenzene	2500 ug/mL	
						Bromoform	2500 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00002	07/31/19		Ultra, Lot CR-2819		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-Main A_00032	03/05/18	09/05/17	P&T Methanol, Lot 127999	20 mL	MV-569720_00003	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
							1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1,2-Trichlorotrifluoroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethene	40 ug/mL
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	800 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							2-Methyl-2-propanol	400 ug/mL
							3-Chloro-1-propene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Acrylonitrile	400 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chlorobromomethane	40 ug/mL
							Chlorodibromomethane	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dibromomethane	40 ug/mL
							Dichlorobromomethane	40 ug/mL
							Ethyl ether	40 ug/mL
							Ethyl methacrylate	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexane	40 ug/mL
							Iodomethane	40 ug/mL
							Isobutyl alcohol	1000 ug/mL
							Isopropylbenzene	40 ug/mL
							m-Xylene & p-Xylene	40 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Tetrahydrofuran	80 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							trans-1,4-Dichloro-2-butene	40 ug/mL
							Trichloroethene	40 ug/mL
					MV-CUS17739_00002	800 uL	1-Chlorohexane	40 ug/mL
					2-Pentanone	160 ug/mL		
					sec-Butyl Alcohol	1200 ug/mL		
.MV-569720_00003	03/31/18	RESTEK, Lot A0118177			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2500 ug/mL	
						1,1,1-Trichloroethane	2500 ug/mL	
						1,1,2,2-Tetrachloroethane	2500 ug/mL	
						1,1,2-Trichloroethane	2500 ug/mL	
						1,1,2-Trichlorotrifluoroethane	2500 ug/mL	
						1,1-Dichloroethane	2500 ug/mL	
						1,1-Dichloroethene	2500 ug/mL	
						1,1-Dichloropropene	2500 ug/mL	
						1,2,3-Trichlorobenzene	2500 ug/mL	
						1,2,3-Trichloropropane	2500 ug/mL	
						1,2,4-Trichlorobenzene	2500 ug/mL	
						1,2,4-Trimethylbenzene	2500 ug/mL	
						1,2-Dibromo-3-Chloropropane	2500 ug/mL	
						1,2-Dibromoethane	2500 ug/mL	
						1,2-Dichlorobenzene	2500 ug/mL	
						1,2-Dichloroethane	2500 ug/mL	
						1,2-Dichloropropane	2500 ug/mL	
						1,3,5-Trimethylbenzene	2500 ug/mL	
						1,3-Dichlorobenzene	2500 ug/mL	
						1,3-Dichloropropane	2500 ug/mL	
						1,4-Dichlorobenzene	2500 ug/mL	
						1,4-Dioxane	50000 ug/mL	
						2,2-Dichloropropane	2500 ug/mL	
						2-Chlorotoluene	2500 ug/mL	
						2-Methyl-2-propanol	25000 ug/mL	
						3-Chloro-1-propene	2500 ug/mL	
						4-Chlorotoluene	2500 ug/mL	
						4-Isopropyltoluene	2500 ug/mL	
						Acrylonitrile	25000 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
Tetrachloroethene	2500 ug/mL							
Tetrahydrofuran	5000 ug/mL							
Toluene	2500 ug/mL							
trans-1,2-Dichloroethene	2500 ug/mL							
trans-1,3-Dichloropropene	2500 ug/mL							
trans-1,4-Dichloro-2-butene	2500 ug/mL							
Trichloroethene	2500 ug/mL							
.MV-CUS17739_00002	07/31/19	Ultra, Lot CR-2819			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-Main B_00018	11/28/17	05/28/17	P&T Methanol, Lot 127999	20 mL	MV-569720.sec_00002	320 uL	1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichlorotrifluoroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	800 ug/mL
							Benzene	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chlorobromomethane	40 ug/mL
							Chlorodibromomethane	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dichlorobromomethane	40 ug/mL
							Ethylbenzene	40 ug/mL
							Isopropylbenzene	40 ug/mL
							m-Xylene & p-Xylene	40 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							o-Xylene	40 ug/mL
							Styrene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							Trichloroethene	40 ug/mL
.MV-569720.sec_00002	07/31/18		RESTEK, Lot A0120604		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1,2-Trichlorotrifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							Benzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
MV-Main B_00019	03/28/18	09/29/17	P&T Methanol, Lot 127999	20 mL	MV-569720.sec_00002	320 uL	1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1,2-Trichlorotrifluoroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	800 ug/mL
							Benzene	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chlorobromomethane	40 ug/mL
							Chlorodibromomethane	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dichlorobromomethane	40 ug/mL
							Ethylbenzene	40 ug/mL
							Isopropylbenzene	40 ug/mL
							m-Xylene & p-Xylene	40 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							o-Xylene	40 ug/mL
							Styrene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							Trichloroethene	40 ug/mL
.MV-569720.sec_00002	07/31/18	RESTEK, Lot A0120604			(Purchased Reagent)	1,1,1-Trichloroethane	2500 ug/mL	
						1,1,2,2-Tetrachloroethane	2500 ug/mL	
						1,1,2-Trichloroethane	2500 ug/mL	
						1,1,2-Trichlorotrifluoroethane	2500 ug/mL	
						1,1-Dichloroethane	2500 ug/mL	
						1,1-Dichloroethene	2500 ug/mL	
						1,2,3-Trichlorobenzene	2500 ug/mL	
						1,2,4-Trichlorobenzene	2500 ug/mL	
						1,2-Dibromo-3-Chloropropane	2500 ug/mL	
						1,2-Dibromoethane	2500 ug/mL	
						1,2-Dichlorobenzene	2500 ug/mL	
						1,2-Dichloroethane	2500 ug/mL	
						1,2-Dichloropropane	2500 ug/mL	
						1,3-Dichlorobenzene	2500 ug/mL	
						1,4-Dichlorobenzene	2500 ug/mL	
						1,4-Dioxane	50000 ug/mL	
						Benzene	2500 ug/mL	
						Bromoform	2500 ug/mL	
						Carbon disulfide	2500 ug/mL	
						Carbon tetrachloride	2500 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							o-Xylene	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0125560
Description : 8260 List 1/Std #5 Acrolein High
8260 List 1/Std #5 Acrolein High 19,750 µg/mL, Water, 1 mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 30, 2017 **Storage:** 0°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acrolein	19,779.0 µg/mL	+/-	115.8104	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 170123JLM)		+/-	634.1769	µg/mL	Unstressed
	Purity 99%		+/-	737.1613	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

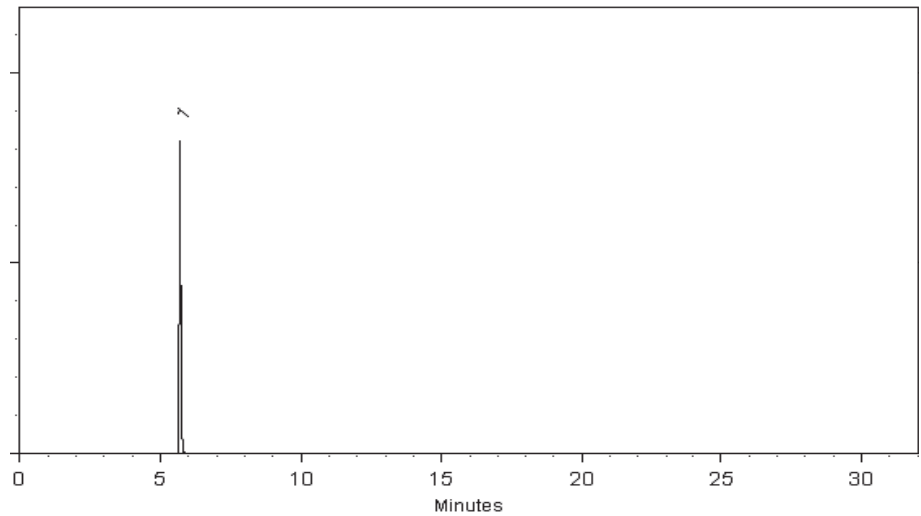
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

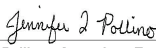
Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


F. Joseph Tallon - Mix Technician

Date Mixed: 06-Mar-2017 **Balance:** B251644995


Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 10-Mar-2017

<p>Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397</p>
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General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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Tel: (800)356-1688
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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720.sec **Lot No.:** A0120604

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Diethyl ether (ethyl ether) CAS # 60-29-7.SEC (Lot F23X068) Purity 98%	2,501.1 µg/mL	+/- 14.5415 µg/mL Gravimetric +/- 150.9014 µg/mL Unstressed +/- 151.2597 µg/mL Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1.SEC (Lot 18342) Purity 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL Gravimetric +/- 150.9040 µg/mL Unstressed +/- 151.2622 µg/mL Stressed
3	1,1-Dichloroethene CAS # 75-35-4.SEC (Lot 2767000) Purity 99%	2,500.8 µg/mL	+/- 14.5396 µg/mL Gravimetric +/- 150.8813 µg/mL Unstressed +/- 151.2395 µg/mL Stressed
4	tert-Butanol (TBA) CAS # 75-65-0.SEC (Lot XYXDO) Purity 98%	25,004.1 µg/mL	+/- 145.3683 µg/mL Gravimetric +/- 1,508.6067 µg/mL Unstressed +/- 1,512.1884 µg/mL Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4.SEC (Lot Y25A027) Purity 99%	2,501.0 µg/mL	+/- 14.5410 µg/mL Gravimetric +/- 150.8964 µg/mL Unstressed +/- 151.2547 µg/mL Stressed
6	Methyl acetate CAS # 79-20-9.SEC (Lot 6WOXM) Purity 99%	12,501.6 µg/mL	+/- 72.6817 µg/mL Gravimetric +/- 754.2781 µg/mL Unstressed +/- 756.0689 µg/mL Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1.SEC (Lot VEOC) Purity 98%	2,501.0 µg/mL	+/- 14.5408 µg/mL Gravimetric +/- 150.8940 µg/mL Unstressed +/- 151.2522 µg/mL Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2.SEC (Lot FGM02) Purity 99%	2,501.1	µg/mL	+/- +/- +/-	14.5418 150.9040 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0.SEC (Lot MKBL1376V) Purity 99%	2,500.5	µg/mL	+/- +/- +/-	14.5381 150.8662 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1.SEC (Lot UERIL-DA) Purity 99%	25,020.0	µg/mL	+/- +/- +/-	145.4608 1,509.5667 1,513.1507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	cis-1,2-Dichloroethene CAS # 156-59-2.SEC (Lot HGC01-BLKT) Purity 98%	2,500.8	µg/mL	+/- +/- +/-	14.5401 150.8866 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Hexane (C6) CAS # 110-54-3.SEC (Lot 10188491) Purity 99%	2,501.1	µg/mL	+/- +/- +/-	14.5418 150.9040 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,1-Dichloroethane CAS # 75-34-3.SEC (Lot 5035700) Purity 99%	2,501.1	µg/mL	+/- +/- +/-	14.5418 150.9040 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2-Dichloropropane CAS # 594-20-7.SEC (Lot GI01) Purity 99%	2,500.6	µg/mL	+/- +/- +/-	14.5388 150.8738 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	trans-1,2-Dichloroethene CAS # 156-60-5.SEC (Lot TS5UB) Purity 97%	2,501.3	µg/mL	+/- +/- +/-	14.5426 150.9125 151.2708	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1.SEC (Lot 83NHH) Purity 99%	62,503.0	µg/mL	+/- +/- +/-	363.3788 3,771.0811 3,780.0343	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4.SEC (Lot ZAQT-MS) Purity 99%	2,501.0	µg/mL	+/- +/- +/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Bromochloromethane CAS # 74-97-5.SEC (Lot 1775400) Purity 99%	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Tetrahydrofuran CAS # 109-99-9.SEC (Lot K3V7J-SJ) Purity 99%	5,000.3	µg/mL	+/- +/- +/-	29.0719 301.6872 302.4035	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,1-Trichloroethane CAS # 71-55-6.SEC (Lot CS160712) Purity 98%	2,501.3	µg/mL	+/- +/- +/-	14.5429 150.9162 151.2745	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Cyclohexane CAS # 110-82-7.SEC (Lot YADRA) Purity 99%	2,500.3	µg/mL	+/- +/- +/-	14.5367 150.8512 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	1,1-Dichloropropene CAS # 563-58-6.SEC (Lot 4672600) Purity 96%	2,500.4	µg/mL	+/- +/- +/-	14.5378 150.8626 151.2208	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	Carbon tetrachloride CAS # 56-23-5.SEC (Lot 11466) Purity 99%	2,500.5	µg/mL	+/- +/- +/-	14.5381 150.8662 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	n-Heptane (C7) CAS # 142-82-5.SEC Purity 99%	(Lot OGM01)	2,500.5	µg/mL	+/- +/- +/-	14.5381 150.8662 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane CAS # 107-06-2.SEC Purity 99%	(Lot FO6PK)	2,501.3	µg/mL	+/- +/- +/-	14.5425 150.9115 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene CAS # 71-43-2.SEC Purity 99%	(Lot B28Y008)	2,500.6	µg/mL	+/- +/- +/-	14.5388 150.8738 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene CAS # 79-01-6.SEC Purity 99%	(Lot H04X050)	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane CAS # 108-87-2.SEC Purity 99%	(Lot 24MSD-CD)	2,501.9	µg/mL	+/- +/- +/-	14.5461 150.9492 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	(Lot OGG01)	2,500.8	µg/mL	+/- +/- +/-	14.5396 150.8813 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Bromodichloromethane CAS # 75-27-4.SEC Purity 99%	(Lot 10171168)	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1.SEC Purity 99%	(Lot CHA4A)	50,014.8	µg/mL	+/- +/- +/-	290.7749 3,017.6100 3,024.7743	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3.SEC Purity 99%	(Lot FGI01-OICH)	2,501.4	µg/mL	+/- +/- +/-	14.5432 150.9190 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	(Lot 7ZLXJ-TJ)	2,500.8	µg/mL	+/- +/- +/-	14.5396 150.8813 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3.SEC Purity 99%	(Lot YND2B-BD)	2,501.3	µg/mL	+/- +/- +/-	14.5425 150.9115 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2.SEC Purity 99%	(Lot MLWYK-LS)	2,501.6	µg/mL	+/- +/- +/-	14.5447 150.9341 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 99%	(Lot 2ECIC)	2,500.5	µg/mL	+/- +/- +/-	14.5381 150.8662 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 98%	(Lot 3440900)	2,500.5	µg/mL	+/- +/- +/-	14.5379 150.8644 151.2226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	(Lot AGN01-EFPC)	2,501.0	µg/mL	+/- +/- +/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	(Lot F09W014)	2,501.5	µg/mL	+/- +/- +/-	14.5439 150.9266 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane CAS # 124-48-1.SEC Purity 97%	(Lot 10181507)	2,501.9	µg/mL	+/- +/- +/-	14.5461 150.9491 151.3074	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4.SEC Purity 99%	(Lot 3505900)	2,500.1	µg/mL	+/- +/- +/-	14.5359 150.8436 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7.SEC Purity 99%	(Lot 1161936)	2,501.5	µg/mL	+/- +/- +/-	14.5439 150.9266 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,1,1,2-Tetrachloroethane CAS # 630-20-6.SEC Purity 98%	(Lot GC01)	2,501.0	µg/mL	+/- +/- +/-	14.5408 150.8940 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	Ethylbenzene CAS # 100-41-4.SEC Purity 99%	(Lot PI4SE)	2,501.4	µg/mL	+/- +/- +/-	14.5432 150.9190 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene CAS # 108-38-3.SEC Purity 99%	(Lot OUKMG-GB)	1,250.9	µg/mL	+/- +/- +/-	7.2727 75.4708 75.6500	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	p-Xylene CAS # 106-42-3.SEC Purity 99%	(Lot GM01)	1,250.8	µg/mL	+/- +/- +/-	7.2720 75.4633 75.6425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6.SEC Purity 99%	(Lot FGL01-KTPK)	2,501.0	µg/mL	+/- +/- +/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5.SEC Purity 99%	(Lot OFIOL-IA)	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8.SEC Purity 99%	(Lot 2PHXG-IH)	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	Bromoform CAS # 75-25-2.SEC Purity 99%	(Lot 5139000)	2,500.3	µg/mL	+/- +/- +/-	14.5367 150.8512 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,1,2,2-Tetrachloroethane CAS # 79-34-5.SEC Purity 99%	(Lot CFA4D-AQ)	2,500.5	µg/mL	+/- +/- +/-	14.5381 150.8662 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Chloroform CAS # 67-66-3.SEC Purity 99%	(Lot 1297547)	2,500.6	µg/mL	+/- +/- +/-	14.5388 150.8738 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4.SEC Purity 98%	(Lot OGI01)	2,501.5	µg/mL	+/- +/- +/-	14.5436 150.9236 151.2819	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-Dichloro-2-butene CAS # 110-57-6.SEC Purity 98%	(Lot 100700-3)	2,500.5	µg/mL	+/- +/- +/-	14.5379 150.8644 151.2226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1.SEC Purity 99%	(Lot T2HFC-IT)	2,500.0	µg/mL	+/- +/- +/-	14.5352 150.8361 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1.SEC Purity 99%	(Lot 2FUHG-EM)	2,501.0	µg/mL	+/- +/- +/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot SC7LO-QA)	2,500.6	µg/mL	+/- +/- +/-	14.5388 150.8738 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	2,500.6	µg/mL	+/- +/- +/-	14.5388 150.8738 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	2,500.9	µg/mL	+/- +/- +/-	14.5403 150.8889 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot OGN01-CAI)	2,500.5	µg/mL	+/- +/- +/-	14.5381 150.8662 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	2,500.8	µg/mL	+/- +/- +/-	14.5396 150.8813 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot OGN01-IMA)	2,500.9	µg/mL	+/- +/- +/-	14.5403 150.8889 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 96%	(Lot 1195000)	2,501.5	µg/mL	+/- +/- +/-	14.5441 150.9278 151.2861	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	2,501.6	µg/mL	+/- +/- +/-	14.5447 150.9341 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	2,501.1	µg/mL	+/- +/- +/-	14.5418 150.9040 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot OGN01-PNP)	2,501.4	µg/mL	+/- +/- +/-	14.5432 150.9190 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot 4NRGF-OT)	2,500.3	µg/mL	+/- +/- +/-	14.5367 150.8512 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 97%	(Lot LC00408V)	2,500.3	µg/mL	+/- +/- +/-	14.5369 150.8539 151.2121	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot 3LYYC)	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 98%	(Lot 497470099)	2,500.7	µg/mL	+/- +/- +/-	14.5394 150.8792 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot SKZ5N)	2,500.0	µg/mL	+/- +/- +/-	14.5352 150.8361 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Det. Temp:
250°C

Mass spectrum of the sample showing relative intensity versus m/z. The x-axis ranges from 5 to 45 m/z. The y-axis represents relative intensity from 0 to 100. The base peak is at m/z 43 and 44. Other significant peaks are labeled with their m/z values.

m/z	Relative Intensity (approx.)
5	10
6	10
7	10
8	10
9	10
10	30
11	10
12	10
13	10
14	10
15	10
16	100
17	100
18	10
19	10
20	10
21	10
22	10
23	10
24	10
25	10
26	10
27	10
28	10
29	10
30	100
31	100
32	10
33	10
34	10
35	10
36	10
37	10
38	10
39	10
40	10
41	10
42	10
43	100
44	100
45	10
46	10
47	10
48	10
49	10
50	10
51	10
52	10
53	10
54	10
55	10
56	10
57	10
58	10
59	10
60	10
61	10
62	10
63	10
64	10
65	10
66	10
67	10
68	10
69	10
70	10
71	10

Michael Mays

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720 **Lot No.:** A0118177

Description : 8260 List 1 / Std #1 MegaMix (2015)
8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Diethyl ether (ethyl ether) CAS # 60-29-7 (Lot SHBG1462V) Purity 99%	2,503.5 µg/mL	+/- 14.5556 µg/mL Gravimetric +/- 151.0472 µg/mL Unstressed +/- 151.4059 µg/mL Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 (Lot 00004562) Purity 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL Gravimetric +/- 150.8361 µg/mL Unstressed +/- 151.1942 µg/mL Stressed
3	1,1-Dichloroethane CAS # 75-34-3 (Lot 00008621) Purity 99%	2,500.1 µg/mL	+/- 14.5359 µg/mL Gravimetric +/- 150.8436 µg/mL Unstressed +/- 151.2017 µg/mL Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 (Lot SHBD0362V) Purity 99%	25,033.4 µg/mL	+/- 145.5386 µg/mL Gravimetric +/- 1,510.3737 µg/mL Unstressed +/- 1,513.9596 µg/mL Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4 (Lot SHBF2149V) Purity 98%	2,502.9 µg/mL	+/- 14.5522 µg/mL Gravimetric +/- 151.0123 µg/mL Unstressed +/- 151.3708 µg/mL Stressed
6	Methyl acetate CAS # 79-20-9 (Lot SHBD7134V) Purity 98%	12,508.6 µg/mL	+/- 72.7223 µg/mL Gravimetric +/- 754.6987 µg/mL Unstressed +/- 756.4905 µg/mL Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1 (Lot SHBF8133V) Purity 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL Gravimetric +/- 151.3663 µg/mL Unstressed +/- 151.7231 µg/mL Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBF9870V)	2,521.4	µg/mL	+/- +/- +/-	14.6595 152.1257 152.4869	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0 Purity 99%	(Lot S20A856)	2,516.0	µg/mL	+/- +/- +/-	14.6282 151.8014 152.1618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1 Purity 99%	(Lot J08Z057)	25,001.3	µg/mL	+/- +/- +/-	145.3518 1,508.4355 1,512.0167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 98%	(Lot MKBV2831V)	2,507.8	µg/mL	+/- +/- +/-	14.5807 151.3079 151.6671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Hexane (C6) CAS # 110-54-3 Purity 99%	(Lot SHBF7674V)	2,512.4	µg/mL	+/- +/- +/-	14.6072 151.5827 151.9426	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,1-dichloroethene CAS # 75-35-4 Purity 99%	(Lot 73896KMV)	2,508.1	µg/mL	+/- +/- +/-	14.5825 151.3263 151.6856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2-Dichloropropane CAS # 594-20-7 Purity 99%	(Lot BCBL9720V)	2,507.6	µg/mL	+/- +/- +/-	14.5795 151.2961 151.6553	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot MKBH9850V)	2,509.8	µg/mL	+/- +/- +/-	14.5919 151.4243 151.7838	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	(Lot SHBD1647V)	62,815.4	µg/mL	+/- +/- +/-	365.1949 3,789.9281 3,798.9260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	(Lot MKBV2134V)	2,510.0	µg/mL	+/- +/- +/-	14.5934 151.4394 151.7990	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,507.0	µg/mL	+/- +/- +/-	14.5759 151.2584 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Tetrahydrofuran CAS # 109-99-9 Purity 99%	(Lot SHBG2910V)	5,025.3	µg/mL	+/- +/- +/-	29.2172 303.1956 303.9154	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B15MW0705)	2,508.9	µg/mL	+/- +/- +/-	14.5868 151.3715 151.7309	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot MKBV3194V)	2,503.4	µg/mL	+/- +/- +/-	14.5548 151.0397 151.3983	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	1,1-Dichloropropene CAS # 563-58-6 Purity 99%	(Lot PR09161302)	2,507.4	µg/mL	+/- +/- +/-	14.5781 151.2810 151.6402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG1763V)	2,505.9	µg/mL	+/- +/- +/-	14.5694 151.1905 151.5495	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	n-Heptane (C7) CAS # 142-82-5 Purity 99%	(Lot MKBV6176V)	2,510.8	µg/mL	+/- +/- +/-	14.5977 151.4847 151.8443	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot MKBV4565V)	2,511.1	µg/mL	+/- +/- +/-	14.5999 151.5073 151.8670	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBG1169V)	2,502.9	µg/mL	+/- +/- +/-	14.5519 151.0095 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBF0943V)	2,500.4	µg/mL	+/- +/- +/-	14.5374 150.8587 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane CAS # 108-87-2 Purity 99%	(Lot 50996APV)	2,503.9	µg/mL	+/- +/- +/-	14.5577 151.0699 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot 01113D0V)	2,523.5	µg/mL	+/- +/- +/-	14.6718 152.2539 152.6154	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	bromodichloromethane CAS # 75-27-4 Purity 98%	(Lot MKBL1617V)	2,509.0	µg/mL	+/- +/- +/-	14.5878 151.3818 151.7412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1 Purity 99%	(Lot SHBG6312V)	50,018.1	µg/mL	+/- +/- +/-	290.7945 3,017.8137 3,024.9785	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3 Purity 98%	(Lot 10183283)	2,511.4	µg/mL	+/- +/- +/-	14.6013 151.5222 151.8820	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 22622)	2,506.0	µg/mL	+/- +/- +/-	14.5701 151.1981 151.5571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3 Purity 99%	(Lot MKBV5601V)	2,515.5	µg/mL	+/- +/- +/-	14.6253 151.7713 152.1316	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2 Purity 99%	(Lot SHBD9190V)	2,503.1	µg/mL	+/- +/- +/-	14.5534 151.0246 151.3832	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot C584177)	2,508.0	µg/mL	+/- +/- +/-	14.5817 151.3188 151.6780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	2,508.4	µg/mL	+/- +/- +/-	14.5839 151.3414 151.7007	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	(Lot BCBG2162V)	2,522.8	µg/mL	+/- +/- +/-	14.6675 152.2087 152.5701	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBD9374V)	2,518.9	µg/mL	+/- +/- +/-	14.6450 151.9749 152.3357	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKBQ6577V)	2,505.4	µg/mL	+/- +/- +/-	14.5664 151.1601 151.5190	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,505.1	µg/mL	+/- +/- +/-	14.5650 151.1453 151.5041	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBF0505V)	2,505.6	µg/mL	+/- +/- +/-	14.5679 151.1755 151.5344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,505.1	µg/mL	+/- +/- +/-	14.5650 151.1453 151.5041	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBG5920V)	2,506.1	µg/mL	+/- +/- +/-	14.5708 151.2056 151.5646	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBF8095V)	1,254.4	µg/mL	+/- +/- +/-	7.2930 75.6820 75.8617	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBF3427V)	1,250.0	µg/mL	+/- +/- +/-	7.2676 75.4180 75.5971	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBF7003V)	2,506.3	µg/mL	+/- +/- +/-	14.5716 151.2132 151.5722	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 Purity 99%	(Lot MKBS7097V)	2,503.9	µg/mL	+/- +/- +/-	14.5577 151.0699 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,509.4	µg/mL	+/- +/- +/-	14.5897 151.4017 151.7612	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBC3410V)	2,503.3	µg/mL	+/- +/- +/-	14.5541 151.0322 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	(Lot MKBS3769V)	2,505.0	µg/mL	+/- +/- +/-	14.5643 151.1378 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	chloroform CAS # 67-66-3 Purity 99%	(Lot MKBV2089V)	2,507.8	µg/mL	+/- +/- +/-	14.5803 151.3037 151.6629	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	(Lot BCBH8722V)	2,504.8	µg/mL	+/- +/- +/-	14.5628 151.1227 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 95%	(Lot MKBP6041V)	2,499.7	µg/mL	+/- +/- +/-	14.5334 150.8172 151.1753	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	(Lot MKBJ0332V)	2,507.5	µg/mL	+/- +/- +/-	14.5788 151.2886 151.6478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1 Purity 99%	(Lot MKBD4032V)	2,515.1	µg/mL	+/- +/- +/-	14.6232 151.7486 152.1089	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	(Lot MKBJ6229V)	2,503.7	µg/mL	+/- +/- +/-	14.5565 151.0566 151.4152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBH8892V)	2,502.1	µg/mL	+/- +/- +/-	14.5476 150.9643 151.3227	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBL7753V)	2,512.6	µg/mL	+/- +/- +/-	14.6086 151.5978 151.9577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot S52237V)	2,507.8	µg/mL	+/- +/- +/-	14.5803 151.3037 151.6629	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	(Lot BCBJ6245V)	2,502.5	µg/mL	+/- +/- +/-	14.5498 150.9869 151.3454	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBK3151V)	2,521.8	µg/mL	+/- +/- +/-	14.6617 152.1484 152.5096	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBK4439V)	2,502.6	µg/mL	+/- +/- +/-	14.5505 150.9945 151.3529	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	2,505.8	µg/mL	+/- +/- +/-	14.5686 151.1830 151.5419	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	2,504.1	µg/mL	+/- +/- +/-	14.5592 151.0850 151.4437	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09418JJV)	2,503.3	µg/mL	+/- +/- +/-	14.5541 151.0322 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	2,505.5	µg/mL	+/- +/- +/-	14.5672 151.1679 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01-JM)	2,508.6	µg/mL	+/- +/- +/-	14.5854 151.3565 151.7158	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot 26896BM)	2,518.6	µg/mL	+/- +/- +/-	14.6435 151.9598 152.3206	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	2,499.9	µg/mL	+/- +/- +/-	14.5344 150.8275 151.1856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	2,514.9	µg/mL	+/- +/- +/-	14.6217 151.7336 152.0938	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene	2,502.0 µg/mL	+/- 14.5468	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBS4859V)	+/- 150.9567	µg/mL	Unstressed
	Purity 99%		+/- 151.3151	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

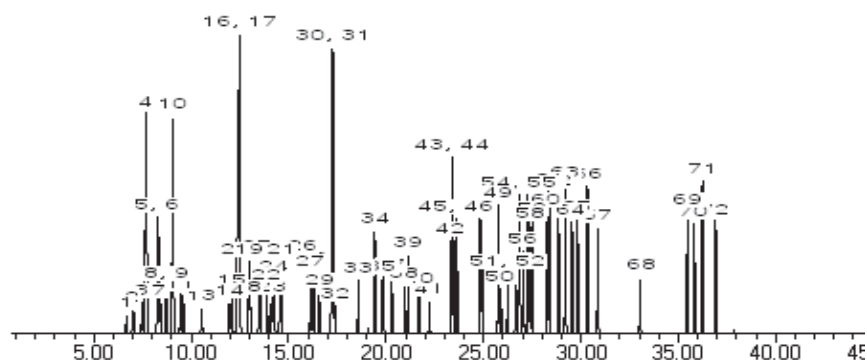
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Lawler

Date Mixed: 21-Mar-2016 **Balance:** 1125113331

Jodi E. Breon
Jodi E. Breon - QA Analyst

Date Passed: 28-Mar-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0118013

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound			Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone			12,550.0	µg/mL	+/-	73.4830	µg/mL	Gravimetric
	CAS #	67-64-1.SEC	(Lot P14A572)			+/-	757.2470	µg/mL	Unstressed
	Purity	99%				+/-	759.0446	µg/mL	Stressed
2	2-Butanone (MEK)			12,603.0	µg/mL	+/-	73.7933	µg/mL	Gravimetric
	CAS #	78-93-3.SEC	(Lot RA58J)			+/-	760.4450	µg/mL	Unstressed
	Purity	99%				+/-	762.2502	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)			12,591.5	µg/mL	+/-	73.7260	µg/mL	Gravimetric
	CAS #	108-10-1.SEC	(Lot E29T040)			+/-	759.7511	µg/mL	Unstressed
	Purity	99%				+/-	761.5546	µg/mL	Stressed
4	2-Hexanone			12,588.0	µg/mL	+/-	73.7055	µg/mL	Gravimetric
	CAS #	591-78-6.SEC	(Lot V3NRA)			+/-	759.5399	µg/mL	Unstressed
	Purity	99%				+/-	761.3429	µg/mL	Stressed
Solvent:	P&T Methanol/Water (90:10)								
	CAS #	67-56-1/7732-18-5							
	Purity	99%							



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0122964

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot Q167-08) Purity 99%	2,491.5 µg/mL	+/- 31.7005 µg/mL Gravimetric +/- 142.5149 µg/mL Unstressed +/- 145.7205 µg/mL Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBG7976V) Purity 99%	2,515.8 µg/mL	+/- 34.3475 µg/mL Gravimetric +/- 144.4391 µg/mL Unstressed +/- 147.6640 µg/mL Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 1026101231B1) Purity 99%	2,486.4 µg/mL	+/- 25.8864 µg/mL Gravimetric +/- 141.0541 µg/mL Unstressed +/- 144.2790 µg/mL Stressed
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBF3387V) Purity 99%	2,492.0 µg/mL	+/- 23.1233 µg/mL Gravimetric +/- 140.8813 µg/mL Unstressed +/- 144.1245 µg/mL Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,515.4 µg/mL	+/- 22.6959 µg/mL Gravimetric +/- 142.0993 µg/mL Unstressed +/- 145.3752 µg/mL Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot SHBD1717V) Purity 99%	2,494.8 µg/mL	+/- 25.9739 µg/mL Gravimetric +/- 141.5307 µg/mL Unstressed +/- 144.7664 µg/mL Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot 4938100) Purity 99%	2,500.0 µg/mL	+/- 81.3528 µg/mL Gravimetric +/- 161.4167 µg/mL Unstressed +/- 164.2729 µg/mL Stressed



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0124520

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2017 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Vinyl acetate CAS # 108-05-4 Purity 99% (Lot STBD7333V)	5,027.0 µg/mL	+/- 29.5013 µg/mL Gravimetric +/- 303.3277 µg/mL Unstressed +/- 304.0477 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

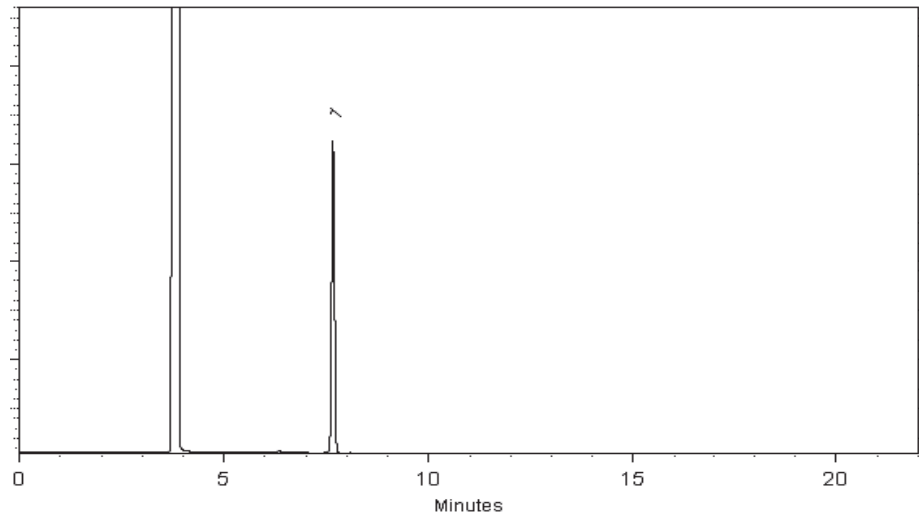
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

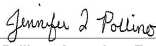
Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


F. Joseph Tallon - Mix Technician

Date Mixed: 27-Jan-2017 **Balance:** B251644995


Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 31-Jan-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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Catalog No. : 569727 **Lot No.:** A0118487

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Cyclohexanone CAS # 108-94-1 Purity 99% (Lot MKBN5282V)	25,000.4 µg/mL	+/- 146.3826 µg/mL Gravimetric +/- 1,508.4819 µg/mL Unstressed +/- 1,512.0629 µg/mL Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

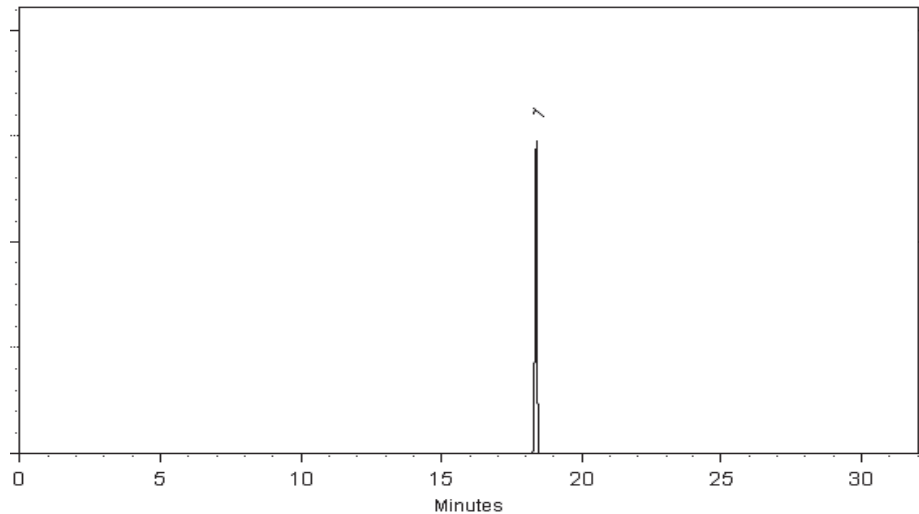
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C


Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Joseph Jaglowski - Mix Technician

Date Mixed: 31-Mar-2016 Balance: B442140311


Jodi E. Breon - QA Analyst

Date Passed: 04-Apr-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Custom Standard

Product Number: CUS-17739

Page: 1 of 1

Lot Number: CR-2819

Lot Issue Date: 19-Jun-2017

Expiration Date: 31-Jul-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA Scientific's ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-chlorohexane	000544-10-5	RM04263	998.8 ± 5.0 µg/mL
2-pentanone	000107-87-9	RM03775	4020 ± 20 µg/mL
sec-butanol	000078-92-2	RM01299	30116 ± 151 µg/mL

Matrix: methanol (purge & trap grade)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Certification Summary

Client: Espinoza Consulting Services
Project/Site: ECS - Atlas D Missile Site 4

TestAmerica Job ID: 280-102119-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Denver	A2LA	DoD ELAP		2907.01
TestAmerica Denver	A2LA	ISO/IEC 17025		2907.01
TestAmerica Denver	Alaska (UST)	State Program	10	UST-30
TestAmerica Denver	Arizona	State Program	9	AZ0713
TestAmerica Denver	Arkansas DEQ	State Program	6	88-0687
TestAmerica Denver	California	State Program	9	2513
TestAmerica Denver	Connecticut	State Program	1	PH-0686
TestAmerica Denver	Florida	NELAP	4	E87667
TestAmerica Denver	Georgia	State Program	4	N/A
TestAmerica Denver	Illinois	NELAP	5	200017
TestAmerica Denver	Iowa	State Program	7	370
TestAmerica Denver	Kansas	NELAP	7	E-10166
TestAmerica Denver	Louisiana	NELAP	6	02096
TestAmerica Denver	Maine	State Program	1	CO0002
TestAmerica Denver	Minnesota	NELAP	5	8-999-405
TestAmerica Denver	Nevada	State Program	9	CO0026
TestAmerica Denver	New Hampshire	NELAP	1	205310
TestAmerica Denver	New Jersey	NELAP	2	CO004
TestAmerica Denver	New York	NELAP	2	11964
TestAmerica Denver	North Carolina (WW/SW)	State Program	4	358
TestAmerica Denver	North Dakota	State Program	8	R-034
TestAmerica Denver	Oklahoma	State Program	6	8614
TestAmerica Denver	Oregon	NELAP	10	4025
TestAmerica Denver	Pennsylvania	NELAP	3	68-00664
TestAmerica Denver	South Carolina	State Program	4	72002001
TestAmerica Denver	Texas	NELAP	6	T104704183-16-12
TestAmerica Denver	USDA	Federal		P330-16-00397
TestAmerica Denver	Utah	NELAP	8	CO00026
TestAmerica Denver	Virginia	NELAP	3	460232
TestAmerica Denver	Washington	State Program	10	C583
TestAmerica Denver	West Virginia DEP	State Program	3	354
TestAmerica Denver	Wisconsin	State Program	5	999615430
TestAmerica Denver	Wyoming (UST)	A2LA	8	2907.01

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method 8260B

Volatile Organic Compounds (GC/MS)
by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Matrix: Water

Level: Low

GC Column (1): DB-624 (75. ID: 0.53 (mm))

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
FEW4-BAR 13 RANCH	280-102119-1	108	96	96	104
FEW4-FRITZ LEY#1	280-102119-2	112	100	95	101
FEW4-BERT MCGEE#8	280-102119-3	110	98	94	98
FEW4-CANDES#888	280-102119-4	110	101	95	99
FEW4-FARRELL#1-INF	280-102119-5	109	99	95	99
FEW4-HARDY#1-INF	280-102119-6	113	101	96	100
FEW4-FARRELL#1-INT	280-102119-7	111	101	95	99
FEW4-FARRELL#1-EFF	280-102119-8	106	94	90	96
FEW4-VG#1-INF	280-102119-9	111	95	97	102
FEW4-GUNCLUB#1-INF	280-102119-10	113	101	95	100
FEW4-VG#1-INT	280-102119-11	110	98	95	99
FEW4-VG#1-EFF	280-102119-12	114	106	96	101
FEW4-FINNERTY#1-INF	280-102119-13	108	98	92	96
FEW4-FINNERTY#1-INT	280-102119-14	110	100	92	97
FEW4-FINNERTY#1-EFF	280-102119-15	112	99	97	101
FEW4-DYSON#1-INF	280-102119-16	110	95	97	104
FEW4-HOUSER#1	280-102119-17	110	98	94	102
FEW4-BROWN#1	280-102119-18	109	99	95	103
FEW4-WELTY#2	280-102119-19	108	99	93	96
FEW4-1774 OTTO	280-102119-20	113	102	97	102
FEW4-BOYD-1	280-102119-21	110	98	93	98
FEW4-BOYD-3	280-102119-22	116	102	96	102
FEW4-BOYD-J	280-102119-23	112	102	95	103
FEW4-HILL#1	280-102119-24	112	101	96	103
FEW4-TB-20171006	280-102119-25	109	96	93	99
FEW4-TB-20171007	280-102119-26	109	99	94	97
	MB 280-391324/6	110	100	97	104
	MB 280-391346/6	109	97	95	102
	LCS 280-391324/4	106	100	100	95
	LCS 280-391346/4	111	105	103	98
FEW4-VG#1-INF-MS	280-102119-9 MS	108	98	102	94
FEW4-BOYD-3-MS MS	280-102119-22 MS	115	110	104	99

QC LIMITS

DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Matrix: Water Level: Low
GC Column (1): DB-624 (75. ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
FEW4-VG#1-INF-MSD MSD	280-102119-9 MSD	110	104	101	91
FEW4-BOYD-3-MSD MSD	280-102119-22 MSD	111	105	101	92

DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
80-119
81-118
89-112
85-114

Column to be used to flag recovery values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: H0630.D
 Lab ID: LCS 280-391324/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	22.3	112	39-160	
Benzene	5.00	5.52	110	79-120	
Bromoform	5.00	5.08	102	66-130	
Bromomethane	5.00	4.92	98	53-141	
2-Butanone (MEK)	20.0	21.1	105	56-143	
Carbon disulfide	5.00	5.40	108	64-133	
Carbon tetrachloride	5.00	5.35	107	72-136	
Chlorobenzene	5.00	4.96	99	82-118	
Chlorobromomethane	5.00	5.44	109	78-123	
Chlorodibromomethane	5.00	4.86	97	74-126	
Chloroethane	5.00	4.64	93	60-138	
Chloroform	5.00	5.21	104	79-124	
Chloromethane	5.00	4.62	92	50-139	
cis-1,2-Dichloroethene	5.00	5.41	108	78-123	
cis-1,3-Dichloropropene	5.00	4.87	97	75-124	
Cyclohexane	5.00	5.31	106	71-130	
1,2-Dibromo-3-Chloropropane	5.00	4.93 J	99	62-128	
1,2-Dibromoethane	5.00	5.00	100	77-121	
1,2-Dichlorobenzene	5.00	4.86	97	80-119	
1,3-Dichlorobenzene	5.00	4.91	98	80-119	
1,4-Dichlorobenzene	5.00	4.64	93	79-118	
Dichlorobromomethane	5.00	5.31	106	79-125	
Dichlorodifluoromethane	5.00	4.47	89	32-152	
1,1-Dichloroethane	5.00	5.19	104	77-125	
1,2-Dichloroethane	5.00	4.93	99	73-128	
1,1-Dichloroethene	5.00	5.24	105	71-131	
1,2-Dichloropropane	5.00	5.18	104	78-122	
Ethylbenzene	5.00	4.93	99	79-121	
2-Hexanone	20.0	20.3	102	57-139	
Isopropylbenzene	5.00	4.73	95	72-131	
Methyl acetate	25.0	25.2	101	56-136	
Methylene Chloride	5.00	5.17	103	74-124	
4-Methyl-2-pentanone (MIBK)	20.0	23.0	115	67-130	
Methyl tert-butyl ether	5.00	5.33	107	71-124	
m-Xylene & p-Xylene	5.00	5.00	100	80-121	
o-Xylene	5.00	4.98	100	78-122	
Styrene	5.00	4.88	98	78-123	
1,1,2,2-Tetrachloroethane	5.00	4.72	94	71-121	
Tetrachloroethene	5.00	5.07	101	74-129	
Toluene	5.00	5.29	106	80-121	
trans-1,2-Dichloroethene	5.00	5.58	112	75-124	
trans-1,3-Dichloropropene	5.00	4.86	97	73-127	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: H0630.D
Lab ID: LCS 280-391324/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,3-Trichlorobenzene	5.00	4.61	92	69-129	
1,2,4-Trichlorobenzene	5.00	4.66	93	69-130	
1,1,1-Trichloroethane	5.00	5.32	106	74-131	
1,1,2-Trichloroethane	5.00	5.19	104	80-119	
Trichloroethene	5.00	5.34	107	79-123	
Trichlorofluoromethane	5.00	4.98	100	65-141	
Vinyl chloride	5.00	4.81	96	58-137	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: H0663.D
 Lab ID: LCS 280-391346/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	21.7	109	39-160	
Benzene	5.00	5.81	116	79-120	
Bromoform	5.00	5.53	111	66-130	
Bromomethane	5.00	5.18	104	53-141	
2-Butanone (MEK)	20.0	23.1	116	56-143	
Carbon disulfide	5.00	5.83	117	64-133	
Carbon tetrachloride	5.00	5.82	116	72-136	
Chlorobenzene	5.00	5.39	108	82-118	
Chlorobromomethane	5.00	5.80	116	78-123	
Chlorodibromomethane	5.00	5.17	103	74-126	
Chloroethane	5.00	4.78	96	60-138	
Chloroform	5.00	5.64	113	79-124	
Chloromethane	5.00	4.72	94	50-139	
cis-1,2-Dichloroethene	5.00	5.77	115	78-123	
cis-1,3-Dichloropropene	5.00	5.23	105	75-124	
Cyclohexane	5.00	5.66	113	71-130	
1,2-Dibromo-3-Chloropropane	5.00	5.31	106	62-128	
1,2-Dibromoethane	5.00	5.40	108	77-121	
1,2-Dichlorobenzene	5.00	5.02	100	80-119	
1,3-Dichlorobenzene	5.00	5.07	101	80-119	
1,4-Dichlorobenzene	5.00	4.94	99	79-118	
Dichlorobromomethane	5.00	5.86	117	79-125	
Dichlorodifluoromethane	5.00	4.70	94	32-152	
1,1-Dichloroethane	5.00	5.57	111	77-125	
1,2-Dichloroethane	5.00	5.42	108	73-128	
1,1-Dichloroethene	5.00	5.67	113	71-131	
1,2-Dichloropropane	5.00	5.54	111	78-122	
Ethylbenzene	5.00	5.40	108	79-121	
2-Hexanone	20.0	22.4	112	57-139	
Isopropylbenzene	5.00	4.96	99	72-131	
Methyl acetate	25.0	27.6	111	56-136	
Methylene Chloride	5.00	5.47	109	74-124	
4-Methyl-2-pentanone (MIBK)	20.0	23.4	117	67-130	
Methyl tert-butyl ether	5.00	5.84	117	71-124	
m-Xylene & p-Xylene	5.00	5.28	106	80-121	
o-Xylene	5.00	5.22	104	78-122	
Styrene	5.00	5.32	106	78-123	
1,1,2,2-Tetrachloroethane	5.00	4.90	98	71-121	
Tetrachloroethene	5.00	5.43	109	74-129	
Toluene	5.00	5.74	115	80-121	
trans-1,2-Dichloroethene	5.00	5.78	116	75-124	
trans-1,3-Dichloropropene	5.00	5.25	105	73-127	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: H0663.D
Lab ID: LCS 280-391346/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,3-Trichlorobenzene	5.00	4.95	99	69-129	
1,2,4-Trichlorobenzene	5.00	4.85	97	69-130	
1,1,1-Trichloroethane	5.00	5.77	115	74-131	
1,1,2-Trichloroethane	5.00	5.42	108	80-119	
Trichloroethene	5.00	5.86	117	79-123	
Trichlorofluoromethane	5.00	5.24	105	65-141	
Vinyl chloride	5.00	4.90	98	58-137	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Matrix: Water

Level: Low

Lab File ID: H0644.D

Lab ID: 280-102119-9 MS

Client ID: FEW4-VG#1-INF-MS MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20.0	6.4 U	23.2	116	39-160	
Benzene	5.00	0.40 U	5.46	109	79-120	
Bromoform	5.00	0.40 U	5.17	103	66-130	
Bromomethane	5.00	0.80 U	4.89	98	53-141	
2-Butanone (MEK)	20.0	4.0 U	22.9	115	56-143	
Carbon disulfide	5.00	1.6 U	5.29	106	64-133	
Carbon tetrachloride	5.00	0.40 U	5.25	105	72-136	
Chlorobenzene	5.00	0.40 U	5.08	102	82-118	
Chlorobromomethane	5.00	0.20 U	5.56	111	78-123	
Chlorodibromomethane	5.00	0.40 U	4.98	100	74-126	
Chloroethane	5.00	1.6 U	4.57	91	60-138	
Chloroform	5.00	0.40 U	5.32	106	79-124	
Chloromethane	5.00	0.80 U	4.64	93	50-139	
cis-1,2-Dichloroethene	5.00	0.40 U	5.34	107	78-123	
cis-1,3-Dichloropropene	5.00	0.40 U	4.92	98	75-124	
Cyclohexane	5.00	0.80 U	5.14	103	71-130	
1,2-Dibromo-3-Chloropropane	5.00	1.6 U	4.97 U	99	62-128	
1,2-Dibromoethane	5.00	0.40 U	5.01	100	77-121	
1,2-Dichlorobenzene	5.00	0.40 U	4.91	98	80-119	
1,3-Dichlorobenzene	5.00	0.40 U	4.94	99	80-119	
1,4-Dichlorobenzene	5.00	0.40 U	4.65	93	79-118	
Dichlorobromomethane	5.00	0.40 U	5.49	110	79-125	
Dichlorodifluoromethane	5.00	0.80 U	4.39	88	32-152	
1,1-Dichloroethane	5.00	0.80 U	5.26	105	77-125	
1,2-Dichloroethane	5.00	0.40 U	5.10	102	73-128	
1,1-Dichloroethene	5.00	0.80 U	5.30	106	71-131	
1,2-Dichloropropane	5.00	0.40 U	5.32	106	78-122	
Ethylbenzene	5.00	0.40 U	5.07	101	79-121	
2-Hexanone	20.0	4.0 U	20.1	101	57-139	
Isopropylbenzene	5.00	0.40 U	4.64	93	72-131	
Methyl acetate	25.0	4.0 U	23.8	95	56-136	
Methylene Chloride	5.00	0.80 U	4.98 U	100	74-124	
4-Methyl-2-pentanone (MIBK)	20.0	3.2 U	24.2	121	67-130	
Methyl tert-butyl ether	5.00	0.80 U	5.33	107	71-124	
m-Xylene & p-Xylene	5.00	0.80 U	5.00	100	80-121	
o-Xylene	5.00	0.40 U	5.15	103	78-122	
Styrene	5.00	0.40 U	5.03	101	78-123	
1,1,2,2-Tetrachloroethane	5.00	0.80 U	4.52	90	71-121	
Tetrachloroethene	5.00	0.40 U	5.07	101	74-129	
Toluene	5.00	0.40 U	5.45	109	80-121	
trans-1,2-Dichloroethene	5.00	0.40 U	5.44	109	75-124	
trans-1,3-Dichloropropene	5.00	0.40 U	4.93	99	73-127	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: H0644.D
Lab ID: 280-102119-9 MS Client ID: FEW4-VG#1-INF-MS MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,2,3-Trichlorobenzene	5.00	0.80 U	4.87	97	69-129	
1,2,4-Trichlorobenzene	5.00	0.80 U	4.77	95	69-130	
1,1,1-Trichloroethane	5.00	0.40 U	5.31	106	74-131	
1,1,2-Trichloroethane	5.00	0.80 U	5.61	112	80-119	
Trichloroethene	5.00	4.9	10.2	106	79-123	
Trichlorofluoromethane	5.00	0.80 U	4.90	98	65-141	
Vinyl chloride	5.00	0.20 U	4.66	93	58-137	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Matrix: Water

Level: Low

Lab File ID: H0680.D

Lab ID: 280-102119-22 MS

Client ID: FEW4-BOYD-3-MS MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20.0	3.0 J	31.8	144	39-160	
Benzene	5.00	0.40 U	5.43	109	79-120	
Bromoform	5.00	0.40 U	5.42	108	66-130	
Bromomethane	5.00	0.80 U	4.58	92	53-141	
2-Butanone (MEK)	20.0	4.0 U	21.6	108	56-143	
Carbon disulfide	5.00	1.6 U	5.09	102	64-133	
Carbon tetrachloride	5.00	0.40 U	5.05	101	72-136	
Chlorobenzene	5.00	0.40 U	4.87	97	82-118	
Chlorobromomethane	5.00	0.20 U	5.60	112	78-123	
Chlorodibromomethane	5.00	0.40 U	5.05	101	74-126	
Chloroethane	5.00	1.6 U	4.38	88	60-138	
Chloroform	5.00	0.40 U	5.33	107	79-124	
Chloromethane	5.00	0.80 U	4.25	85	50-139	
cis-1,2-Dichloroethene	5.00	0.40 U	5.37	107	78-123	
cis-1,3-Dichloropropene	5.00	0.40 U	4.92	98	75-124	
Cyclohexane	5.00	0.80 U	4.86	97	71-130	
1,2-Dibromo-3-Chloropropane	5.00	1.6 U	5.06	101	62-128	
1,2-Dibromoethane	5.00	0.40 U	5.16	103	77-121	
1,2-Dichlorobenzene	5.00	0.40 U	4.68	94	80-119	
1,3-Dichlorobenzene	5.00	0.40 U	4.51	90	80-119	
1,4-Dichlorobenzene	5.00	0.40 U	4.53	91	79-118	
Dichlorobromomethane	5.00	0.40 U	5.61	112	79-125	
Dichlorodifluoromethane	5.00	0.80 U	4.12	82	32-152	
1,1-Dichloroethane	5.00	0.80 U	5.18	104	77-125	
1,2-Dichloroethane	5.00	0.40 U	5.34	107	73-128	
1,1-Dichloroethene	5.00	0.80 U	5.01	100	71-131	
1,2-Dichloropropane	5.00	0.40 U	5.28	106	78-122	
Ethylbenzene	5.00	0.40 U	4.74	95	79-121	
2-Hexanone	20.0	4.0 U	22.6	113	57-139	
Isopropylbenzene	5.00	0.40 U	4.29	86	72-131	
Methyl acetate	25.0	4.0 U	27.5	110	56-136	
Methylene Chloride	5.00	0.80 U	5.12	102	74-124	
4-Methyl-2-pentanone (MIBK)	20.0	3.2 U	25.1	126	67-130	
Methyl tert-butyl ether	5.00	0.80 U	5.82	116	71-124	
m-Xylene & p-Xylene	5.00	0.80 U	4.67	93	80-121	
o-Xylene	5.00	0.40 U	4.82	96	78-122	
Styrene	5.00	0.40 U	4.77	95	78-123	
1,1,2,2-Tetrachloroethane	5.00	0.80 U	4.88	98	71-121	
Tetrachloroethene	5.00	0.40 U	4.67	93	74-129	
Toluene	5.00	0.40 U	5.33	107	80-121	
trans-1,2-Dichloroethene	5.00	0.40 U	5.30	106	75-124	
trans-1,3-Dichloropropene	5.00	0.40 U	5.06	101	73-127	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: H0680.D
 Lab ID: 280-102119-22 MS Client ID: FEW4-BOYD-3-MS MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,2,3-Trichlorobenzene	5.00	0.80 U	4.81	96	69-129	
1,2,4-Trichlorobenzene	5.00	0.80 U	4.50	90	69-130	
1,1,1-Trichloroethane	5.00	0.40 U	5.03	101	74-131	
1,1,2-Trichloroethane	5.00	0.80 U	5.48	110	80-119	
Trichloroethene	5.00	1.0	6.29	105	79-123	
Trichlorofluoromethane	5.00	0.80 U	4.54	91	65-141	
Vinyl chloride	5.00	0.20 U	4.28	86	58-137	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Matrix: Water

Level: Low

Lab File ID: H0645.D

Lab ID: 280-102119-9 MSD

Client ID: FEW4-VG#1-INF-MSD MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Acetone	20.0	26.0	130	11	20	39-160	
Benzene	5.00	5.58	112	2	20	79-120	
Bromoform	5.00	5.50	110	6	20	66-130	
Bromomethane	5.00	4.88	98	0	20	53-141	
2-Butanone (MEK)	20.0	22.4	112	2	20	56-143	
Carbon disulfide	5.00	5.37	107	1	20	64-133	
Carbon tetrachloride	5.00	5.39	108	3	20	72-136	
Chlorobenzene	5.00	5.13	103	1	20	82-118	
Chlorobromomethane	5.00	5.80	116	4	20	78-123	
Chlorodibromomethane	5.00	5.22	104	5	20	74-126	
Chloroethane	5.00	4.55	91	0	20	60-138	
Chloroform	5.00	5.49	110	3	20	79-124	
Chloromethane	5.00	4.49	90	3	20	50-139	
cis-1,2-Dichloroethene	5.00	5.58	112	4	20	78-123	
cis-1,3-Dichloropropene	5.00	5.07	101	3	20	75-124	
Cyclohexane	5.00	5.16	103	0	20	71-130	
1,2-Dibromo-3-Chloropropane	5.00	5.40	108	8	20	62-128	
1,2-Dibromoethane	5.00	5.28	106	5	20	77-121	
1,2-Dichlorobenzene	5.00	5.01	100	2	20	80-119	
1,3-Dichlorobenzene	5.00	4.98	100	1	20	80-119	
1,4-Dichlorobenzene	5.00	4.77	95	2	20	79-118	
Dichlorobromomethane	5.00	5.80	116	6	20	79-125	
Dichlorodifluoromethane	5.00	4.16	83	5	20	32-152	
1,1-Dichloroethane	5.00	5.34	107	1	20	77-125	
1,2-Dichloroethane	5.00	5.44	109	6	20	73-128	
1,1-Dichloroethene	5.00	5.28	106	0	20	71-131	
1,2-Dichloropropane	5.00	5.46	109	3	20	78-122	
Ethylbenzene	5.00	5.07	101	0	20	79-121	
2-Hexanone	20.0	21.0	105	4	20	57-139	
Isopropylbenzene	5.00	4.53	91	2	20	72-131	
Methyl acetate	25.0	25.8	103	8	20	56-136	
Methylene Chloride	5.00	5.17	103	4	20	74-124	
4-Methyl-2-pentanone (MIBK)	20.0	24.3	121	0	20	67-130	
Methyl tert-butyl ether	5.00	5.70	114	7	20	71-124	
m-Xylene & p-Xylene	5.00	5.12	102	2	20	80-121	
o-Xylene	5.00	5.13	103	0	20	78-122	
Styrene	5.00	5.14	103	2	20	78-123	
1,1,2,2-Tetrachloroethane	5.00	4.90	98	8	20	71-121	
Tetrachloroethene	5.00	5.05	101	0	20	74-129	
Toluene	5.00	5.47	109	0	20	80-121	
trans-1,2-Dichloroethene	5.00	5.68	114	4	20	75-124	
trans-1,3-Dichloropropene	5.00	5.17	103	5	20	73-127	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: H0645.D
 Lab ID: 280-102119-9 MSD Client ID: FEW4-VG#1-INF-MSD MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,2,3-Trichlorobenzene	5.00	4.97	99	2	20	69-129	
1,2,4-Trichlorobenzene	5.00	4.88	98	2	20	69-130	
1,1,1-Trichloroethane	5.00	5.31	106	0	20	74-131	
1,1,2-Trichloroethane	5.00	5.71	114	2	20	80-119	
Trichloroethene	5.00	9.92	100	3	20	79-123	
Trichlorofluoromethane	5.00	4.88	98	0	20	65-141	
Vinyl chloride	5.00	4.61	92	1	20	58-137	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver

Job No.: 280-102119-1

SDG No.: _____

Matrix: Water

Level: Low

Lab File ID: H0681.D

Lab ID: 280-102119-22 MSD

Client ID: FEW4-BOYD-3-MSD MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Acetone	20.0	29.3	132	8	20	39-160	
Benzene	5.00	5.57	111	2	20	79-120	
Bromoform	5.00	5.48	110	1	20	66-130	
Bromomethane	5.00	4.73	95	3	20	53-141	
2-Butanone (MEK)	20.0	21.9	110	1	20	56-143	
Carbon disulfide	5.00	5.25	105	3	20	64-133	
Carbon tetrachloride	5.00	5.20	104	3	20	72-136	
Chlorobenzene	5.00	5.17	103	6	20	82-118	
Chlorobromomethane	5.00	5.88	118	5	20	78-123	
Chlorodibromomethane	5.00	5.26	105	4	20	74-126	
Chloroethane	5.00	4.38	88	0	20	60-138	
Chloroform	5.00	5.55	111	4	20	79-124	
Chloromethane	5.00	4.48	90	5	20	50-139	
cis-1,2-Dichloroethene	5.00	5.69	114	6	20	78-123	
cis-1,3-Dichloropropene	5.00	5.07	101	3	20	75-124	
Cyclohexane	5.00	5.08	102	4	20	71-130	
1,2-Dibromo-3-Chloropropane	5.00	5.25	105	4	20	62-128	
1,2-Dibromoethane	5.00	5.46	109	6	20	77-121	
1,2-Dichlorobenzene	5.00	4.73	95	1	20	80-119	
1,3-Dichlorobenzene	5.00	4.66	93	3	20	80-119	
1,4-Dichlorobenzene	5.00	4.68	94	3	20	79-118	
Dichlorobromomethane	5.00	5.85	117	4	20	79-125	
Dichlorodifluoromethane	5.00	4.27	85	4	20	32-152	
1,1-Dichloroethane	5.00	5.34	107	3	20	77-125	
1,2-Dichloroethane	5.00	5.41	108	1	20	73-128	
1,1-Dichloroethene	5.00	5.12	102	2	20	71-131	
1,2-Dichloropropane	5.00	5.50	110	4	20	78-122	
Ethylbenzene	5.00	5.02	100	6	20	79-121	
2-Hexanone	20.0	23.2	116	3	20	57-139	
Isopropylbenzene	5.00	4.43	89	3	20	72-131	
Methyl acetate	25.0	26.3	105	4	20	56-136	
Methylene Chloride	5.00	5.22	104	2	20	74-124	
4-Methyl-2-pentanone (MIBK)	20.0	25.3	126	1	20	67-130	
Methyl tert-butyl ether	5.00	5.95	119	2	20	71-124	
m-Xylene & p-Xylene	5.00	5.03	101	7	20	80-121	
o-Xylene	5.00	5.12	102	6	20	78-122	
Styrene	5.00	5.15	103	8	20	78-123	
1,1,2,2-Tetrachloroethane	5.00	4.90	98	0	20	71-121	
Tetrachloroethene	5.00	4.94	99	6	20	74-129	
Toluene	5.00	5.49	110	3	20	80-121	
trans-1,2-Dichloroethene	5.00	5.57	111	5	20	75-124	
trans-1,3-Dichloropropene	5.00	5.57	111	10	20	73-127	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: H0681.D
 Lab ID: 280-102119-22 MSD Client ID: FEW4-BOYD-3-MSD MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,2,3-Trichlorobenzene	5.00	4.90	98	2	20	69-129	
1,2,4-Trichlorobenzene	5.00	4.74	95	5	20	69-130	
1,1,1-Trichloroethane	5.00	5.24	105	4	20	74-131	
1,1,2-Trichloroethane	5.00	5.48	110	0	20	80-119	
Trichloroethene	5.00	6.38	107	1	20	79-123	
Trichlorofluoromethane	5.00	4.75	95	4	20	65-141	
Vinyl chloride	5.00	4.45	89	4	20	58-137	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab File ID: H0631.D Lab Sample ID: MB 280-391324/6
Matrix: Water Heated Purge: (Y/N) N
Instrument ID: VMS_H Date Analyzed: 10/15/2017 10:26
GC Column: DB-624 (75.53) ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-391324/4	H0630.D	10/15/2017 10:04
FEW4-VG#1-INF	280-102119-9	H0636.D	10/15/2017 12:21
FEW4-BAR 13 RANCH	280-102119-1	H0637.D	10/15/2017 12:42
FEW4-FRITZ LEY#1	280-102119-2	H0638.D	10/15/2017 13:04
FEW4-BERT MCGEE#8	280-102119-3	H0639.D	10/15/2017 13:26
FEW4-CANDES#888	280-102119-4	H0640.D	10/15/2017 13:48
FEW4-FARRELL#1-INF	280-102119-5	H0641.D	10/15/2017 14:10
FEW4-TB-20171006	280-102119-25	H0642.D	10/15/2017 14:31
FEW4-TB-20171007	280-102119-26	H0643.D	10/15/2017 14:53
FEW4-VG#1-INF-MS MS	280-102119-9 MS	H0644.D	10/15/2017 15:15
FEW4-VG#1-INF-MSD MSD	280-102119-9 MSD	H0645.D	10/15/2017 15:37
FEW4-HARDY#1-INF	280-102119-6	H0648.D	10/15/2017 16:43
FEW4-FARRELL#1-INT	280-102119-7	H0649.D	10/15/2017 17:04
FEW4-FARRELL#1-EFF	280-102119-8	H0650.D	10/15/2017 17:26
FEW4-GUNCLUB#1-INF	280-102119-10	H0651.D	10/15/2017 17:48
FEW4-VG#1-INT	280-102119-11	H0652.D	10/15/2017 18:11
FEW4-VG#1-EFF	280-102119-12	H0653.D	10/15/2017 18:33
FEW4-FINNERTY#1-INF	280-102119-13	H0654.D	10/15/2017 18:54
FEW4-FINNERTY#1-INT	280-102119-14	H0655.D	10/15/2017 19:16

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab File ID: H0664.D Lab Sample ID: MB 280-391346/6
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: VMS_H Date Analyzed: 10/16/2017 07:58
 GC Column: DB-624 (75.53) ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-391346/4	H0663.D	10/16/2017 07:36
FEW4-FINNERTY#1-EFF	280-102119-15	H0668.D	10/16/2017 09:25
FEW4-DYSON#1-INF	280-102119-16	H0669.D	10/16/2017 09:48
FEW4-HOUSER#1	280-102119-17	H0670.D	10/16/2017 10:10
FEW4-BROWN#1	280-102119-18	H0671.D	10/16/2017 10:32
FEW4-WELTY#2	280-102119-19	H0672.D	10/16/2017 10:53
FEW4-1774 OTTO	280-102119-20	H0673.D	10/16/2017 11:15
FEW4-BOYD-1	280-102119-21	H0674.D	10/16/2017 11:36
FEW4-BOYD-3	280-102119-22	H0675.D	10/16/2017 11:58
FEW4-BOYD-J	280-102119-23	H0676.D	10/16/2017 12:20
FEW4-HILL#1	280-102119-24	H0677.D	10/16/2017 12:41
FEW4-BOYD-3-MS MS	280-102119-22 MS	H0680.D	10/16/2017 13:47
FEW4-BOYD-3-MSD MSD	280-102119-22 MSD	H0681.D	10/16/2017 14:09

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab File ID: H7375.D BFB Injection Date: 06/29/2017
 Instrument ID: VMS_H BFB Injection Time: 09:07
 Analysis Batch No.: 379245

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	18.4
75	30.0 - 60.0 % of mass 95	47.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.4
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	84.3
175	5.0 - 9.0 % of mass 174	6.7 (7.9) 1
176	95.0 - 101.0 % of mass 174	82.6 (98.0) 1
177	5.0 - 9.0 % of mass 176	5.4 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-379245/10	H7379.D	06/29/2017	10:14
	IC 280-379245/11	H7380.D	06/29/2017	10:36
	IC 280-379245/12	H7381.D	06/29/2017	10:58
	IC 280-379245/13	H7382.D	06/29/2017	11:20
	IC 280-379245/14	H7383.D	06/29/2017	11:41
	IC 280-379245/15	H7384.D	06/29/2017	12:03
	IC 280-379245/16	H7385.D	06/29/2017	12:25
	ICV 280-379245/17	H7387.D	06/29/2017	13:09

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab File ID: H0335.D BFB Injection Date: 10/09/2017
 Instrument ID: VMS_H BFB Injection Time: 07:54
 Analysis Batch No.: 390481

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	15.9
75	30.0 - 60.0 % of mass 95	46.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.3
173	Less than 2.0 % of mass 174	0.2 (0.3) 1
174	50.0 - 120.00 % of mass 95	65.4
175	5.0 - 9.0 % of mass 174	4.8 (7.4) 1
176	95.0 - 101.0 % of mass 174	64.5 (98.5) 1
177	5.0 - 9.0 % of mass 176	4.6 (7.1) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-390481/10	H0338.D	10/09/2017	09:00
	IC 280-390481/11	H0339.D	10/09/2017	09:22
	IC 280-390481/12	H0340.D	10/09/2017	09:44
	IC 280-390481/13	H0341.D	10/09/2017	10:06
	ICIS 280-390481/14	H0342.D	10/09/2017	10:28
	IC 280-390481/15	H0343.D	10/09/2017	10:50
	IC 280-390481/16	H0344.D	10/09/2017	11:12
	ICV 280-390481/17	H0346.D	10/09/2017	11:56

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab File ID: H0626.D BFB Injection Date: 10/15/2017
Instrument ID: VMS_H BFB Injection Time: 08:41
Analysis Batch No.: 391324

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	15.2
75	30.0 - 60.0 % of mass 95	45.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.4
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	67.0
175	5.0 - 9.0 % of mass 174	4.6 (6.9) 1
176	95.0 - 101.0 % of mass 174	65.1 (97.3) 1
177	5.0 - 9.0 % of mass 176	4.3 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-391324/2	H0628.D	10/15/2017	09:20
	CCV 280-391324/3	H0629.D	10/15/2017	09:42
	LCS 280-391324/4	H0630.D	10/15/2017	10:04
	MB 280-391324/6	H0631.D	10/15/2017	10:26
FEW4-VG#1-INF	280-102119-9	H0636.D	10/15/2017	12:21
FEW4-BAR 13 RANCH	280-102119-1	H0637.D	10/15/2017	12:42
FEW4-FRITZ LEY#1	280-102119-2	H0638.D	10/15/2017	13:04
FEW4-BERT MCGEE#8	280-102119-3	H0639.D	10/15/2017	13:26
FEW4-CANDES#888	280-102119-4	H0640.D	10/15/2017	13:48
FEW4-FARRELL#1-INF	280-102119-5	H0641.D	10/15/2017	14:10
FEW4-TB-20171006	280-102119-25	H0642.D	10/15/2017	14:31
FEW4-TB-20171007	280-102119-26	H0643.D	10/15/2017	14:53
FEW4-VG#1-INF-MS MS	280-102119-9 MS	H0644.D	10/15/2017	15:15
FEW4-VG#1-INF-MSD MSD	280-102119-9 MSD	H0645.D	10/15/2017	15:37
FEW4-HARDY#1-INF	280-102119-6	H0648.D	10/15/2017	16:43
FEW4-FARRELL#1-INT	280-102119-7	H0649.D	10/15/2017	17:04
FEW4-FARRELL#1-EFF	280-102119-8	H0650.D	10/15/2017	17:26
FEW4-GUNCLUB#1-INF	280-102119-10	H0651.D	10/15/2017	17:48
FEW4-VG#1-INT	280-102119-11	H0652.D	10/15/2017	18:11
FEW4-VG#1-EFF	280-102119-12	H0653.D	10/15/2017	18:33
FEW4-FINNERTY#1-INF	280-102119-13	H0654.D	10/15/2017	18:54
FEW4-FINNERTY#1-INT	280-102119-14	H0655.D	10/15/2017	19:16
	CCVC 280-391324/33	H0656.D	10/15/2017	19:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab File ID: H0660.D BFB Injection Date: 10/16/2017
 Instrument ID: VMS_H BFB Injection Time: 06:40
 Analysis Batch No.: 391346

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	15.0
75	30.0 - 60.0 % of mass 95	46.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	69.1
175	5.0 - 9.0 % of mass 174	4.8 (7.0) 1
176	95.0 - 101.0 % of mass 174	67.8 (98.1) 1
177	5.0 - 9.0 % of mass 176	4.3 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-391346/2	H0661.D	10/16/2017	06:52
	CCV 280-391346/3	H0662.D	10/16/2017	07:14
	LCS 280-391346/4	H0663.D	10/16/2017	07:36
	MB 280-391346/6	H0664.D	10/16/2017	07:58
FEW4-FINNERTY#1-EFF	280-102119-15	H0668.D	10/16/2017	09:25
FEW4-DYSON#1-INF	280-102119-16	H0669.D	10/16/2017	09:48
FEW4-HOUSER#1	280-102119-17	H0670.D	10/16/2017	10:10
FEW4-BROWN#1	280-102119-18	H0671.D	10/16/2017	10:32
FEW4-WELTY#2	280-102119-19	H0672.D	10/16/2017	10:53
FEW4-1774 OTTO	280-102119-20	H0673.D	10/16/2017	11:15
FEW4-BOYD-1	280-102119-21	H0674.D	10/16/2017	11:36
FEW4-BOYD-3	280-102119-22	H0675.D	10/16/2017	11:58
FEW4-BOYD-J	280-102119-23	H0676.D	10/16/2017	12:20
FEW4-HILL#1	280-102119-24	H0677.D	10/16/2017	12:41
FEW4-BOYD-3-MS MS	280-102119-22 MS	H0680.D	10/16/2017	13:47
FEW4-BOYD-3-MSD MSD	280-102119-22 MSD	H0681.D	10/16/2017	14:09
	CCVC 280-391346/26	H0682.D	10/16/2017	14:30

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Sample No.: ICIS 280-390481/14 Date Analyzed: 10/09/2017 10:28
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H0342.D Heated Purge: (Y/N) N
 Calibration ID: 30552

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		272314	3.97	1262666	6.74	383667	11.08
UPPER LIMIT		544628	4.47	2525332	7.24	767334	11.58
LOWER LIMIT		136157	3.47	631333	6.24	191834	10.58
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-390481/17		228910	3.97	1245401	6.72	371306	11.06
CCV 280-391324/2		267325	3.97	1288821	6.72	400764	11.06
CCV 280-391324/3		245405	3.97	1246181	6.73	424019	11.06
LCS 280-391324/4		262307	3.97	1243171	6.72	399241	11.06
MB 280-391324/6		229464	3.98	1181417	6.73	400675	11.06
280-102119-9	FEW4-VG#1-INF	222009	3.97	1244298	6.73	421053	11.06
280-102119-1	FEW4-BAR 13 RANCH	248117	3.97	1262945	6.73	421831	11.06
280-102119-2	FEW4-FRITZ LEY#1	272876	3.99	1235330	6.74	430003	11.07
280-102119-3	FEW4-BERT MCGEE#8	259816	3.97	1243378	6.74	429083	11.08
280-102119-4	FEW4-CANDES#888	285478	3.97	1266295	6.74	433581	11.07
280-102119-5	FEW4-FARRELL#1-INF	269421	3.97	1247659	6.74	426737	11.07
280-102119-25	FEW4-TB-20171006	258467	3.99	1243932	6.74	429344	11.08
280-102119-26	FEW4-TB-20171007	289157	3.99	1266465	6.74	436813	11.07
280-102119-9 MS	FEW4-VG#1-INF-MS MS	253400	3.99	1227883	6.74	397145	11.07
280-102119-9 MSD	FEW4-VG#1-INF-MSD MSD	281474	3.99	1230227	6.74	402013	11.09
280-102119-6	FEW4-HARDY#1-INF	308779	3.99	1226350	6.74	420376	11.09
280-102119-7	FEW4-FARRELL#1-INT	290847	3.99	1212828	6.74	421741	11.10
280-102119-8	FEW4-FARRELL#1-EFF	268855	3.98	1243313	6.74	428199	11.08
280-102119-10	FEW4-GUNCLUB#1-INF	276188	3.97	1200230	6.74	419500	11.08
280-102119-11	FEW4-VG#1-INT	272866	3.97	1230447	6.74	420997	11.09
280-102119-12	FEW4-VG#1-EFF	314960	3.97	1217748	6.74	427903	11.08
280-102119-13	FEW4-FINNERTY#1-INF	280586	3.97	1241140	6.74	436171	11.08
280-102119-14	FEW4-FINNERTY#1-INT	299936	3.98	1249211	6.74	433966	11.08
CCVC 280-391324/33		263568	3.97	1174148	6.74	376605	11.07
CCV 280-391346/2		258724	3.97	1226829	6.73	406593	11.06
CCV 280-391346/3		247489	3.97	1234889	6.74	423849	11.06
LCS 280-391346/4		236412	3.97	1210775	6.72	392741	11.06
MB 280-391346/6		236244	3.99	1194261	6.72	405464	11.06

TBAd9 = TBA-d9 (IS)

FB = Fluorobenzene

CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area

RT Limit = \pm 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Sample No.: ICIS 280-390481/14 Date Analyzed: 10/09/2017 10:28
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H0342.D Heated Purge: (Y/N) N
 Calibration ID: 30552

	TBAd9		FB		CBNZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
INITIAL CALIBRATION MID-POINT	272314	3.97	1262666	6.74	383667	11.08	
UPPER LIMIT	544628	4.47	2525332	7.24	767334	11.58	
LOWER LIMIT	136157	3.47	631333	6.24	191834	10.58	
LAB SAMPLE ID	CLIENT SAMPLE ID						
280-102119-15	FEW4-FINNERTY#1-EFF	230474	3.99	1196984	6.73	412298	11.06
280-102119-16	FEW4-DYSON#1-INF	211825	3.97	1193173	6.74	408197	11.08
280-102119-17	FEW4-HOUSER#1	240963	3.97	1199246	6.72	422788	11.06
280-102119-18	FEW4-BROWN#1	253349	3.96	1197391	6.73	413555	11.06
280-102119-19	FEW4-WELTY#2	263113	3.98	1240576	6.73	426720	11.08
280-102119-20	FEW4-1774 OTTO	265875	3.97	1229862	6.74	423371	11.08
280-102119-21	FEW4-BOYD-1	249063	3.97	1218824	6.74	428291	11.08
280-102119-22	FEW4-BOYD-3	265613	3.97	1222268	6.73	424915	11.06
280-102119-23	FEW4-BOYD-J	261442	3.97	1228360	6.72	427447	11.06
280-102119-24	FEW4-HILL#1	245762	3.97	1220590	6.72	423596	11.06
280-102119-22 MS	FEW4-BOYD-3-MS MS	313587	3.97	1242865	6.72	413689	11.06
280-102119-22 MSD	FEW4-BOYD-3-MSD MSD	313593	3.97	1231683	6.72	403437	11.08
CCVC 280-391346/26		290969	3.97	1210617	6.74	396995	11.08

TBAd9 = TBA-d9 (IS)

FB = Fluorobenzene

CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area

RT Limit = \pm 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Sample No.: ICIS 280-390481/14 Date Analyzed: 10/09/2017 10:28
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H0342.D Heated Purge: (Y/N) N
 Calibration ID: 30552

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		656711	14.07				
UPPER LIMIT		1313422	14.57				
LOWER LIMIT		328356	13.57				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-390481/17		631920	14.07				
CCV 280-391324/2		728395	14.07				
CCV 280-391324/3		711259	14.08				
LCS 280-391324/4		709072	14.07				
MB 280-391324/6		643966	14.08				
280-102119-9	FEW4-VG#1-INF	692665	14.08				
280-102119-1	FEW4-BAR 13 RANCH	688795	14.08				
280-102119-2	FEW4-FRITZ LEY#1	711274	14.09				
280-102119-3	FEW4-BERT MCGEE#8	710263	14.09				
280-102119-4	FEW4-CANDES#888	737313	14.09				
280-102119-5	FEW4-FARRELL#1-INF	729907	14.09				
280-102119-25	FEW4-TB-20171006	710716	14.09				
280-102119-26	FEW4-TB-20171007	745079	14.09				
280-102119-9 MS	FEW4-VG#1-INF-MS MS	725469	14.09				
280-102119-9 MSD	FEW4-VG#1-INF-MSD MSD	737374	14.09				
280-102119-6	FEW4-HARDY#1-INF	723955	14.09				
280-102119-7	FEW4-FARRELL#1-INT	713145	14.09				
280-102119-8	FEW4-FARRELL#1-EFF	704585	14.09				
280-102119-10	FEW4-GUNCLUB#1-INF	704996	14.09				
280-102119-11	FEW4-VG#1-INT	715909	14.09				
280-102119-12	FEW4-VG#1-EFF	721084	14.09				
280-102119-13	FEW4-FINNERTY#1-INF	722224	14.09				
280-102119-14	FEW4-FINNERTY#1-INT	739203	14.09				
CCVC 280-391324/33		689069	14.09				
CCV 280-391346/2		723172	14.08				
CCV 280-391346/3		699275	14.07				
LCS 280-391346/4		710169	14.07				
MB 280-391346/6		656197	14.07				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = \pm 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Sample No.: ICIS 280-390481/14 Date Analyzed: 10/09/2017 10:28
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H0342.D Heated Purge: (Y/N) N
 Calibration ID: 30552

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		656711	14.07				
UPPER LIMIT		1313422	14.57				
LOWER LIMIT		328356	13.57				
LAB SAMPLE ID	CLIENT SAMPLE ID						
280-102119-15	FEW4-FINNERTY#1-EFF	679425	14.08				
280-102119-16	FEW4-DYSON#1-INF	655501	14.09				
280-102119-17	FEW4-HOUSER#1	683533	14.09				
280-102119-18	FEW4-BROWN#1	679842	14.08				
280-102119-19	FEW4-WELTY#2	721067	14.09				
280-102119-20	FEW4-1774 OTTO	715864	14.09				
280-102119-21	FEW4-BOYD-1	714589	14.08				
280-102119-22	FEW4-BOYD-3	727550	14.08				
280-102119-23	FEW4-BOYD-J	706141	14.09				
280-102119-24	FEW4-HILL#1	699118	14.07				
280-102119-22 MS	FEW4-BOYD-3-MS MS	761928	14.07				
280-102119-22 MSD	FEW4-BOYD-3-MSD MSD	759807	14.07				
CCVC 280-391346/26		716833	14.07				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = \pm 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BAR 13 RANCH</u>	Lab Sample ID: <u>280-102119-1</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0637.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 10:45</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 12:42</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BAR 13 RANCH</u>	Lab Sample ID: <u>280-102119-1</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0637.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 10:45</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 12:42</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	108		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0637.D
 Lims ID: 280-102119-C-1
 Client ID: FEW4-BAR 13 RANCH
 Sample Type: Client
 Inject. Date: 15-Oct-2017 12:42:30 ALS Bottle#: 20 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-1 pH<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:05:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.974	3.986	-0.012	95	248117	250.0	
* 2 Fluorobenzene	96	6.726	6.738	-0.012	98	1262945	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.062	11.092	-0.030	86	421831	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.088	-0.013	96	688795	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.890	5.902	-0.012	93	838685	11.1	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.308	6.338	-0.030	100	326859	9.89	
\$ 10 Toluene-d8 (Surr)	98	8.851	8.863	-0.012	92	1743346	9.86	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.747	-0.013	86	998884	10.7	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.922	3.952	-0.030	87	11788	0.2771	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0637.D

Injection Date: 15-Oct-2017 12:42:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-1

Lab Sample ID: 280-102119-1

Worklist Smp#: 15

Client ID: FEW4-BAR 13 RANCH

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

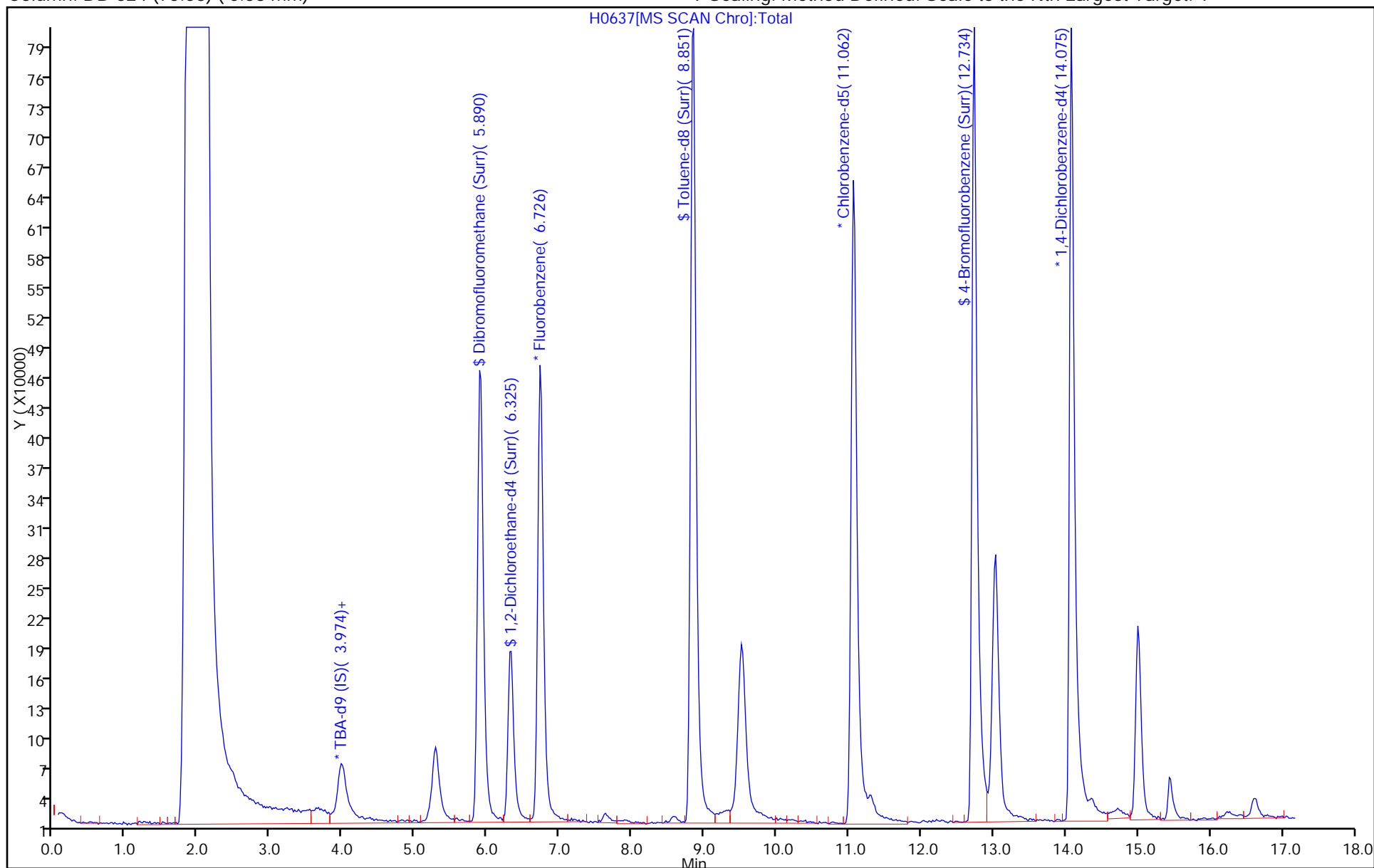
ALS Bottle#: 20

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FRITZ LEY#1</u>	Lab Sample ID: <u>280-102119-2</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0638.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 11:25</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 13:04</u>
Soil Aliquot Vol.: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FRITZ LEY#1</u>	Lab Sample ID: <u>280-102119-2</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0638.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 11:25</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 13:04</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0638.D
 Lims ID: 280-102119-C-2
 Client ID: FEW4-FRITZ LEY#1
 Sample Type: Client
 Inject. Date: 15-Oct-2017 13:04:30 ALS Bottle#: 21 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-2 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:05:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.986	3.986	0.000	95	272876	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	1235330	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.074	11.092	-0.018	86	430003	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.088	-0.001	96	711274	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	849533	11.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.338	-0.018	100	331703	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.863	-0.018	93	1752060	9.72	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.747	-0.018	87	999753	10.4	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.934	3.952	-0.018	88	10994	0.2643	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0638.D

Injection Date: 15-Oct-2017 13:04:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-2

Lab Sample ID: 280-102119-2

Worklist Smp#: 16

Client ID: FEW4-FRITZ LEY#1

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

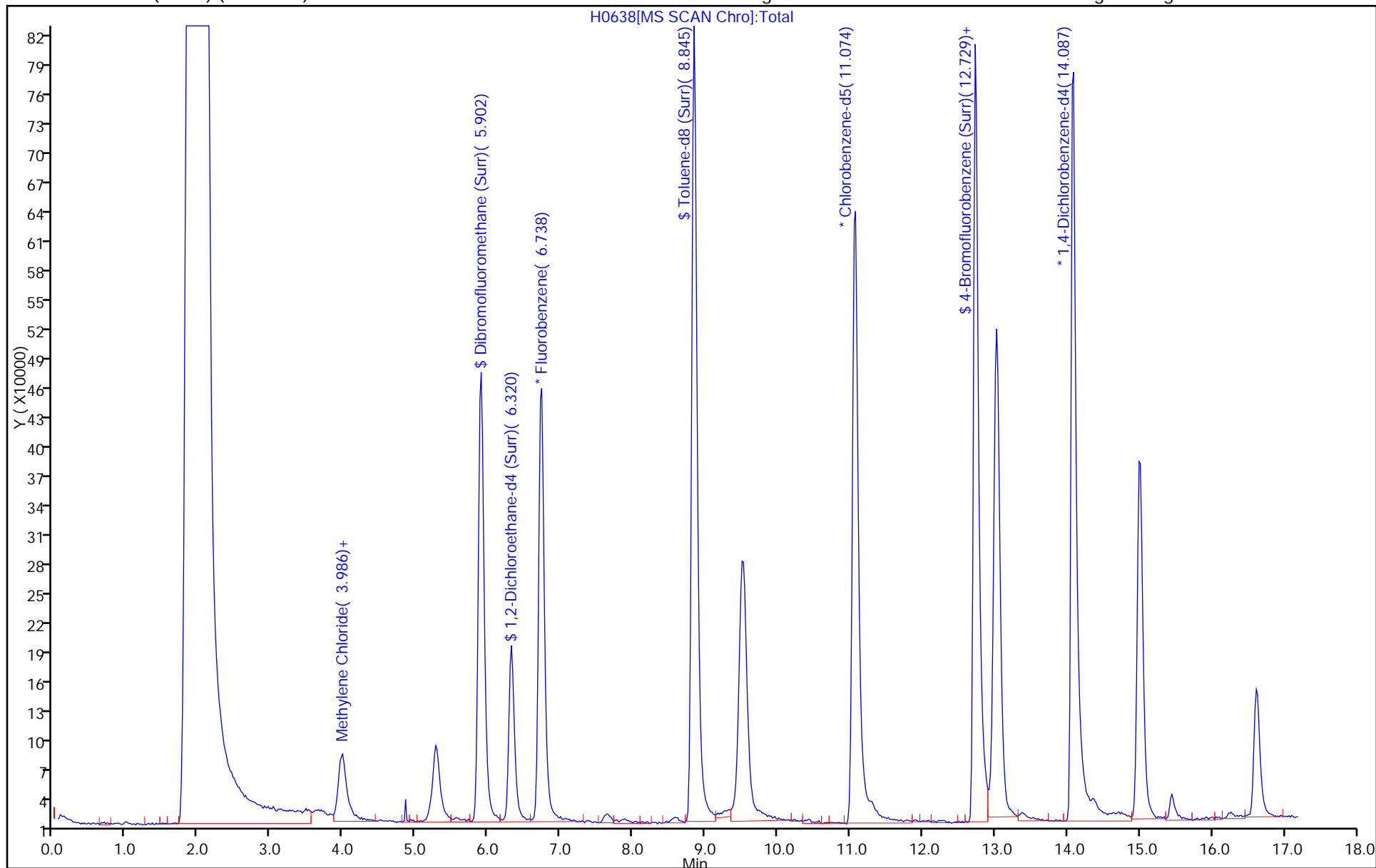
ALS Bottle#: 21

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BERT MCGEE#8</u>	Lab Sample ID: <u>280-102119-3</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0639.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 12:33</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 13:26</u>
Soil Aliquot Vol.: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	2.1	J	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BERT MCGEE#8</u>	Lab Sample ID: <u>280-102119-3</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0639.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 12:33</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 13:26</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
2037-26-5	Toluene-d8 (Surr)	94		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0639.D
 Lims ID: 280-102119-C-3
 Client ID: FEW4-BERT MCGEE#8
 Sample Type: Client
 Inject. Date: 15-Oct-2017 13:26:30 ALS Bottle#: 22 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-3 pH<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:05:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.986	-0.014	96	259816	250.0	
* 2 Fluorobenzene	96	6.741	6.738	0.003	99	1243378	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.078	11.092	-0.014	86	429083	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.091	14.088	0.003	96	710263	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.902	0.003	93	841199	11.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.338	-0.015	99	326678	10.0	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.863	-0.015	93	1741385	9.68	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.747	-0.015	86	967550	10.0	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43	3.502	3.516	-0.014	94	11350	2.08	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.937	3.952	-0.015	90	11733	0.2802	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0639.D

Injection Date: 15-Oct-2017 13:26:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-3

Lab Sample ID: 280-102119-3

Worklist Smp#: 17

Client ID: FEW4-BERT MCGEE#8

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

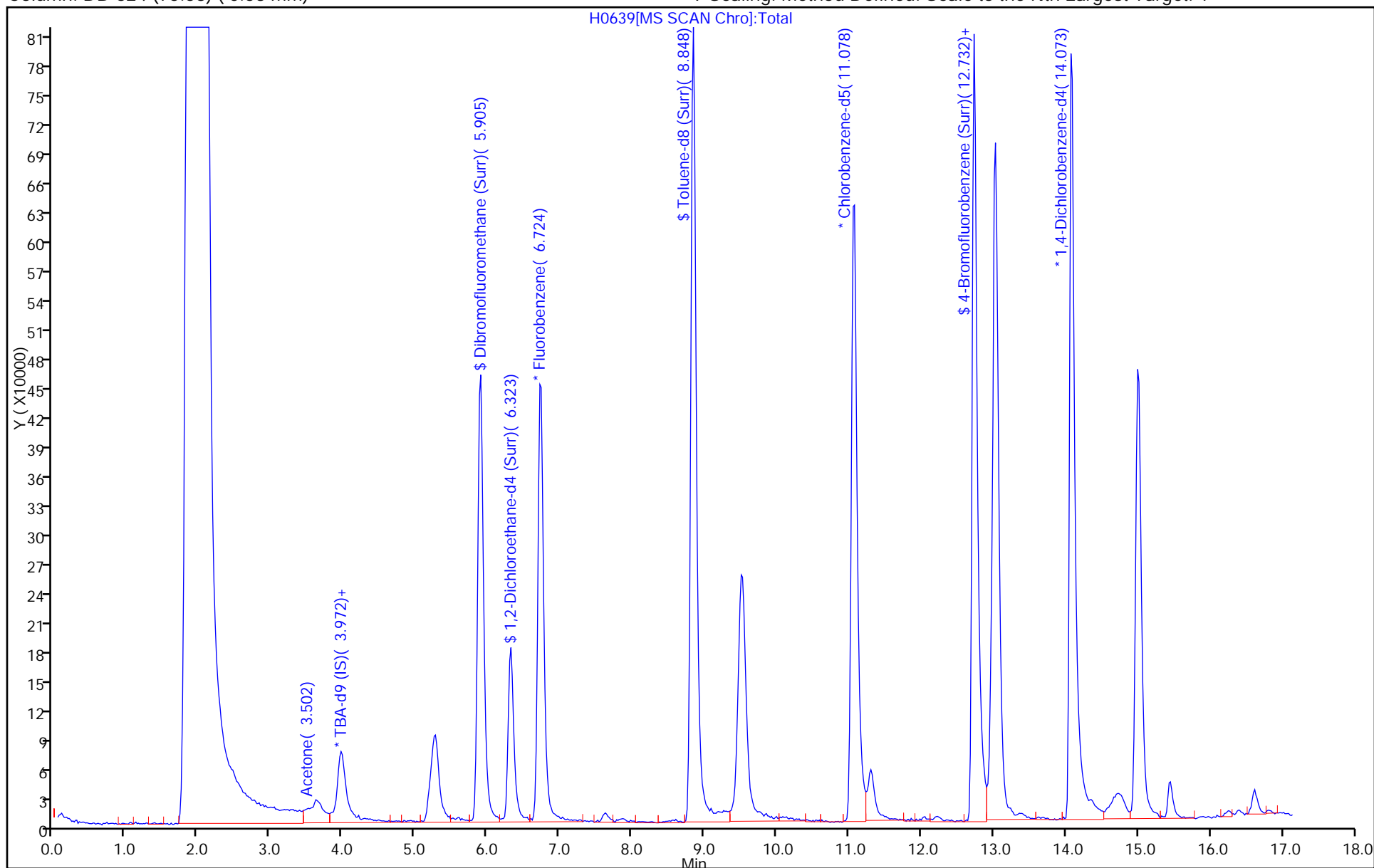
ALS Bottle#: 22

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0639.D

Injection Date: 15-Oct-2017 13:26:30

Instrument ID: VMS_H

Lims ID: 280-102119-C-3

Lab Sample ID: 280-102119-3

Client ID: FEW4-BERT MCGEE#8

Operator ID: MOANM

ALS Bottle#: 22

Worklist Smp#: 17

Purge Vol: 20.000 mL

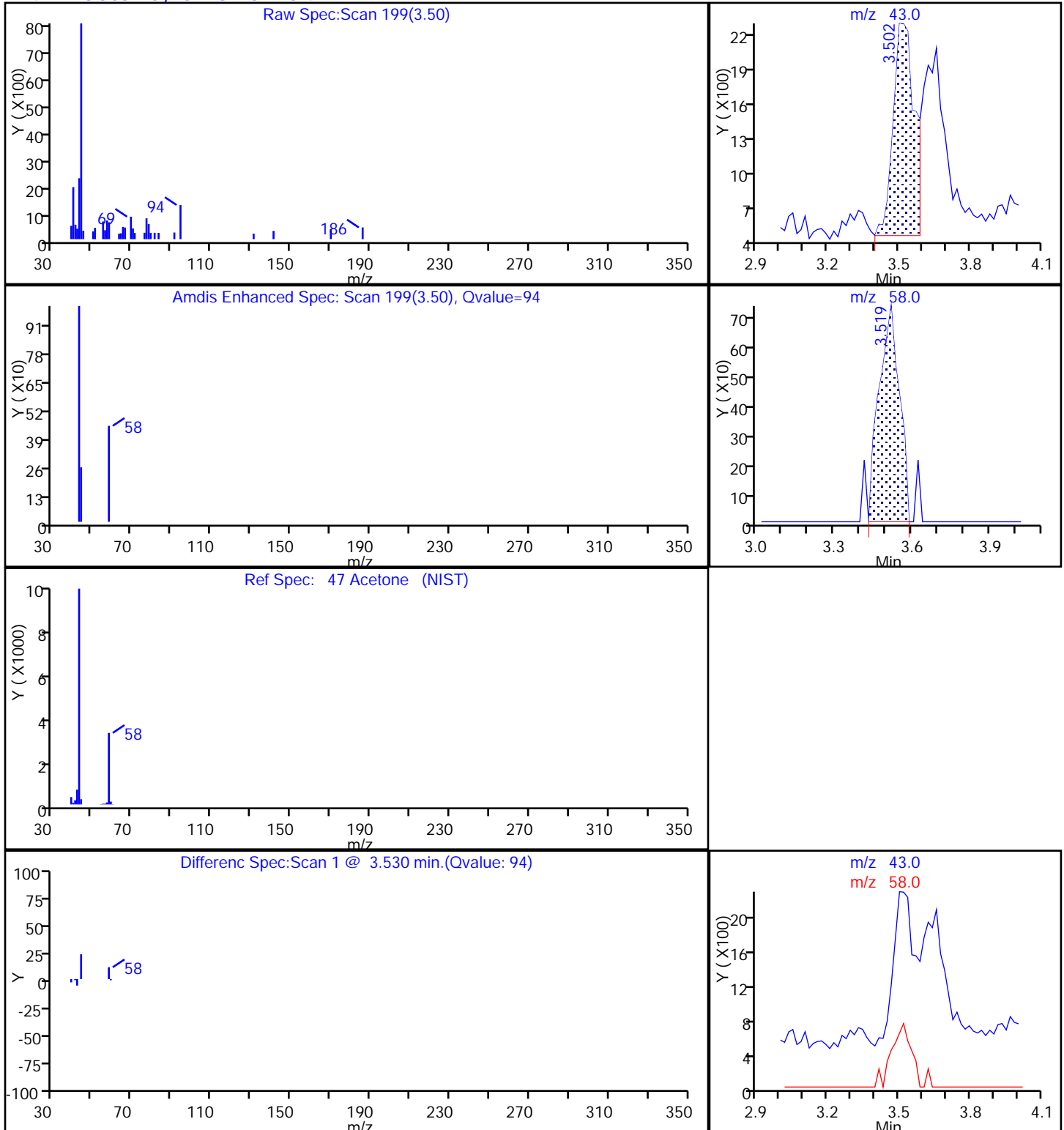
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

47 Acetone, CAS: 67-64-1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-CANDES#888</u>	Lab Sample ID: <u>280-102119-4</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0640.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 13:38</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 13:48</u>
Soil Aliquot Vol.: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	1.9	J	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-CANDES#888</u>	Lab Sample ID: <u>280-102119-4</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0640.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 13:38</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 13:48</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0640.D
 Lims ID: 280-102119-A-4
 Client ID: FEW4-CANDES#888
 Sample Type: Client
 Inject. Date: 15-Oct-2017 13:48:30 ALS Bottle#: 23 Worklist Smp#: 18
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-4 pH<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:05:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.986	-0.017	96	285478	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	1266295	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.074	11.092	-0.018	86	433581	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.088	-0.001	96	737313	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	851748	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.338	-0.018	100	342667	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.863	-0.018	93	1769178	9.74	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.747	-0.018	87	1018672	10.2	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43	3.516	3.516	0.000	97	11233	1.94	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.934	3.952	-0.018	89	10995	0.2578	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0640.D

Injection Date: 15-Oct-2017 13:48:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-A-4

Lab Sample ID: 280-102119-4

Worklist Smp#: 18

Client ID: FEW4-CANDES#888

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

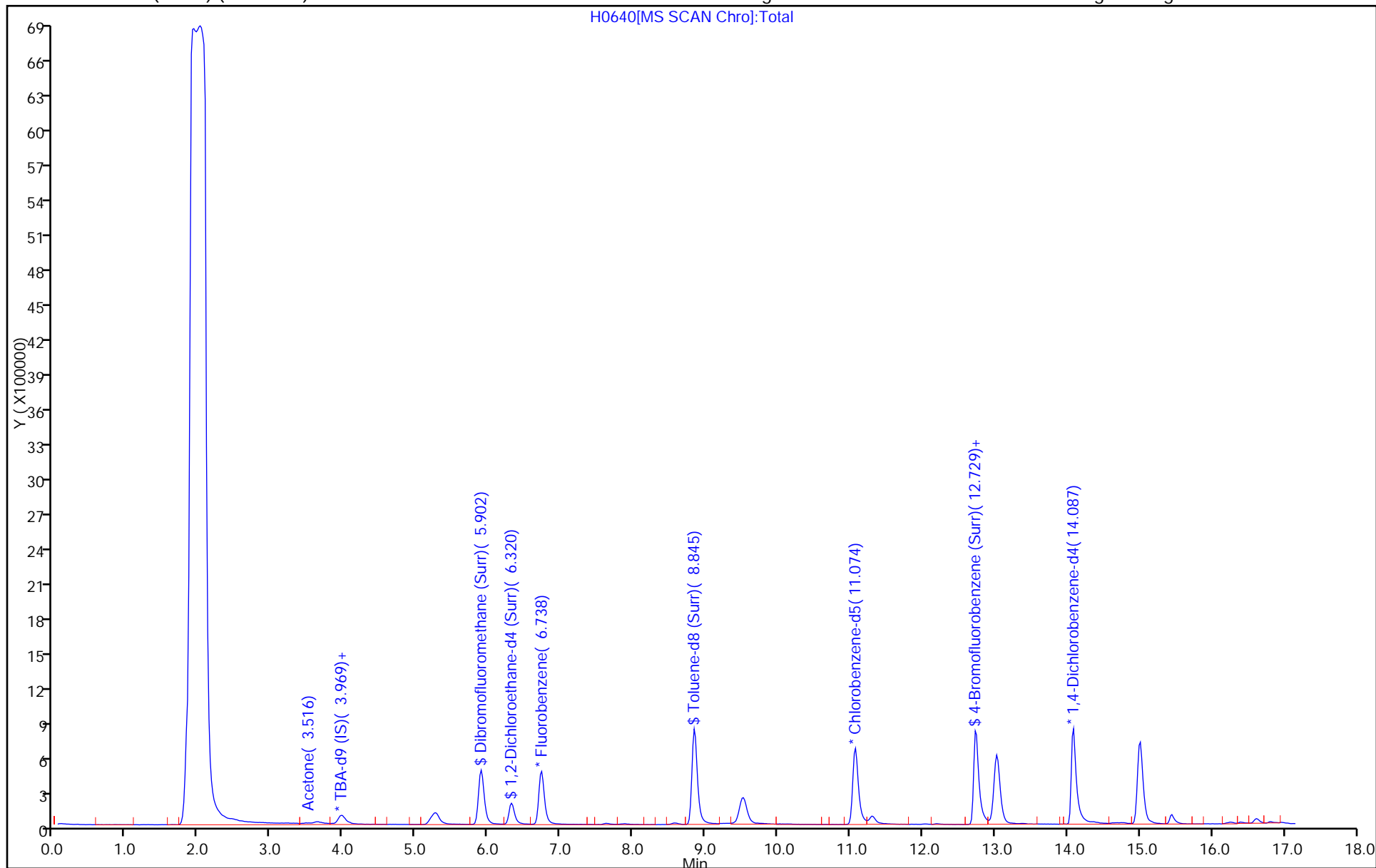
ALS Bottle#: 23

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0640.D

Injection Date: 15-Oct-2017 13:48:30

Instrument ID: VMS_H

Lims ID: 280-102119-A-4

Lab Sample ID: 280-102119-4

Client ID: FEW4-CANDES#888

Operator ID: MOANM

ALS Bottle#: 23

Worklist Smp#: 18

Purge Vol: 20.000 mL

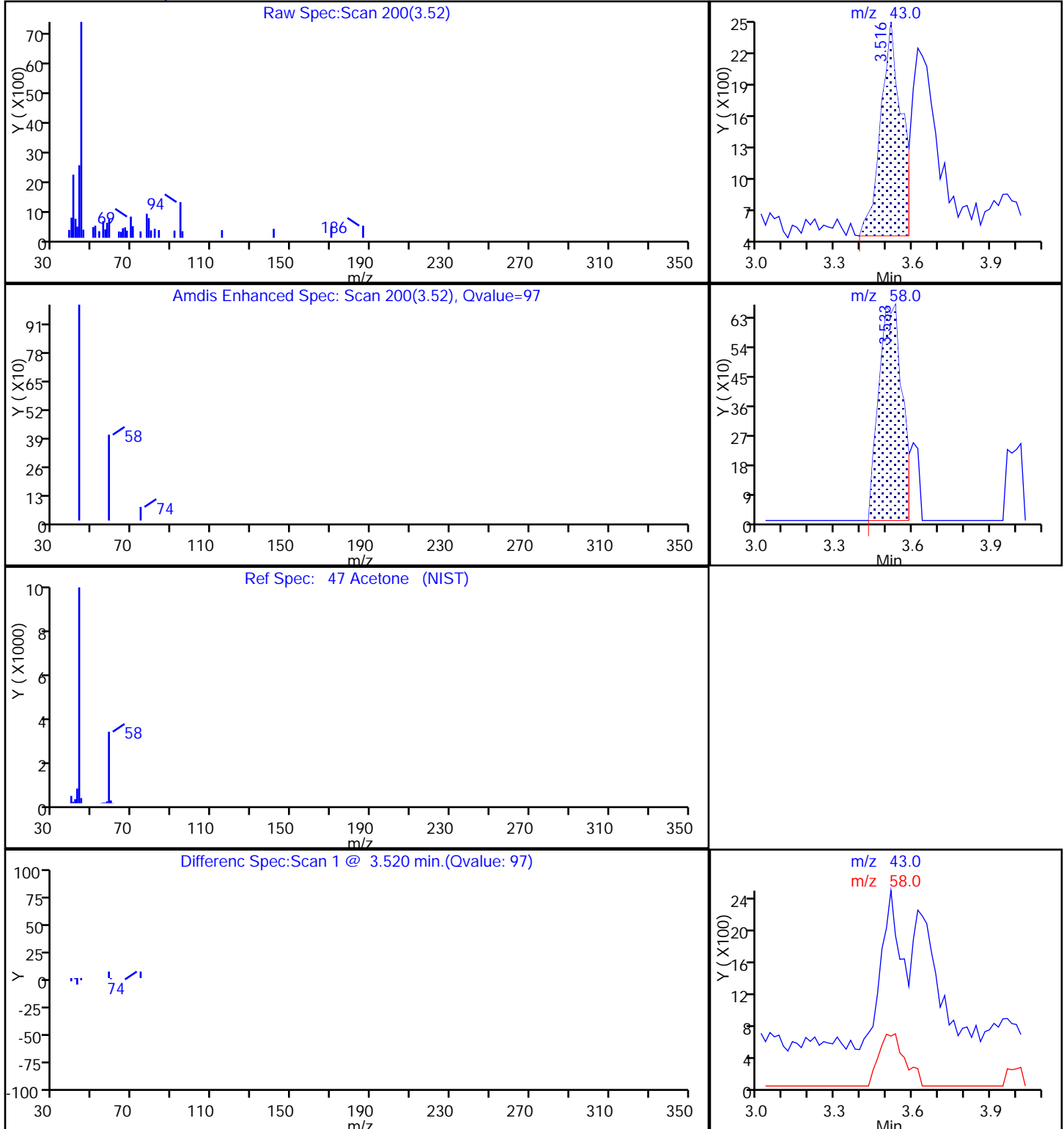
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

47 Acetone, CAS: 67-64-1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FARRELL#1-INF</u>	Lab Sample ID: <u>280-102119-5</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0641.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 14:35</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 14:10</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FARRELL#1-INF</u>	Lab Sample ID: <u>280-102119-5</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0641.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 14:35</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 14:10</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.62	J	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	109		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0641.D
 Lims ID: 280-102119-A-5
 Client ID: FEW4-FARRELL#1-INF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 14:10:30 ALS Bottle#: 24 Worklist Smp#: 19
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-5 pH<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:05:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.986	-0.017	96	269421	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	1247659	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.074	11.092	-0.018	86	426737	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.088	-0.001	96	729907	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	837525	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.338	-0.018	100	331252	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.863	-0.018	93	1740931	9.74	
\$ 11 4-Bromofluorobenzene (Surr	95	12.746	12.747	-0.001	87	1000820	10.1	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43	3.516	3.516	0.000	96	10421	1.64	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.934	3.952	-0.018	90	10719	0.2551	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95	7.208	7.208	0.000	98	37785	0.6224	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0641.D

Injection Date: 15-Oct-2017 14:10:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-A-5

Lab Sample ID: 280-102119-5

Worklist Smp#: 19

Client ID: FEW4-FARRELL#1-INF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

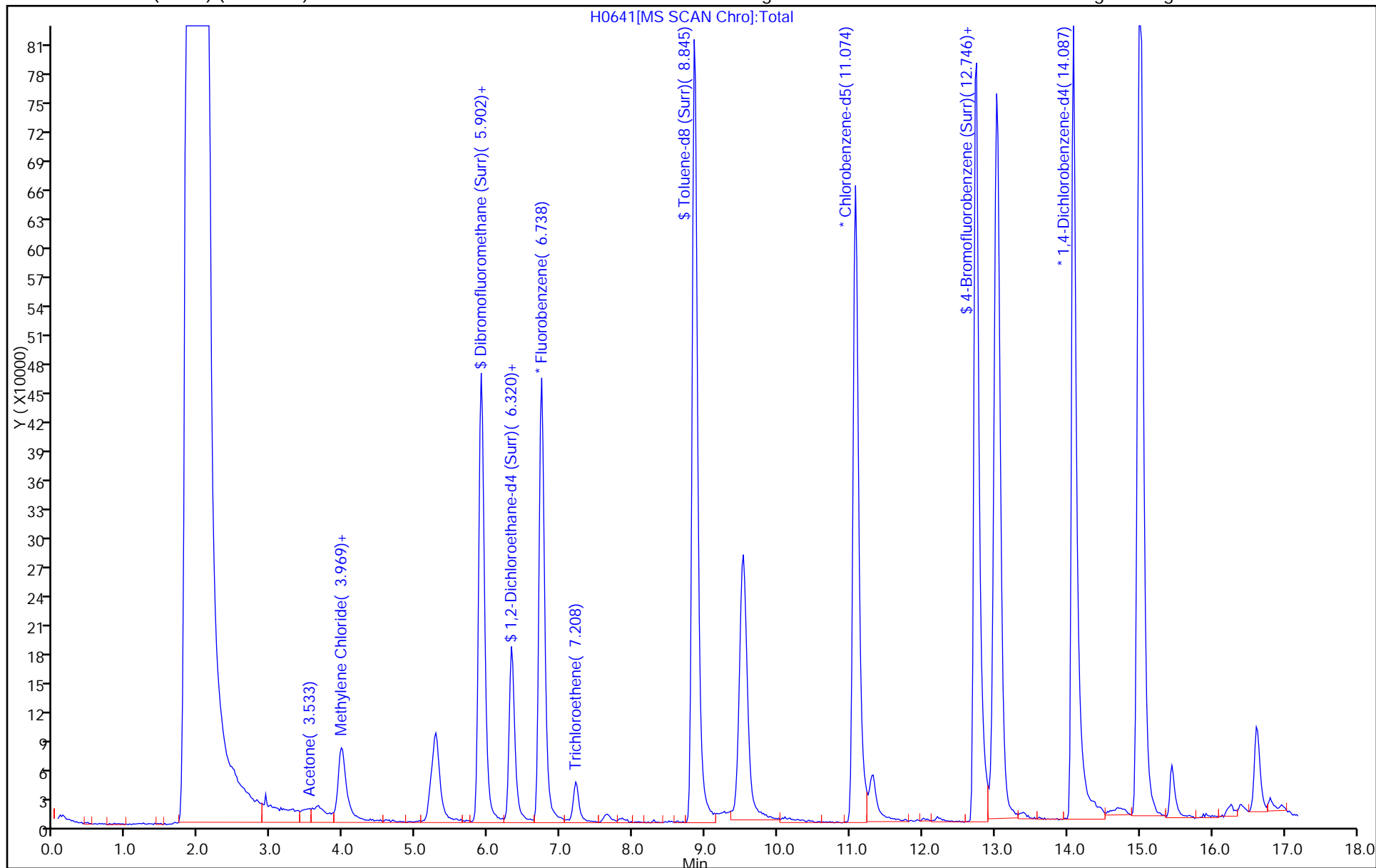
ALS Bottle#: 24

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0641.D

Injection Date: 15-Oct-2017 14:10:30

Instrument ID: VMS_H

Lims ID: 280-102119-A-5

Lab Sample ID: 280-102119-5

Client ID: FEW4-FARRELL#1-INF

Operator ID: MOANM

ALS Bottle#: 24

Worklist Smp#: 19

Purge Vol: 20.000 mL

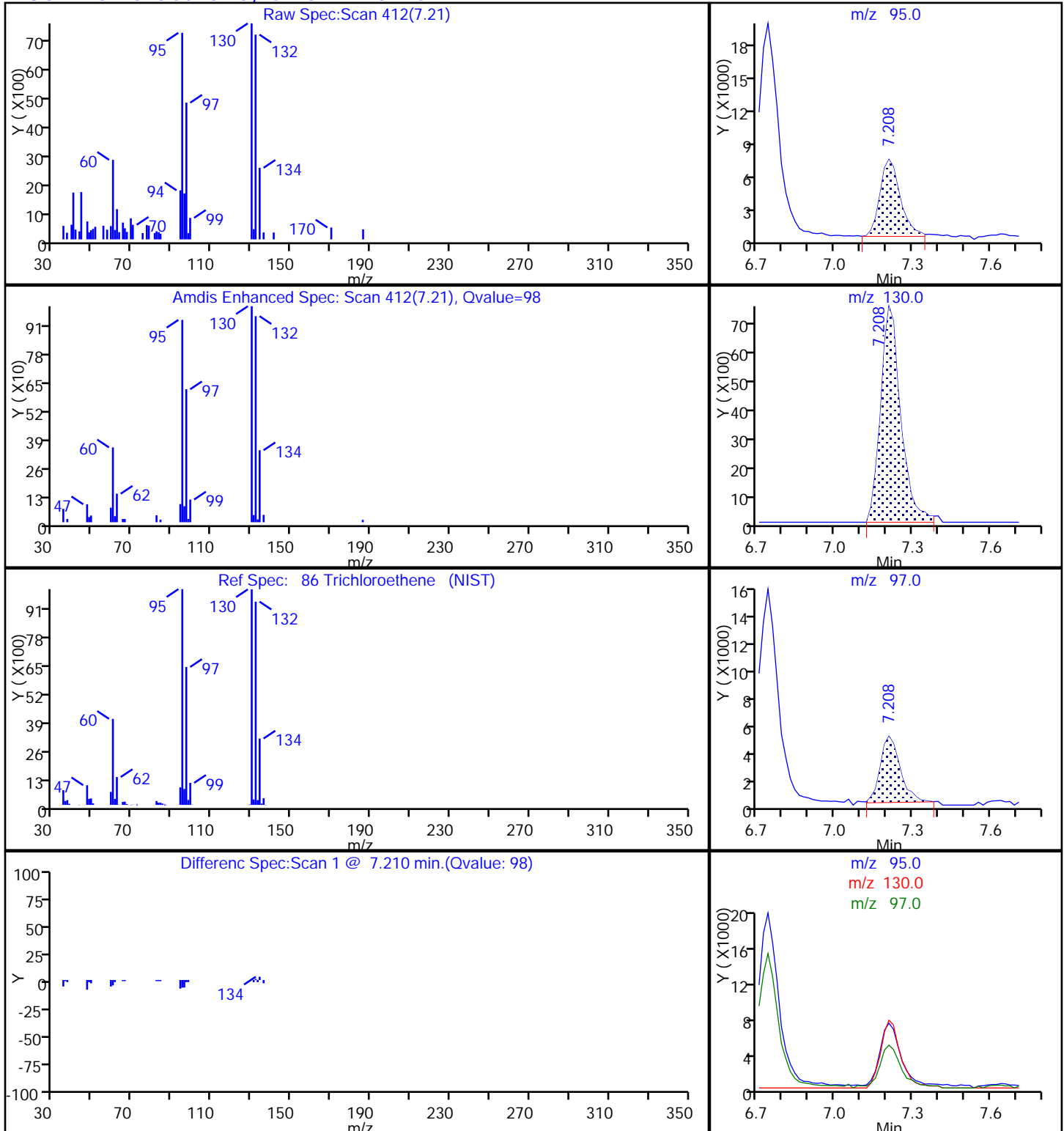
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-HARDY#1-INF</u>	Lab Sample ID: <u>280-102119-6</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0648.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 14:37</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 16:43</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-HARDY#1-INF Lab Sample ID: 280-102119-6

Matrix: Water Lab File ID: H0648.D

Analysis Method: 8260B Date Collected: 10/06/2017 14:37

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 16:43

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.64	J	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	113		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0648.D
 Lims ID: 280-102119-B-6
 Client ID: FEW4-HARDY#1-INF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 16:43:30 ALS Bottle#: 31 Worklist Smp#: 25
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-6 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 15-Oct-2017 17:10:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.987	3.969	0.018	96	308779	250.0	
* 2 Fluorobenzene	96	6.739	6.738	0.001	98	1226350	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.093	11.074	0.019	86	420376	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.089	14.087	0.002	96	723955	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.903	5.902	0.001	93	845964	11.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.339	6.320	0.019	99	332798	10.4	
\$ 10 Toluene-d8 (Surr)	98	8.864	8.845	0.019	92	1732662	9.84	
\$ 11 4-Bromofluorobenzene (Surr	95	12.748	12.729	0.019	86	1002595	10.2	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.953	3.934	0.019	87	10123	0.2451	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95	7.227	7.208	0.019	97	37992	0.6367	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0648.D

Injection Date: 15-Oct-2017 16:43:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-B-6

Lab Sample ID: 280-102119-6

Worklist Smp#: 25

Client ID: FEW4-HARDY#1-INF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

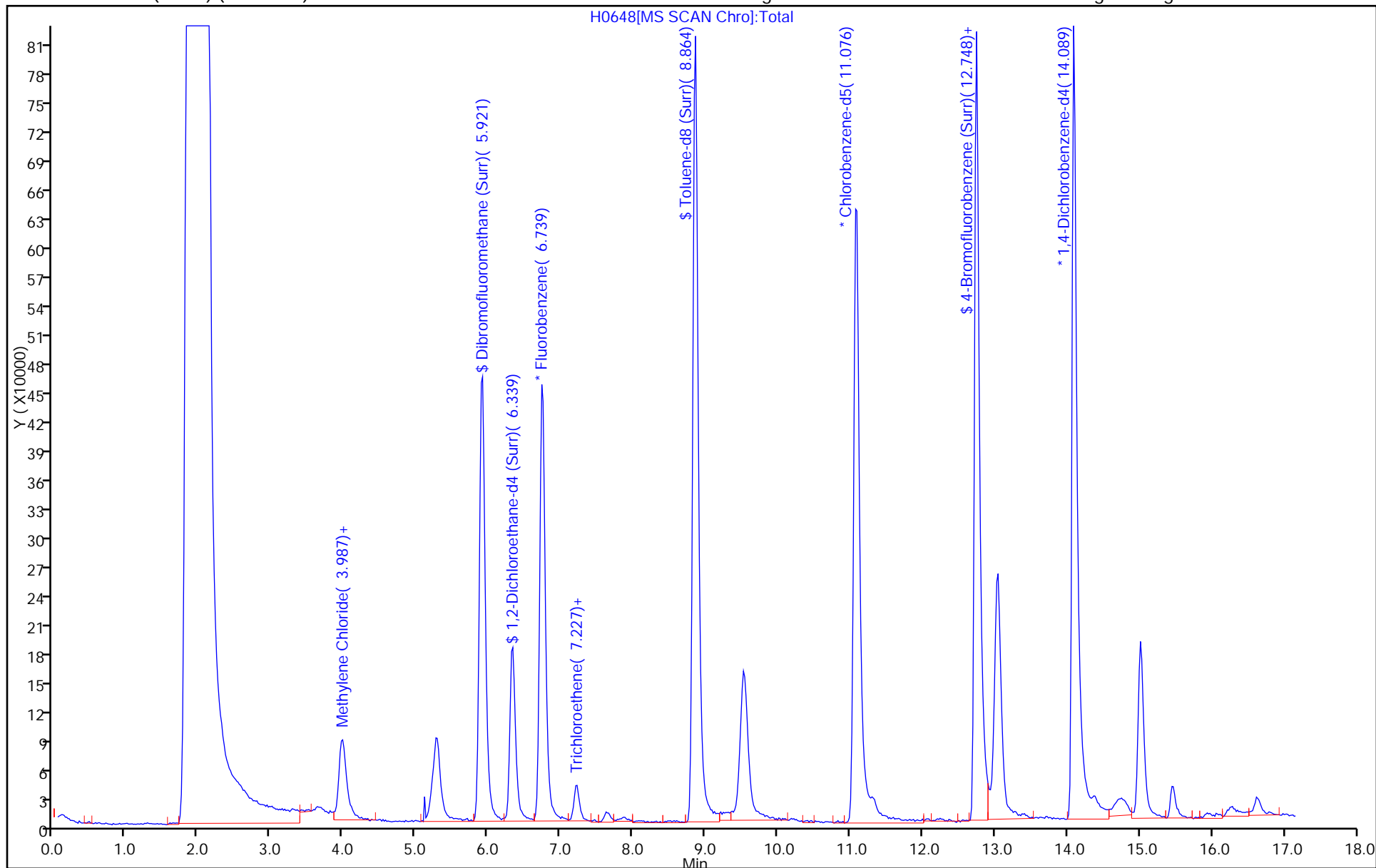
ALS Bottle#: 31

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0648.D

Injection Date: 15-Oct-2017 16:43:30

Instrument ID: VMS_H

Lims ID: 280-102119-B-6

Lab Sample ID: 280-102119-6

Client ID: FEW4-HARDY#1-INF

Operator ID: MOANM

ALS Bottle#: 31

Worklist Smp#: 25

Purge Vol: 20.000 mL

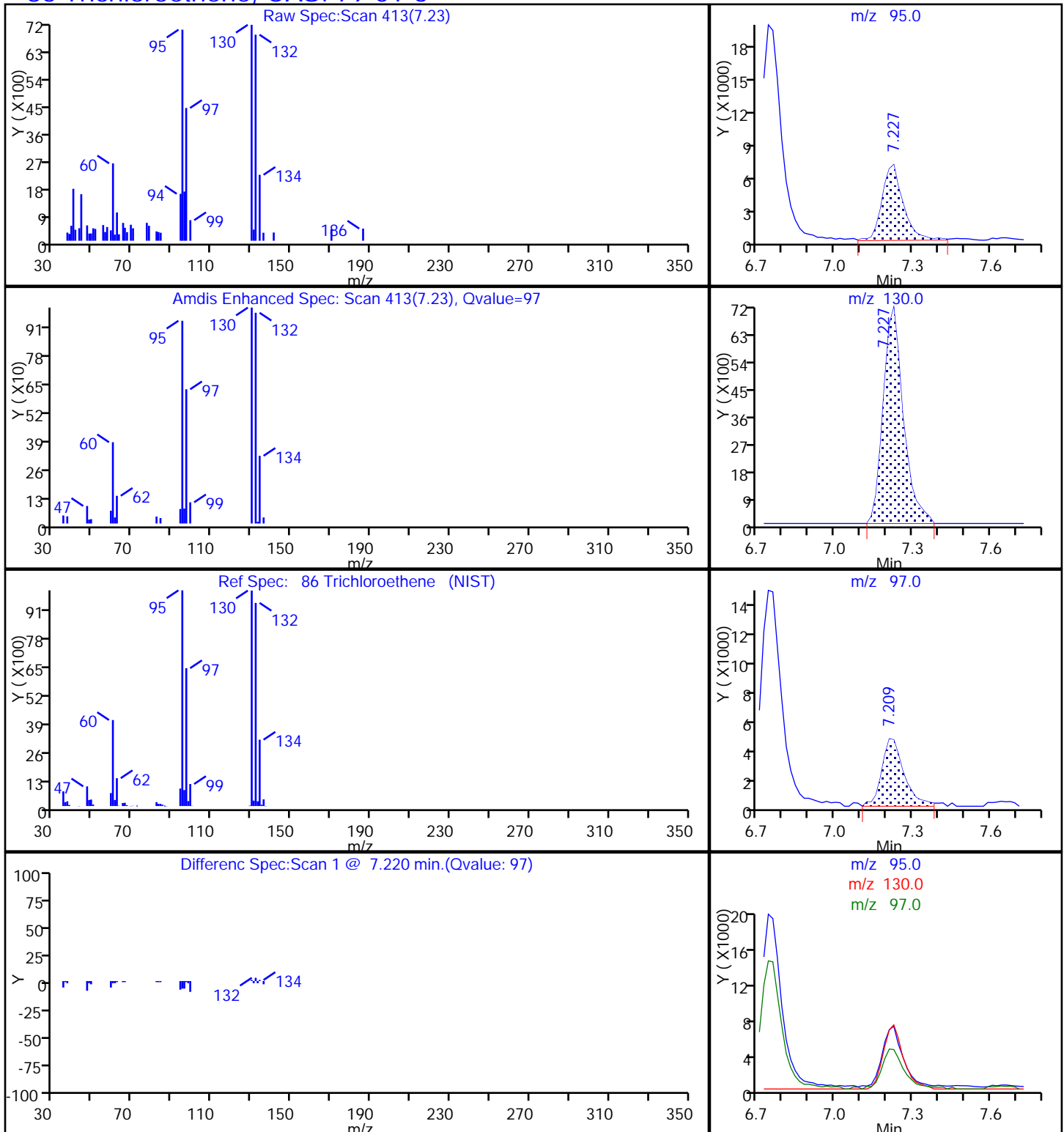
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FARRELL#1-INT</u>	Lab Sample ID: <u>280-102119-7</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0649.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 14:40</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 17:04</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-FARRELL#1-INT Lab Sample ID: 280-102119-7

Matrix: Water Lab File ID: H0649.D

Analysis Method: 8260B Date Collected: 10/06/2017 14:40

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 17:04

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	111		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0649.D
 Lims ID: 280-102119-A-7
 Client ID: FEW4-FARRELL#1-INT
 Sample Type: Client
 Inject. Date: 15-Oct-2017 17:04:30 ALS Bottle#: 32 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-7 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:18:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.990	3.969	0.021	95	290847	250.0	
* 2 Fluorobenzene	96	6.742	6.738	0.004	98	1212828	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.096	11.074	0.022	86	421741	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.092	14.087	0.005	96	713145	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.906	5.902	0.004	94	824467	11.4	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.342	6.320	0.022	100	328702	10.4	
\$ 10 Toluene-d8 (Surr)	98	8.867	8.845	0.022	92	1714052	9.70	
\$ 11 4-Bromofluorobenzene (Surr	95	12.751	12.729	0.022	87	982155	10.1	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.956	3.934	0.022	93	11883	0.2909	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0649.D

Injection Date: 15-Oct-2017 17:04:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-A-7

Lab Sample ID: 280-102119-7

Worklist Smp#: 26

Client ID: FEW4-FARRELL#1-INT

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

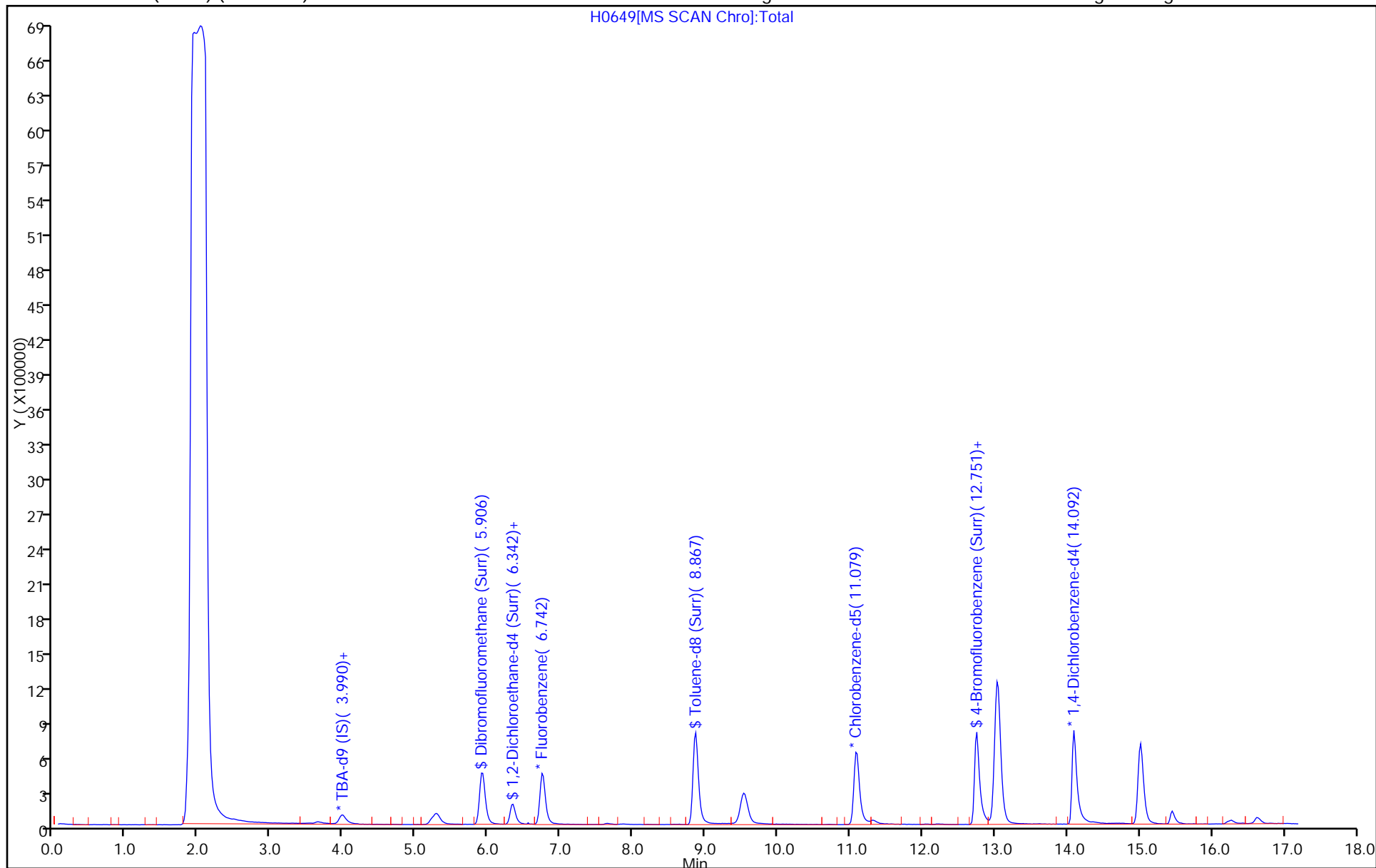
ALS Bottle#: 32

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FARRELL#1-EFF</u>	Lab Sample ID: <u>280-102119-8</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0650.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 14:45</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 17:26</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FARRELL#1-EFF</u>	Lab Sample ID: <u>280-102119-8</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0650.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 14:45</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 17:26</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		81-118
2037-26-5	Toluene-d8 (Surr)	90		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0650.D
 Lims ID: 280-102119-A-8
 Client ID: FEW4-FARRELL#1-EFF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 17:26:30 ALS Bottle#: 33 Worklist Smp#: 27
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-8 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 06:09:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.969	0.006	95	268855	250.0	
* 2 Fluorobenzene	96	6.744	6.738	0.006	99	1243313	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.080	11.074	0.006	86	428199	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.093	14.087	0.006	96	704585	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.908	5.902	0.006	93	805363	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.326	6.320	0.006	99	311974	9.58	
\$ 10 Toluene-d8 (Surr)	98	8.868	8.845	0.023	92	1660619	9.25	
\$ 11 4-Bromofluorobenzene (Surr	95	12.752	12.729	0.023	87	944564	9.88	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.940	3.934	0.006	86	10152	0.2424	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0650.D

Injection Date: 15-Oct-2017 17:26:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-A-8

Lab Sample ID: 280-102119-8

Worklist Smp#: 27

Client ID: FEW4-FARRELL#1-EFF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

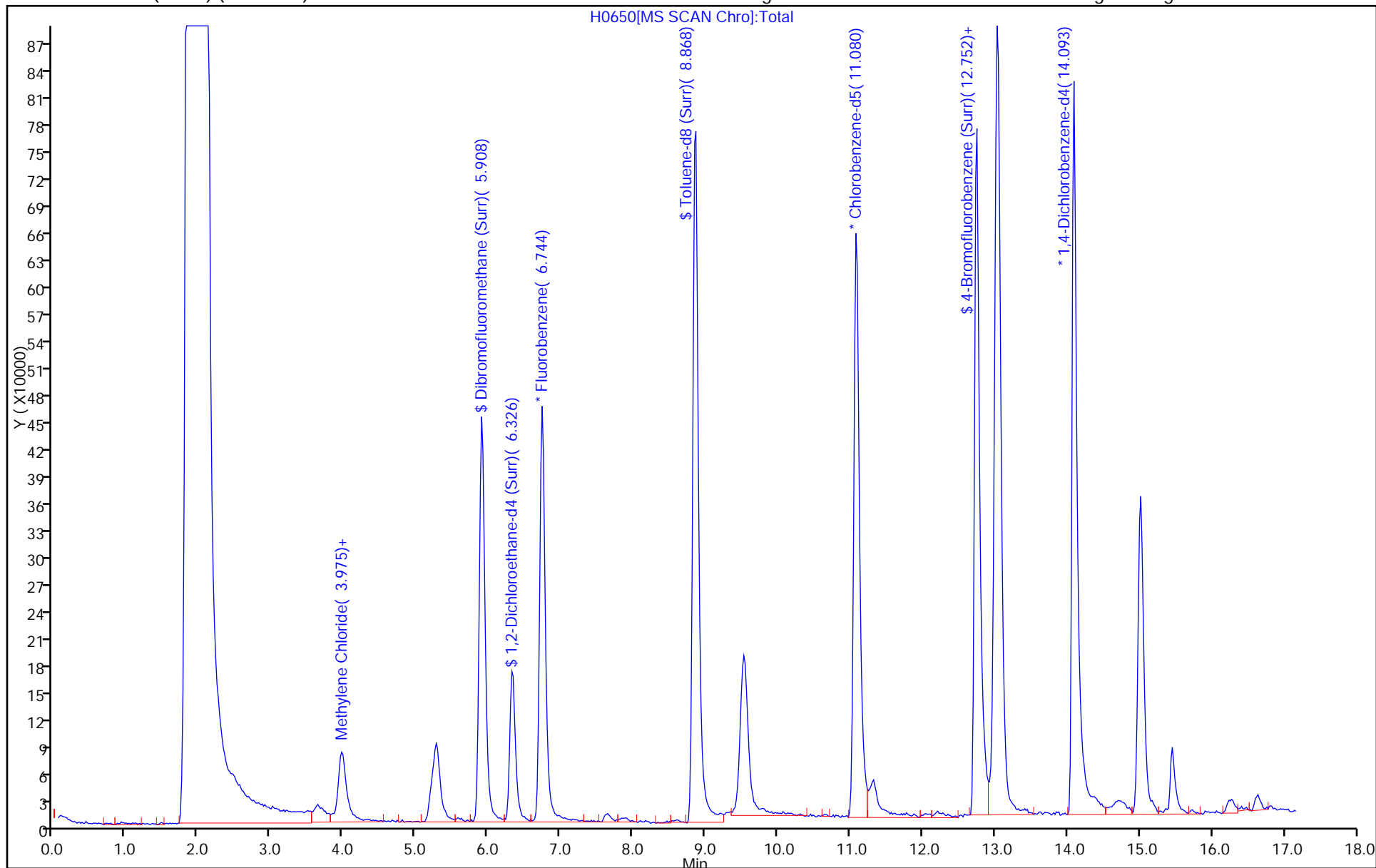
ALS Bottle#: 33

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-VG#1-INF</u>	Lab Sample ID: <u>280-102119-9</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0636.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:47</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 12:21</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-VG#1-INF</u>	Lab Sample ID: <u>280-102119-9</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0636.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:47</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 12:21</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	4.9		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	111		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		81-118
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0636.D
 Lims ID: 280-102119-E-9
 Client ID: FEW4-VG#1-INF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 12:21:30 ALS Bottle#: 19 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-E-9 pH<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:04:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.973	3.986	-0.013	95	222009	250.0	
* 2 Fluorobenzene	96	6.725	6.738	-0.013	98	1244298	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.062	11.092	-0.030	87	421053	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.088	-0.013	96	692665	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.889	5.902	-0.013	93	843253	11.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.307	6.338	-0.031	100	317795	9.76	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.863	-0.013	92	1762488	9.99	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.747	-0.013	86	985995	10.5	
\$ 152 Trifluorotoluene (Surr)	1		0.000				ND	
\$ 7 BFB	95	2.476	2.455	0.021	0	1138	NR	7
28 Dichlorodifluoromethane	85		2.158				ND	
27 Chlorotrifluoroethene	116		2.173				ND	
30 Chloromethane	50		2.280				ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329				ND	
32 Vinyl chloride	62		2.419				ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521				ND	
34 Ethylene oxide	43		2.633				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
37 Dichlorofluoromethane	67		2.941				ND	
38 Trichlorofluoromethane	101		2.994				ND	
49 Isopropyl alcohol	45	3.155	3.155	0.000	1	40	NC	
39 Ethanol	45		3.155				ND	
40 Ethyl ether	59		3.220				ND	
43 Propene oxide	58		3.295				ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322				ND	
44 Acrolein	56		3.359				ND	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43		3.516				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
48 Iodomethane	142		3.638				ND	
50 Carbon disulfide	76		3.725				ND	
51 Acetonitrile	41		3.800				ND	
52 3-Chloro-1-propene	41		3.812				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.939	3.952	-0.013	90	11326	0.2703	
55 2-Methyl-2-propanol	59		4.074				ND	
57 Acrylonitrile	53		4.213				ND	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
59 Hexane	57		4.492				ND	
60 1,1-Dichloroethane	63		4.683				ND	
61 Vinyl acetate	43		4.718				ND	
62 Isopropyl ether	87		4.723				ND	
63 2-Chloro-1,3-butadiene	53		4.775				ND	
64 Tert-butyl ethyl ether	59		5.141				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
66 2,2-Dichloropropane	77		5.362				ND	
69 Ethyl acetate	43		5.402				ND	
70 Propionitrile	54		5.437				ND	
71 sec-Butyl Alcohol	45		5.571				ND	
72 Methacrylonitrile	41		5.594				ND	
73 Chlorobromomethane	128		5.641				ND	
74 Tetrahydrofuran	42		5.693				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
78 1,1-Dichloropropene	75		6.146				ND	
79 Carbon tetrachloride	117		6.163				ND	
80 Isobutyl alcohol	41		6.285				ND	
81 Benzene	78		6.407				ND	
82 1,2-Dichloroethane	62		6.425				ND	
83 Tert-amyl methyl ether	73		6.517				ND	
84 n-Heptane	43		6.703				ND	
85 n-Butanol	56		7.144				ND	
86 Trichloroethene	95	7.195	7.208	-0.013	98	298354	4.93	
88 2-Pentanone	43		7.452				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
91 Methyl methacrylate	100		7.631				ND	
92 Dibromomethane	93		7.679				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
95 2-Nitropropane	41		8.171				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
96 2-Chloroethyl vinyl ether	63		8.497				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
101 Ethyl methacrylate	69		9.385				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164		9.734				ND	
104 1,3-Dichloropropane	76		9.769				ND	
105 2-Hexanone	43		9.908				ND	
107 Tetrahydrothiophene	60		10.104				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
110 1-Chlorohexane	91		11.092				ND	
111 Chlorobenzene	112		11.127				ND	
112 1,1,1,2-Tetrachloroethane	131		11.266				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
119 cis-1,4-Dichloro-2-butene	53		12.630				ND	
120 Cyclohexanone	55		12.677				ND	
122 Bromobenzene	156		12.921				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
123 1,2,3-Trichloropropane	110		12.973				ND	
124 trans-1,4-Dichloro-2-buten	53		13.008				ND	
125 N-Propylbenzene	120		13.060				ND	
126 2-Chlorotoluene	126		13.165				ND	
127 1,3,5-Trimethylbenzene	105		13.269				ND	
128 4-Chlorotoluene	126		13.287				ND	
129 tert-Butylbenzene	119		13.652				ND	
130 1,2,4-Trimethylbenzene	105		13.705				ND	
22 Pentachloroethane	167		13.716				ND	
131 sec-Butylbenzene	134		13.896				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
133 4-Isopropyltoluene	119		14.053				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
135 1,2,3-Trimethylbenzene	105		14.145				ND	
137 n-Butylbenzene	91		14.488				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
140 1,3,5-Trichlorobenzene	180		15.468				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
142 Hexachlorobutadiene	225		16.212				ND	
143 Naphthalene	128		16.282				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	
21 2,4-Dimethylpentane	1		0.000				ND	
162 1-Chlorohexane TIC	1		0.000				ND	
164 1-Chloro-1-fluoroethane TI	1		0.000				ND	
19 2,3-Dimethylpentane	1		0.000				ND	
15 Dimethyl disulfide	1		0.000				ND	
13 n-Nonyl Aldehyde	1		0.000				ND	
12 3-Ethylpentane	1		0.000				ND	
24 3-Methylhexane	1		0.000				ND	
14 2-Butoxyethanol TIC	1		0.000				ND	
23 2-Methylhexane	1		0.000				ND	
16 3,3-Dimethylpentane	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000				ND	
18 2,2-Dimethylpentane	1		0.000				ND	
S 151 1,2-Dichloroethene, Total	96		2.000				ND	
S 148 1,3-Dichloropropene, Total	1		0.000				ND	
S 160 TAH	1				0		0	
S 145 Trihalomethanes, Total	1		0.000				ND	
S 146 Xylenes, Total (URS)	1		0.000				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	
S 147 Total BTEX	1		0.000				ND	
T 165 Cyclohexane TIC	56		6.023				ND	
T 163 Methyl cyclohexane TIC	55		7.469				ND	
T 25 Dichloroacetonitrile TIC	74		0.000				ND	
T 155 4-Ethyltoluene TIC	1		0.000				ND	
T 68 Propene oxide TIC	58		0.000				ND	
T 161 n-Nonane TIC	1		0.000				ND	
T 154 Dicyclopentadiene TIC	1		0.000				ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000				ND	
T 153 Propene TIC	1		0.000				ND	
T 156 1,3-Butadiene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0636.D

Injection Date: 15-Oct-2017 12:21:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-E-9

Lab Sample ID: 280-102119-9

Worklist Smp#: 14

Client ID: FEW4-VG#1-INF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

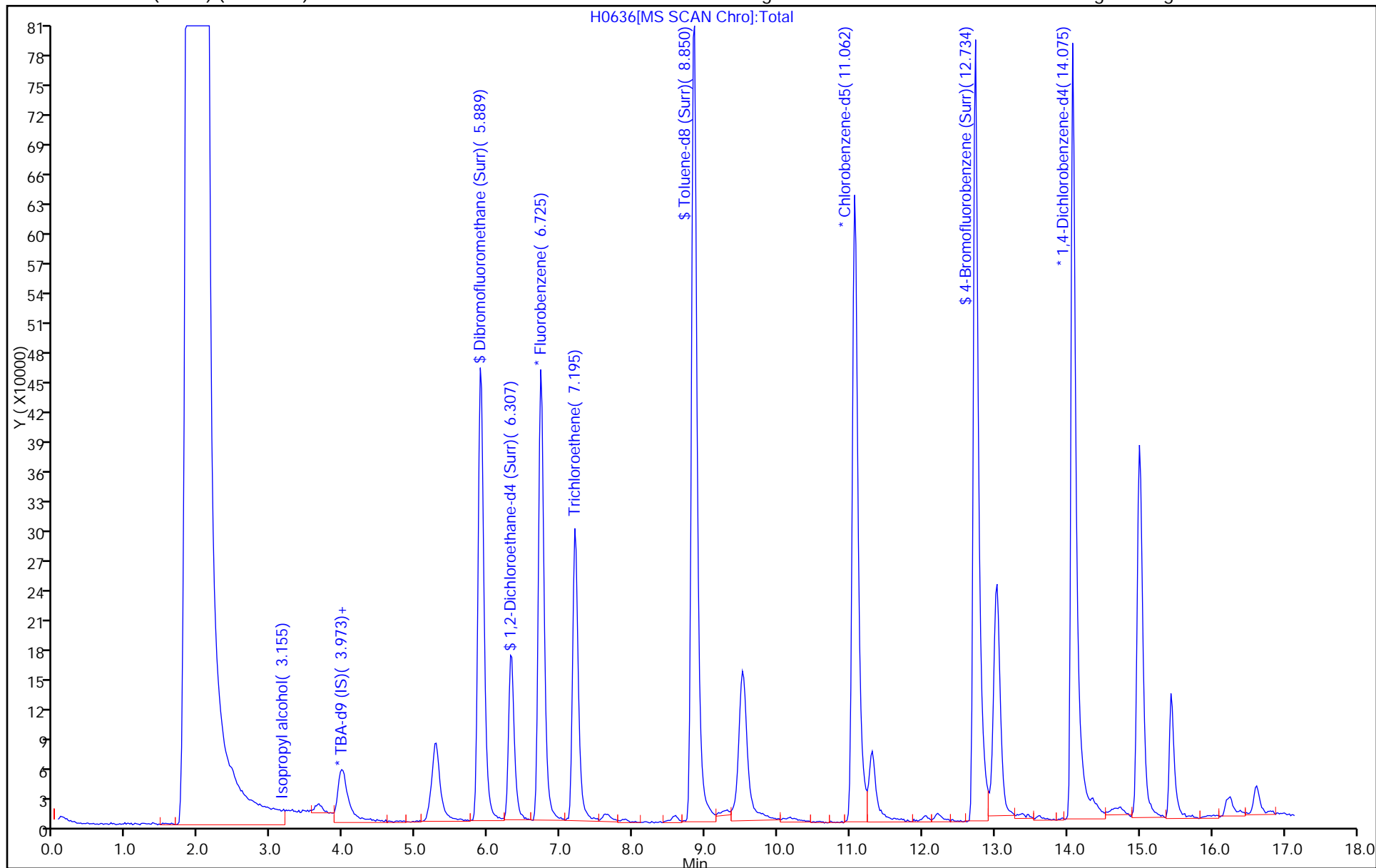
ALS Bottle#: 19

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0636.D

Injection Date: 15-Oct-2017 12:21:30

Instrument ID: VMS_H

Lims ID: 280-102119-E-9

Lab Sample ID: 280-102119-9

Client ID: FEW4-VG#1-INF

Operator ID: MOANM

ALS Bottle#: 19

Worklist Smp#: 14

Purge Vol: 20.000 mL

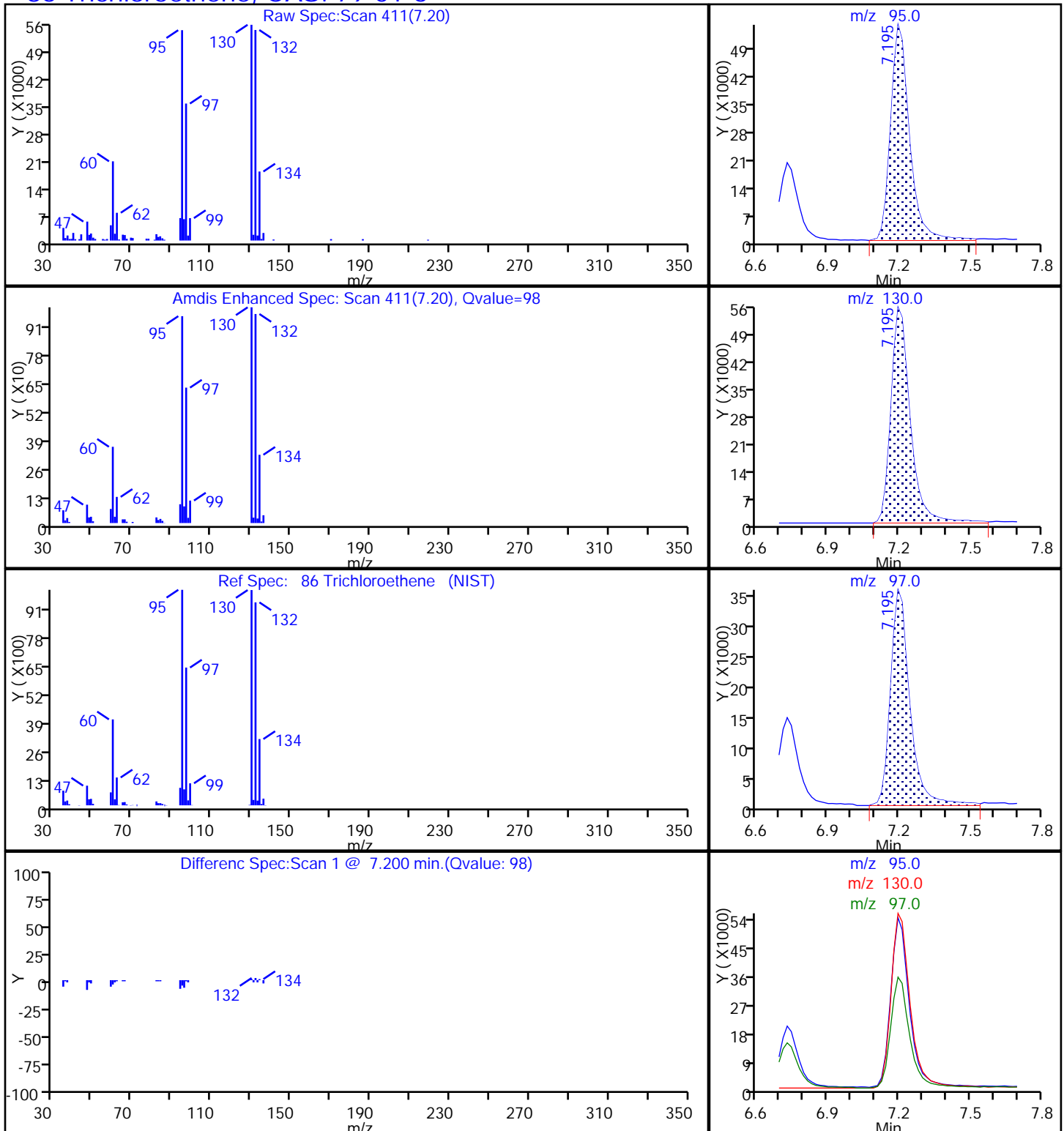
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-GUNCLUB#1-INF</u>	Lab Sample ID: <u>280-102119-10</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0651.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:48</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 17:48</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-GUNCLUB#1-INF Lab Sample ID: 280-102119-10

Matrix: Water Lab File ID: H0651.D

Analysis Method: 8260B Date Collected: 10/06/2017 15:48

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 17:48

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	4.5		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	113		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0651.D
 Lims ID: 280-102119-B-10
 Client ID: FEW4-GUNCLUB#1-INF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 17:48:30 ALS Bottle#: 34 Worklist Smp#: 28
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-10 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:18:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.974	3.969	0.005	95	276188	250.0	
* 2 Fluorobenzene	96	6.744	6.738	0.006	98	1200230	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.080	11.074	0.006	86	419500	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.093	14.087	0.006	96	704996	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.908	5.902	0.006	93	832379	11.6	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.326	6.320	0.006	99	324859	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.868	8.845	0.023	92	1708020	9.72	
\$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.729	0.006	87	980552	10.2	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43	3.522	3.516	0.006	97	8564	0.9489	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.940	3.934	0.006	91	11127	0.2753	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95	7.214	7.208	0.006	98	264597	4.53	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0651.D

Injection Date: 15-Oct-2017 17:48:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-B-10

Lab Sample ID: 280-102119-10

Worklist Smp#: 28

Client ID: FEW4-GUNCLUB#1-INF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

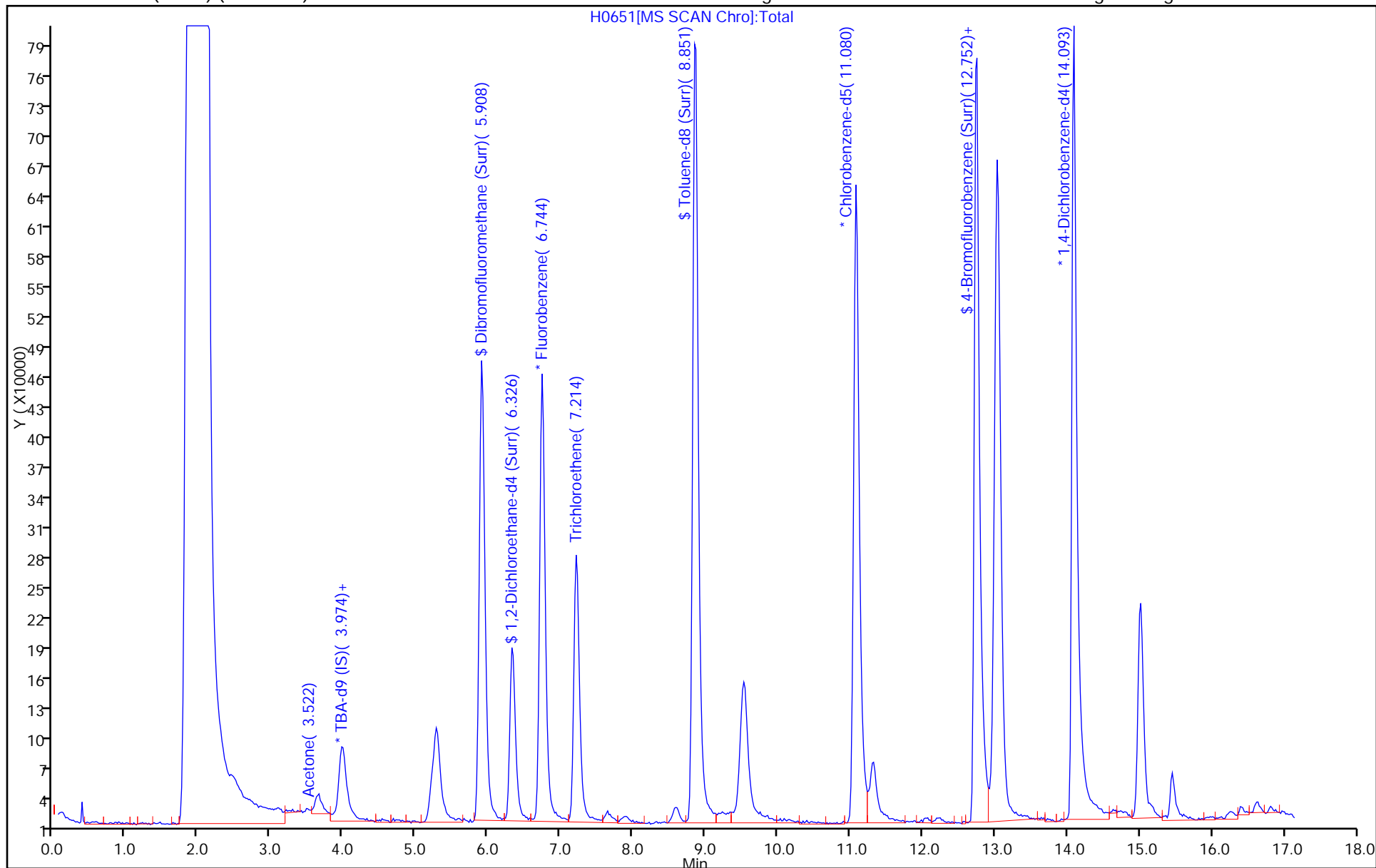
ALS Bottle#: 34

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0651.D

Injection Date: 15-Oct-2017 17:48:30

Instrument ID: VMS_H

Lims ID: 280-102119-B-10

Lab Sample ID: 280-102119-10

Client ID: FEW4-GUNCLUB#1-INF

Operator ID: MOANM

ALS Bottle#: 34

Worklist Smp#: 28

Purge Vol: 20.000 mL

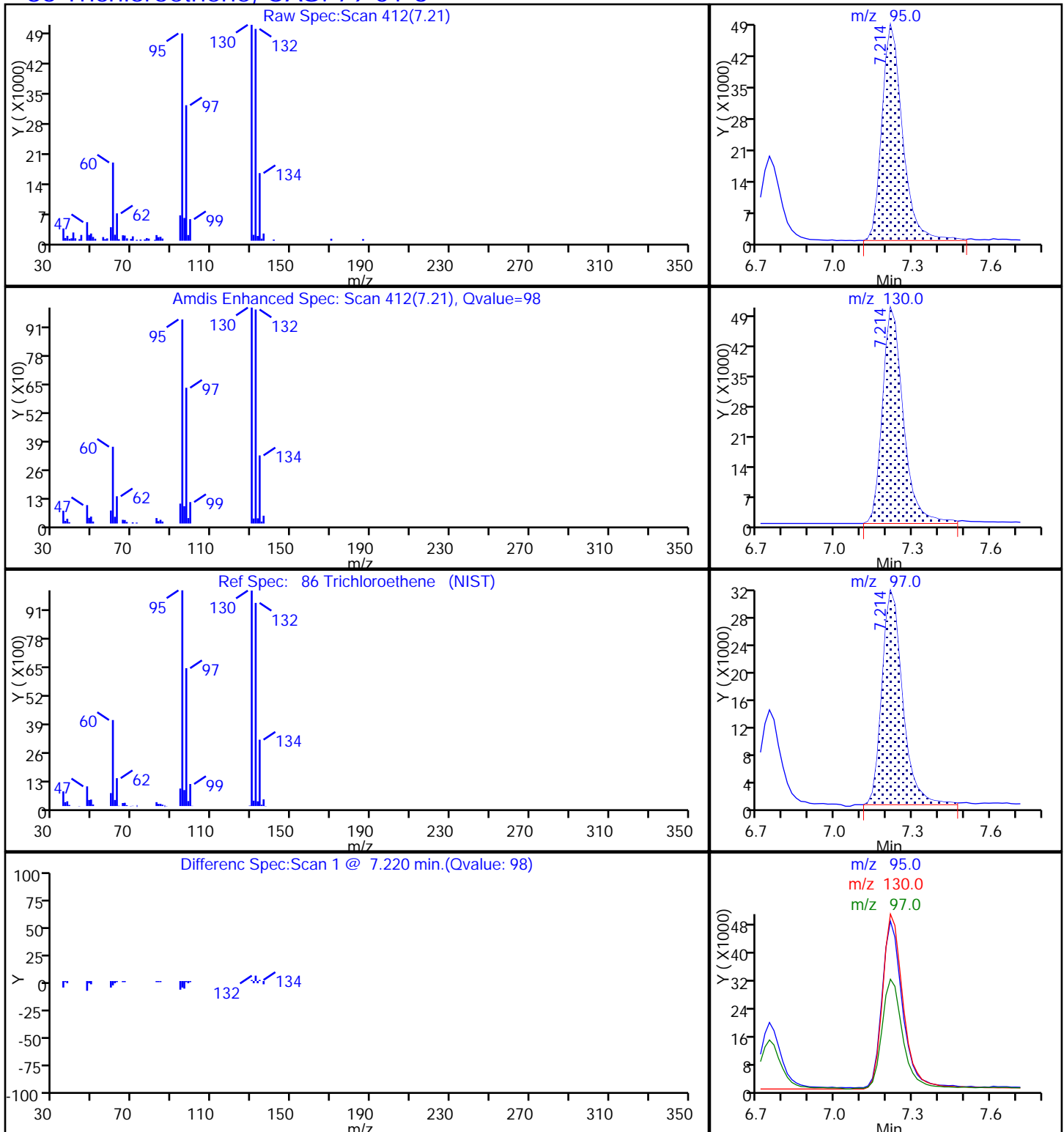
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-VG#1-INT</u>	Lab Sample ID: <u>280-102119-11</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0652.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:53</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 18:11</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Client Sample ID: FEW4-VG#1-INT Lab Sample ID: 280-102119-11
 Matrix: Water Lab File ID: H0652.D
 Analysis Method: 8260B Date Collected: 10/06/2017 15:53
 Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 18:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0652.D
 Lims ID: 280-102119-B-11
 Client ID: FEW4-VG#1-INT
 Sample Type: Client
 Inject. Date: 15-Oct-2017 18:11:30 ALS Bottle#: 35 Worklist Smp#: 29
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-11 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:19:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.968	3.969	-0.001	95	272866	250.0	
* 2 Fluorobenzene	96	6.737	6.738	-0.001	98	1230447	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.091	11.074	0.017	86	420997	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.087	0.000	96	715909	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.901	5.902	-0.001	93	827613	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.319	6.320	-0.001	100	323114	10.0	
\$ 10 Toluene-d8 (Surr)	98	8.862	8.845	0.017	93	1721109	9.76	
\$ 11 4-Bromofluorobenzene (Surr	95	12.746	12.729	0.017	87	984453	10.1	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43	3.515	3.516	-0.001	97	10680	1.83	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.951	3.934	0.017	91	11341	0.2737	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0652.D

Injection Date: 15-Oct-2017 18:11:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-B-11

Lab Sample ID: 280-102119-11

Worklist Smp#: 29

Client ID: FEW4-VG#1-INT

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

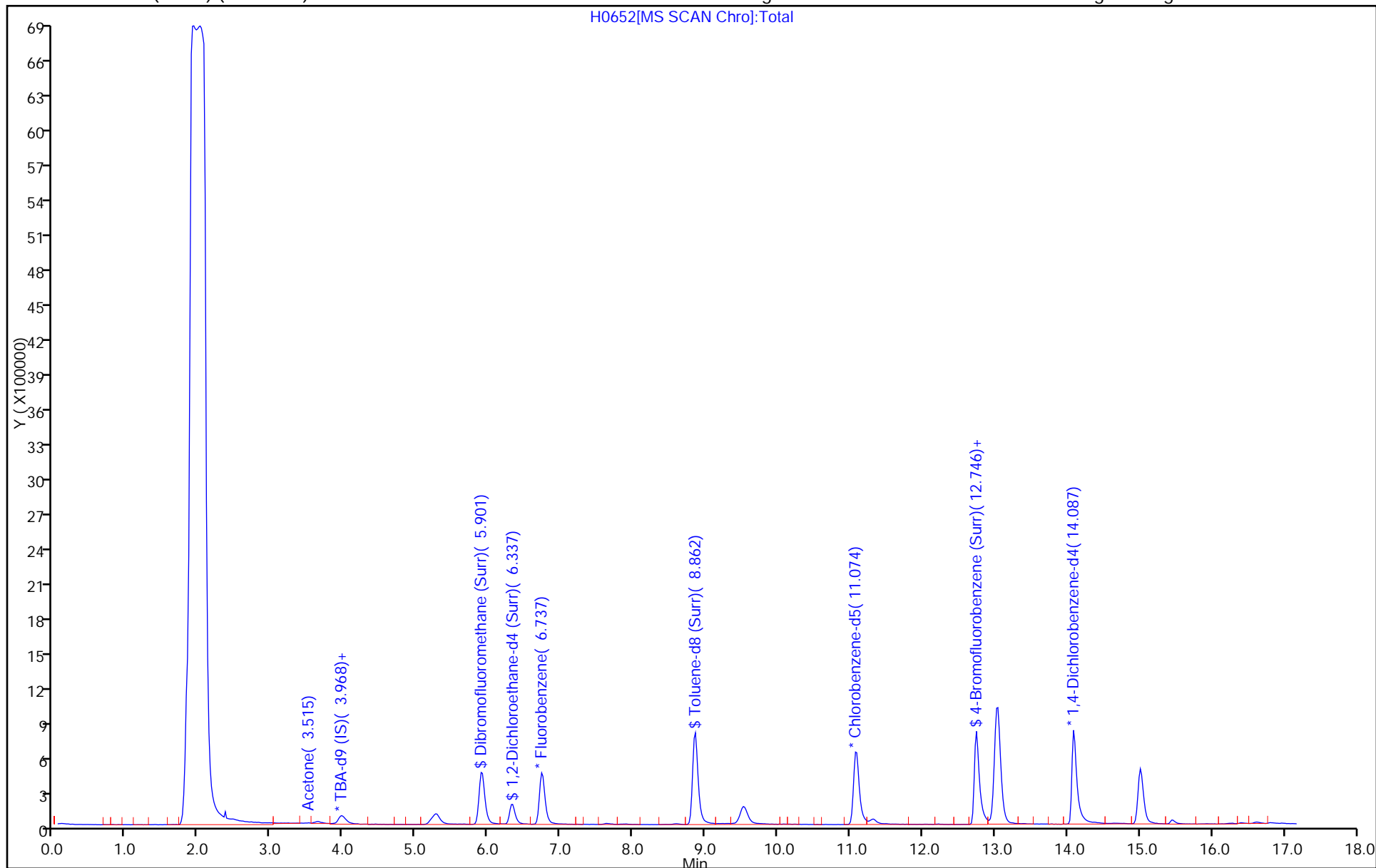
ALS Bottle#: 35

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-VG#1-EFF</u>	Lab Sample ID: <u>280-102119-12</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0653.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:56</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 18:33</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-VG#1-EFF</u>	Lab Sample ID: <u>280-102119-12</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0653.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:56</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 18:33</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	114		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		81-118
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0653.D
 Lims ID: 280-102119-C-12
 Client ID: FEW4-VG#1-EFF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 18:33:30 ALS Bottle#: 36 Worklist Smp#: 30
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-12 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:19:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.974	3.969	0.005	95	314960	250.0	
* 2 Fluorobenzene	96	6.743	6.738	0.005	98	1217748	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.080	11.074	0.006	86	427903	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.093	14.087	0.006	96	721084	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.907	5.902	0.005	93	852703	11.7	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.325	6.320	0.005	99	345908	10.8	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.845	0.005	92	1757256	9.80	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.729	0.005	86	1017769	10.4	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43	3.504	3.516	-0.012	94	9724	1.43	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.939	3.934	0.005	91	11250	0.2743	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0653.D

Injection Date: 15-Oct-2017 18:33:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-12

Lab Sample ID: 280-102119-12

Worklist Smp#: 30

Client ID: FEW4-VG#1-EFF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

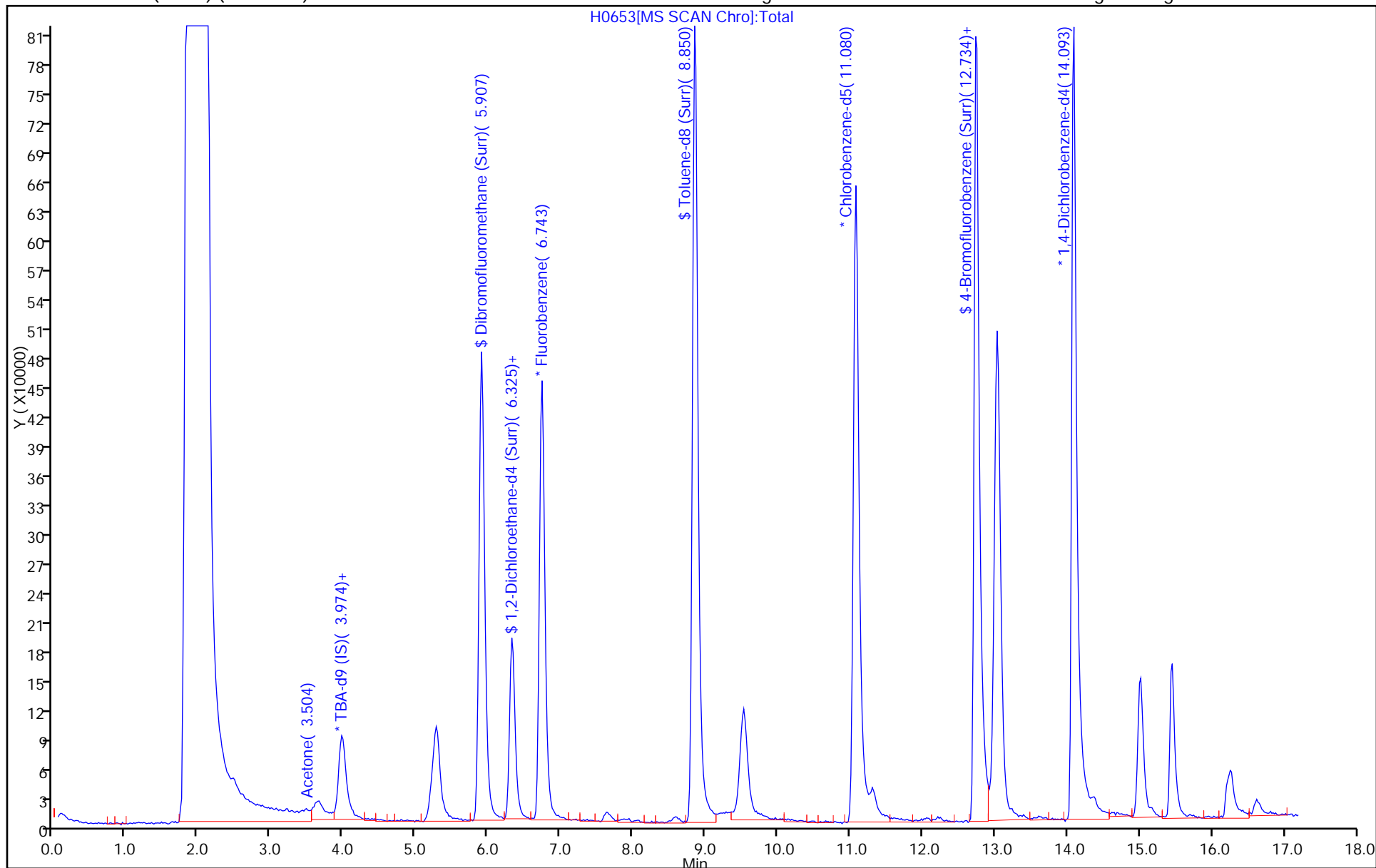
ALS Bottle#: 36

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FINNERTY#1-INF</u>	Lab Sample ID: <u>280-102119-13</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0654.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 17:33</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 18:54</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-FINNERTY#1-INF Lab Sample ID: 280-102119-13

Matrix: Water Lab File ID: H0654.D

Analysis Method: 8260B Date Collected: 10/06/2017 17:33

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 18:54

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	1.4		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	108		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
2037-26-5	Toluene-d8 (Surr)	92		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0654.D
 Lims ID: 280-102119-B-13
 Client ID: FEW4-FINNERTY#1-INF
 Sample Type: Client
 Inject. Date: 15-Oct-2017 18:54:30 ALS Bottle#: 37 Worklist Smp#: 31
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-13 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:19:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.973	3.969	0.004	96	280586	250.0	
* 2 Fluorobenzene	96	6.743	6.738	0.004	98	1241140	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.079	11.074	0.005	86	436171	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.092	14.087	0.005	96	722224	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.907	5.902	0.005	93	821514	11.1	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.325	6.320	0.005	100	325188	10.0	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.845	0.005	93	1716066	9.39	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.729	0.005	87	969192	9.89	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43	3.521	3.516	0.005	72	10249	1.59	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.939	3.934	0.005	33	12070	0.2888	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95	7.213	7.208	0.005	98	86005	1.42	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0654.D

Injection Date: 15-Oct-2017 18:54:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-B-13

Lab Sample ID: 280-102119-13

Worklist Smp#: 31

Client ID: FEW4-FINNERTY#1-INF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

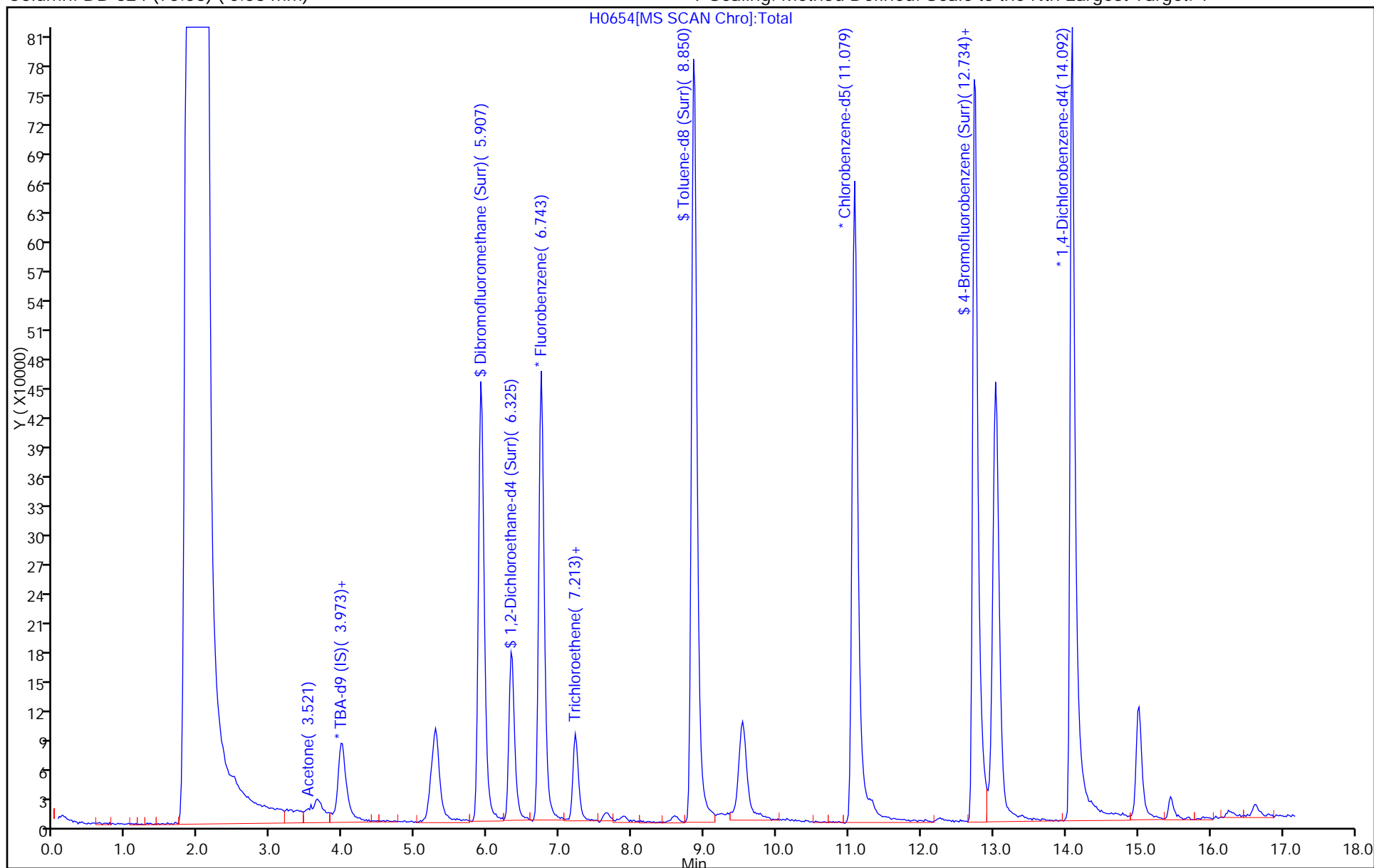
ALS Bottle#: 37

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0654.D

Injection Date: 15-Oct-2017 18:54:30

Instrument ID: VMS_H

Lims ID: 280-102119-B-13

Lab Sample ID: 280-102119-13

Client ID: FEW4-FINNERTY#1-INF

Operator ID: MOANM

ALS Bottle#: 37

Worklist Smp#: 31

Purge Vol: 20.000 mL

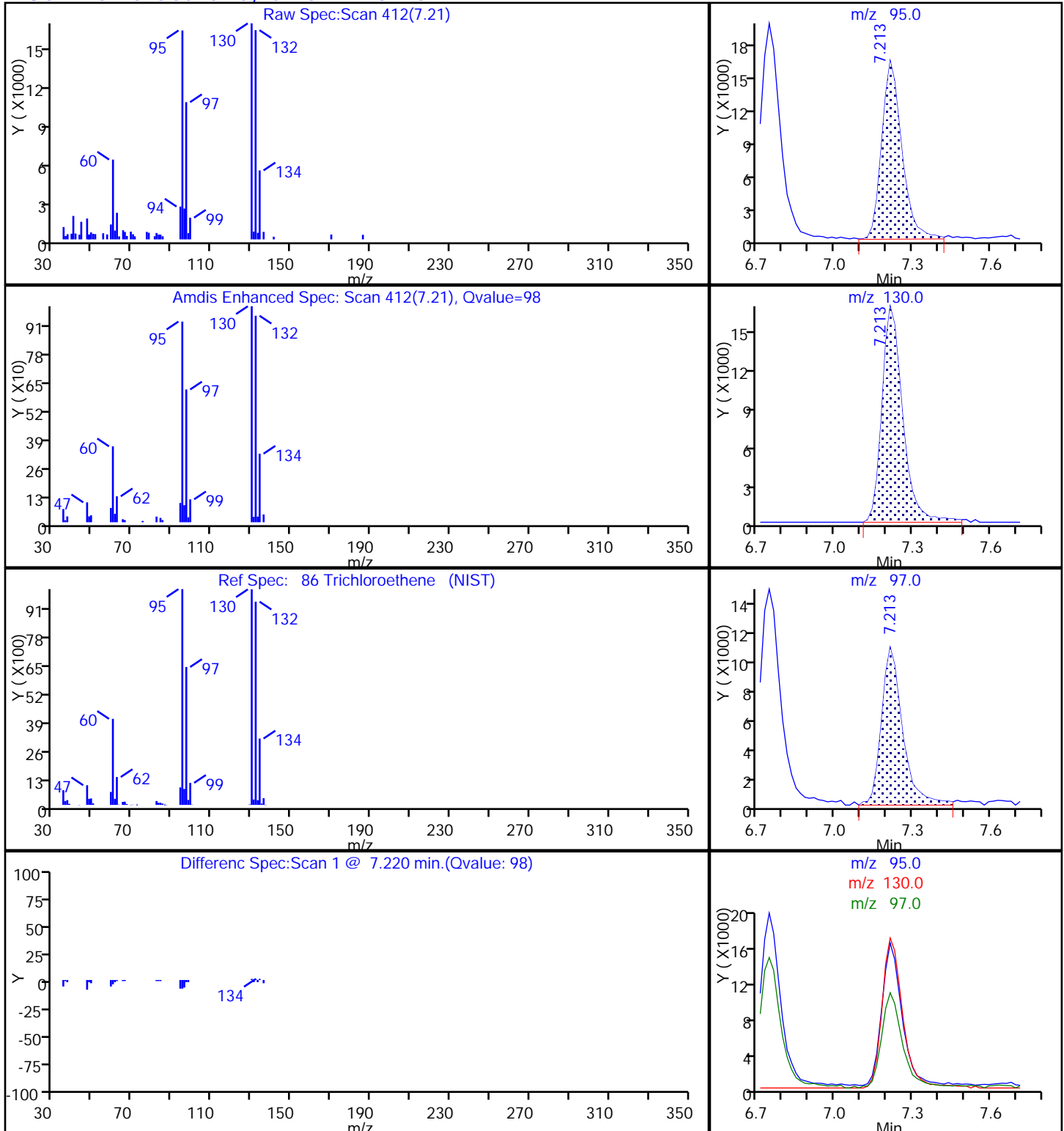
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FINNERTY#1-INT</u>	Lab Sample ID: <u>280-102119-14</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0655.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 17:37</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 19:16</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-FINNERTY#1-INT</u>	Lab Sample ID: <u>280-102119-14</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0655.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 17:37</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 19:16</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
2037-26-5	Toluene-d8 (Surr)	92		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0655.D
 Lims ID: 280-102119-C-14
 Client ID: FEW4-FINNERTY#1-INT
 Sample Type: Client
 Inject. Date: 15-Oct-2017 19:16:30 ALS Bottle#: 38 Worklist Smp#: 32
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-14 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:26:01 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:24:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.969	0.006	95	299936	250.0	
* 2 Fluorobenzene	96	6.744	6.738	0.006	98	1249211	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.081	11.074	0.007	86	433966	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.094	14.087	0.007	96	739203	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.908	5.902	0.006	93	842774	11.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.326	6.320	0.006	100	336173	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.851	8.845	0.006	93	1723430	9.48	
\$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.729	0.006	87	998693	9.95	
28 Dichlorodifluoromethane	85		2.157				ND	
30 Chloromethane	50		2.262				ND	
32 Vinyl chloride	62		2.401				ND	
35 Bromomethane	94		2.680				ND	
36 Chloroethane	64		2.749				ND	
38 Trichlorofluoromethane	101		2.976				ND	
45 1,1-Dichloroethene	96		3.463				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.498				ND	
47 Acetone	43	3.522	3.516	0.006	98	7989	0.5280	
50 Carbon disulfide	76		3.707				ND	
53 Methyl acetate	43		3.812				ND	
54 Methylene Chloride	84	3.940	3.934	0.006	89	11161	0.2653	
56 Methyl tert-butyl ether	73		4.212				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.344				ND	
67 2-Butanone (MEK)	43		5.344				ND	
73 Chlorobromomethane	128		5.623				ND	
75 Chloroform	83		5.710				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.146				ND	
81 Benzene	78		6.389				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.424				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.452				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.479				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.688				ND	
99 Toluene	91		8.949				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.524				ND	
103 Tetrachloroethene	164		9.733				ND	
105 2-Hexanone	43		9.907				ND	
108 Chlorodibromomethane	129		10.116				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.126				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.328				ND	
118 Isopropylbenzene	105		12.537				ND	
121 1,1,2,2-Tetrachloroethane	83		12.920				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.505				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.055				ND	
144 1,2,3-Trichlorobenzene	180		16.508				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0655.D

Injection Date: 15-Oct-2017 19:16:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-14

Lab Sample ID: 280-102119-14

Worklist Smp#: 32

Client ID: FEW4-FINNERTY#1-INT

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

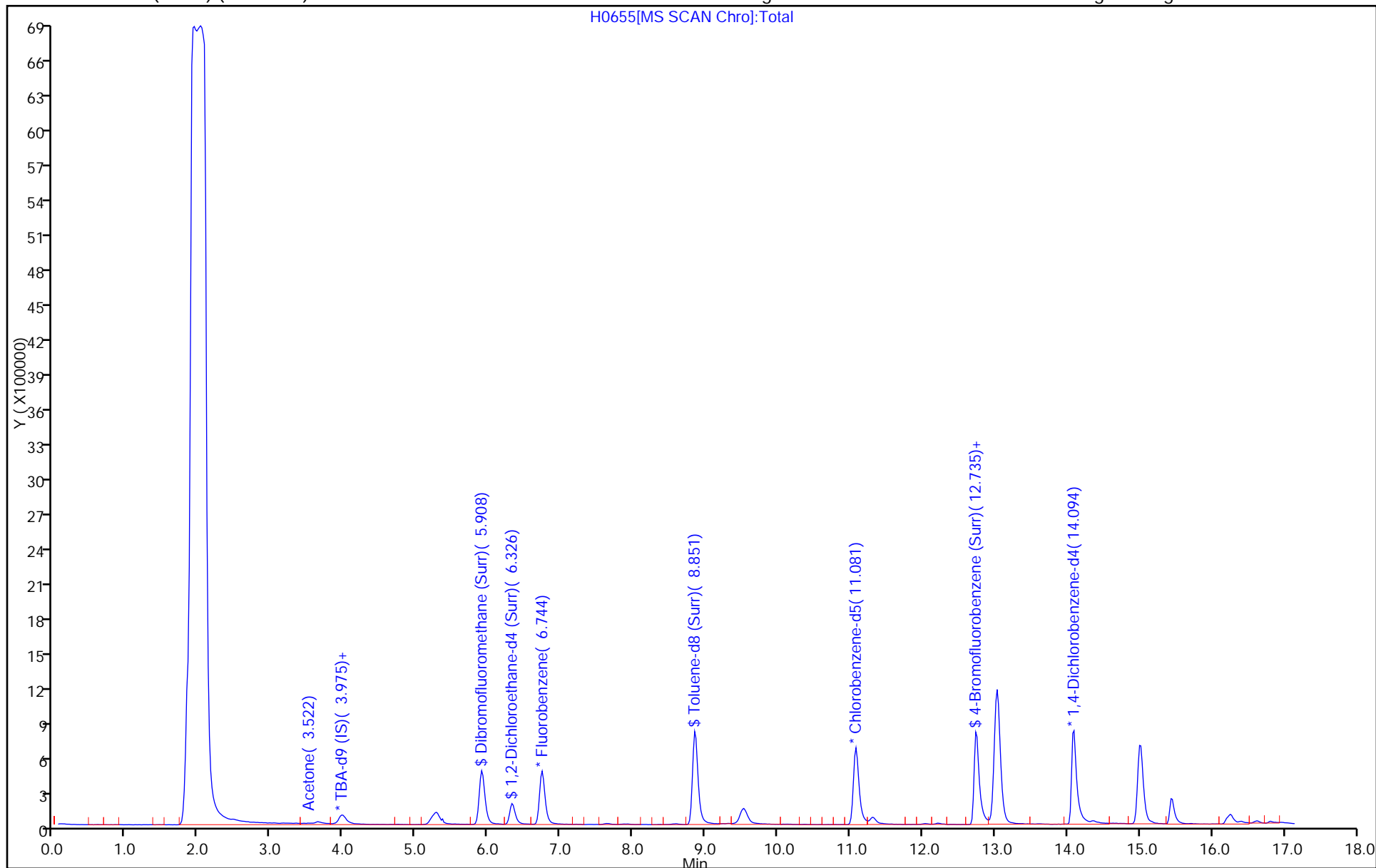
ALS Bottle#: 38

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-FINNERTY#1-EFF Lab Sample ID: 280-102119-15

Matrix: Water Lab File ID: H0668.D

Analysis Method: 8260B Date Collected: 10/06/2017 17:40

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 09:25

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-FINNERTY#1-EFF Lab Sample ID: 280-102119-15

Matrix: Water Lab File ID: H0668.D

Analysis Method: 8260B Date Collected: 10/06/2017 17:40

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 09:25

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0668.D
 Lims ID: 280-102119-C-15
 Client ID: FEW4-FINNERTY#1-EFF
 Sample Type: Client
 Inject. Date: 16-Oct-2017 09:25:30 ALS Bottle#: 17 Worklist Smp#: 12
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-15 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:44:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.991	3.972	0.019	95	230474	250.0	
* 2 Fluorobenzene	96	6.725	6.741	-0.016	99	1196984	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.062	11.078	-0.016	86	412298	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.073	0.002	96	679425	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.889	5.905	-0.016	93	824087	11.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.325	6.323	0.002	99	317514	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.848	0.002	93	1710871	9.90	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.732	0.002	86	954562	10.4	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.939	3.937	0.002	93	11570	0.2870	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0668.D

Injection Date: 16-Oct-2017 09:25:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-C-15

Lab Sample ID: 280-102119-15

Worklist Smp#: 12

Client ID: FEW4-FINNERTY#1-EFF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

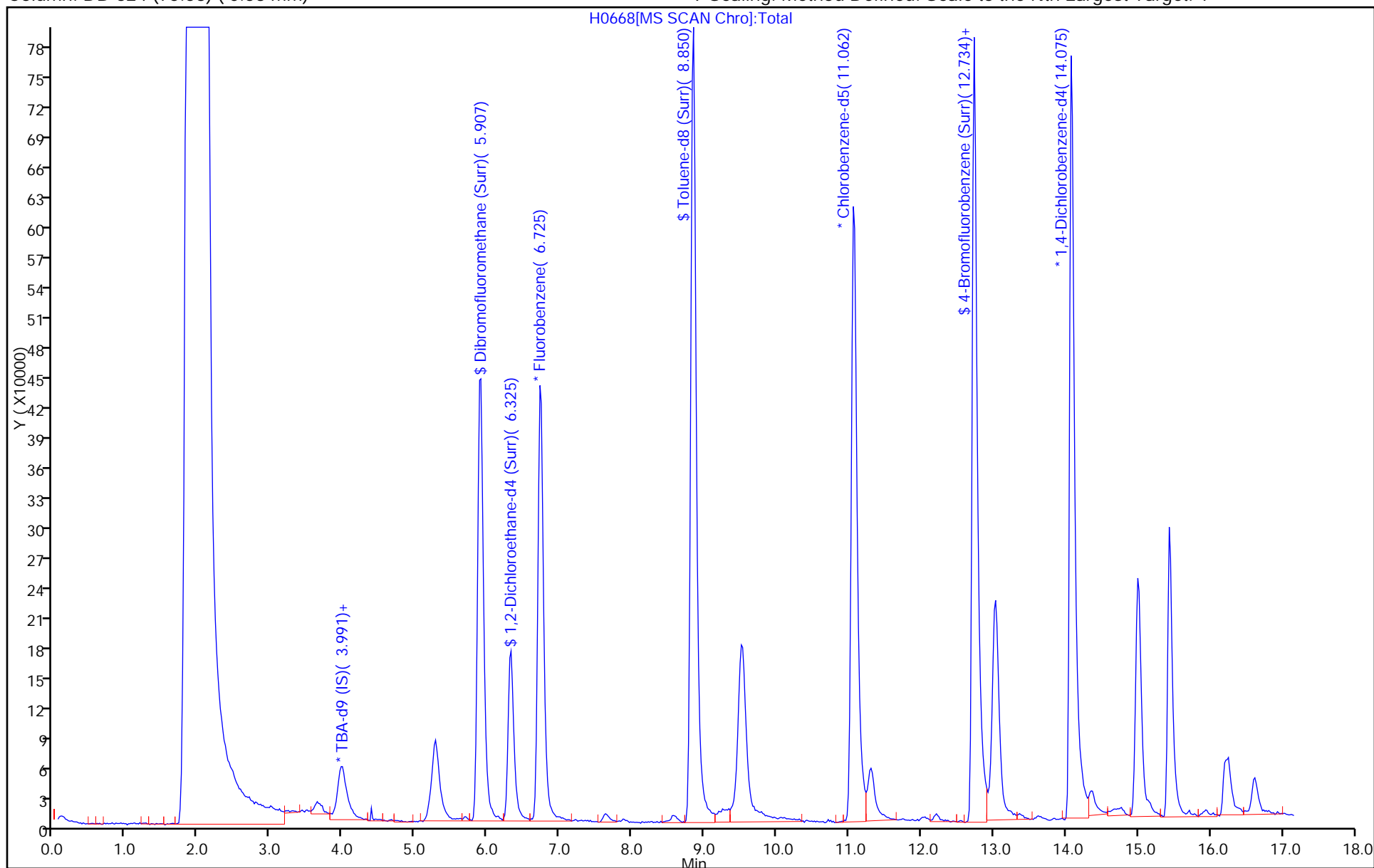
ALS Bottle#: 17

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-DYSON#1-INF</u>	Lab Sample ID: <u>280-102119-16</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0669.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 18:33</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 09:48</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-DYSON#1-INF</u>	Lab Sample ID: <u>280-102119-16</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0669.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 18:33</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 09:48</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	1.6		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		81-118
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0669.D
 Lims ID: 280-102119-A-16
 Client ID: FEW4-DYSON#1-INF
 Sample Type: Client
 Inject. Date: 16-Oct-2017 09:48:30 ALS Bottle#: 18 Worklist Smp#: 13
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-16 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 10:29:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.972	0.000	96	211825	250.0	
* 2 Fluorobenzene	96	6.741	6.741	0.000	99	1193173	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.077	11.078	-0.001	86	408197	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.090	14.073	0.017	96	655501	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.905	0.000	93	802879	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.323	0.000	100	303533	9.72	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.848	0.000	93	1701760	9.95	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.732	0.000	86	948130	10.7	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.937	3.937	0.000	91	9433	0.2347	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95	7.211	7.194	0.017	99	90860	1.56	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0669.D

Injection Date: 16-Oct-2017 09:48:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-A-16

Lab Sample ID: 280-102119-16

Worklist Smp#: 13

Client ID: FEW4-DYSON#1-INF

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

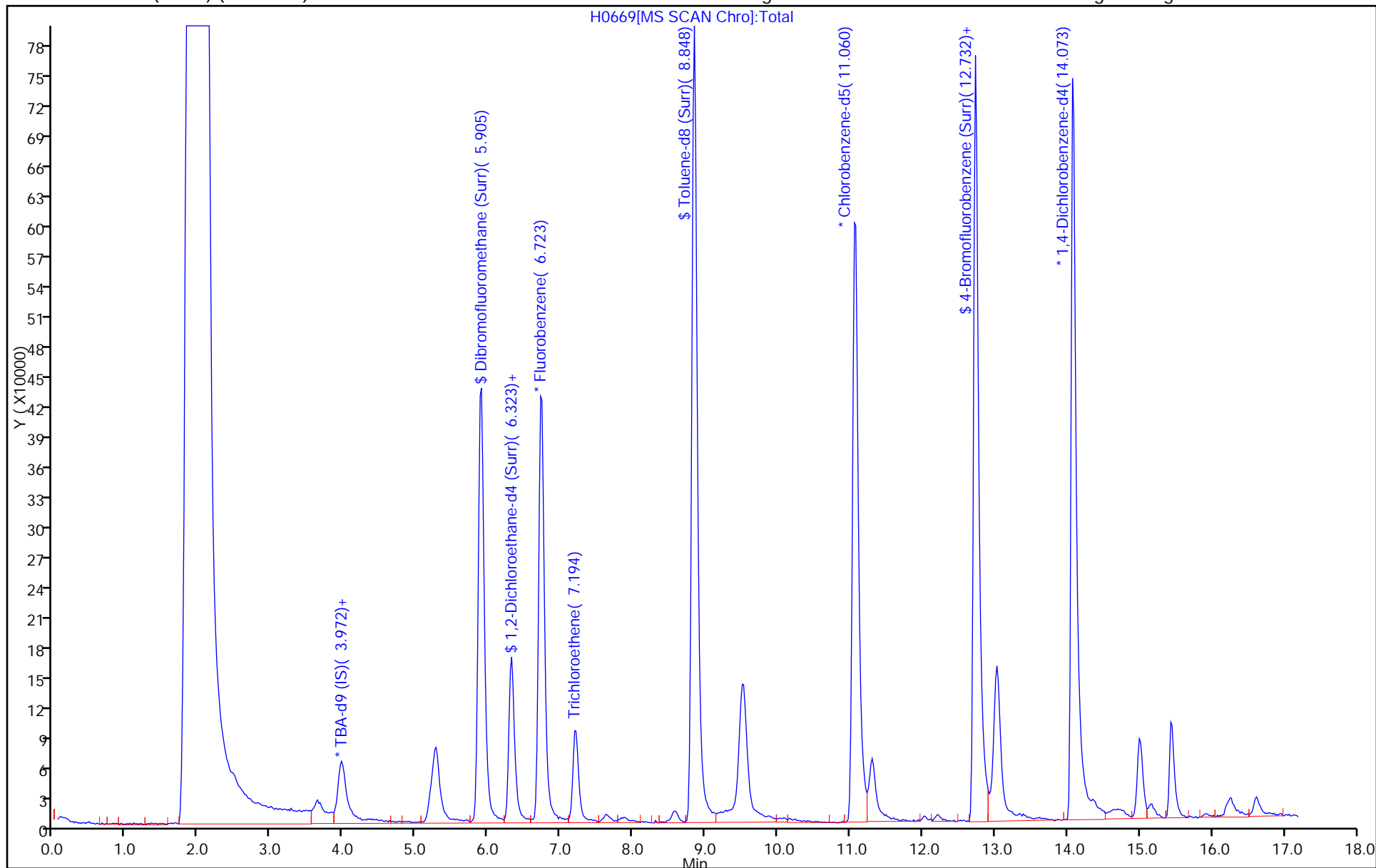
ALS Bottle#: 18

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0669.D

Injection Date: 16-Oct-2017 09:48:30

Instrument ID: VMS_H

Lims ID: 280-102119-A-16

Lab Sample ID: 280-102119-16

Client ID: FEW4-DYSON#1-INF

Operator ID: moanm

ALS Bottle#: 18

Worklist Smp#: 13

Purge Vol: 20.000 mL

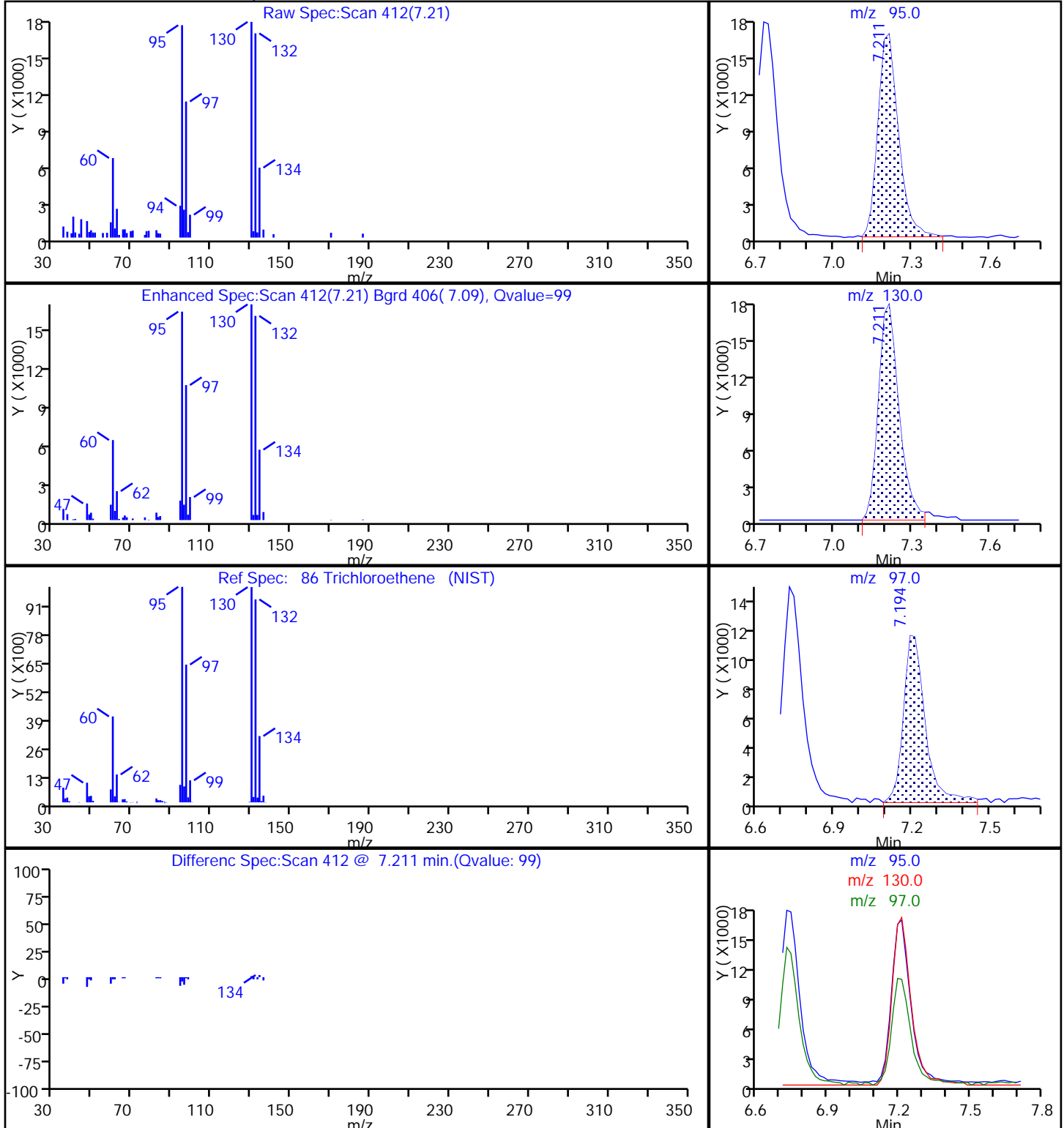
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-HOUSER#1</u>	Lab Sample ID: <u>280-102119-17</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0670.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 08:35</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 10:10</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-HOUSER#1 Lab Sample ID: 280-102119-17

Matrix: Water Lab File ID: H0670.D

Analysis Method: 8260B Date Collected: 10/07/2017 08:35

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 10:10

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
2037-26-5	Toluene-d8 (Surr)	94		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0670.D
 Lims ID: 280-102119-B-17
 Client ID: FEW4-HOUSE#1
 Sample Type: Client
 Inject. Date: 16-Oct-2017 10:10:30 ALS Bottle#: 19 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-17 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:44:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.970	3.972	-0.002	95	240963	250.0	
* 2 Fluorobenzene	96	6.722	6.741	-0.019	99	1199246	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.058	11.078	-0.020	86	422788	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.073	0.015	96	683533	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.886	5.905	-0.019	93	811800	11.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.304	6.323	-0.019	99	316231	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.848	-0.002	92	1699694	9.59	
\$ 11 4-Bromofluorobenzene (Surr	95	12.730	12.732	-0.002	86	965825	10.4	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.935	3.937	-0.002	94	8265	0.2046	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0670.D

Injection Date: 16-Oct-2017 10:10:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-B-17

Lab Sample ID: 280-102119-17

Worklist Smp#: 14

Client ID: FEW4-HOUSER#1

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

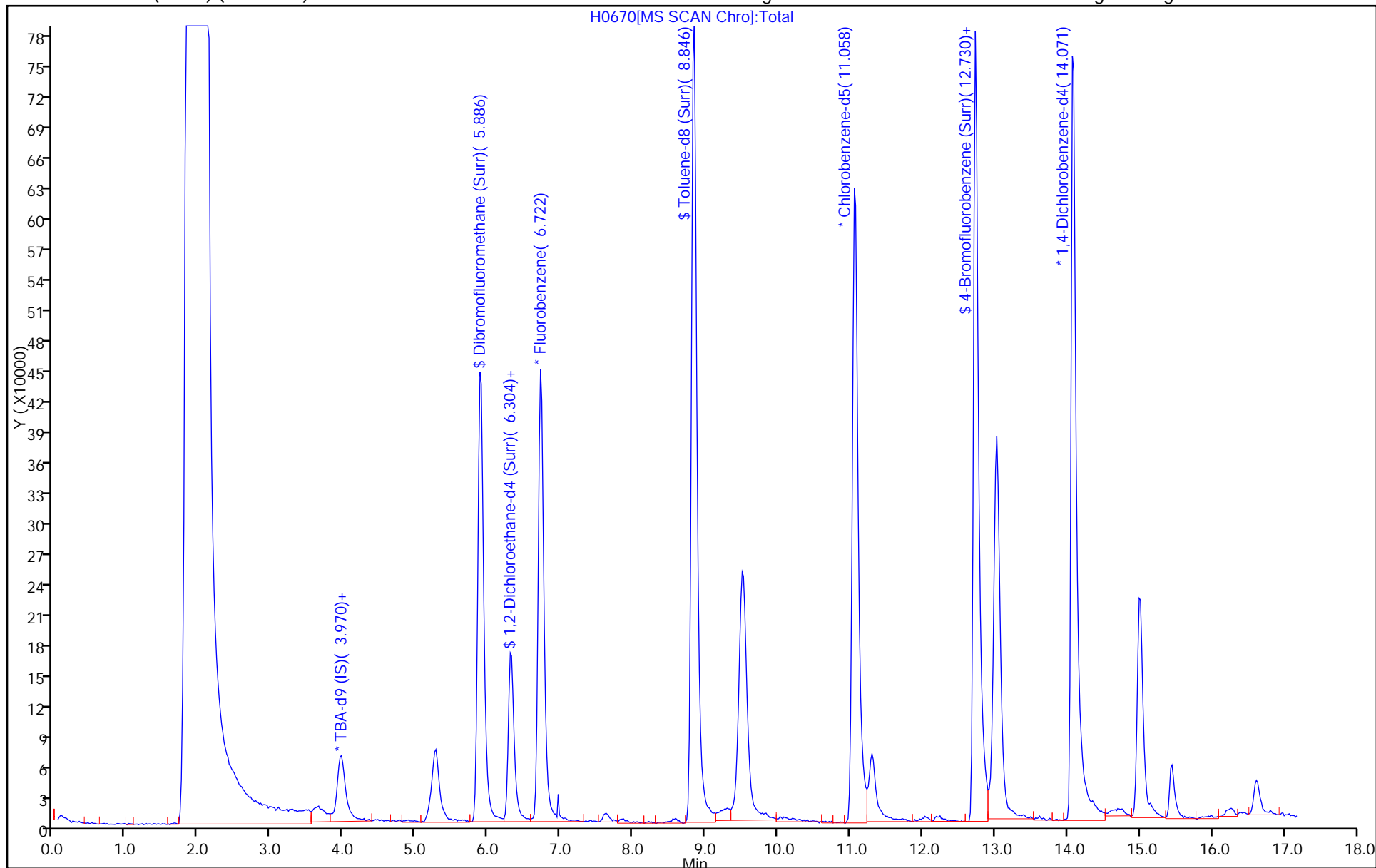
ALS Bottle#: 19

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BROWN#1</u>	Lab Sample ID: <u>280-102119-18</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0671.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 09:20</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 10:32</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-BROWN#1 Lab Sample ID: 280-102119-18

Matrix: Water Lab File ID: H0671.D

Analysis Method: 8260B Date Collected: 10/07/2017 09:20

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 10:32

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	109		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0671.D
 Lims ID: 280-102119-C-18
 Client ID: FEW4-BROWN#1
 Sample Type: Client
 Inject. Date: 16-Oct-2017 10:32:30 ALS Bottle#: 20 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-18 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 10:52:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.957	3.972	-0.015	97	253349	250.0	
* 2 Fluorobenzene	96	6.726	6.741	-0.015	98	1197391	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.063	11.078	-0.015	86	413555	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.076	14.073	0.003	96	679842	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.890	5.905	-0.015	93	800047	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.308	6.323	-0.015	100	317321	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.851	8.848	0.003	93	1692866	9.77	
\$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.732	0.003	86	975671	10.6	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.940	3.937	0.003	91	7847	0.1946	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0671.D

Injection Date: 16-Oct-2017 10:32:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-C-18

Lab Sample ID: 280-102119-18

Worklist Smp#: 15

Client ID: FEW4-BROWN#1

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

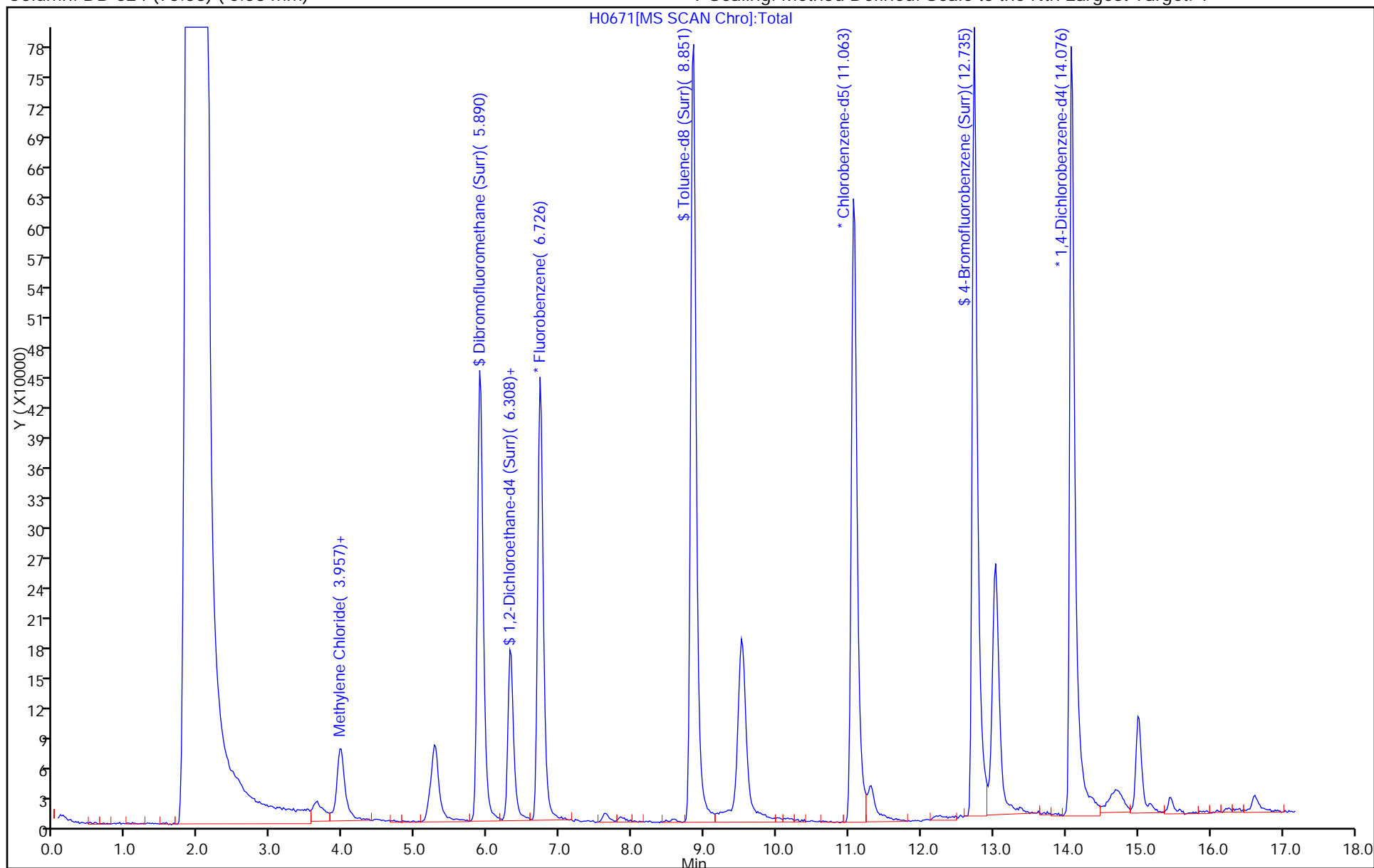
ALS Bottle#: 20

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-WELTY#2</u>	Lab Sample ID: <u>280-102119-19</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0672.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 09:50</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 10:53</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-WELTY#2</u>	Lab Sample ID: <u>280-102119-19</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0672.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 09:50</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 10:53</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.37	J	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	108		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
2037-26-5	Toluene-d8 (Surr)	93		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0672.D
 Lims ID: 280-102119-A-19
 Client ID: FEW4-WELTY#2
 Sample Type: Client
 Inject. Date: 16-Oct-2017 10:53:30 ALS Bottle#: 21 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-19 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 11:35:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.972	0.003	97	263113	250.0	
* 2 Fluorobenzene	96	6.727	6.741	-0.014	99	1240576	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.081	11.078	0.003	86	426720	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.094	14.073	0.021	96	721067	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.908	5.905	0.003	93	817843	11.0	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.326	6.323	0.003	100	329200	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.852	8.848	0.004	92	1698668	9.50	
\$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.732	0.003	87	967742	9.89	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.940	3.937	0.003	84	8927	0.2137	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95	7.215	7.194	0.020	95	22263	0.3688	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0672.D

Injection Date: 16-Oct-2017 10:53:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-A-19

Lab Sample ID: 280-102119-19

Worklist Smp#: 16

Client ID: FEW4-WELTY#2

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

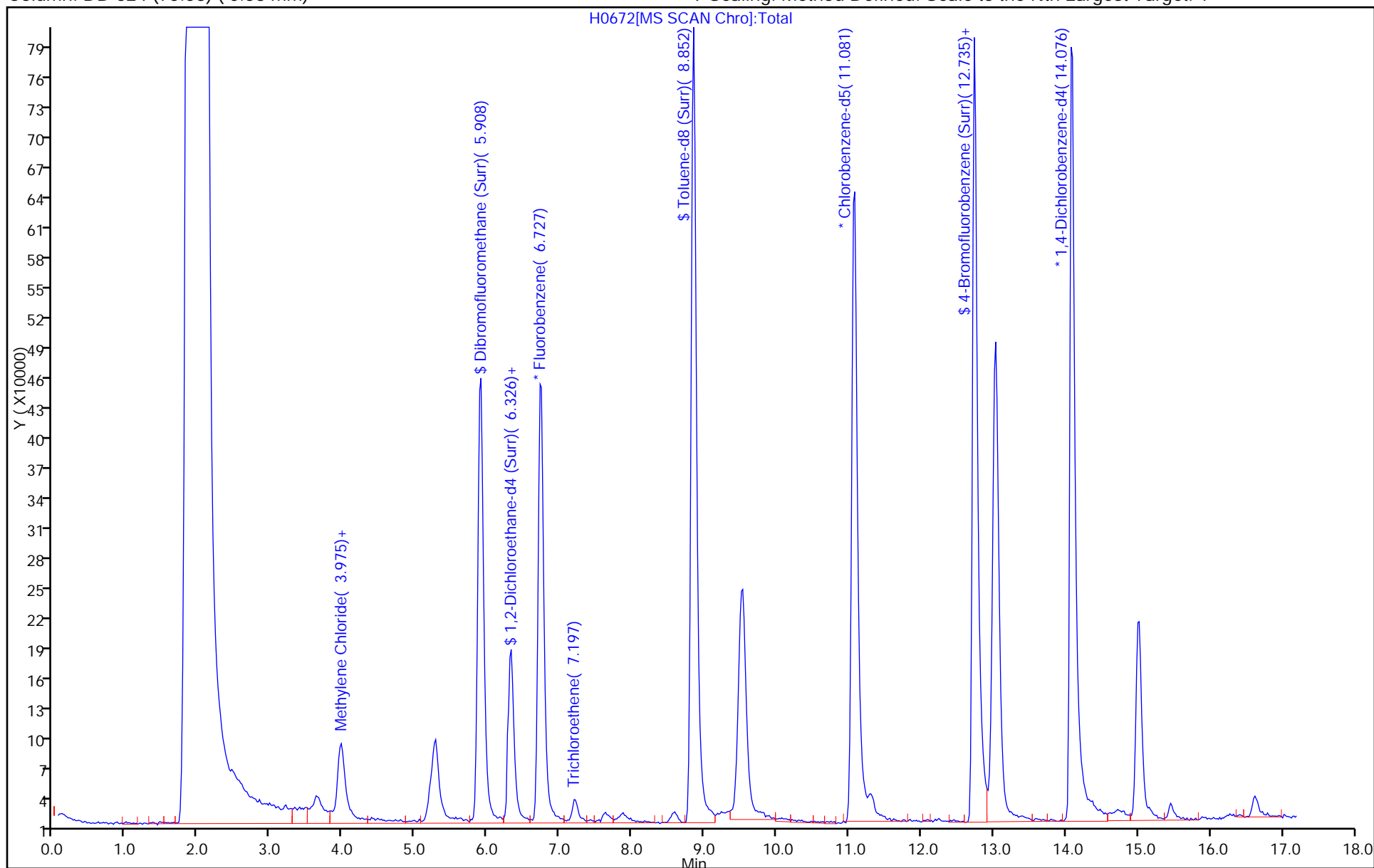
ALS Bottle#: 21

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0672.D

Injection Date: 16-Oct-2017 10:53:30

Instrument ID: VMS_H

Lims ID: 280-102119-A-19

Lab Sample ID: 280-102119-19

Client ID: FEW4-WELTY#2

Operator ID: moanm

ALS Bottle#: 21

Worklist Smp#: 16

Purge Vol: 20.000 mL

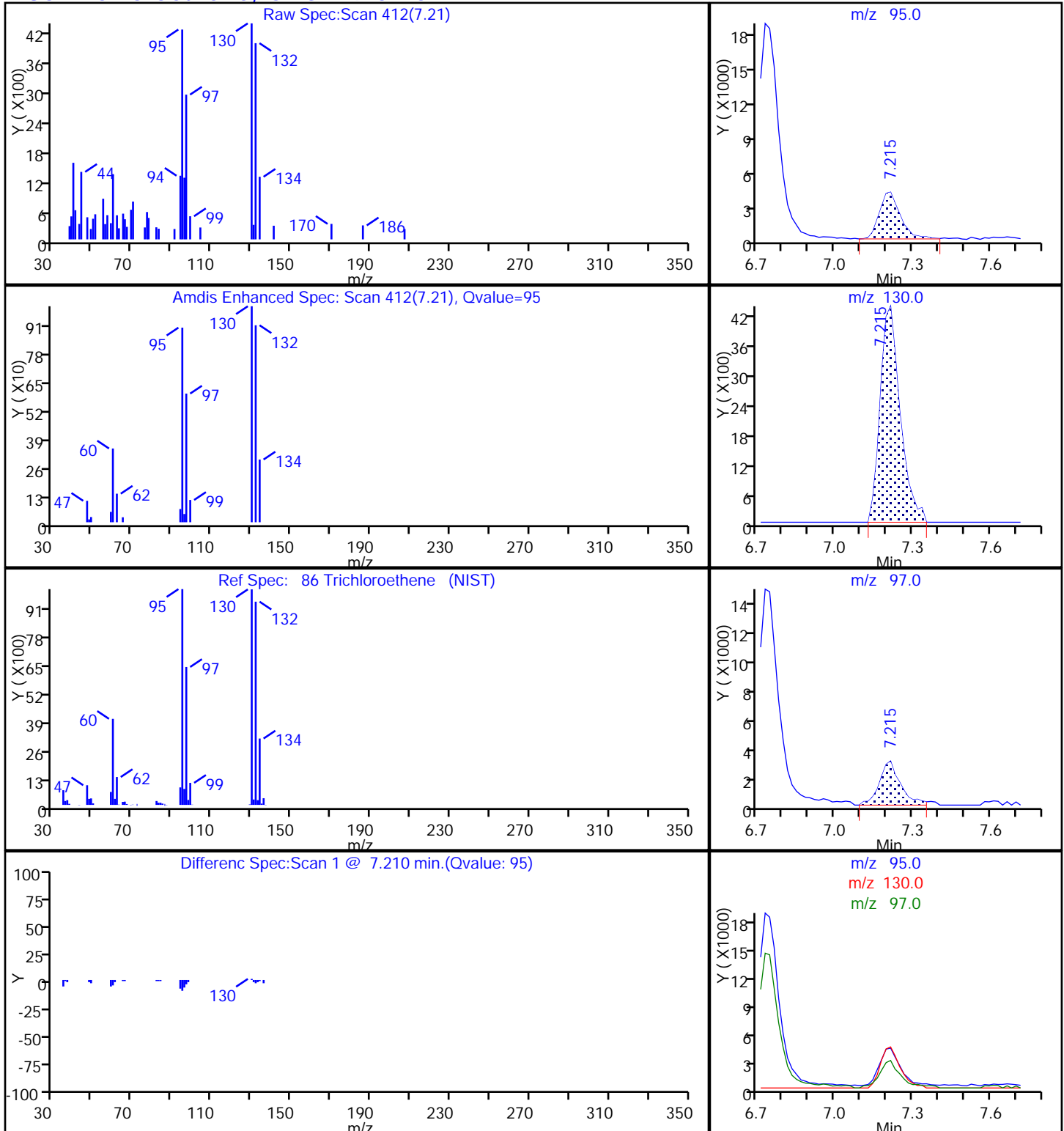
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-1774 OTTO</u>	Lab Sample ID: <u>280-102119-20</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0673.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 10:25</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 11:15</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-1774 OTTO</u>	Lab Sample ID: <u>280-102119-20</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0673.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 10:25</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 11:15</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	113		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0673.D
 Lims ID: 280-102119-C-20
 Client ID: FEW4-1774 OTTO
 Sample Type: Client
 Inject. Date: 16-Oct-2017 11:15:30 ALS Bottle#: 22 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-20 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:45:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.972	-0.003	95	265875	250.0	
* 2 Fluorobenzene	96	6.738	6.741	-0.003	98	1229862	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.075	11.078	-0.003	86	423371	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.073	0.015	96	715864	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.905	-0.003	93	853941	11.6	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.323	-0.003	99	335447	10.4	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.848	-0.002	93	1765653	9.95	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.732	-0.003	86	1013316	10.4	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.952	3.937	0.015	91	9024	0.2179	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0673.D

Injection Date: 16-Oct-2017 11:15:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-C-20

Lab Sample ID: 280-102119-20

Worklist Smp#: 17

Client ID: FEW4-1774 OTTO

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

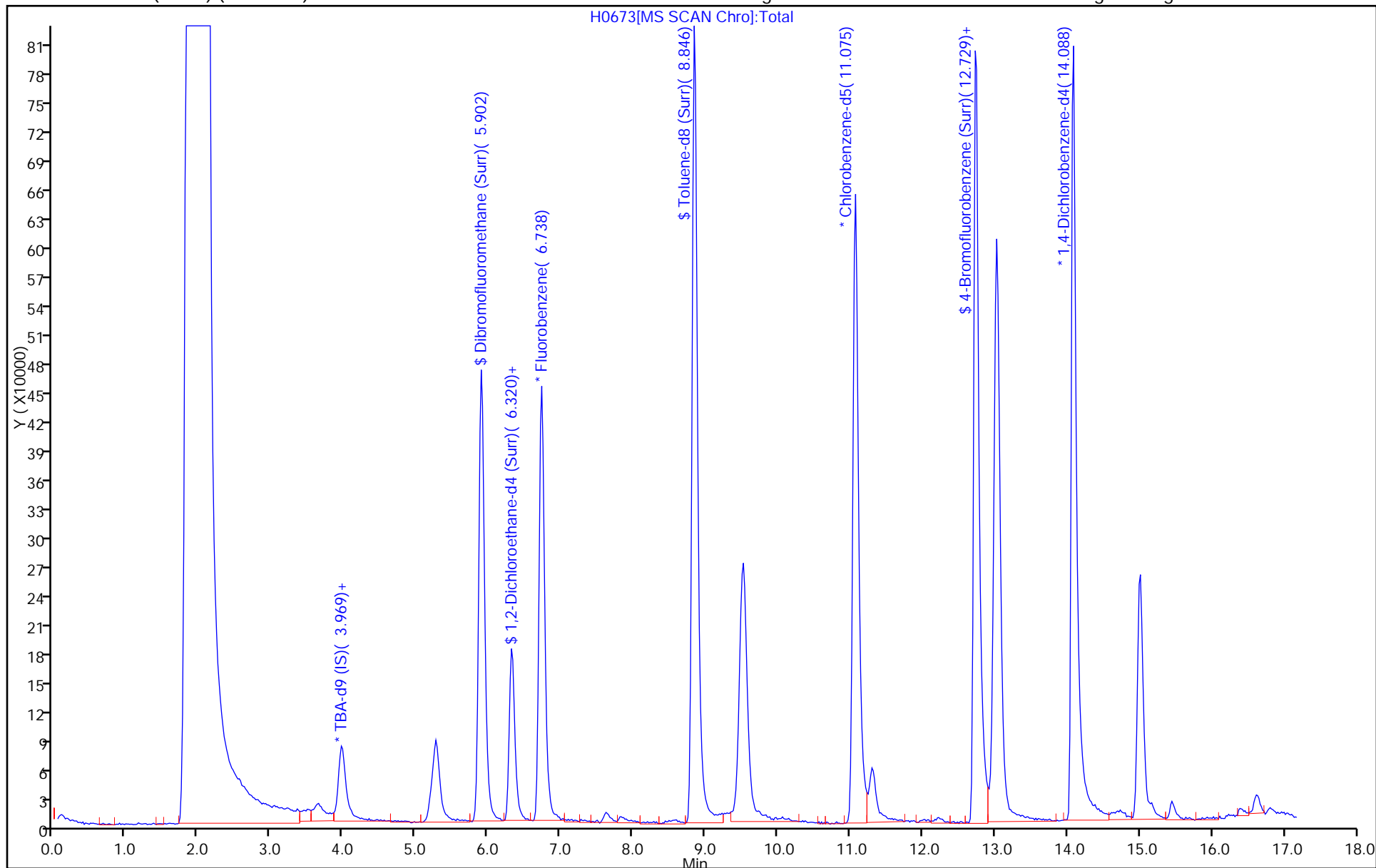
ALS Bottle#: 22

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BOYD-1</u>	Lab Sample ID: <u>280-102119-21</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0674.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 10:55</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 11:36</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Client Sample ID: FEW4-BOYD-1 Lab Sample ID: 280-102119-21
 Matrix: Water Lab File ID: H0674.D
 Analysis Method: 8260B Date Collected: 10/07/2017 10:55
 Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 11:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
2037-26-5	Toluene-d8 (Surr)	93		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0674.D
 Lims ID: 280-102119-B-21
 Client ID: FEW4-BOYD-1
 Sample Type: Client
 Inject. Date: 16-Oct-2017 11:36:30 ALS Bottle#: 23 Worklist Smp#: 18
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-21 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:45:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.974	3.972	0.002	95	249063	250.0	
* 2 Fluorobenzene	96	6.743	6.741	0.002	99	1218824	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.080	11.078	0.002	87	428291	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.076	14.073	0.003	96	714589	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.907	5.905	0.002	93	822081	11.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.325	6.323	0.002	100	319049	10.0	
\$ 10 Toluene-d8 (Surr)	98	8.851	8.848	0.003	92	1706396	9.51	
\$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.732	0.002	86	971893	10.0	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.939	3.937	0.002	93	8489	0.2068	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0674.D

Injection Date: 16-Oct-2017 11:36:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-B-21

Lab Sample ID: 280-102119-21

Worklist Smp#: 18

Client ID: FEW4-BOYD-1

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

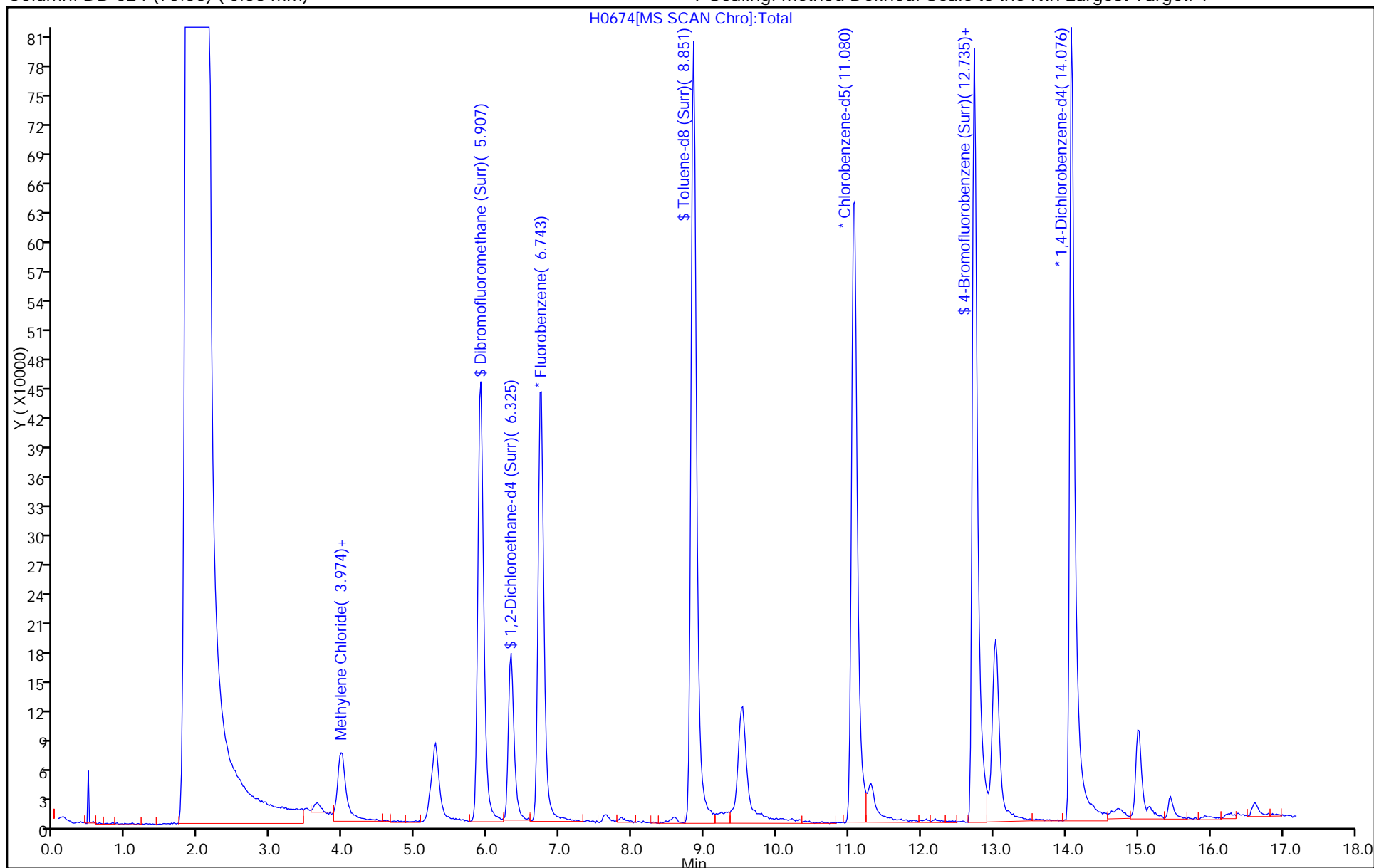
ALS Bottle#: 23

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BOYD-3</u>	Lab Sample ID: <u>280-102119-22</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0675.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 11:30</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 11:58</u>
Soil Aliquot Vol.: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	3.0	J	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-BOYD-3 Lab Sample ID: 280-102119-22

Matrix: Water Lab File ID: H0675.D

Analysis Method: 8260B Date Collected: 10/07/2017 11:30

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 11:58

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	1.0		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	116		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0675.D
 Lims ID: 280-102119-H-22
 Client ID: FEW4-BOYD-3
 Sample Type: Client
 Inject. Date: 16-Oct-2017 11:58:30 ALS Bottle#: 24 Worklist Smp#: 19
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-H-22 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 12:19:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.974	3.972	0.002	95	265613	250.0	
* 2 Fluorobenzene	96	6.725	6.741	-0.016	98	1222268	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.062	11.078	-0.016	86	424915	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.073	0.002	96	727550	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.889	5.905	-0.016	93	866537	11.9	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.307	6.323	-0.016	100	335583	10.5	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.848	0.002	92	1753958	9.85	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.732	0.002	86	1033233	10.5	
\$ 152 Trifluorotoluene (Surr)	1		0.000				ND	
\$ 7 BFB	95	2.720	2.454	0.266	0	1150	NR	7
28 Dichlorodifluoromethane	85		2.161				ND	
27 Chlorotrifluoroethene	116		2.173				ND	
30 Chloromethane	50		2.265				ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329				ND	
32 Vinyl chloride	62		2.405				ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521				ND	
34 Ethylene oxide	43		2.628				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
37 Dichlorofluoromethane	67		2.927				ND	
38 Trichlorofluoromethane	101		2.979				ND	
49 Isopropyl alcohol	45	3.207	3.150	0.057	1	840	NC	
39 Ethanol	45		3.150				ND	
40 Ethyl ether	59		3.206				ND	
43 Propene oxide	58		3.289				ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322				ND	
44 Acrolein	56		3.359				ND	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43	3.503	3.502	0.001	95	13080	2.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
48 Iodomethane	142		3.641				ND	
50 Carbon disulfide	76		3.711				ND	
51 Acetonitrile	41		3.794				ND	
52 3-Chloro-1-propene	41		3.815				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.921	3.937	-0.016	89	9112	0.2214	
55 2-Methyl-2-propanol	59		4.059				ND	
57 Acrylonitrile	53		4.198				ND	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
59 Hexane	57		4.477				ND	
60 1,1-Dichloroethane	63		4.669				ND	
61 Vinyl acetate	43		4.703				ND	
62 Isopropyl ether	87		4.717				ND	
63 2-Chloro-1,3-butadiene	53		4.770				ND	
64 Tert-butyl ethyl ether	59		5.135				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
66 2,2-Dichloropropane	77		5.348				ND	
69 Ethyl acetate	43		5.397				ND	
70 Propionitrile	54		5.432				ND	
71 sec-Butyl Alcohol	45		5.557				ND	
72 Methacrylonitrile	41		5.588				ND	
73 Chlorobromomethane	128		5.626				ND	
74 Tetrahydrofuran	42		5.679				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
78 1,1-Dichloropropene	75		6.132				ND	
79 Carbon tetrachloride	117		6.149				ND	
80 Isobutyl alcohol	41		6.271				ND	
81 Benzene	78		6.393				ND	
82 1,2-Dichloroethane	62		6.410				ND	
83 Tert-amyl methyl ether	73		6.511				ND	
84 n-Heptane	43		6.689				ND	
85 n-Butanol	56		7.138				ND	
86 Trichloroethene	95	7.196	7.194	0.002	98	61881	1.04	
88 2-Pentanone	43		7.438				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
91 Methyl methacrylate	100		7.643				ND	
92 Dibromomethane	93		7.664				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
95 2-Nitropropane	41		8.166				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
96 2-Chloroethyl vinyl ether	63		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
101 Ethyl methacrylate	69		9.388				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164		9.719				ND	
104 1,3-Dichloropropane	76		9.754				ND	
105 2-Hexanone	43		9.893				ND	
107 Tetrahydrothiophene	60		10.099				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
110 1-Chlorohexane	91		11.078				ND	
111 Chlorobenzene	112		11.112				ND	
112 1,1,1,2-Tetrachloroethane	131		11.252				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
119 cis-1,4-Dichloro-2-butene	53		12.624				ND	
120 Cyclohexanone	55		12.663				ND	
122 Bromobenzene	156		12.924				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
123 1,2,3-Trichloropropane	110		12.976				ND	
124 trans-1,4-Dichloro-2-buten	53		12.993				ND	
125 N-Propylbenzene	120		13.046				ND	
126 2-Chlorotoluene	126		13.150				ND	
127 1,3,5-Trimethylbenzene	105		13.272				ND	
128 4-Chlorotoluene	126		13.289				ND	
129 tert-Butylbenzene	119		13.638				ND	
130 1,2,4-Trimethylbenzene	105		13.690				ND	
22 Pentachloroethane	167		13.716				ND	
131 sec-Butylbenzene	134		13.882				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
133 4-Isopropyltoluene	119		14.038				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
135 1,2,3-Trimethylbenzene	105		14.157				ND	
137 n-Butylbenzene	91		14.474				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
140 1,3,5-Trichlorobenzene	180		15.481				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
142 Hexachlorobutadiene	225		16.198				ND	
143 Naphthalene	128		16.285				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	
162 1-Chlorohexane TIC	1		0.000				ND	
164 1-Chloro-1-fluoroethane TI	1		0.000				ND	
21 2,4-Dimethylpentane	1		0.000				ND	
15 Dimethyl disulfide	1		0.000				ND	
13 n-Nonyl Aldehyde	1		0.000				ND	
19 2,3-Dimethylpentane	1		0.000				ND	
12 3-Ethylpentane	1		0.000				ND	
24 3-Methylhexane	1		0.000				ND	
14 2-Butoxyethanol TIC	1		0.000				ND	
23 2-Methylhexane	1		0.000				ND	
16 3,3-Dimethylpentane	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000				ND	
18 2,2-Dimethylpentane	1		0.000				ND	
S 151 1,2-Dichloroethene, Total	96		2.000				ND	
S 148 1,3-Dichloropropene, Total	1		0.000				ND	
S 160 TAH	1				0		0	
S 145 Trihalomethanes, Total	1		0.000				ND	
S 146 Xylenes, Total (URS)	1		0.000				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	
S 147 Total BTEX	1		0.000				ND	
T 165 Cyclohexane TIC	56		6.023				ND	
T 163 Methyl cyclohexane TIC	55		7.469				ND	
T 25 Dichloroacetonitrile TIC	74		0.000				ND	
T 155 4-Ethyltoluene TIC	1		0.000				ND	
T 68 Propene oxide TIC	58		0.000				ND	
T 161 n-Nonane TIC	1		0.000				ND	
T 154 Dicyclopentadiene TIC	1		0.000				ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000				ND	
T 153 Propene TIC	1		0.000				ND	
T 156 1,3-Butadiene TIC	1		0.000				ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0675.D

Injection Date: 16-Oct-2017 11:58:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-H-22

Lab Sample ID: 280-102119-22

Worklist Smp#: 19

Client ID: FEW4-BOYD-3

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

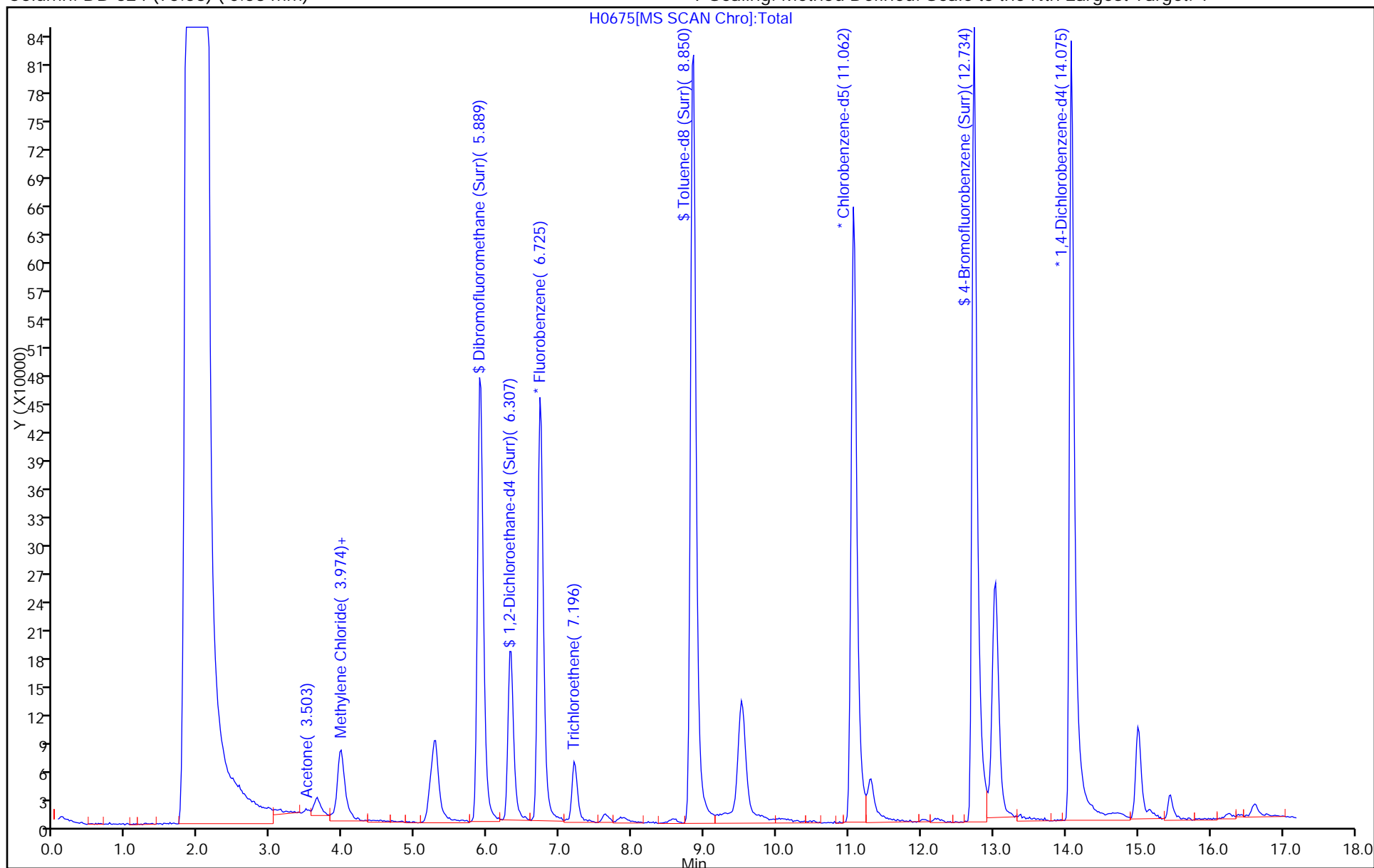
ALS Bottle#: 24

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0675.D

Injection Date: 16-Oct-2017 11:58:30

Instrument ID: VMS_H

Lims ID: 280-102119-H-22

Lab Sample ID: 280-102119-22

Client ID: FEW4-BOYD-3

Operator ID: moanm

ALS Bottle#: 24

Worklist Smp#: 19

Purge Vol: 20.000 mL

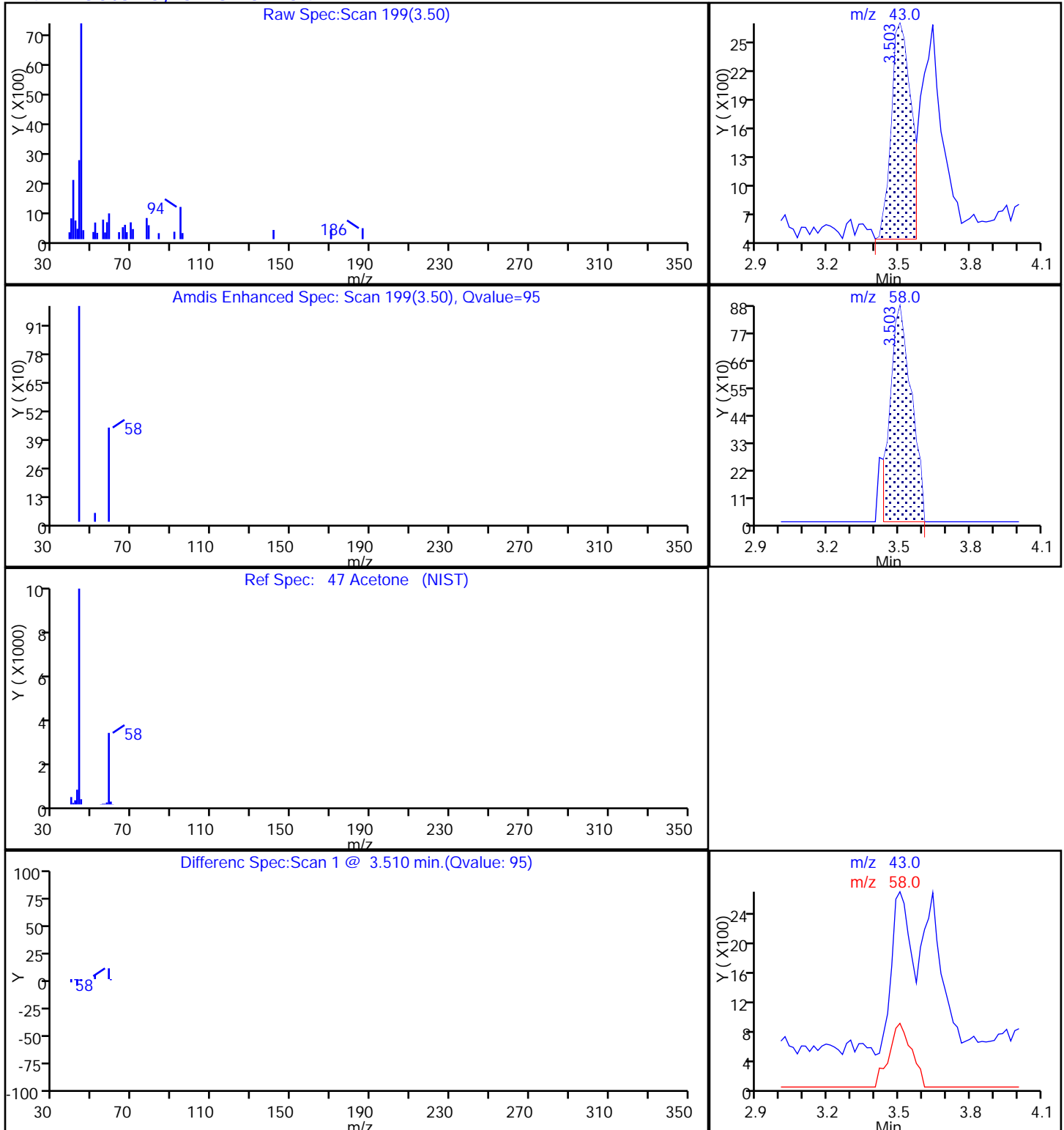
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

47 Acetone, CAS: 67-64-1

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0675.D

Injection Date: 16-Oct-2017 11:58:30

Instrument ID: VMS_H

Lims ID: 280-102119-H-22

Lab Sample ID: 280-102119-22

Client ID: FEW4-BOYD-3

Operator ID: moanm

ALS Bottle#: 24

Worklist Smp#: 19

Purge Vol: 20.000 mL

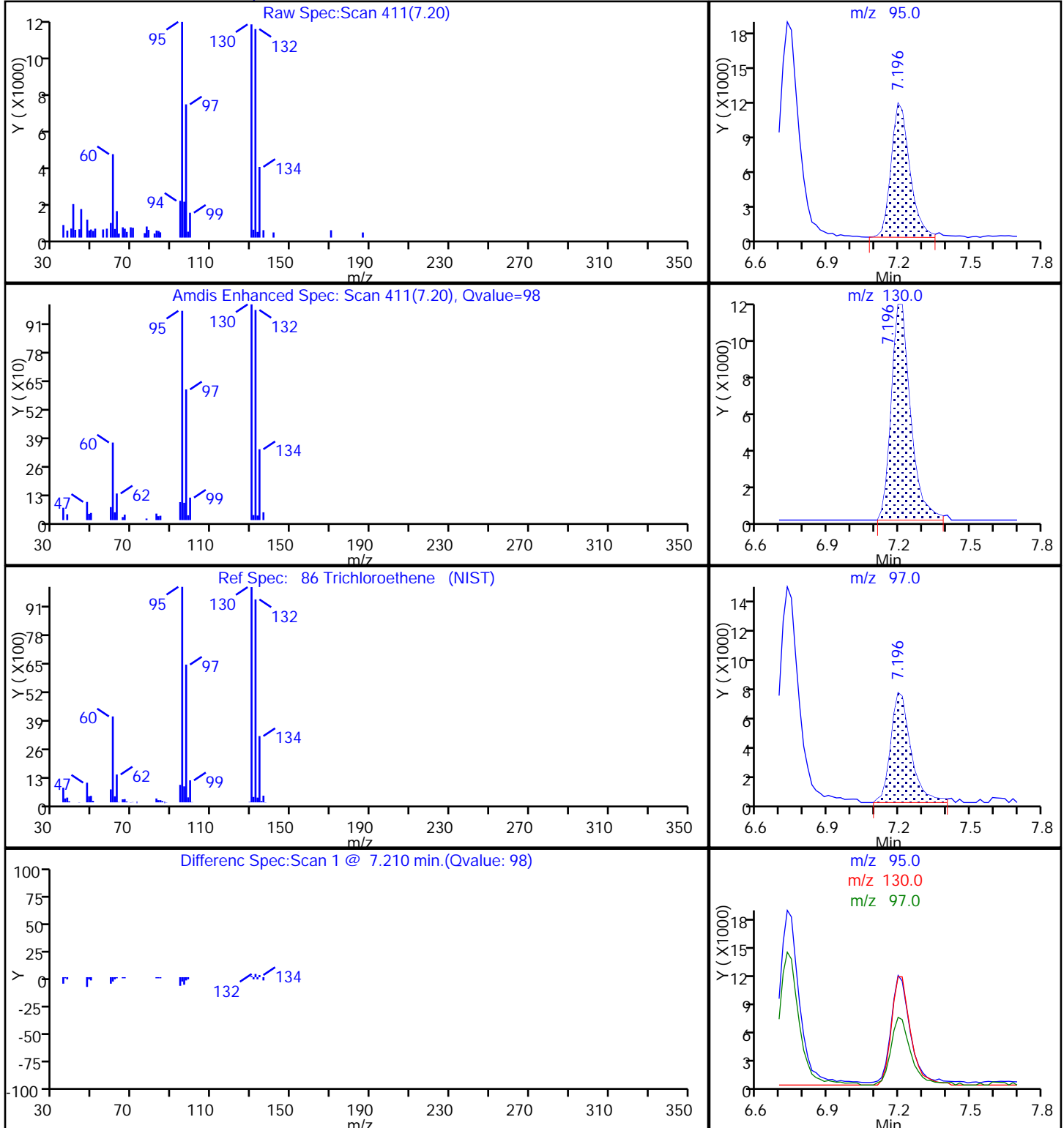
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

86 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BOYD-J</u>	Lab Sample ID: <u>280-102119-23</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0676.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 12:24</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 12:20</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BOYD-J</u>	Lab Sample ID: <u>280-102119-23</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0676.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 12:24</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 12:20</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0676.D
 Lims ID: 280-102119-C-23
 Client ID: FEW4-BOYD-J
 Sample Type: Client
 Inject. Date: 16-Oct-2017 12:20:30 ALS Bottle#: 25 Worklist Smp#: 20
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-23 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:46:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.972	-0.003	95	261442	250.0	
* 2 Fluorobenzene	96	6.720	6.741	-0.021	99	1228360	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.057	11.078	-0.021	86	427447	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.073	0.014	96	706141	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.884	5.905	-0.021	93	839759	11.4	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.323	-0.003	100	336349	10.5	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.848	-0.003	93	1752829	9.79	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.732	-0.003	86	1009133	10.5	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.934	3.937	-0.003	90	8855	0.2140	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0676.D

Injection Date: 16-Oct-2017 12:20:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-C-23

Lab Sample ID: 280-102119-23

Worklist Smp#: 20

Client ID: FEW4-BOYD-J

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

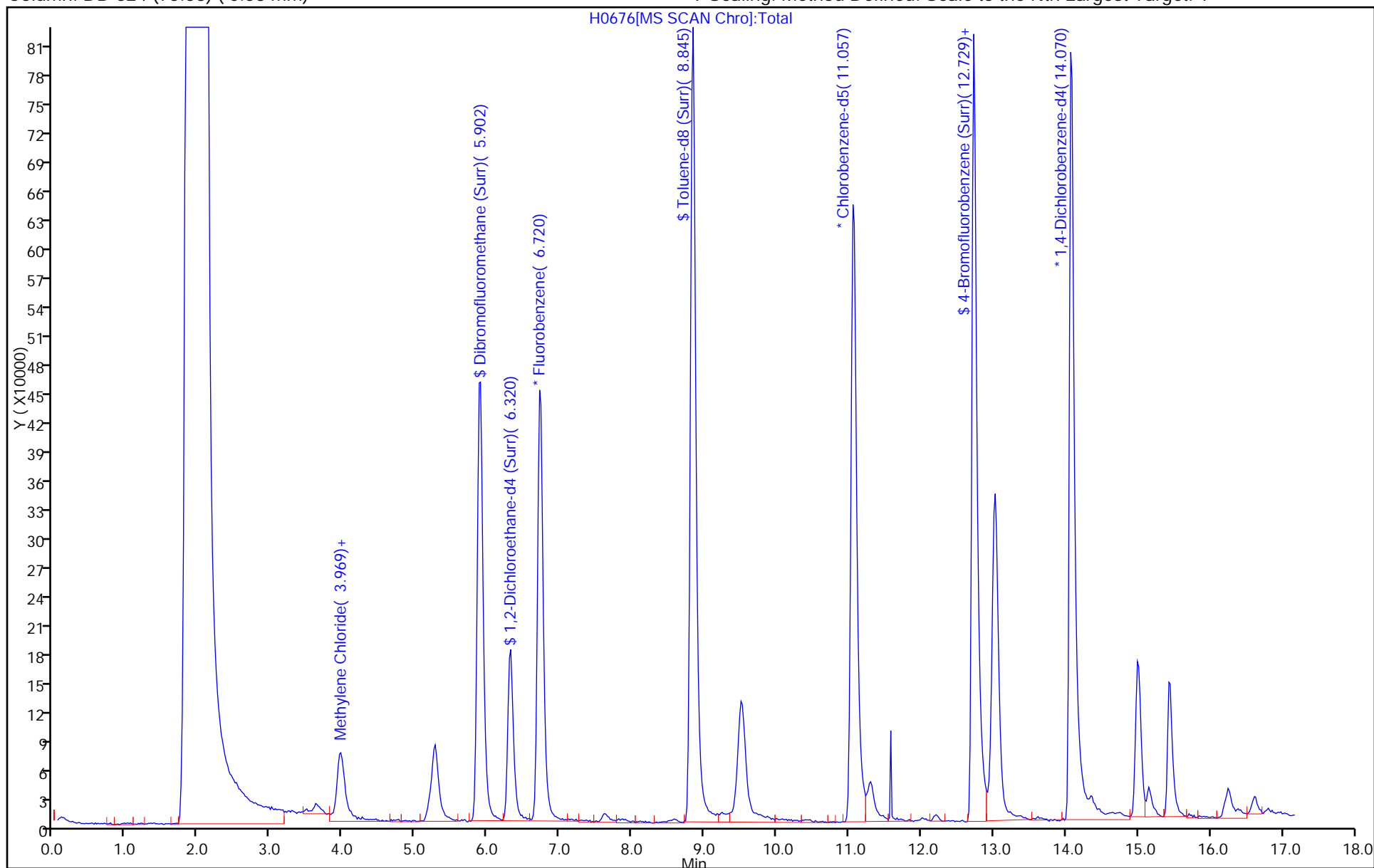
ALS Bottle#: 25

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-HILL#1</u>	Lab Sample ID: <u>280-102119-24</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0677.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 13:12</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 12:41</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-HILL#1 Lab Sample ID: 280-102119-24

Matrix: Water Lab File ID: H0677.D

Analysis Method: 8260B Date Collected: 10/07/2017 13:12

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 12:41

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
2037-26-5	Toluene-d8 (Surr)	96		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0677.D
 Lims ID: 280-102119-B-24
 Client ID: FEW4-HILL#1
 Sample Type: Client
 Inject. Date: 16-Oct-2017 12:41:30 ALS Bottle#: 26 Worklist Smp#: 21
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-24 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:47:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.970	3.972	-0.002	95	245762	250.0	
* 2 Fluorobenzene	96	6.721	6.741	-0.020	98	1220590	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.058	11.078	-0.020	86	423596	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.071	14.073	-0.002	97	699118	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.885	5.905	-0.020	93	837343	11.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.321	6.323	-0.002	99	329317	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.848	-0.002	93	1749481	9.86	
\$ 11 4-Bromofluorobenzene (Surr	95	12.730	12.732	-0.002	86	1000189	10.5	
28 Dichlorodifluoromethane	85		2.161				ND	
30 Chloromethane	50		2.265				ND	
32 Vinyl chloride	62		2.405				ND	
35 Bromomethane	94		2.683				ND	
36 Chloroethane	64		2.753				ND	
38 Trichlorofluoromethane	101		2.979				ND	
45 1,1-Dichloroethene	96		3.467				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.484				ND	
47 Acetone	43		3.502				ND	
50 Carbon disulfide	76		3.711				ND	
53 Methyl acetate	43		3.815				ND	
54 Methylene Chloride	84	3.935	3.937	-0.002	29	9076	0.2208	
56 Methyl tert-butyl ether	73		4.216				ND	
58 trans-1,2-Dichloroethene	96		4.216				ND	
60 1,1-Dichloroethane	63		4.669				ND	
65 cis-1,2-Dichloroethene	96		5.330				ND	
67 2-Butanone (MEK)	43		5.348				ND	
73 Chlorobromomethane	128		5.626				ND	
75 Chloroform	83		5.696				ND	
76 1,1,1-Trichloroethane	97		5.940				ND	
77 Cyclohexane	56		6.010				ND	
79 Carbon tetrachloride	117		6.149				ND	
81 Benzene	78		6.393				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.410				ND	
86 Trichloroethene	95		7.194				ND	
89 Methylcyclohexane	55		7.455				ND	
90 1,2-Dichloropropane	63		7.507				ND	
93 1,4-Dioxane	88		7.699				ND	
94 Dichlorobromomethane	83		7.856				ND	
97 cis-1,3-Dichloropropene	75		8.465				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.692				ND	
99 Toluene	91		8.936				ND	
100 trans-1,3-Dichloropropene	75		9.249				ND	
102 1,1,2-Trichloroethane	97		9.510				ND	
103 Tetrachloroethene	164		9.719				ND	
105 2-Hexanone	43		9.893				ND	
108 Chlorodibromomethane	129		10.120				ND	
109 Ethylene Dibromide	107		10.294				ND	
111 Chlorobenzene	112		11.112				ND	
113 Ethylbenzene	106		11.287				ND	
114 m-Xylene & p-Xylene	106		11.478				ND	
115 o-Xylene	106		12.036				ND	
116 Styrene	104		12.070				ND	
117 Bromoform	173		12.314				ND	
118 Isopropylbenzene	105		12.541				ND	
121 1,1,2,2-Tetrachloroethane	83		12.924				ND	
132 1,3-Dichlorobenzene	146		14.004				ND	
134 1,4-Dichlorobenzene	146		14.108				ND	
138 1,2-Dichlorobenzene	146		14.509				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.292				ND	
141 1,2,4-Trichlorobenzene	180		16.059				ND	
144 1,2,3-Trichlorobenzene	180		16.511				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0677.D

Injection Date: 16-Oct-2017 12:41:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-B-24

Lab Sample ID: 280-102119-24

Worklist Smp#: 21

Client ID: FEW4-HILL#1

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

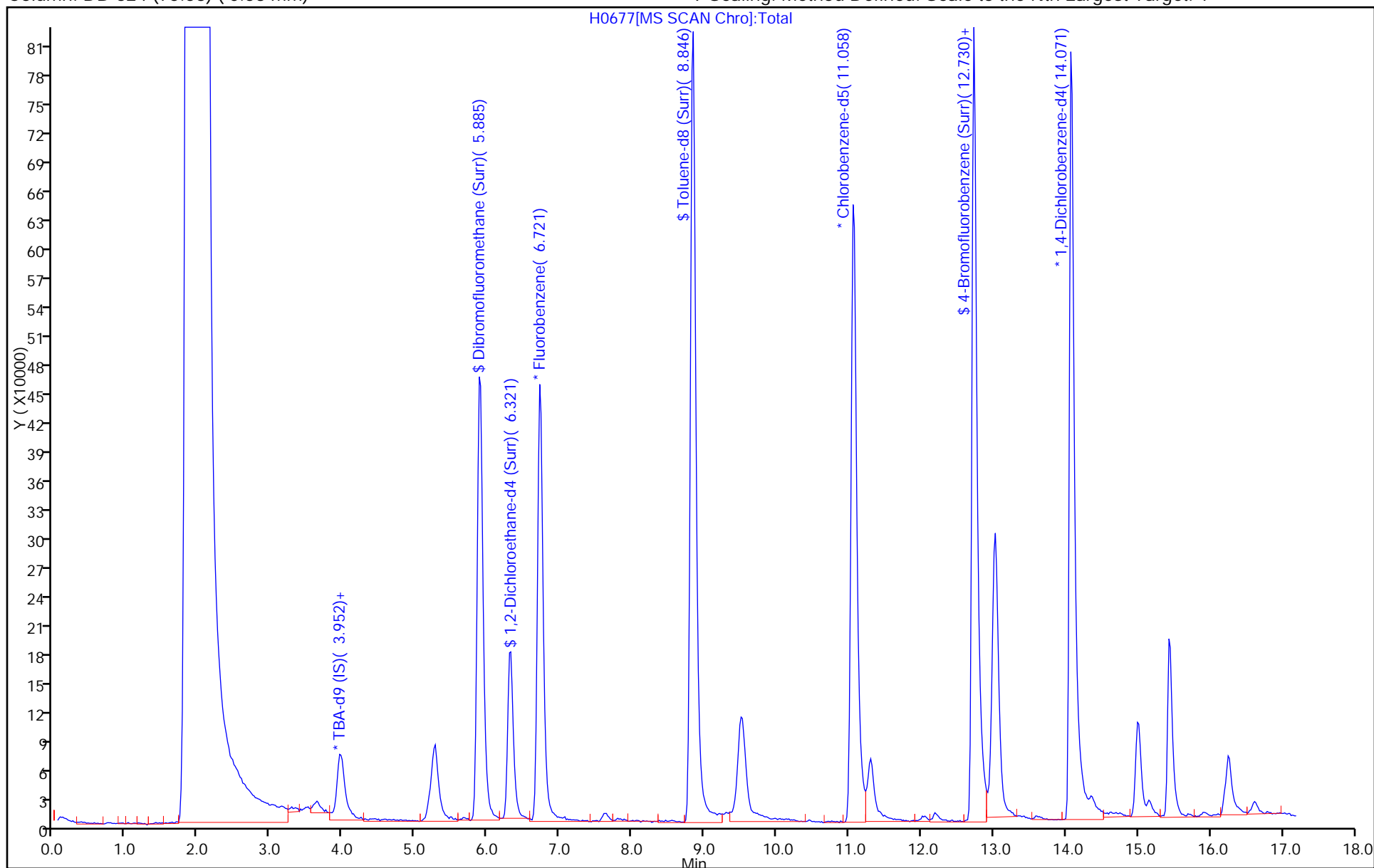
ALS Bottle#: 26

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-TB-20171006</u>	Lab Sample ID: <u>280-102119-25</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0642.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/02/2017 00:00</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 14:31</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-TB-20171006</u>	Lab Sample ID: <u>280-102119-25</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0642.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/02/2017 00:00</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 14:31</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	109		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
2037-26-5	Toluene-d8 (Surr)	93		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0642.D
 Lims ID: 280-102119-A-25
 Client ID: FEW4-TB-20171006
 Sample Type: Client
 Inject. Date: 15-Oct-2017 14:31:30 ALS Bottle#: 25 Worklist Smp#: 20
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-A-25 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:06:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.986	3.986	0.000	96	258467	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	1243932	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.075	11.092	-0.017	86	429344	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.088	0.000	96	710716	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	828764	11.1	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.338	6.338	0.000	99	320367	9.84	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.863	-0.018	93	1720978	9.56	
\$ 11 4-Bromofluorobenzene (Surr	95	12.747	12.747	0.000	87	978962	10.1	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.952	3.952	0.000	92	12611	0.3010	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0642.D

Injection Date: 15-Oct-2017 14:31:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-A-25

Lab Sample ID: 280-102119-25

Worklist Smp#: 20

Client ID: FEW4-TB-20171006

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

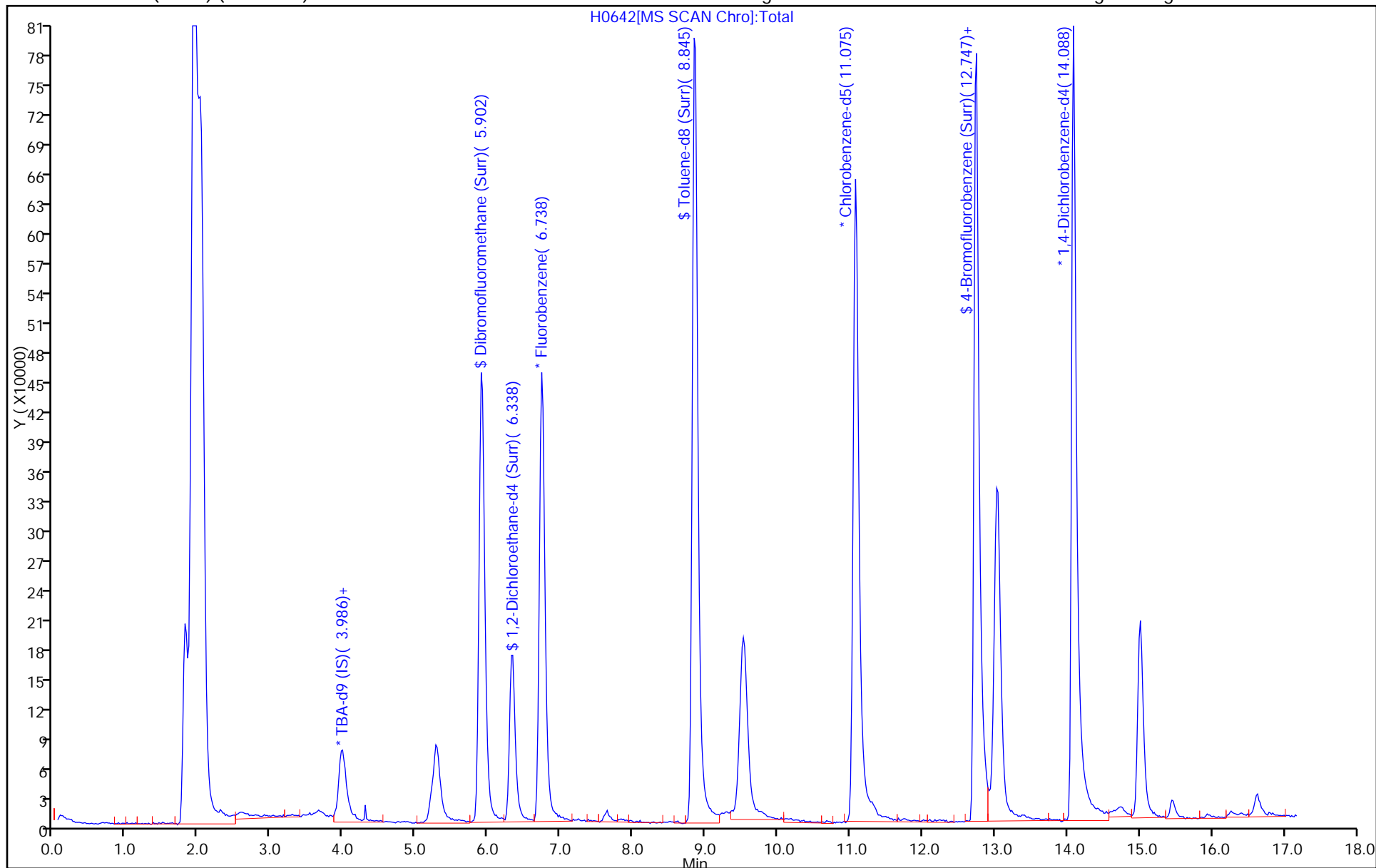
ALS Bottle#: 25

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-TB-20171007</u>	Lab Sample ID: <u>280-102119-26</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0643.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/02/2017 00:00</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 14:53</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-TB-20171007 Lab Sample ID: 280-102119-26

Matrix: Water Lab File ID: H0643.D

Analysis Method: 8260B Date Collected: 10/02/2017 00:00

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 14:53

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	109		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
2037-26-5	Toluene-d8 (Surr)	94		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0643.D
 Lims ID: 280-102119-B-26
 Client ID: FEW4-TB-20171007
 Sample Type: Client
 Inject. Date: 15-Oct-2017 14:53:30 ALS Bottle#: 26 Worklist Smp#: 21
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-B-26 ph<2
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:06:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.986	3.986	0.000	95	289157	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	1266465	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.074	11.092	-0.018	86	436813	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.088	-0.001	96	745079	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	845766	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.338	-0.018	99	335301	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.863	8.863	-0.001	92	1766849	9.65	
\$ 11 4-Bromofluorobenzene (Surr	95	12.746	12.747	-0.001	87	1007574	9.96	
28 Dichlorodifluoromethane	85		2.158				ND	
30 Chloromethane	50		2.280				ND	
32 Vinyl chloride	62		2.419				ND	
35 Bromomethane	94		2.698				ND	
36 Chloroethane	64		2.767				ND	
38 Trichlorofluoromethane	101		2.994				ND	
45 1,1-Dichloroethene	96		3.481				ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.499				ND	
47 Acetone	43		3.516				ND	
50 Carbon disulfide	76		3.725				ND	
53 Methyl acetate	43		3.830				ND	
54 Methylene Chloride	84	3.934	3.952	-0.018	88	11780	0.2762	
56 Methyl tert-butyl ether	73		4.230				ND	
58 trans-1,2-Dichloroethene	96		4.230				ND	
60 1,1-Dichloroethane	63		4.683				ND	
65 cis-1,2-Dichloroethene	96		5.345				ND	
67 2-Butanone (MEK)	43		5.362				ND	
73 Chlorobromomethane	128		5.641				ND	
75 Chloroform	83		5.711				ND	
76 1,1,1-Trichloroethane	97		5.954				ND	
77 Cyclohexane	56		6.024				ND	
79 Carbon tetrachloride	117		6.163				ND	
81 Benzene	78		6.407				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
82 1,2-Dichloroethane	62		6.425				ND	
86 Trichloroethene	95		7.208				ND	
89 Methylcyclohexane	55		7.470				ND	
90 1,2-Dichloropropane	63		7.504				ND	
93 1,4-Dioxane	88		7.713				ND	
94 Dichlorobromomethane	83		7.870				ND	
97 cis-1,3-Dichloropropene	75		8.480				ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.706				ND	
99 Toluene	91		8.950				ND	
100 trans-1,3-Dichloropropene	75		9.263				ND	
102 1,1,2-Trichloroethane	97		9.525				ND	
103 Tetrachloroethene	164		9.734				ND	
105 2-Hexanone	43		9.908				ND	
108 Chlorodibromomethane	129		10.117				ND	
109 Ethylene Dibromide	107		10.308				ND	
111 Chlorobenzene	112		11.127				ND	
113 Ethylbenzene	106		11.301				ND	
114 m-Xylene & p-Xylene	106		11.475				ND	
115 o-Xylene	106		12.050				ND	
116 Styrene	104		12.067				ND	
117 Bromoform	173		12.329				ND	
118 Isopropylbenzene	105		12.538				ND	
121 1,1,2,2-Tetrachloroethane	83		12.938				ND	
132 1,3-Dichlorobenzene	146		14.018				ND	
134 1,4-Dichlorobenzene	146		14.105				ND	
138 1,2-Dichlorobenzene	146		14.506				ND	
139 1,2-Dibromo-3-Chloropropan	157		15.289				ND	
141 1,2,4-Trichlorobenzene	180		16.056				ND	
144 1,2,3-Trichlorobenzene	180		16.509				ND	

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0643.D

Injection Date: 15-Oct-2017 14:53:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-B-26

Lab Sample ID: 280-102119-26

Worklist Smp#: 21

Client ID: FEW4-TB-20171007

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

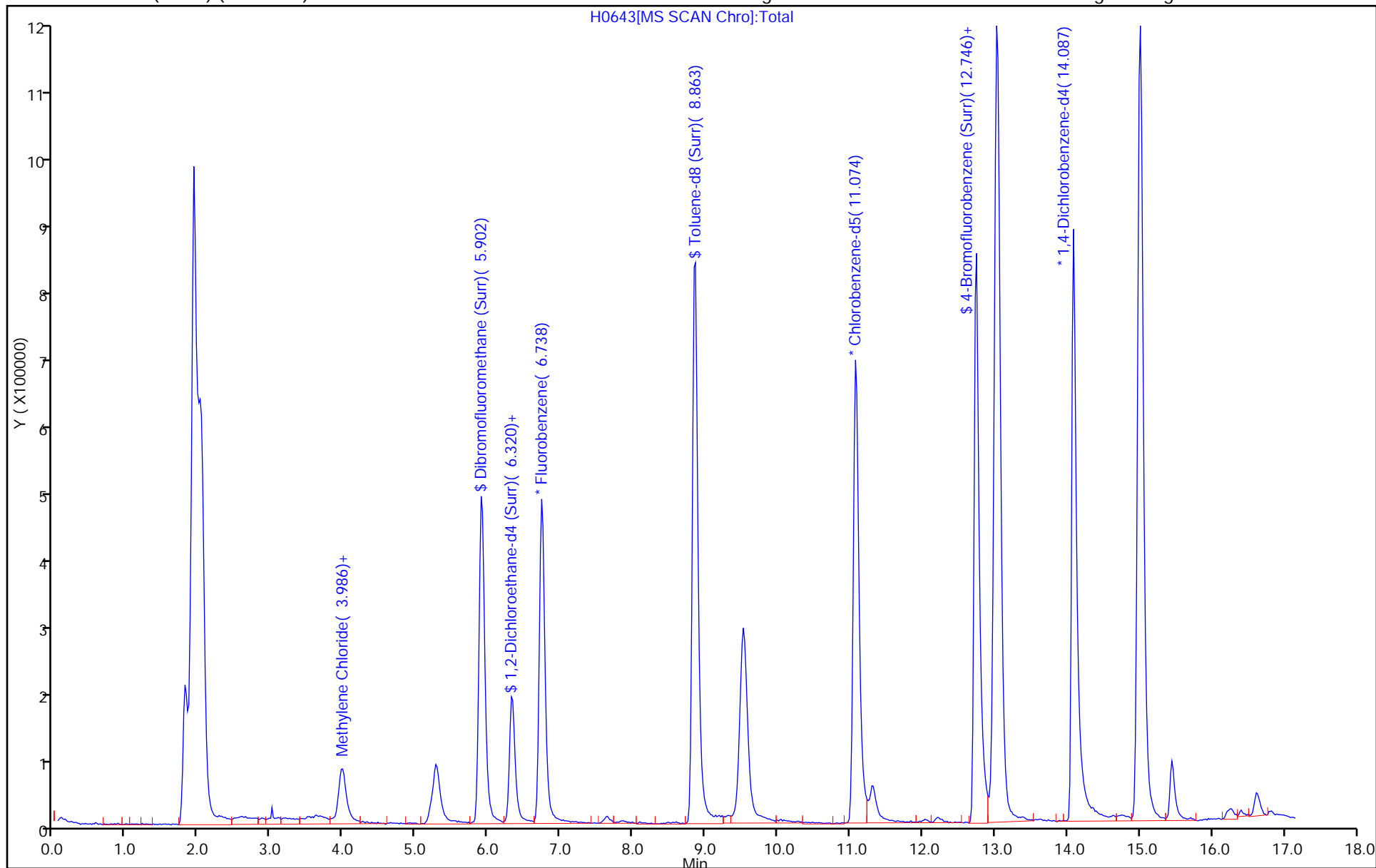
ALS Bottle#: 26

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-379245/10	H7379.D
Level 2	IC 280-379245/11	H7380.D
Level 3	IC 280-379245/12	H7381.D
Level 4	IC 280-379245/13	H7382.D
Level 5	IC 280-379245/14	H7383.D
Level 6	IC 280-379245/15	H7384.D
Level 7	IC 280-379245/16	H7385.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Dichlorodifluoromethane	+++++ 0.3888	0.2573 0.3980	0.2458	0.4002	0.3869	Lin1	-0.175	0.4001							0.9990		0.9900
Chloromethane	0.2057 0.2105	0.1690 0.2141	0.1732	0.2121	0.2117	Ave		0.1995			0.1000	9.8		15.0			
Vinyl chloride	0.3799 0.2848	0.3145 0.2866	0.2773	0.3028	0.3011	Ave		0.3067				11.3		30.0			
Bromomethane	0.4459 0.3416	0.3611 0.3372	0.3211	0.3609	0.3597	Ave		0.3611				11.2		15.0			
Chloroethane	0.2161 0.2004	0.2280 0.2044	0.1906	0.2142	0.2100	Ave		0.2091				5.8		15.0			
Dichlorofluoromethane	0.8515 0.8157	0.8805 0.8373	0.7908	0.8360	0.8456	Ave		0.8368				3.4		15.0			
Trichlorofluoromethane	0.9602 0.8708	0.9335 0.8826	0.8683	0.9227	0.9177	Ave		0.9080				3.8		15.0			
Ethyl ether	+++++ 0.1639	0.2099 0.1720	0.1869	0.1856	0.1806	Ave		0.1831				8.6		15.0			
Acrolein	+++++ 0.0129	0.0108 0.0136	0.0121	0.0134	0.0129	Ave		0.0126				8.3		15.0			
1,1-Dichloroethene	0.4333 0.4168	0.4414 0.4301	0.4112	0.4600	0.4488	Ave		0.4345				4.0		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.8219 0.6961	0.7570 0.7106	0.6998	0.7631	0.7378	Ave		0.7409				6.0		15.0			
Acetone	+++++ 0.0235	+++++ 0.0244	0.0373	0.0316	0.0271	Lin2	0.1125	0.0240							0.9960		0.9900
Iodomethane	1.4017 1.2152	1.3474 1.2697	1.2044	1.3217	1.2963	Ave		1.2938				5.5		15.0			
Carbon disulfide	1.7108 1.4750	1.5871 1.5352	1.4544	1.6031	1.5753	Ave		1.5630				5.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	++++ 0.5361	0.8168 0.5602	0.5493	0.5832	0.5970	Lin1	0.1857	0.5498							0.9980		0.9900
Methyl acetate	++++ 0.0843	0.0792 0.0864	0.0972	0.0907	0.0894	Ave		0.0879				7.0		15.0			
Methylene Chloride	++++ 0.3451	0.7757 0.3539	0.5005	0.4493	0.3869	Lin2	0.4173	0.3399							0.9910		0.9900
t-Butyl alcohol	++++ 1.3091	1.8715 1.3981	1.8512	1.5901	1.4545	Ave		1.5791				15.0		15.0			
Acrylonitrile	++++ 0.0241	0.0228 0.0257	0.0207	0.0242	0.0246	Ave		0.0237				7.4		15.0			
Methyl tert-butyl ether	0.6500 0.5697	0.5904 0.6132	0.5497	0.6090	0.6143	Ave		0.5995				5.5		15.0			
trans-1,2-Dichloroethene	0.4817 0.4418	0.4752 0.4629	0.4441	0.4754	0.4783	Ave		0.4656				3.6		15.0			
Hexane	2.7360 2.4305	2.5189 2.4801	2.2871	2.5491	2.5005	Ave		2.5003				5.4		15.0			
1,1-Dichloroethane	0.7880 0.7239	0.7730 0.7719	0.7172	0.7877	0.7833	Ave		0.7636			0.1000	3.9		15.0			
Vinyl acetate	0.3955 0.3707	0.3695 0.3951	0.3263	0.3681	0.3670	Ave		0.3703				6.2		15.0			
cis-1,2-Dichloroethene	0.4542 0.4428	0.4834 0.4748	0.4381	0.4830	0.4711	Ave		0.4639				4.1		15.0			
2,2-Dichloropropane	++++ 0.7017	1.2591 0.7267	0.9435	0.8619	0.7996	Lin2	0.5292	0.7189							0.9970		0.9900
2-Butanone (MEK)	++++ 0.0465	0.0503 0.0498	0.0506	0.0468	0.0517	Ave		0.0493				4.3		15.0			
sec-Butyl Alcohol	++++ 1.2785	1.0921 1.2876	1.0877	1.2570	1.2622	Ave		1.2109				7.8		15.0			
Bromochloromethane	0.2931 0.2409	0.2850 0.2543	0.2501	0.2649	0.2532	Ave		0.2631				7.3		15.0			
Tetrahydrofuran	++++ 0.0304	0.0356 0.0315	0.0290	0.0308	0.0307	Ave		0.0313				7.1		15.0			
Chloroform	0.8302 0.8253	0.9039 0.8717	0.8152	0.9061	0.8860	Ave		0.8626				4.5		30.0			
1,1,1-Trichloroethane	0.9418 0.8523	0.9719 0.9052	0.8627	0.9325	0.9228	Ave		0.9128				4.7		15.0			
Cyclohexane	0.7020 0.6397	0.6958 0.6769	0.6513	0.7139	0.7019	Ave		0.6831				4.1		15.0			
1,1-Dichloropropene	0.8662 0.6729	0.8250 0.7070	0.7062	0.7446	0.7298	Ave		0.7502				9.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	1.1079 0.9102	1.0662 0.9506	0.9336	0.9960	0.9948	Ave		0.9942				7.2		15.0			
Isobutyl alcohol	++++ 0.4646	++++ 0.4846	0.4361	0.5398	0.4771	Ave		0.4804				7.9		15.0			
Benzene	1.3258 1.2021	1.3133 1.2638	1.1968	1.2998	1.2754	Ave		1.2681				4.1		15.0			
1,2-Dichloroethane	0.3995 0.3373	0.3909 0.3482	0.3417	0.3717	0.3560	Ave		0.3636				6.7		15.0			
Trichloroethene	0.6762 0.5457	0.6182 0.5712	0.5410	0.6034	0.5960	Ave		0.5931				7.9		15.0			
2-Pentanone	0.1435 ++++	0.1947 ++++	0.1664	0.1824	0.1991	Ave		0.1772				12.8		15.0			
Methylcyclohexane	0.7011 0.5885	0.6744 0.6147	0.6237	0.6731	0.6390	Ave		0.6449				6.1		15.0			
1,2-Dichloropropane	0.4137 0.4076	0.4550 0.4272	0.4139	0.4440	0.4363	Ave		0.4282				4.1		30.0			
Dibromomethane	++++ 0.2574	0.3230 0.2689	0.2713	0.2968	0.2831	Ave		0.2834				8.3		15.0			
1,4-Dioxane	++++ 0.0015	++++ 0.0015	0.0011	0.0015	0.0015	Ave		0.0014				11.2		15.0			
Bromodichloromethane	0.7216 0.7188	0.7592 0.7447	0.7224	0.7917	0.7746	Ave		0.7476				3.8		15.0			
cis-1,3-Dichloropropene	2.5514 2.4703	2.7314 2.4984	2.5008	2.7520	2.6460	Ave		2.5929				4.5		15.0			
4-Methyl-2-pentanone (MIBK)	0.1778 0.1587	0.1612 0.1625	0.1617	0.1609	0.1700	Ave		0.1647				4.1		15.0			
Toluene	1.5217 1.3902	1.5410 1.4224	1.4113	1.5543	1.4920	Ave		1.4761				4.6		30.0			
trans-1,3-Dichloropropene	++++ 0.4583	0.4792 0.4605	0.4336	0.4736	0.4673	Ave		0.4621				3.5		15.0			
Ethyl methacrylate	++++ 1.3582	1.4474 1.3244	1.2849	1.4144	1.4106	Ave		1.3733				4.5		15.0			
1,1,2-Trichloroethane	++++ 0.2852	0.5257 0.2748	0.3834	0.3411	0.3259	Lin2	0.2376	0.2828							0.9960		0.9900
Tetrachloroethene	2.4226 2.5024	2.7376 2.5115	2.5771	2.7767	2.6572	Ave		2.5979				5.0		15.0			
1,3-Dichloropropane	2.4411 1.7835	1.7495 1.7881	1.7396	1.9670	1.9145	Ave		1.9119				13.0		15.0			
2-Hexanone	++++ 0.4235	0.3842 0.4289	0.3857	0.4204	0.4402	Ave		0.4138				5.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	2.3065 2.5719	2.5524 2.5364	2.4176	2.6794	2.6780	Ave		2.5346				5.3		15.0			
1,2-Dibromoethane (EDB)	1.6008 1.5508	1.7074 1.5061	1.5263	1.6150	1.6324	Ave		1.5913				4.4		15.0			
1-Chlorohexane	3.2560 2.9509	3.3089 2.8907	2.9947	3.1669	3.0759	Ave		3.0920				5.1		15.0			
Chlorobenzene	4.6953 4.4816	4.7274 4.3960	4.3372	4.7910	4.6351	Ave		4.5805			0.3000	3.8		15.0			
1,1,1,2-Tetrachloroethane	2.3576 2.4237	2.5365 2.3749	2.4221	2.6783	2.5361	Ave		2.4756				4.6		15.0			
Ethylbenzene	2.0920 2.1608	2.3710 2.1104	2.2331	2.4041	2.2574	Ave		2.2327				5.5		30.0			
m-Xylene & p-Xylene	2.4875 2.8672	3.2116 2.7536	2.9073	3.1564	2.9915	Ave		2.9107				8.5		15.0			
o-Xylene	2.5819 2.5196	2.8422 2.4106	2.6388	2.8055	2.6448	Ave		2.6348				5.8		15.0			
Styrene	4.1816 3.9643	4.4001 3.8357	3.9499	4.3183	4.1720	Ave		4.1174				5.0		15.0			
Bromoform	1.4109 1.5801	1.6351 1.5132	1.5589	1.7067	1.6755	Ave		1.5829			0.1000	6.4		15.0			
Isopropylbenzene	5.0246 4.5632	5.2326 4.7436	4.7170	5.0203	4.5550	Ave		4.8366				5.4		15.0			
Cyclohexanone	++++ 0.0167	0.0165 0.0157	0.0163	0.0172	0.0181	Ave		0.0167				5.0		15.0			
Bromobenzene	1.3128 1.3106	1.3853 1.3928	1.3027	1.4272	1.3146	Ave		1.3494				3.8		15.0			
1,1,2,2-Tetrachloroethane	1.0135 0.8135	0.8333 0.8376	0.8168	0.8604	0.8088	Ave		0.8548			0.3000	8.4		15.0			
1,2,3-Trichloropropane	++++ 0.2136	0.4155 0.2210	0.2978	0.2418	0.2245	Lin2	0.2029	0.2065							0.9980		0.9900
trans-1,4-Dichloro-2-butene	++++ 0.1499	0.1429 0.1590	0.1437	0.1449	0.1469	Ave		0.1479				4.1		15.0			
N-Propylbenzene	1.6859 1.1976	1.4460 1.2479	1.2879	1.3002	1.1954	Ave		1.3373				13.1		15.0			
2-Chlorotoluene	++++ 0.9899	1.1961 1.0508	1.0405	1.0713	0.9955	Ave		1.0574				7.1		15.0			
1,3,5-Trimethylbenzene	3.9766 3.4365	3.9732 3.5196	3.6303	3.8201	3.5924	Ave		3.7070				5.9		15.0			
4-Chlorotoluene	1.3651 1.1776	1.2445 1.1900	1.1652	1.2358	1.2072	Ave		1.2265				5.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butylbenzene	4.7007 4.0005	4.7098 4.1274	4.1993	4.5104	4.1311	Ave		4.3399				6.8		15.0			
1,2,4-Trimethylbenzene	3.6667 3.2732	3.7482 3.3036	3.4616	3.6414	3.3743	Ave		3.4956				5.4		15.0			
sec-Butylbenzene	1.3415 1.1097	1.3297 1.1152	1.1584	1.2245	1.1524	Ave		1.2045				8.1		15.0			
1,3-Dichlorobenzene	1.9512 1.9595	2.2735 2.1220	1.9705	2.1711	1.9933	Ave		2.0630				6.1		15.0			
4-Isopropyltoluene	5.2513 4.5412	5.3093 4.5509	4.8385	5.1425	4.7139	Ave		4.9068				6.6		15.0			
1,4-Dichlorobenzene	3.2317 2.6740	3.0514 2.6705	2.7161	2.9687	2.7784	Ave		2.8701				7.6		15.0			
n-Butylbenzene	4.2310 3.9065	4.6037 3.9169	4.1588	4.3843	4.0446	Ave		4.1780				6.1		15.0			
1,2-Dichlorobenzene	2.0942 1.9457	2.2286 1.9098	2.0375	2.1246	2.0134	Ave		2.0505				5.3		15.0			
1,2-Dibromo-3-Chloropropane	++++ 0.1942	0.2165 0.1974	0.2027	0.2137	0.2031	Ave		0.2046				4.3		15.0			
1,2,4-Trichlorobenzene	1.3659 1.5374	1.5930 1.5241	1.4791	1.6582	1.5647	Ave		1.5318				6.0		15.0			
Hexachlorobutadiene	1.8385 1.6262	1.9242 1.5398	1.7437	1.8954	1.7151	Ave		1.7547				8.1		15.0			
Naphthalene	1.3364 1.3955	1.3250 1.3715	1.2831	1.4464	1.4015	Ave		1.3656				4.0		15.0			
1,2,3-Trichlorobenzene	1.0679 1.1771	1.2344 1.1558	1.1840	1.2970	1.2132	Ave		1.1899				6.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-379245/10	H7379.D
Level 2	IC 280-379245/11	H7380.D
Level 3	IC 280-379245/12	H7381.D
Level 4	IC 280-379245/13	H7382.D
Level 5	IC 280-379245/14	H7383.D
Level 6	IC 280-379245/15	H7384.D
Level 7	IC 280-379245/16	H7385.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Lin1	+++++ 927951	18927 1792911	39954	157491	307290	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	4341 502324	12433 964482	28157	83460	168134	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	8018 679647	23137 1290936	45072	119142	239205	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	9412 815193	26567 1519159	52197	142002	285712	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	4562 478292	16771 920647	30983	84286	166821	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	17973 1946684	64772 3771838	128550	329003	671643	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	20268 2078386	68674 3975914	141160	363100	728979	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	+++++ 391181	15442 774586	30384	73020	143423	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	+++++ 307192	7932 613789	19614	52697	102619	+++++ 300	10.00 600	20.0	50.0	100.0
1,1-Dichloroethene	FB	Ave	9146 994867	32474 1937331	66851	181012	356452	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	17348 1661273	55688 3200803	113756	300306	586056	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Lin2	+++++ 224687	+++++ 439329	24270	49755	86123	+++++ 120	+++++ 240	8.00	20.0	40.0
Iodomethane	FB	Ave	29586 2900232	99125 5719389	195794	520100	1029713	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	36110 3520347	116759 6915444	236433	630872	1251303	0.300 30.0	1.00 60.0	2.00	5.00	10.0
3-Chloro-1-propene	FB	Lin1	+++++ 1279519	60086 2523470	89296	229496	474175	+++++ 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	+++++ 1005671	29149 1945295	79046	178415	355007	+++++ 150	5.00 300	10.0	25.0	50.0
Methylene Chloride	FB	Lin2	+++++ 823702	57063 1594399	81372	176794	307343	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd 9	Ave	+++++ 240390	9489 501302	20635	43866	89146	+++++ 300	10.0 600	20.0	50.0	100
Acrylonitrile	FB	Ave	+++++ 575083	16791 1157575	33590	95415	195352	+++++ 300	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	13719 1359725	43433 2762129	89364	239672	487912	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	10168 1054308	34957 2085210	72189	187085	379919	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	15996 1408729	47501 2801890	92766	247307	494319	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	16632 1727676	56865 3477098	116596	309979	622186	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	16697 1769572	54367 3559192	106092	289743	583074	0.600 60.0	2.00 120	4.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	9587 1056870	35565 2138792	71220	190067	374182	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Lin2	+++++ 1674760	92630 3273592	153379	339194	635132	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 443922	14804 896592	32906	73695	164406	+++++ 120	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd 9	Ave	+++++ 704363	16612 1385095	36374	104035	232078	+++++ 900	30.0 1800	60.0	150	300
Bromochloromethane	FB	Ave	6186 574947	20965 1145678	40654	104228	201117	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 145169	5233 284057	9425	24233	48796	+++++ 60.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	17524 1969667	66500 3926557	132522	356563	703763	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	19878 2034246	71498 4077681	140253	366977	732980	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	14818 1526794	51188 3049156	105886	280937	557571	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	18283 1605893	60690 3185004	114801	293003	579729	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	23385 2172409	78436 4282023	151769	391943	790177	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd 9	Ave	+++++ 213307	+++++ 434362	12154	37227	73100	+++++ 750	+++++ 1500	50.0	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	27984 2868987	96618 5693144	194552	511480	1013066	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	8433 805120	28757 1568324	55552	146278	282800	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	14273 1302359	45477 2573209	87955	237450	473441	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	12119 ++++	57294 ++++	108212	287133	632479	1.20 ++++	4.00 ++++	8.00	20.0	40.0
Methylcyclohexane	FB	Ave	14798 1404577	49611 2768946	101389	264870	507558	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	8733 972713	33471 1924338	67293	174726	346538	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	++++ 614431	23765 1211408	44107	116814	224888	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Ave	++++ 71683	++++ 134203	3697	11755	23575	++++ 600	++++ 1200	40.0	100	200
Bromodichloromethane	FB	Ave	15230 1715604	55848 3354439	117444	311563	615276	0.300 30.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	14917 1431840	51508 2822523	101433	266992	523097	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	15014 1515028	47443 2927582	105177	253257	539996	1.20 120	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	32119 3317845	113368 6407298	229426	611631	1185099	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	++++ 1093847	35254 2074354	70491	186380	371192	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	++++ 787236	27295 1496240	52115	137221	278872	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Lin2	++++ 680788	38677 1237853	62333	134237	258876	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	14164 1450444	51624 2837372	104526	269388	525305	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	14272 1033719	32992 2020131	70557	190828	378480	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	++++ 981792	28983 1937998	62569	163125	348087	++++ 120	4.00 240	8.00	20.0	40.0
Dibromochloromethane	CBNZ d5	Ave	13485 1490723	48132 2865492	98057	259941	529422	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	9359 898852	32198 1701567	61909	156680	322715	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	19036 1710375	62399 3265795	121465	307244	608079	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	27451 2597604	89148 4966368	175917	464802	916326	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	13784 1404821	47833 2683073	98243	259836	501368	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	12231 1252407	44712 2384190	90574	233238	446276	0.300 30.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	14543 1661879	60563 3110883	117922	306221	591386	0.300 30.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	15095 1460413	53597 2723338	107032	272183	522845	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	24448 2297755	82975 4333392	160211	418942	824776	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	8249 915822	30834 1709551	63229	165574	331229	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	46328 4580162	170396 8546684	339430	875992	1667464	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	++++ 387027	12437 707511	26383	66805	142807	++++ 1200	40.0 2400	80.0	200	400
Bromobenzene	DCBd 4	Ave	12104 1315527	45113 2509391	93740	249041	481240	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	9345 816528	27137 1509064	58774	150139	296068	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Lin2	++++ 214378	13532 398149	21427	42186	82202	++++ 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	++++ 150469	4652 286488	10338	25276	53786	++++ 30.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	15544 1202049	47087 2248428	92676	226867	437624	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	++++ 993615	38952 1893190	74874	186934	364443	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	36665 3449246	129385 6341476	261232	666575	1315101	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	12587 1181985	40527 2144117	83847	215637	441916	0.300 30.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	43342 4015414	153374 7436572	302177	787023	1512313	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	33808 3285380	122060 5952286	249088	635394	1235253	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	12369 1113864	43302 2009287	83357	213662	421880	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	17991 1966823	74035 3823224	141791	378847	729692	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 379245

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/29/2017 10:14 Calibration End Date: 06/29/2017 12:25 Calibration ID: 29658

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	48418 4558122	172895 8199594	348169	897331	1725663	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	29797 2683909	99366 4811544	195448	518011	1017118	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	39011 3921035	149917 7057175	299262	765018	1480642	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	19309 1952977	72575 3440966	146618	370718	737049	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	++++ 194902	7050 355729	14584	37289	74357	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	12594 1543124	51876 2746119	106436	289341	572793	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	16951 1632303	62662 2774367	125473	330740	627876	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	12322 1400658	43148 2471095	92333	252383	513054	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	9846 1181489	40197 2082442	85202	226312	444117	0.300 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7379.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 29-Jun-2017 10:14:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:31:55 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 11:54:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.993	-0.018	97	121530	250.0	250.0	
* 2 Fluorobenzene	96	6.727	6.744	-0.017	98	879470	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.081	11.098	-0.017	88	243605	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.094	14.094	0.000	98	384177	12.5	12.5	
28 Dichlorodifluoromethane	85	2.146	2.175	-0.029	92	5659	0.3000	0.6385	
30 Chloromethane	50	2.268	2.280	-0.012	93	4341	0.3000	0.3093	
32 Vinyl chloride	62	2.390	2.419	-0.029	93	8018	0.3000	0.3716	
35 Bromomethane	94	2.669	2.698	-0.029	82	9412	0.3000	0.3705	
36 Chloroethane	64	2.739	2.768	-0.029	96	4562	0.3000	0.3101	
37 Dichlorofluoromethane	67	2.930	2.942	-0.012	98	17973	0.3000	0.3053	
38 Trichlorofluoromethane	101	2.982	2.994	-0.012	97	20268	0.3000	0.3173	
40 Ethyl ether	59	3.209	3.220	-0.011	88	7265	0.3000	0.5639	
44 Acrolein	56		3.377				ND	ND	
45 1,1-Dichloroethene	96	3.453	3.482	-0.029	96	9146	0.3000	0.2992	
46 1,1,2-Trichloro-1,2,2-trif	151	3.487	3.499	-0.012	95	17348	0.3000	0.3328	
47 Acetone	43		3.516				ND	ND	
48 Iodomethane	142	3.627	3.638	-0.011	98	29586	0.3000	0.3250	
50 Carbon disulfide	76	3.714	3.725	-0.011	98	36110	0.3000	0.3284	
52 3-Chloro-1-propene	41		3.812				ND	ND	
53 Methyl acetate	43		3.830				ND	ND	
54 Methylene Chloride	84	3.940	3.952	-0.012	91	34308	0.3000	0.2069	
55 2-Methyl-2-propanol	59		4.056				ND	ND	
57 Acrylonitrile	53		4.213				ND	ND	
56 Methyl tert-butyl ether	73	4.201	4.230	-0.029	87	13719	0.3000	0.3253	
58 trans-1,2-Dichloroethene	96	4.219	4.230	-0.011	98	10168	0.3000	0.3104	
59 Hexane	57	4.480	4.492	-0.012	93	15996	0.3000	0.3283	
60 1,1-Dichloroethane	63	4.672	4.683	-0.011	95	16632	0.3000	0.3096	
61 Vinyl acetate	43	4.707	4.718	-0.011	96	16697	0.6000	0.6408	
65 cis-1,2-Dichloroethene	96	5.333	5.345	-0.012	83	9587	0.3000	0.2937	
66 2,2-Dichloropropane	77		5.363				ND	ND	
67 2-Butanone (MEK)	43		5.363				ND	ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45		5.572				ND	ND	
73 Chlorobromomethane	128	5.630	5.641	-0.011	84	6186	0.3000	0.3342	
74 Tetrahydrofuran	42		5.693				ND	ND	
75 Chloroform	83	5.699	5.711	-0.012	93	17524	0.3000	0.2887	
76 1,1,1-Trichloroethane	97	5.943	5.955	-0.012	98	19878	0.3000	0.3095	
77 Cyclohexane	56	6.013	6.024	-0.011	86	14818	0.3000	0.3083	
78 1,1-Dichloropropene	75	6.135	6.146	-0.011	85	18283	0.3000	0.3464	
79 Carbon tetrachloride	117	6.152	6.164	-0.012	96	23385	0.3000	0.3343	
80 Isobutyl alcohol	41		6.286				ND	ND	
81 Benzene	78	6.396	6.407	-0.011	96	27984	0.3000	0.3136	
82 1,2-Dichloroethane	62	6.413	6.425	-0.012	54	8433	0.3000	0.3296	
84 n-Heptane	43	6.692	6.704	-0.012	91	16912	0.3000	0.3170	
86 Trichloroethene	95	7.197	7.209	-0.012	93	14273	0.3000	0.3420	
88 2-Pentanone	43	7.458	7.452	0.006	59	12119	1.20	0.9719	
89 Methylcyclohexane	55	7.458	7.470	-0.012	90	14798	0.3000	0.3261	
90 1,2-Dichloropropane	63	7.510	7.522	-0.012	91	8733	0.3000	0.2898	
92 Dibromomethane	93	7.685	7.679	0.006	90	8327	0.3000	0.4175	
93 1,4-Dioxane	88		7.714				ND	ND	
94 Dichlorobromomethane	83	7.859	7.870	-0.011	97	15230	0.3000	0.2896	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.486	8.480	0.006	94	14917	0.3000	0.2952	
98 4-Methyl-2-pentanone (MIBK)	43	8.712	8.706	0.006	95	15014	1.20	1.30	
99 Toluene	91	8.939	8.950	-0.011	98	32119	0.3000	0.3093	
100 trans-1,3-Dichloropropene	75		9.264				ND	ND	
101 Ethyl methacrylate	69		9.403				ND	ND	
102 1,1,2-Trichloroethane	97		9.525				ND	ND	
103 Tetrachloroethene	164	9.740	9.734	0.006	93	14164	0.3000	0.2798	
104 1,3-Dichloropropane	76	9.775	9.786	-0.011	81	14272	0.3000	0.3830	
105 2-Hexanone	43		9.908				ND	ND	
108 Chlorodibromomethane	129	10.105	10.134	-0.029	89	13485	0.3000	0.2730	
109 Ethylene Dibromide	107	10.297	10.309	-0.012	98	9359	0.3000	0.3018	
110 1-Chlorohexane	91	11.081	11.092	-0.011	70	19036	0.3000	0.3159	
111 Chlorobenzene	112	11.133	11.127	0.006	96	27451	0.3000	0.3075	
112 1,1,1,2-Tetrachloroethane	131	11.255	11.267	-0.012	75	13784	0.3000	0.2857	
113 Ethylbenzene	106	11.290	11.301	-0.011	98	12231	0.3000	0.2811	
114 m-Xylene & p-Xylene	106	11.481	11.493	-0.012	97	14543	0.3000	0.2564	
115 o-Xylene	106	12.056	12.050	0.006	96	15095	0.3000	0.2940	
116 Styrene	104	12.073	12.085	-0.012	94	24448	0.3000	0.3047	
117 Bromoform	173	12.317	12.329	-0.012	93	8249	0.3000	0.2674	
118 Isopropylbenzene	105	12.544	12.555	-0.011	95	46328	0.3000	0.3117	
120 Cyclohexanone	55		12.677				ND	ND	
122 Bromobenzene	156	12.927	12.938	-0.011	89	12104	0.3000	0.2918	
121 1,1,2,2-Tetrachloroethane	83	12.927	12.938	-0.011	70	9345	0.3000	0.3557	
123 1,2,3-Trichloropropane	110	13.014	12.991	0.023	65	10961	0.3000	0.7445	
124 trans-1,4-Dichloro-2-buten	53		13.008				ND	ND	
125 N-Propylbenzene	120	13.066	13.060	0.006	97	15544	0.3000	0.3782	
126 2-Chlorotoluene	126		13.165				ND	ND	
127 1,3,5-Trimethylbenzene	105	13.275	13.269	0.006	96	36665	0.3000	0.3218	
128 4-Chlorotoluene	126	13.293	13.304	-0.011	97	12587	0.3000	0.3339	
129 tert-Butylbenzene	119	13.658	13.652	0.006	92	43342	0.3000	0.3249	
130 1,2,4-Trimethylbenzene	105	13.711	13.705	0.006	94	33808	0.3000	0.3147	
131 sec-Butylbenzene	134	13.902	13.896	0.006	93	12369	0.3000	0.3341	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.024	14.018	0.006	93	17991	0.3000	0.2837	
133 4-Isopropyltoluene	119	14.059	14.053	0.006	96	48418	0.3000	0.3211	
134 1,4-Dichlorobenzene	146	14.111	14.123	-0.012	93	29797	0.3000	0.3378	
137 n-Butylbenzene	91	14.494	14.488	0.006	97	39011	0.3000	0.3038	
138 1,2-Dichlorobenzene	146	14.512	14.523	-0.011	97	19309	0.3000	0.3064	
139 1,2-Dibromo-3-Chloropropan	157		15.290				ND	ND	
141 1,2,4-Trichlorobenzene	180	16.062	16.056	0.006	88	12594	0.3000	0.2675	
142 Hexachlorobutadiene	225	16.218	16.213	0.005	94	16951	0.3000	0.3143	
143 Naphthalene	128	16.306	16.300	0.006	93	12322	0.3000	0.2936	
144 1,2,3-Trichlorobenzene	180	16.515	16.509	0.006	91	9846	0.3000	0.2692	
S 151 1,2-Dichloroethene, Total	96				0		0.6000	0.6041	
S 148 1,3-Dichloropropene, Total	1				0		0.6000	0.2952	
S 150 Xylenes, Total	106				0		0.6000	0.5504	
S 147 Total BTEX	1				0			1.45	
S 146 Xylenes, Total (URS)	1				0		0.6000	0.5504	
S 145 Trihalomethanes, Total	1				0		1.20	1.12	
S 149 1,2-Dichloroethene, Total	1				0		0.6000	0.6041	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 0.15	Units: uL
MV-Gas/Ket A_00062	Amount Added: 0.15	Units: uL
MV-2cleve+AVA_00025	Amount Added: 0.15	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7379.D

Injection Date: 29-Jun-2017 10:14:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 10

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

ALS Bottle#: 4

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7380.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 29-Jun-2017 10:36:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:03 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 12:38:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.976	3.993	-0.017	96	126754	250.0	250.0	
* 2 Fluorobenzene	96	6.745	6.744	0.001	98	919577	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.082	11.098	-0.016	87	235721	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.095	14.094	0.001	96	407057	12.5	12.5	
28 Dichlorodifluoromethane	85	2.165	2.175	-0.010	97	18927	1.00	1.08	
30 Chloromethane	50	2.269	2.280	-0.011	97	12433	1.00	0.8473	
32 Vinyl chloride	62	2.391	2.419	-0.028	96	23137	1.00	1.03	
35 Bromomethane	94	2.687	2.698	-0.011	92	26567	1.00	1.00	
36 Chloroethane	64	2.757	2.768	-0.011	98	16771	1.00	1.09	
37 Dichlorofluoromethane	67	2.931	2.942	-0.011	97	64772	1.00	1.05	
38 Trichlorofluoromethane	101	2.983	2.994	-0.011	100	68674	1.00	1.03	
40 Ethyl ether	59	3.227	3.220	0.007	92	15442	1.00	1.15	
44 Acrolein	56	3.384	3.377	0.007	92	7932	10.0	8.55	
45 1,1-Dichloroethene	96	3.471	3.482	-0.011	98	32474	1.00	1.02	
46 1,1,2-Trichloro-1,2,2-trif	151	3.488	3.499	-0.011	95	55688	1.00	1.02	
47 Acetone	43	3.506	3.516	-0.010	85	7995	4.00	-0.1591	
48 Iodomethane	142	3.645	3.638	0.007	99	99125	1.00	1.04	
50 Carbon disulfide	76	3.715	3.725	-0.010	99	116759	1.00	1.02	
52 3-Chloro-1-propene	41	3.819	3.812	0.007	88	60086	1.00	1.15	
53 Methyl acetate	43	3.819	3.830	-0.011	69	29149	5.00	4.51	
54 Methylene Chloride	84	3.941	3.952	-0.011	91	57063	1.00	1.05	
55 2-Methyl-2-propanol	59	4.080	4.056	0.024	91	9489	10.0	11.9	
57 Acrylonitrile	53	4.202	4.213	-0.011	47	16791	10.0	9.64	
58 trans-1,2-Dichloroethene	96	4.237	4.230	0.007	98	34957	1.00	1.02	
56 Methyl tert-butyl ether	73	4.220	4.230	-0.010	76	43433	1.00	0.9849	
59 Hexane	57	4.481	4.492	-0.011	92	47501	1.00	1.01	
60 1,1-Dichloroethane	63	4.673	4.683	-0.010	96	56865	1.00	1.01	
61 Vinyl acetate	43	4.707	4.718	-0.011	97	54367	2.00	2.00	
65 cis-1,2-Dichloroethene	96	5.352	5.345	0.007	83	35565	1.00	1.04	
67 2-Butanone (MEK)	43	5.369	5.363	0.006	76	14804	4.00	4.08	
66 2,2-Dichloropropane	77	5.334	5.363	-0.029	84	92630	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.578	5.572	0.006	92	16612	30.0	27.1	
73 Chlorobromomethane	128	5.630	5.641	-0.011	90	20965	1.00	1.08	
74 Tetrahydrofuran	42	5.700	5.693	0.007	37	5233	2.00	2.27	
75 Chloroform	83	5.700	5.711	-0.011	94	66500	1.00	1.05	
76 1,1,1-Trichloroethane	97	5.944	5.955	-0.011	98	71498	1.00	1.06	
77 Cyclohexane	56	6.014	6.024	-0.010	88	51188	1.00	1.02	
78 1,1-Dichloropropene	75	6.136	6.146	-0.010	98	60690	1.00	1.10	
79 Carbon tetrachloride	117	6.153	6.164	-0.011	96	78436	1.00	1.07	
80 Isobutyl alcohol	41		6.286				ND	ND	
81 Benzene	78	6.397	6.407	-0.010	97	96618	1.00	1.04	
82 1,2-Dichloroethane	62	6.432	6.425	0.007	96	28757	1.00	1.07	
84 n-Heptane	43	6.693	6.704	-0.011	93	61885	1.00	1.11	
86 Trichloroethene	95	7.215	7.209	0.006	95	45477	1.00	1.04	
88 2-Pentanone	43	7.459	7.452	0.007	80	57294	4.00	4.39	
89 Methylcyclohexane	55	7.477	7.470	0.007	89	49611	1.00	1.05	
90 1,2-Dichloropropane	63	7.511	7.522	-0.011	96	33471	1.00	1.06	
92 Dibromomethane	93	7.686	7.679	0.007	92	23765	1.00	1.14	
93 1,4-Dioxane	88		7.714				ND	ND	
94 Dichlorobromomethane	83	7.877	7.870	0.007	99	55848	1.00	1.02	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.487	8.480	0.007	96	51508	1.00	1.05	
98 4-Methyl-2-pentanone (MIBK)	43	8.713	8.706	0.007	97	47443	4.00	3.92	
99 Toluene	91	8.957	8.950	0.007	99	113368	1.00	1.04	
100 trans-1,3-Dichloropropene	75	9.270	9.264	0.006	89	35254	1.00	1.04	
101 Ethyl methacrylate	69	9.410	9.403	0.007	84	27295	1.00	1.05	
102 1,1,2-Trichloroethane	97	9.532	9.525	0.007	35	38677	1.00	1.02	
103 Tetrachloroethene	164	9.741	9.734	0.007	97	51624	1.00	1.05	
104 1,3-Dichloropropane	76	9.775	9.786	-0.011	87	32992	1.00	0.9151	
105 2-Hexanone	43	9.915	9.908	0.007	97	28983	4.00	3.71	
108 Chlorodibromomethane	129	10.124	10.134	-0.010	88	48132	1.00	1.01	
109 Ethylene Dibromide	107	10.315	10.309	0.006	100	32198	1.00	1.07	
110 1-Chlorohexane	91	11.099	11.092	0.007	87	62399	1.00	1.07	
111 Chlorobenzene	112	11.134	11.127	0.007	96	89148	1.00	1.03	
112 1,1,1,2-Tetrachloroethane	131	11.256	11.267	-0.011	84	47833	1.00	1.02	
113 Ethylbenzene	106	11.308	11.301	0.007	99	44712	1.00	1.06	
114 m-Xylene & p-Xylene	106	11.482	11.493	-0.011	98	60563	1.00	1.10	
115 o-Xylene	106	12.057	12.050	0.007	96	53597	1.00	1.08	
116 Styrene	104	12.074	12.085	-0.011	90	82975	1.00	1.07	
117 Bromoform	173	12.336	12.329	0.007	96	30834	1.00	1.03	
118 Isopropylbenzene	105	12.545	12.555	-0.010	96	170396	1.00	1.08	
120 Cyclohexanone	55	12.684	12.677	0.007	89	12437	40.0	39.4	
121 1,1,2,2-Tetrachloroethane	83	12.928	12.938	-0.010	93	27137	1.00	0.9748	
122 Bromobenzene	156	12.928	12.938	-0.010	94	45113	1.00	1.03	
123 1,2,3-Trichloropropane	110	12.980	12.991	-0.011	77	13532	1.00	1.03	
124 trans-1,4-Dichloro-2-buten	53	13.015	13.008	0.007	56	4652	1.00	0.9661	
125 N-Propylbenzene	120	13.067	13.060	0.007	99	47087	1.00	1.08	
126 2-Chlorotoluene	126	13.172	13.165	0.007	96	38952	1.00	1.13	
127 1,3,5-Trimethylbenzene	105	13.276	13.269	0.007	95	129385	1.00	1.07	
128 4-Chlorotoluene	126	13.293	13.304	-0.011	99	40527	1.00	1.01	
129 tert-Butylbenzene	119	13.659	13.652	0.007	93	153374	1.00	1.09	
130 1,2,4-Trimethylbenzene	105	13.711	13.705	0.006	95	122060	1.00	1.07	
131 sec-Butylbenzene	134	13.903	13.896	0.007	94	43302	1.00	1.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.025	14.018	0.007	89	74035	1.00	1.10	
133 4-Isopropyltoluene	119	14.060	14.053	0.007	97	172895	1.00	1.08	
134 1,4-Dichlorobenzene	146	14.112	14.123	-0.011	96	99366	1.00	1.06	
137 n-Butylbenzene	91	14.495	14.488	0.007	97	149917	1.00	1.10	
138 1,2-Dichlorobenzene	146	14.513	14.523	-0.010	97	72575	1.00	1.09	
139 1,2-Dibromo-3-Chloropropan	157	15.296	15.290	0.006	91	7050	1.00	1.06	
141 1,2,4-Trichlorobenzene	180	16.063	16.056	0.007	93	51876	1.00	1.04	
142 Hexachlorobutadiene	225	16.202	16.213	-0.011	96	62662	1.00	1.10	
143 Naphthalene	128	16.289	16.300	-0.011	97	43148	1.00	0.9702	
144 1,2,3-Trichlorobenzene	180	16.515	16.509	0.006	94	40197	1.00	1.04	
S 151 1,2-Dichloroethene, Total	96				0		2.00	2.06	
S 146 Xylenes, Total (URS)	1				0		2.00	2.18	
S 145 Trihalomethanes, Total	1				0		4.00	4.10	
S 149 1,2-Dichloroethene, Total	1				0		2.00	2.06	
S 147 Total BTEX	1				0			5.32	
S 148 1,3-Dichloropropene, Total	1				0		2.00	2.09	
S 150 Xylenes, Total	106				0		2.00	2.18	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 0.50	Units: uL
MV-Gas/Ket A_00062	Amount Added: 0.50	Units: uL
MV-2cleve+AVA_00025	Amount Added: 0.50	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7380.D

Injection Date: 29-Jun-2017 10:36:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 11

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

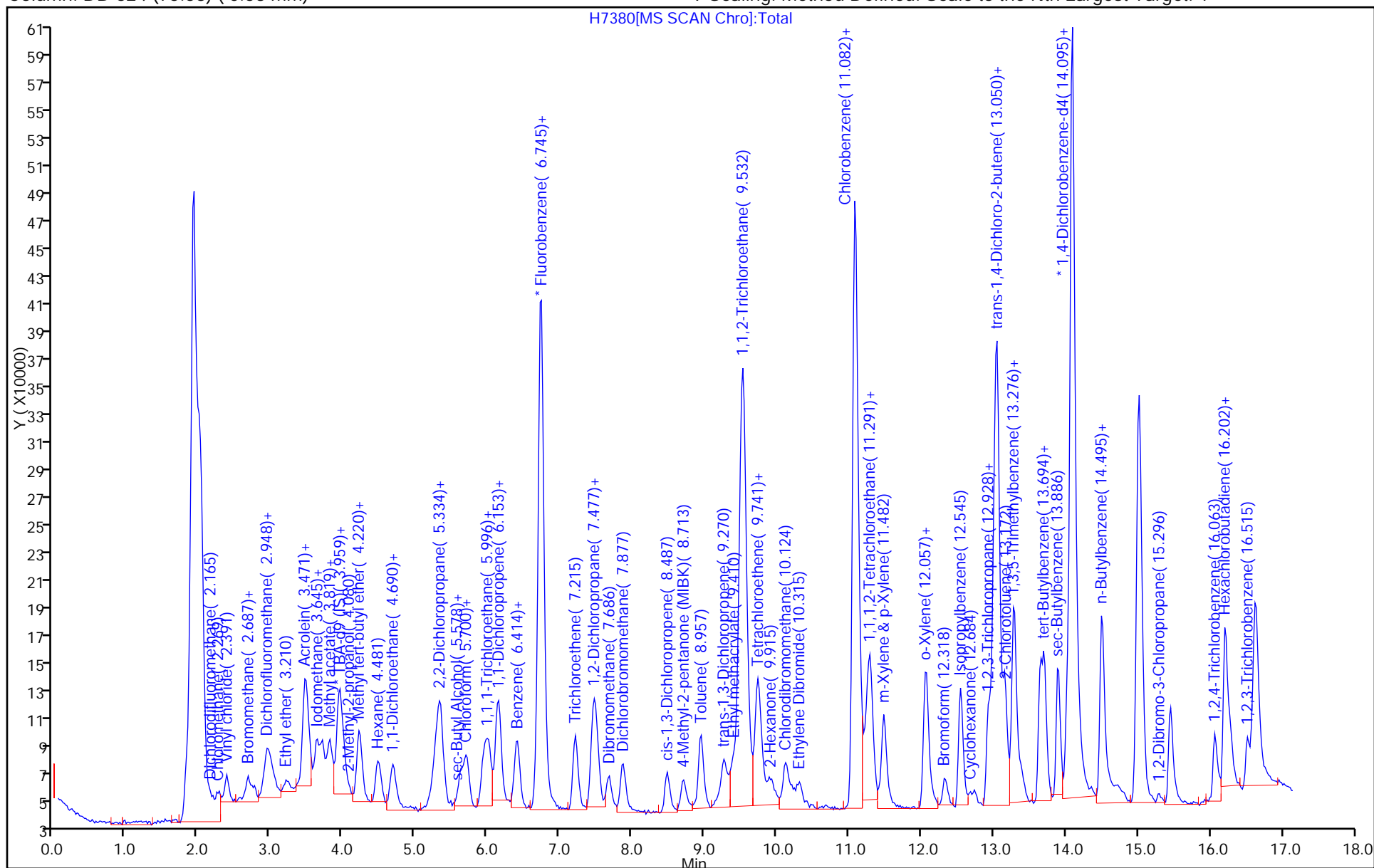
ALS Bottle#: 5

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7381.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 29-Jun-2017 10:58:30 ALS Bottle#: 5 Worklist Smp#: 12
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:08 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 12:38:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.970	3.993	-0.023	95	139333	250.0	250.0	
* 2 Fluorobenzene	96	6.739	6.744	-0.005	98	1016037	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.093	11.098	-0.005	86	253502	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.094	-0.006	96	449739	12.5	12.5	
28 Dichlorodifluoromethane	85	2.158	2.175	-0.017	97	39954	2.00	1.67	
30 Chloromethane	50	2.263	2.280	-0.017	98	28157	2.00	1.74	
32 Vinyl chloride	62	2.402	2.419	-0.017	98	45072	2.00	1.81	
35 Bromomethane	94	2.681	2.698	-0.017	92	52197	2.00	1.78	
36 Chloroethane	64	2.750	2.768	-0.018	99	30983	2.00	1.82	
37 Dichlorofluoromethane	67	2.925	2.942	-0.017	99	128550	2.00	1.89	
38 Trichlorofluoromethane	101	2.977	2.994	-0.017	99	141160	2.00	1.91	
40 Ethyl ether	59	3.203	3.220	-0.017	89	30384	2.00	2.04	
44 Acrolein	56	3.377	3.377	0.000	99	19614	20.0	19.1	
45 1,1-Dichloroethene	96	3.464	3.482	-0.018	99	66851	2.00	1.89	
46 1,1,2-Trichloro-1,2,2-trif	151	3.482	3.499	-0.017	96	113756	2.00	1.89	
47 Acetone	43	3.517	3.516	0.001	39	24270	8.00	7.75	
48 Iodomethane	142	3.639	3.638	0.001	99	195794	2.00	1.86	
50 Carbon disulfide	76	3.708	3.725	-0.017	98	236433	2.00	1.86	
52 3-Chloro-1-propene	41	3.813	3.812	0.001	81	89296	2.00	1.66	
53 Methyl acetate	43	3.813	3.830	-0.017	75	79046	10.0	11.1	
54 Methylene Chloride	84	3.935	3.952	-0.017	90	81372	2.00	1.72	
55 2-Methyl-2-propanol	59	4.074	4.056	0.018	91	20635	20.0	23.4	
57 Acrylonitrile	53	4.196	4.213	-0.017	99	33590	20.0	17.4	
56 Methyl tert-butyl ether	73	4.213	4.230	-0.017	88	89364	2.00	1.83	
58 trans-1,2-Dichloroethene	96	4.231	4.230	0.001	99	72189	2.00	1.91	
59 Hexane	57	4.492	4.492	0.000	92	92766	2.00	1.83	
60 1,1-Dichloroethane	63	4.666	4.683	-0.017	97	116596	2.00	1.88	
61 Vinyl acetate	43	4.701	4.718	-0.017	97	106092	4.00	3.52	
65 cis-1,2-Dichloroethene	96	5.345	5.345	0.000	84	71220	2.00	1.89	
66 2,2-Dichloropropane	77	5.345	5.363	-0.018	89	153379	2.00	1.89	
67 2-Butanone (MEK)	43	5.345	5.363	-0.018	46	32906	8.00	8.21	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.572	5.572	0.000	97	36374	60.0	53.9	
73 Chlorobromomethane	128	5.624	5.641	-0.017	89	40654	2.00	1.90	
74 Tetrahydrofuran	42	5.676	5.693	-0.017	37	9425	4.00	3.70	
75 Chloroform	83	5.711	5.711	0.000	94	132522	2.00	1.89	
76 1,1,1-Trichloroethane	97	5.955	5.955	0.000	98	140253	2.00	1.89	
77 Cyclohexane	56	6.025	6.024	0.001	88	105886	2.00	1.91	
78 1,1-Dichloropropene	75	6.147	6.146	0.001	96	114801	2.00	1.88	
79 Carbon tetrachloride	117	6.147	6.164	-0.017	98	151769	2.00	1.88	
80 Isobutyl alcohol	41	6.286	6.286	0.000	95	12154	50.0	45.4	
81 Benzene	78	6.408	6.407	0.001	96	194552	2.00	1.89	
82 1,2-Dichloroethane	62	6.425	6.425	0.000	97	55552	2.00	1.88	
84 n-Heptane	43	6.686	6.704	-0.018	91	116320	2.00	1.89	
86 Trichloroethene	95	7.209	7.209	0.000	95	87955	2.00	1.82	
88 2-Pentanone	43	7.453	7.452	0.001	97	108212	8.00	7.51	
89 Methylcyclohexane	55	7.470	7.470	0.000	90	101389	2.00	1.93	
90 1,2-Dichloropropane	63	7.505	7.522	-0.017	95	67293	2.00	1.93	
92 Dibromomethane	93	7.679	7.679	0.000	91	44107	2.00	1.91	
93 1,4-Dioxane	88	7.714	7.714	0.000	28	3697	40.0	32.0	
94 Dichlorobromomethane	83	7.871	7.870	0.001	99	117444	2.00	1.93	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.480	8.480	0.000	97	101433	2.00	1.93	
98 4-Methyl-2-pentanone (MIBK)	43	8.707	8.706	0.001	96	105177	8.00	7.86	
99 Toluene	91	8.950	8.950	0.000	99	229426	2.00	1.91	
100 trans-1,3-Dichloropropene	75	9.264	9.264	0.000	92	70491	2.00	1.88	
101 Ethyl methacrylate	69	9.403	9.403	0.000	85	52115	2.00	1.87	
102 1,1,2-Trichloroethane	97	9.525	9.525	0.000	37	62333	2.00	1.87	
103 Tetrachloroethene	164	9.734	9.734	0.000	98	104526	2.00	1.98	
104 1,3-Dichloropropane	76	9.769	9.786	-0.017	87	70557	2.00	1.82	
105 2-Hexanone	43	9.908	9.908	0.000	98	62569	8.00	7.46	
108 Chlorodibromomethane	129	10.135	10.134	0.001	89	98057	2.00	1.91	
109 Ethylene Dibromide	107	10.309	10.309	0.000	100	61909	2.00	1.92	
110 1-Chlorohexane	91	11.093	11.092	0.001	96	121465	2.00	1.94	
111 Chlorobenzene	112	11.127	11.127	0.000	97	175917	2.00	1.89	
112 1,1,1,2-Tetrachloroethane	131	11.267	11.267	0.000	92	98243	2.00	1.96	
113 Ethylbenzene	106	11.302	11.301	0.001	99	90574	2.00	2.00	
114 m-Xylene & p-Xylene	106	11.493	11.493	0.000	99	117922	2.00	2.00	
115 o-Xylene	106	12.051	12.050	0.001	97	107032	2.00	2.00	
116 Styrene	104	12.085	12.085	0.000	93	160211	2.00	1.92	
117 Bromoform	173	12.329	12.329	0.000	97	63229	2.00	1.97	
118 Isopropylbenzene	105	12.556	12.555	0.001	96	339430	2.00	1.95	
120 Cyclohexanone	55	12.677	12.677	0.000	89	26383	80.0	77.8	
122 Bromobenzene	156	12.939	12.938	0.001	91	93740	2.00	1.93	
121 1,1,2,2-Tetrachloroethane	83	12.939	12.938	0.001	94	58774	2.00	1.91	
123 1,2,3-Trichloropropane	110	12.991	12.991	0.000	80	21427	2.00	1.90	
124 trans-1,4-Dichloro-2-buten	53	13.008	13.008	0.000	60	10338	2.00	1.94	
125 N-Propylbenzene	120	13.061	13.060	0.001	99	92676	2.00	1.93	
126 2-Chlorotoluene	126	13.165	13.165	0.000	96	74874	2.00	1.97	
127 1,3,5-Trimethylbenzene	105	13.270	13.269	0.001	96	261232	2.00	1.96	
128 4-Chlorotoluene	126	13.304	13.304	0.000	99	83847	2.00	1.90	
129 tert-Butylbenzene	119	13.653	13.652	0.001	94	302177	2.00	1.94	
130 1,2,4-Trimethylbenzene	105	13.705	13.705	0.000	95	249088	2.00	1.98	
131 sec-Butylbenzene	134	13.897	13.896	0.001	94	83357	2.00	1.92	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.019	14.018	0.001	94	141791	2.00	1.91	
133 4-Isopropyltoluene	119	14.053	14.053	0.000	98	348169	2.00	1.97	
134 1,4-Dichlorobenzene	146	14.123	14.123	0.000	96	195448	2.00	1.89	
137 n-Butylbenzene	91	14.489	14.488	0.001	97	299262	2.00	1.99	
138 1,2-Dichlorobenzene	146	14.524	14.523	0.001	98	146618	2.00	1.99	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	91	14584	2.00	1.98	
141 1,2,4-Trichlorobenzene	180	16.074	16.056	0.018	95	106436	2.00	1.93	
142 Hexachlorobutadiene	225	16.213	16.213	0.000	96	125473	2.00	1.99	
143 Naphthalene	128	16.300	16.300	0.000	97	92333	2.00	1.88	
144 1,2,3-Trichlorobenzene	180	16.509	16.509	0.000	95	85202	2.00	1.99	
S 151 1,2-Dichloroethene, Total	96				0		4.00	3.80	
S 148 1,3-Dichloropropene, Total	1				0		4.00	3.81	
S 150 Xylenes, Total	106				0		4.00	4.00	
S 147 Total BTEX	1				0			9.80	
S 146 Xylenes, Total (URS)	1				0		4.00	4.00	
S 145 Trihalomethanes, Total	1				0		8.00	7.70	
S 149 1,2-Dichloroethene, Total	1				0		4.00	3.80	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 1.00	Units: uL
MV-Gas/Ket A_00062	Amount Added: 1.00	Units: uL
MV-2cleve+AVA_00025	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7381.D

Injection Date: 29-Jun-2017 10:58:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 12

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

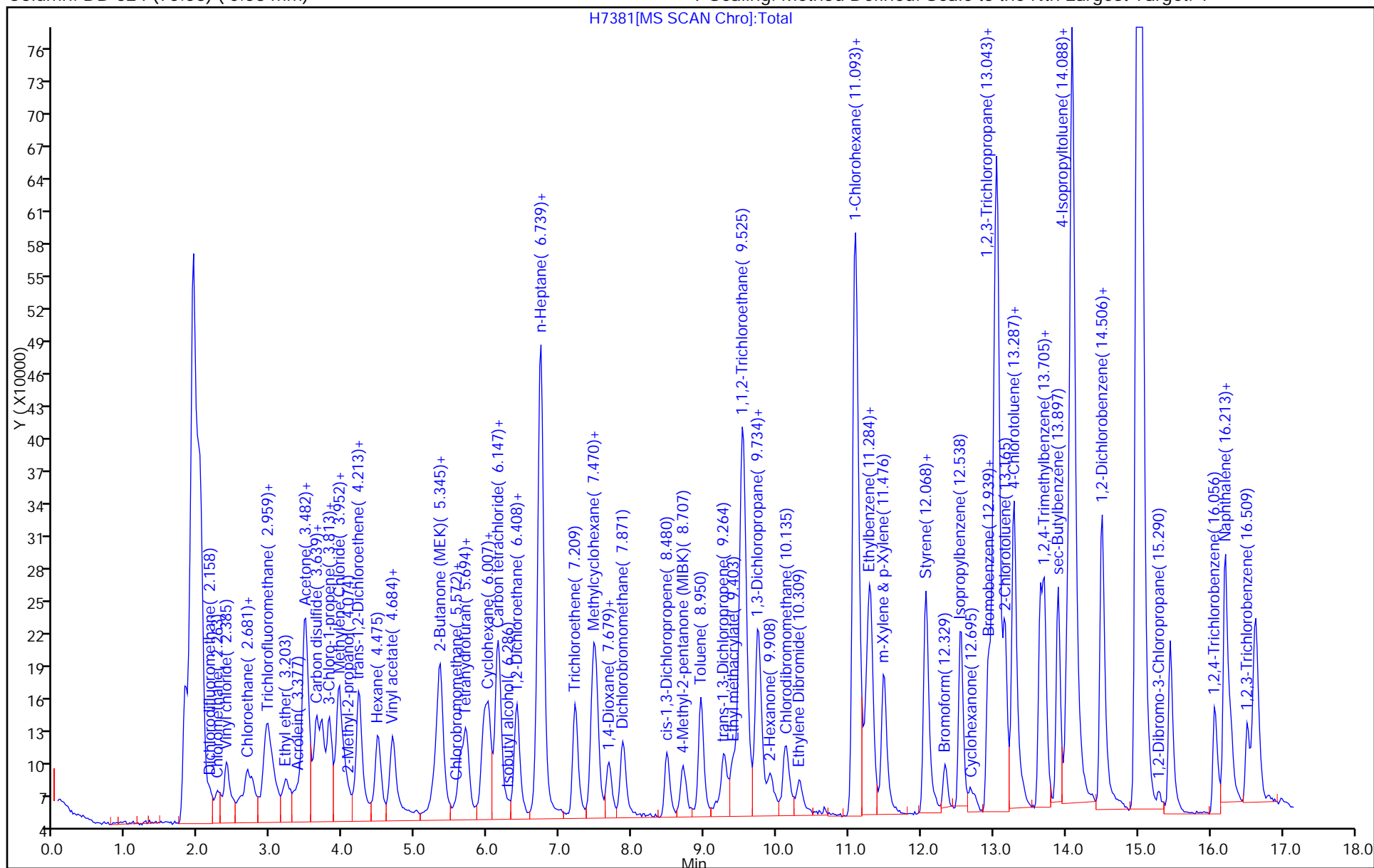
ALS Bottle#: 5

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7382.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 29-Jun-2017 11:20:30 ALS Bottle#: 6 Worklist Smp#: 13
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:16 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 11:54:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.987	3.993	-0.006	95	137939	250.0	250.0	
* 2 Fluorobenzene	96	6.739	6.744	-0.005	98	983802	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.076	11.098	-0.022	87	242541	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.089	14.094	-0.005	96	436229	12.5	12.5	
28 Dichlorodifluoromethane	85	2.159	2.175	-0.016	99	157491	5.00	5.44	
30 Chloromethane	50	2.281	2.280	0.001	99	83460	5.00	5.32	
32 Vinyl chloride	62	2.403	2.419	-0.016	98	119142	5.00	4.94	
35 Bromomethane	94	2.681	2.698	-0.017	90	142002	5.00	5.00	
36 Chloroethane	64	2.768	2.768	0.000	98	84286	5.00	5.12	
37 Dichlorofluoromethane	67	2.942	2.942	0.000	98	329003	5.00	5.00	
38 Trichlorofluoromethane	101	2.995	2.994	0.001	100	363100	5.00	5.08	
40 Ethyl ether	59	3.221	3.220	0.001	91	73020	5.00	5.07	
44 Acrolein	56	3.378	3.377	0.001	98	52697	50.0	53.1	
45 1,1-Dichloroethene	96	3.465	3.482	-0.017	99	181012	5.00	5.29	
46 1,1,2-Trichloro-1,2,2-trif	151	3.500	3.499	0.001	96	300306	5.00	5.15	
47 Acetone	43	3.517	3.516	0.001	55	49755	20.0	21.6	
48 Iodomethane	142	3.639	3.638	0.001	99	520100	5.00	5.11	
50 Carbon disulfide	76	3.726	3.725	0.001	99	630872	5.00	5.13	
52 3-Chloro-1-propene	41	3.813	3.812	0.001	85	229496	5.00	4.97	
53 Methyl acetate	43	3.813	3.830	-0.017	96	178415	25.0	25.8	
54 Methylene Chloride	84	3.953	3.952	0.001	91	176794	5.00	5.38	
55 2-Methyl-2-propanol	59	4.074	4.056	0.018	96	43866	50.0	50.3	
57 Acrylonitrile	53	4.196	4.213	-0.017	99	95415	50.0	51.2	
58 trans-1,2-Dichloroethene	96	4.231	4.230	0.001	99	187085	5.00	5.11	
56 Methyl tert-butyl ether	73	4.231	4.230	0.001	83	239672	5.00	5.08	
59 Hexane	57	4.492	4.492	0.000	92	247307	5.00	5.10	
60 1,1-Dichloroethane	63	4.684	4.683	0.001	96	309979	5.00	5.16	
61 Vinyl acetate	43	4.701	4.718	-0.017	97	289743	10.0	9.94	
65 cis-1,2-Dichloroethene	96	5.346	5.345	0.001	84	190067	5.00	5.21	
67 2-Butanone (MEK)	43	5.363	5.363	0.000	43	73695	20.0	19.0	
66 2,2-Dichloropropane	77	5.346	5.363	-0.017	89	339194	5.00	5.26	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.572	5.572	0.000	96	104035	150.0	155.7	
73 Chlorobromomethane	128	5.642	5.641	0.001	87	104228	5.00	5.03	
74 Tetrahydrofuran	42	5.694	5.693	0.001	37	24233	10.0	9.83	
75 Chloroform	83	5.712	5.711	0.001	95	356563	5.00	5.25	
76 1,1,1-Trichloroethane	97	5.955	5.955	0.000	98	366977	5.00	5.11	
77 Cyclohexane	56	6.025	6.024	0.001	89	280937	5.00	5.23	
78 1,1-Dichloropropene	75	6.147	6.146	0.001	98	293003	5.00	4.96	
79 Carbon tetrachloride	117	6.164	6.164	0.000	98	391943	5.00	5.01	
80 Isobutyl alcohol	41	6.286	6.286	0.000	92	37227	125.0	140.4	
81 Benzene	78	6.408	6.407	0.001	96	511480	5.00	5.12	
82 1,2-Dichloroethane	62	6.426	6.425	0.001	96	146278	5.00	5.11	
84 n-Heptane	43	6.687	6.704	-0.017	91	301375	5.00	5.05	
86 Trichloroethene	95	7.209	7.209	0.000	95	237450	5.00	5.09	
88 2-Pentanone	43	7.453	7.452	0.001	98	287133	20.0	20.6	
89 Methylcyclohexane	55	7.471	7.470	0.001	90	264870	5.00	5.22	
90 1,2-Dichloropropane	63	7.505	7.522	-0.017	95	174726	5.00	5.18	
92 Dibromomethane	93	7.680	7.679	0.001	94	116814	5.00	5.24	
93 1,4-Dioxane	88	7.714	7.714	0.000	29	11755	100.0	105.1	
94 Dichlorobromomethane	83	7.871	7.870	0.001	99	311563	5.00	5.30	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.481	8.480	0.001	96	266992	5.00	5.31	
98 4-Methyl-2-pentanone (MIBK)	43	8.707	8.706	0.001	96	253257	20.0	19.5	
99 Toluene	91	8.951	8.950	0.001	99	611631	5.00	5.26	
100 trans-1,3-Dichloropropene	75	9.264	9.264	0.000	92	186380	5.00	5.12	
101 Ethyl methacrylate	69	9.404	9.403	0.001	89	137221	5.00	5.15	
102 1,1,2-Trichloroethane	97	9.526	9.525	0.001	42	134237	5.00	5.19	
103 Tetrachloroethene	164	9.735	9.734	0.001	98	269388	5.00	5.34	
104 1,3-Dichloropropane	76	9.769	9.786	-0.017	86	190828	5.00	5.14	
105 2-Hexanone	43	9.909	9.908	0.001	96	163125	20.0	20.3	
108 Chlorodibromomethane	129	10.135	10.134	0.001	90	259941	5.00	5.29	
109 Ethylene Dibromide	107	10.309	10.309	0.000	100	156680	5.00	5.07	
110 1-Chlorohexane	91	11.093	11.092	0.001	93	307244	5.00	5.12	
111 Chlorobenzene	112	11.128	11.127	0.001	94	464802	5.00	5.23	
112 1,1,1,2-Tetrachloroethane	131	11.267	11.267	0.000	94	259836	5.00	5.41	
113 Ethylbenzene	106	11.302	11.301	0.001	99	233238	5.00	5.38	
114 m-Xylene & p-Xylene	106	11.476	11.493	-0.017	99	306221	5.00	5.42	
115 o-Xylene	106	12.051	12.050	0.001	97	272183	5.00	5.32	
116 Styrene	104	12.086	12.085	0.001	94	418942	5.00	5.24	
117 Bromoform	173	12.330	12.329	0.001	97	165574	5.00	5.39	
118 Isopropylbenzene	105	12.539	12.555	-0.016	96	875992	5.00	5.19	
120 Cyclohexanone	55	12.678	12.677	0.001	89	66805	200.0	205.8	
121 1,1,2,2-Tetrachloroethane	83	12.939	12.938	0.001	94	150139	5.00	5.03	
122 Bromobenzene	156	12.922	12.938	-0.016	95	249041	5.00	5.29	
123 1,2,3-Trichloropropane	110	12.974	12.991	-0.017	79	42186	5.00	4.87	
124 trans-1,4-Dichloro-2-buten	53	13.009	13.008	0.001	65	25276	5.00	4.90	
125 N-Propylbenzene	120	13.061	13.060	0.001	98	226867	5.00	4.86	
126 2-Chlorotoluene	126	13.166	13.165	0.001	96	186934	5.00	5.07	
127 1,3,5-Trimethylbenzene	105	13.270	13.269	0.001	96	666575	5.00	5.15	
128 4-Chlorotoluene	126	13.287	13.304	-0.017	98	215637	5.00	5.04	
129 tert-Butylbenzene	119	13.653	13.652	0.001	93	787023	5.00	5.20	
130 1,2,4-Trimethylbenzene	105	13.705	13.705	0.000	95	635394	5.00	5.21	
131 sec-Butylbenzene	134	13.897	13.896	0.001	94	213662	5.00	5.08	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.019	14.018	0.001	96	378847	5.00	5.26	
133 4-Isopropyltoluene	119	14.054	14.053	0.001	98	897331	5.00	5.24	
134 1,4-Dichlorobenzene	146	14.123	14.123	0.000	94	518011	5.00	5.17	
137 n-Butylbenzene	91	14.489	14.488	0.001	97	765018	5.00	5.25	
138 1,2-Dichlorobenzene	146	14.507	14.523	-0.016	98	370718	5.00	5.18	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	92	37289	5.00	5.22	
141 1,2,4-Trichlorobenzene	180	16.057	16.056	0.001	95	289341	5.00	5.41	
142 Hexachlorobutadiene	225	16.213	16.213	0.000	96	330740	5.00	5.40	
143 Naphthalene	128	16.283	16.300	-0.017	97	252383	5.00	5.30	
144 1,2,3-Trichlorobenzene	180	16.509	16.509	0.000	95	226312	5.00	5.45	
S 151 1,2-Dichloroethene, Total	96				0		10.0	10.3	
S 146 Xylenes, Total (URS)	1				0		10.0	10.7	
S 145 Trihalomethanes, Total	1				0		20.0	21.2	
S 149 1,2-Dichloroethene, Total	1				0		10.0	10.3	
S 147 Total BTEX	1				0			26.5	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.4	
S 150 Xylenes, Total	106				0		10.0	10.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 2.50	Units: uL
MV-Gas/Ket A_00062	Amount Added: 2.50	Units: uL
MV-2cleve+AVA_00025	Amount Added: 2.50	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7382.D

Injection Date: 29-Jun-2017 11:20:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 13

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

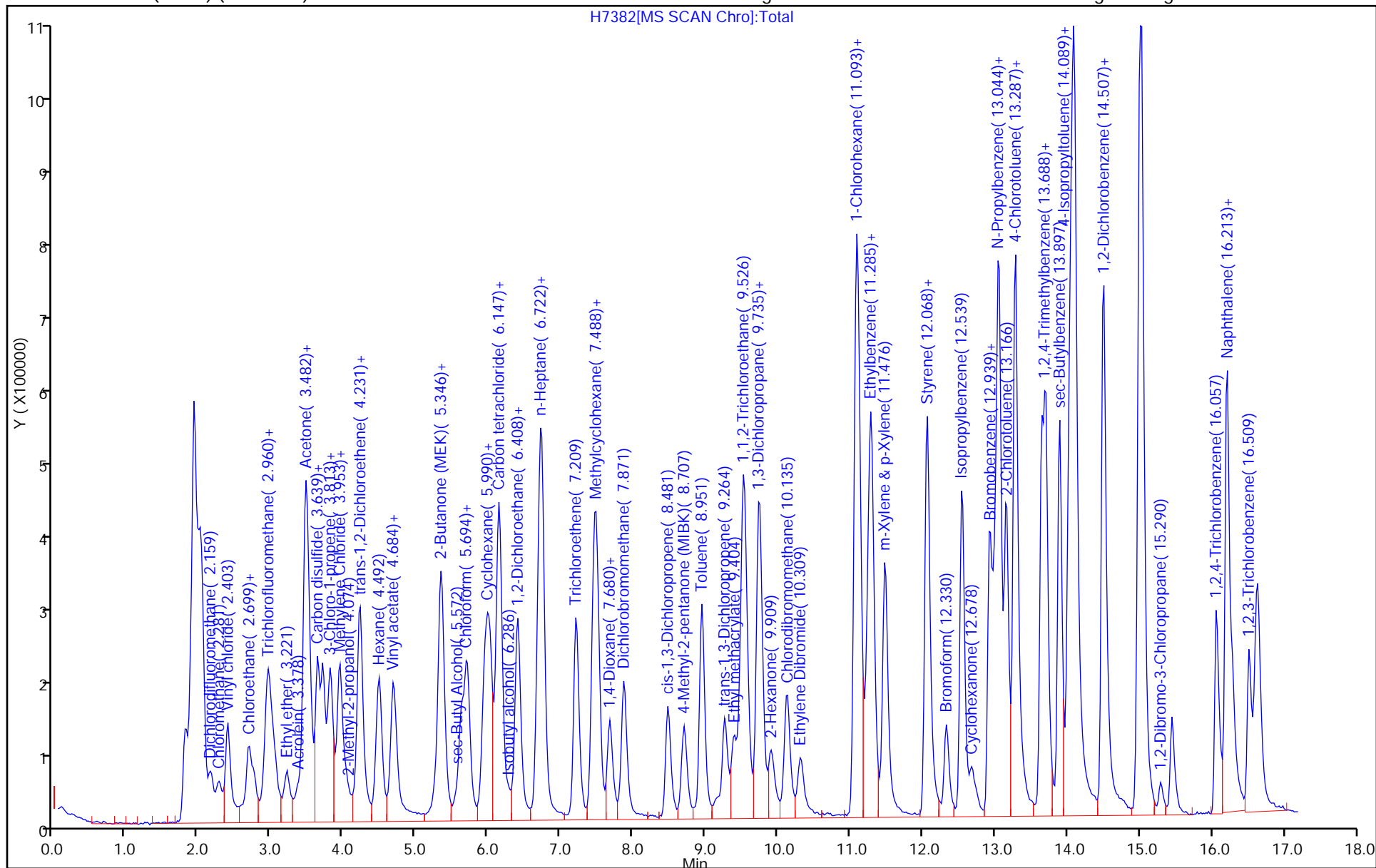
ALS Bottle#: 6

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7383.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 29-Jun-2017 11:41:30 ALS Bottle#: 7 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:19 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 12:59:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.969	0.000	96	153223	250.0	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	992901	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.092	11.092	0.000	87	247114	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.088	0.000	95	457596	12.5	12.5	
28 Dichlorodifluoromethane	85	2.175	2.175	0.000	99	307290	10.0	10.1	
30 Chloromethane	50	2.280	2.280	0.000	98	168134	10.0	10.6	
32 Vinyl chloride	62	2.419	2.419	0.000	98	239205	10.0	9.82	
35 Bromomethane	94	2.698	2.698	0.000	92	285712	10.0	9.96	
36 Chloroethane	64	2.768	2.768	0.000	99	166821	10.0	10.0	
37 Dichlorofluoromethane	67	2.942	2.942	0.000	98	671643	10.0	10.1	
38 Trichlorofluoromethane	101	2.994	2.994	0.000	100	728979	10.0	10.1	
40 Ethyl ether	59	3.220	3.220	0.000	90	143423	10.0	9.86	
44 Acrolein	56	3.377	3.377	0.000	98	102619	100.0	102.4	
45 1,1-Dichloroethene	96	3.482	3.482	0.000	99	356452	10.0	10.3	
46 1,1,2-Trichloro-1,2,2-trif	151	3.499	3.499	0.000	96	586056	10.0	9.96	
47 Acetone	43	3.516	3.516	0.000	98	86123	40.0	40.5	
48 Iodomethane	142	3.638	3.638	0.000	99	1029713	10.0	10.0	
50 Carbon disulfide	76	3.725	3.725	0.000	98	1251303	10.0	10.1	
52 3-Chloro-1-propene	41	3.812	3.812	0.000	87	474175	10.0	10.5	
53 Methyl acetate	43	3.830	3.830	0.000	96	355007	50.0	50.9	
54 Methylene Chloride	84	3.952	3.952	0.000	91	307343	10.0	10.2	
55 2-Methyl-2-propanol	59	4.056	4.056	0.000	98	89146	100.0	92.1	
57 Acrylonitrile	53	4.213	4.213	0.000	99	195352	100.0	103.8	
56 Methyl tert-butyl ether	73	4.230	4.230	0.000	85	487912	10.0	10.2	
58 trans-1,2-Dichloroethene	96	4.230	4.230	0.000	99	379919	10.0	10.3	
59 Hexane	57	4.492	4.492	0.000	92	494319	10.0	10.0	
60 1,1-Dichloroethane	63	4.683	4.683	0.000	96	622186	10.0	10.3	
61 Vinyl acetate	43	4.718	4.718	0.000	97	583074	20.0	19.8	
65 cis-1,2-Dichloroethene	96	5.345	5.345	0.000	84	374182	10.0	10.2	
66 2,2-Dichloropropane	77	5.363	5.363	0.000	87	635132	10.0	10.4	
67 2-Butanone (MEK)	43	5.363	5.363	0.000	41	164406	40.0	42.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.572	5.572	0.000	97	232078	300.0	312.7	
73 Chlorobromomethane	128	5.641	5.641	0.000	86	201117	10.0	9.62	
74 Tetrahydrofuran	42	5.693	5.693	0.000	37	48796	20.0	19.6	
75 Chloroform	83	5.711	5.711	0.000	95	703763	10.0	10.3	
76 1,1,1-Trichloroethane	97	5.955	5.955	0.000	99	732980	10.0	10.1	
77 Cyclohexane	56	6.024	6.024	0.000	89	557571	10.0	10.3	
78 1,1-Dichloropropene	75	6.146	6.146	0.000	98	579729	10.0	9.73	
79 Carbon tetrachloride	117	6.164	6.164	0.000	98	790177	10.0	10.0	
80 Isobutyl alcohol	41	6.286	6.286	0.000	91	73100	250.0	248.3	
81 Benzene	78	6.407	6.407	0.000	96	1013066	10.0	10.1	
82 1,2-Dichloroethane	62	6.425	6.425	0.000	97	282800	10.0	9.79	
84 n-Heptane	43	6.704	6.704	0.000	92	597065	10.0	9.91	
86 Trichloroethene	95	7.209	7.209	0.000	95	473441	10.0	10.0	
88 2-Pentanone	43	7.452	7.452	0.000	98	632479	40.0	44.9	
89 Methylcyclohexane	55	7.470	7.470	0.000	89	507558	10.0	9.91	
90 1,2-Dichloropropane	63	7.522	7.522	0.000	96	346538	10.0	10.2	
92 Dibromomethane	93	7.679	7.679	0.000	91	224888	10.0	9.99	
93 1,4-Dioxane	88	7.714	7.714	0.000	49	23575	200.0	208.8	
94 Dichlorobromomethane	83	7.870	7.870	0.000	99	615276	10.0	10.4	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.480	8.480	0.000	96	523097	10.0	10.2	
98 4-Methyl-2-pentanone (MIBK)	43	8.706	8.706	0.000	96	539996	40.0	41.3	
99 Toluene	91	8.950	8.950	0.000	99	1185099	10.0	10.1	
100 trans-1,3-Dichloropropene	75	9.264	9.264	0.000	93	371192	10.0	10.1	
101 Ethyl methacrylate	69	9.403	9.403	0.000	88	278872	10.0	10.3	
102 1,1,2-Trichloroethane	97	9.525	9.525	0.000	47	258876	10.0	10.7	
103 Tetrachloroethene	164	9.734	9.734	0.000	98	525305	10.0	10.2	
104 1,3-Dichloropropane	76	9.786	9.786	0.000	87	378480	10.0	10.0	
105 2-Hexanone	43	9.908	9.908	0.000	97	348087	40.0	42.6	
108 Chlorodibromomethane	129	10.134	10.134	0.000	89	529422	10.0	10.6	
109 Ethylene Dibromide	107	10.309	10.309	0.000	99	322715	10.0	10.3	
110 1-Chlorohexane	91	11.092	11.092	0.000	92	608079	10.0	9.95	
111 Chlorobenzene	112	11.127	11.127	0.000	94	916326	10.0	10.1	
112 1,1,1,2-Tetrachloroethane	131	11.267	11.267	0.000	96	501368	10.0	10.2	
113 Ethylbenzene	106	11.301	11.301	0.000	98	446276	10.0	10.1	
114 m-Xylene & p-Xylene	106	11.493	11.493	0.000	99	591386	10.0	10.3	
115 o-Xylene	106	12.050	12.050	0.000	97	522845	10.0	10.0	
116 Styrene	104	12.085	12.085	0.000	94	824776	10.0	10.1	
117 Bromoform	173	12.329	12.329	0.000	97	331229	10.0	10.6	
118 Isopropylbenzene	105	12.555	12.555	0.000	96	1667464	10.0	9.42	
120 Cyclohexanone	55	12.677	12.677	0.000	90	142807	400.0	431.8	
122 Bromobenzene	156	12.938	12.938	0.000	96	481240	10.0	9.74	
121 1,1,2,2-Tetrachloroethane	83	12.938	12.938	0.000	94	296068	10.0	9.46	
123 1,2,3-Trichloropropane	110	12.991	12.991	0.000	77	82202	10.0	9.89	
124 trans-1,4-Dichloro-2-buten	53	13.008	13.008	0.000	68	53786	10.0	9.94	
125 N-Propylbenzene	120	13.060	13.060	0.000	99	437624	10.0	8.94	
126 2-Chlorotoluene	126	13.165	13.165	0.000	96	364443	10.0	9.42	
127 1,3,5-Trimethylbenzene	105	13.269	13.269	0.000	96	1315101	10.0	9.69	
128 4-Chlorotoluene	126	13.304	13.304	0.000	99	441916	10.0	9.84	
129 tert-Butylbenzene	119	13.652	13.652	0.000	93	1512313	10.0	9.52	
130 1,2,4-Trimethylbenzene	105	13.705	13.705	0.000	95	1235253	10.0	9.65	
131 sec-Butylbenzene	134	13.896	13.896	0.000	94	421880	10.0	9.57	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.018	14.018	0.000	96	729692	10.0	9.66	
133 4-Isopropyltoluene	119	14.053	14.053	0.000	97	1725663	10.0	9.61	
134 1,4-Dichlorobenzene	146	14.123	14.123	0.000	95	1017118	10.0	9.68	
137 n-Butylbenzene	91	14.488	14.488	0.000	97	1480642	10.0	9.68	
138 1,2-Dichlorobenzene	146	14.523	14.523	0.000	98	737049	10.0	9.82	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	93	74357	10.0	9.93	
141 1,2,4-Trichlorobenzene	180	16.056	16.056	0.000	95	572793	10.0	10.2	
142 Hexachlorobutadiene	225	16.213	16.213	0.000	96	627876	10.0	9.77	
143 Naphthalene	128	16.300	16.300	0.000	97	513054	10.0	10.3	
144 1,2,3-Trichlorobenzene	180	16.509	16.509	0.000	96	444117	10.0	10.2	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.4	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.3	
S 150 Xylenes, Total	106				0		20.0	20.3	
S 146 Xylenes, Total (URS)	1				0		20.0	20.3	
S 145 Trihalomethanes, Total	1				0		40.0	41.8	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00062	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00025	Amount Added: 5.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7383.D

Injection Date: 29-Jun-2017 11:41:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 14

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

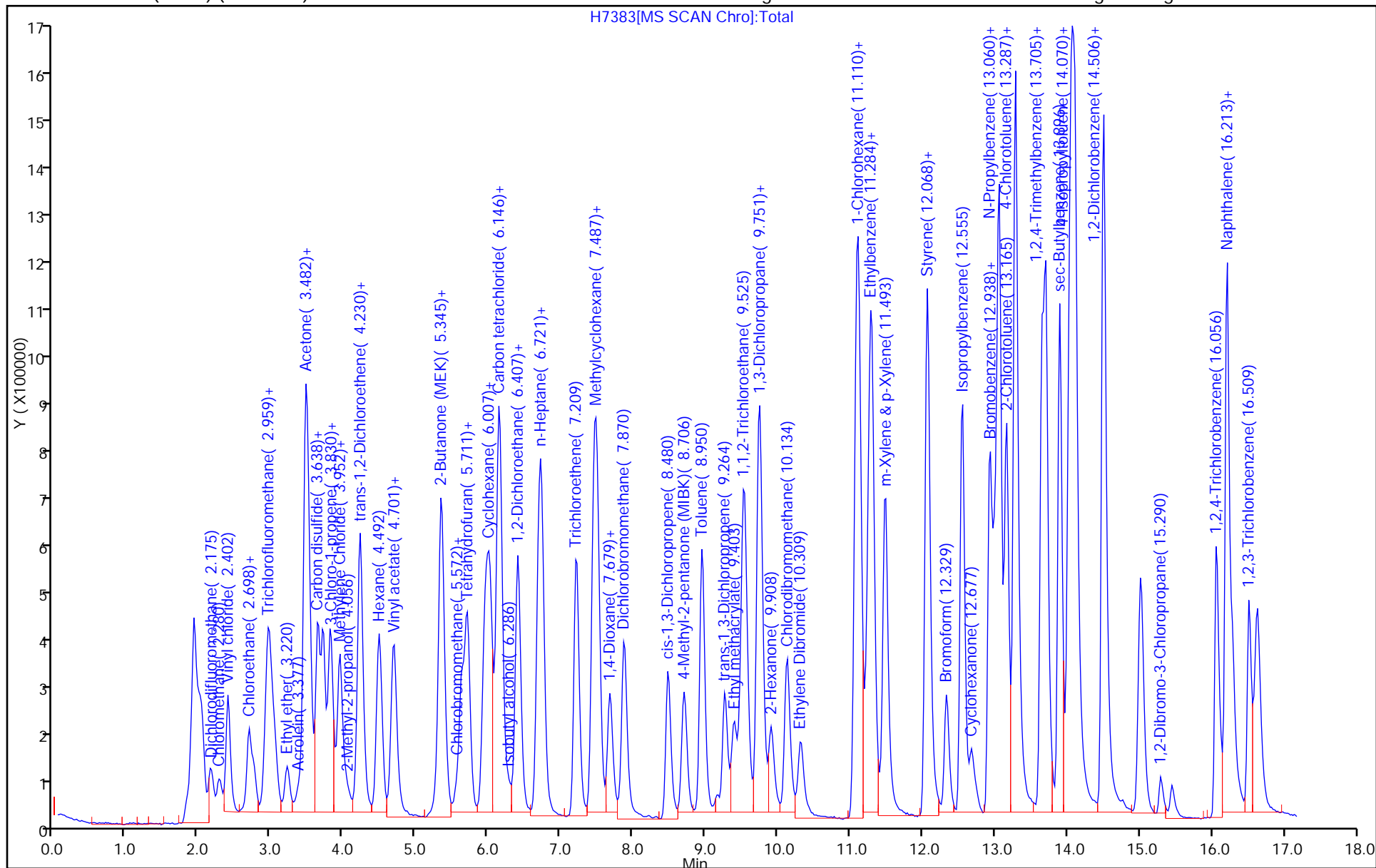
ALS Bottle#: 7

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7384.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 29-Jun-2017 12:03:30 ALS Bottle#: 8 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:23 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 12:25:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.971	3.969	0.002	95	153030	250.0	250.0	
* 2 Fluorobenzene	96	6.740	6.738	0.002	98	994432	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.094	11.092	0.002	87	241506	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.089	14.088	0.001	94	418218	12.5	12.5	
28 Dichlorodifluoromethane	85	2.159	2.175	-0.016	99	927951	30.0	29.6	
30 Chloromethane	50	2.281	2.280	0.001	98	502324	30.0	31.7	
32 Vinyl chloride	62	2.403	2.419	-0.016	98	679647	30.0	27.9	
35 Bromomethane	94	2.682	2.698	-0.016	91	815193	30.0	28.4	
36 Chloroethane	64	2.751	2.768	-0.017	99	478292	30.0	28.8	
37 Dichlorofluoromethane	67	2.943	2.942	0.001	99	1946684	30.0	29.2	
38 Trichlorofluoromethane	101	2.978	2.994	-0.016	100	2078386	30.0	28.8	
40 Ethyl ether	59	3.222	3.220	0.002	91	391181	30.0	26.9	
44 Acrolein	56	3.361	3.377	-0.016	99	307192	300.0	306.2	
45 1,1-Dichloroethene	96	3.466	3.482	-0.016	98	994867	30.0	28.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.483	3.499	-0.016	96	1661273	30.0	28.2	
47 Acetone	43	3.500	3.516	-0.016	100	224687	120.0	112.9	
48 Iodomethane	142	3.640	3.638	0.002	99	2900232	30.0	28.2	
50 Carbon disulfide	76	3.709	3.725	-0.016	99	3520347	30.0	28.3	
52 3-Chloro-1-propene	41	3.814	3.812	0.002	90	1279519	30.0	28.9	
53 Methyl acetate	43	3.814	3.830	-0.016	96	1005671	150.0	143.9	
54 Methylene Chloride	84	3.936	3.952	-0.016	91	823702	30.0	29.2	
55 2-Methyl-2-propanol	59	4.058	4.056	0.002	100	240390	300.0	248.7	
57 Acrylonitrile	53	4.197	4.213	-0.016	99	575083	300.0	305.2	
58 trans-1,2-Dichloroethene	96	4.232	4.230	0.002	99	1054308	30.0	28.5	
56 Methyl tert-butyl ether	73	4.232	4.230	0.002	96	1359725	30.0	28.5	
59 Hexane	57	4.493	4.492	0.001	92	1408729	30.0	29.2	
60 1,1-Dichloroethane	63	4.685	4.683	0.002	96	1727676	30.0	28.4	
61 Vinyl acetate	43	4.702	4.718	-0.016	97	1769572	60.0	60.1	
65 cis-1,2-Dichloroethene	96	5.346	5.345	0.001	84	1056870	30.0	28.6	
67 2-Butanone (MEK)	43	5.346	5.363	-0.017	43	443922	120.0	113.2	
66 2,2-Dichloropropane	77	5.346	5.363	-0.017	86	1674760	30.0	28.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.573	5.572	0.001	97	704363	900.0	950.3	
73 Chlorobromomethane	128	5.625	5.641	-0.016	89	574947	30.0	27.5	
74 Tetrahydrofuran	42	5.695	5.693	0.002	90	145169	60.0	58.2	
75 Chloroform	83	5.712	5.711	0.001	95	1969667	30.0	28.7	
76 1,1,1-Trichloroethane	97	5.956	5.955	0.001	98	2034246	30.0	28.0	
77 Cyclohexane	56	6.026	6.024	0.002	89	1526794	30.0	28.1	
78 1,1-Dichloropropene	75	6.148	6.146	0.002	98	1605893	30.0	26.9	
79 Carbon tetrachloride	117	6.165	6.164	0.001	99	2172409	30.0	27.5	
80 Isobutyl alcohol	41	6.269	6.286	-0.017	91	213307	750.0	725.3	
81 Benzene	78	6.409	6.407	0.002	95	2868987	30.0	28.4	
82 1,2-Dichloroethane	62	6.426	6.425	0.001	97	805120	30.0	27.8	
84 n-Heptane	43	6.687	6.704	-0.017	91	1680527	30.0	27.9	
86 Trichloroethene	95	7.210	7.209	0.001	95	1302359	30.0	27.6	
88 2-Pentanone	43	7.454	7.452	0.002	98	1030171	120.0	73.1	
89 Methylcyclohexane	55	7.471	7.470	0.001	90	1404577	30.0	27.4	
90 1,2-Dichloropropane	63	7.506	7.522	-0.016	96	972713	30.0	28.6	
92 Dibromomethane	93	7.680	7.679	0.001	91	614431	30.0	27.2	
93 1,4-Dioxane	88	7.698	7.714	-0.016	83	71683	600.0	634.0	
94 Dichlorobromomethane	83	7.872	7.870	0.002	99	1715604	30.0	28.8	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.481	8.480	0.001	97	1431840	30.0	28.6	
98 4-Methyl-2-pentanone (MIBK)	43	8.708	8.706	0.002	96	1515028	120.0	115.6	
99 Toluene	91	8.952	8.950	0.002	99	3317845	30.0	28.3	
100 trans-1,3-Dichloropropene	75	9.265	9.264	0.001	93	1093847	30.0	29.8	
101 Ethyl methacrylate	69	9.387	9.403	-0.016	87	787236	30.0	29.7	
102 1,1,2-Trichloroethane	97	9.526	9.525	0.001	90	680788	30.0	29.4	
103 Tetrachloroethene	164	9.735	9.734	0.001	98	1450444	30.0	28.9	
104 1,3-Dichloropropane	76	9.770	9.786	-0.016	87	1033719	30.0	28.0	
105 2-Hexanone	43	9.909	9.908	0.001	97	981792	120.0	122.8	
108 Chlorodibromomethane	129	10.136	10.134	0.002	89	1490723	30.0	30.4	
109 Ethylene Dibromide	107	10.310	10.309	0.001	99	898852	30.0	29.2	
110 1-Chlorohexane	91	11.094	11.092	0.002	96	1710375	30.0	28.6	
111 Chlorobenzene	112	11.129	11.127	0.001	95	2597604	30.0	29.4	
112 1,1,1,2-Tetrachloroethane	131	11.268	11.267	0.001	97	1404821	30.0	29.4	
113 Ethylbenzene	106	11.303	11.301	0.002	98	1252407	30.0	29.0	
114 m-Xylene & p-Xylene	106	11.494	11.493	0.001	99	1661879	30.0	29.6	
115 o-Xylene	106	12.052	12.050	0.002	97	1460413	30.0	28.7	
116 Styrene	104	12.086	12.085	0.001	93	2297755	30.0	28.9	
117 Bromoform	173	12.330	12.329	0.001	97	915822	30.0	29.9	
118 Isopropylbenzene	105	12.557	12.555	0.002	96	4580162	30.0	28.3	
120 Cyclohexanone	55	12.679	12.677	0.002	93	387027	1200.0	1197.4	
121 1,1,2,2-Tetrachloroethane	83	12.940	12.938	0.002	96	816528	30.0	28.5	
122 Bromobenzene	156	12.922	12.938	-0.016	94	1315527	30.0	29.1	
123 1,2,3-Trichloropropane	110	12.992	12.991	0.001	79	214378	30.0	30.1	
124 trans-1,4-Dichloro-2-buten	53	13.009	13.008	0.001	71	150469	30.0	30.4	
125 N-Propylbenzene	120	13.062	13.060	0.002	99	1202049	30.0	26.9	
126 2-Chlorotoluene	126	13.166	13.165	0.001	96	993615	30.0	28.1	
127 1,3,5-Trimethylbenzene	105	13.271	13.269	0.002	95	3449246	30.0	27.8	
128 4-Chlorotoluene	126	13.306	13.304	0.002	98	1181985	30.0	28.8	
129 tert-Butylbenzene	119	13.654	13.652	0.002	94	4015414	30.0	27.7	
130 1,2,4-Trimethylbenzene	105	13.706	13.705	0.001	96	3285380	30.0	28.1	
131 sec-Butylbenzene	134	13.898	13.896	0.002	94	1113864	30.0	27.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.020	14.018	0.002	97	1966823	30.0	28.5	
133 4-Isopropyltoluene	119	14.054	14.053	0.001	97	4558122	30.0	27.8	
134 1,4-Dichlorobenzene	146	14.124	14.123	0.001	95	2683909	30.0	27.9	
137 n-Butylbenzene	91	14.490	14.488	0.002	97	3921035	30.0	28.1	
138 1,2-Dichlorobenzene	146	14.525	14.523	0.002	98	1952977	30.0	28.5	
139 1,2-Dibromo-3-Chloropropan	157	15.291	15.290	0.001	92	194902	30.0	28.5	
141 1,2,4-Trichlorobenzene	180	16.057	16.056	0.001	94	1543124	30.0	30.1	
142 Hexachlorobutadiene	225	16.214	16.213	0.001	96	1632303	30.0	27.8	
143 Naphthalene	128	16.284	16.300	-0.016	97	1400658	30.0	30.7	
144 1,2,3-Trichlorobenzene	180	16.510	16.509	0.001	96	1181489	30.0	29.7	
S 151 1,2-Dichloroethene, Total	96				0		60.0	57.1	
S 146 Xylenes, Total (URS)	1				0		60.0	58.2	
S 145 Trihalomethanes, Total	1				0		120.0	117.9	
S 149 1,2-Dichloroethene, Total	1				0		60.0	57.1	
S 147 Total BTEX	1				0			144.0	
S 148 1,3-Dichloropropene, Total	1				0		60.0	58.3	
S 150 Xylenes, Total	106				0		60.0	58.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 15.00	Units: uL
MV-Gas/Ket A_00062	Amount Added: 15.00	Units: uL
MV-2cleve+AVA_00025	Amount Added: 15.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7384.D

Injection Date: 29-Jun-2017 12:03:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 15

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

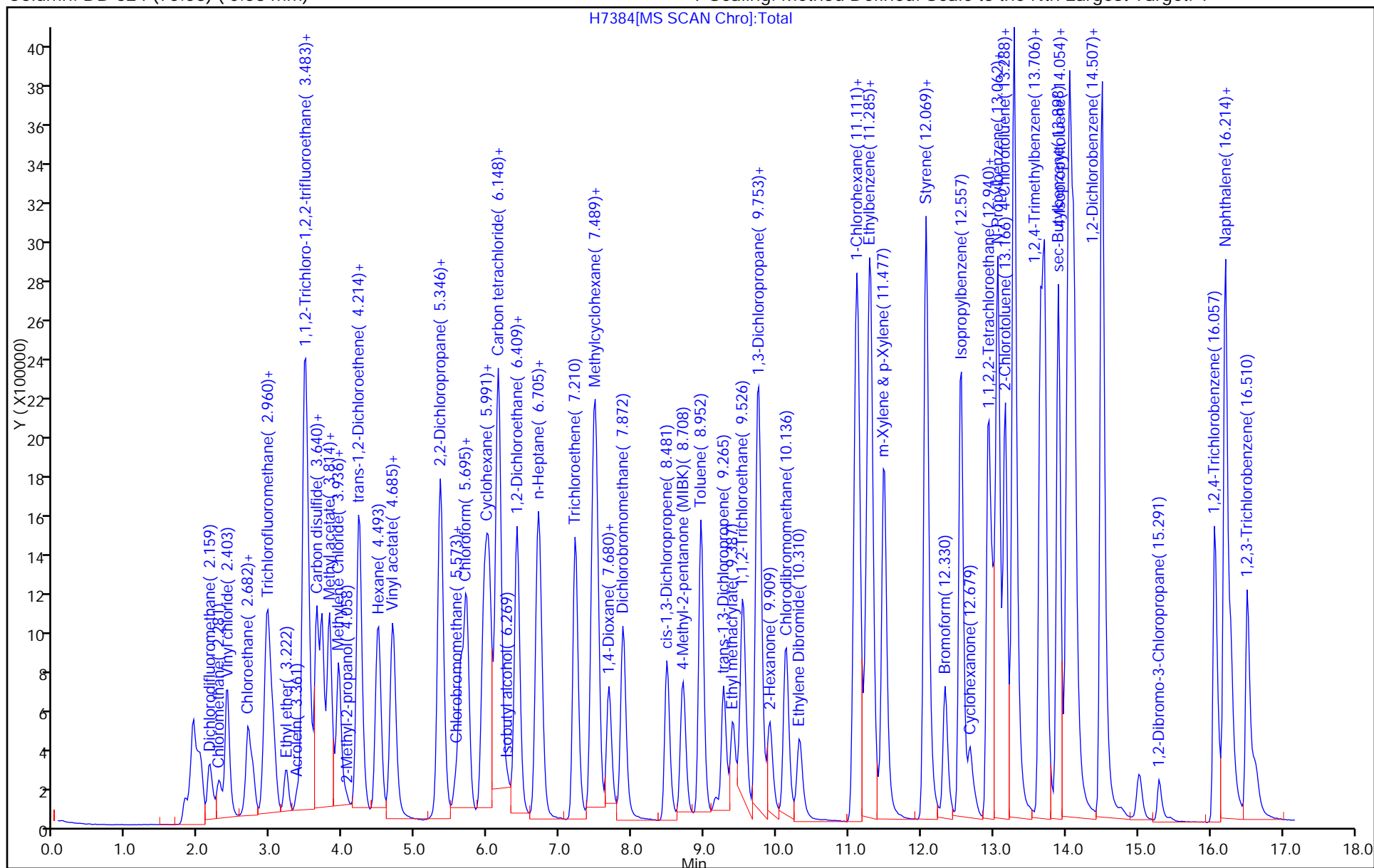
ALS Bottle#: 8

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7385.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 29-Jun-2017 12:25:30 ALS Bottle#: 9 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:25 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 12:50:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.992	3.969	0.023	95	149402	250.0	250.0	
* 2 Fluorobenzene	96	6.762	6.738	0.024	98	938470	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.098	11.092	0.006	87	235365	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.111	14.088	0.023	93	375364	12.5	12.5	
28 Dichlorodifluoromethane	85	2.164	2.175	-0.011	100	1792911	60.0	60.1	
30 Chloromethane	50	2.303	2.280	0.023	98	964482	60.0	64.4	
32 Vinyl chloride	62	2.408	2.419	-0.011	98	1290936	60.0	56.1	
35 Bromomethane	94	2.686	2.698	-0.012	91	1519159	60.0	56.0	
36 Chloroethane	64	2.756	2.768	-0.012	99	920647	60.0	58.6	
37 Dichlorofluoromethane	67	2.948	2.942	0.006	99	3771838	60.0	60.0	
38 Trichlorofluoromethane	101	2.982	2.994	-0.012	99	3975914	60.0	58.3	
40 Ethyl ether	59	3.226	3.220	0.006	91	774586	60.0	56.3	
44 Acrolein	56	3.366	3.377	-0.011	99	613789	599.9	648.3	
45 1,1-Dichloroethene	96	3.470	3.482	-0.012	99	1937331	60.0	59.4	
46 1,1,2-Trichloro-1,2,2-trif	151	3.505	3.499	0.006	96	3200803	60.0	57.5	
47 Acetone	43	3.522	3.516	0.006	99	439329	240.0	239.0	
48 Iodomethane	142	3.644	3.638	0.006	99	5719389	60.0	58.9	
50 Carbon disulfide	76	3.714	3.725	-0.011	99	6915444	60.0	58.9	
52 3-Chloro-1-propene	41	3.818	3.812	0.006	83	2523470	60.0	60.8	
53 Methyl acetate	43	3.818	3.830	-0.012	96	1945295	300.0	294.9	
54 Methylene Chloride	84	3.940	3.952	-0.012	91	1594399	60.0	61.2	
55 2-Methyl-2-propanol	59	4.080	4.056	0.024	91	501302	600.0	531.2	
57 Acrylonitrile	53	4.201	4.213	-0.012	99	1157575	600.0	650.9	
56 Methyl tert-butyl ether	73	4.236	4.230	0.006	94	2762129	60.0	61.4	
58 trans-1,2-Dichloroethene	96	4.236	4.230	0.006	99	2085210	60.0	59.6	
59 Hexane	57	4.498	4.492	0.006	92	2801890	60.0	59.5	
60 1,1-Dichloroethane	63	4.689	4.683	0.006	96	3477098	60.0	60.7	
61 Vinyl acetate	43	4.707	4.718	-0.011	97	3559192	120.0	128.0	
65 cis-1,2-Dichloroethene	96	5.351	5.345	0.006	84	2138792	60.0	61.4	
66 2,2-Dichloropropane	77	5.368	5.363	0.005	87	3273592	60.0	59.9	
67 2-Butanone (MEK)	43	5.368	5.363	0.005	90	896592	240.0	242.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.577	5.572	0.005	97	1385095	1800.0	1914.1	
73 Chlorobromomethane	128	5.647	5.641	0.006	87	1145678	60.0	58.0	
74 Tetrahydrofuran	42	5.699	5.693	0.006	91	284057	120.0	120.7	
75 Chloroform	83	5.717	5.711	0.006	95	3926557	60.0	60.6	
76 1,1,1-Trichloroethane	97	5.960	5.955	0.005	99	4077681	60.0	59.5	
77 Cyclohexane	56	6.030	6.024	0.006	90	3049156	60.0	59.5	
78 1,1-Dichloropropene	75	6.152	6.146	0.006	98	3185004	60.0	56.5	
79 Carbon tetrachloride	117	6.169	6.164	0.005	98	4282023	60.0	57.4	
80 Isobutyl alcohol	41	6.291	6.286	0.005	91	434362	1500.0	1512.9	
81 Benzene	78	6.413	6.407	0.006	96	5693144	60.0	59.8	
82 1,2-Dichloroethane	62	6.431	6.425	0.006	97	1568324	60.0	57.4	
84 n-Heptane	43	6.709	6.704	0.005	91	3283577	60.0	57.7	
86 Trichloroethene	95	7.232	7.209	0.023	96	2573209	60.0	57.8	
88 2-Pentanone	43	7.458	7.452	0.006	98	2443271	240.0	183.6	
89 Methylcyclohexane	55	7.476	7.470	0.006	90	2768946	60.0	57.2	
90 1,2-Dichloropropane	63	7.528	7.522	0.006	96	1924338	60.0	59.9	
92 Dibromomethane	93	7.685	7.679	0.006	91	1211408	60.0	56.9	
93 1,4-Dioxane	88	7.719	7.714	0.005	86	134203	1200.0	1257.8	
94 Dichlorobromomethane	83	7.894	7.870	0.024	99	3354439	60.0	59.8	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.503	8.480	0.023	96	2822523	60.0	57.8	
98 4-Methyl-2-pentanone (MIBK)	43	8.712	8.706	0.006	96	2927582	240.0	236.8	
99 Toluene	91	8.973	8.950	0.023	99	6407298	60.0	57.8	
100 trans-1,3-Dichloropropene	75	9.287	9.264	0.023	92	2074354	60.0	59.8	
101 Ethyl methacrylate	69	9.409	9.403	0.006	87	1496240	60.0	57.9	
102 1,1,2-Trichloroethane	97	9.548	9.525	0.023	92	1237853	60.0	57.5	
103 Tetrachloroethene	164	9.757	9.734	0.023	99	2837372	60.0	58.0	
104 1,3-Dichloropropane	76	9.792	9.786	0.006	86	2020131	60.0	56.1	
105 2-Hexanone	43	9.914	9.908	0.006	97	1937998	240.0	248.7	
108 Chlorodibromomethane	129	10.140	10.134	0.006	89	2865492	60.0	60.0	
109 Ethylene Dibromide	107	10.332	10.309	0.023	99	1701567	60.0	56.8	
110 1-Chlorohexane	91	11.116	11.092	0.024	95	3265795	60.0	56.1	
111 Chlorobenzene	112	11.150	11.127	0.023	95	4966368	60.0	57.6	
112 1,1,1,2-Tetrachloroethane	131	11.290	11.267	0.023	97	2683073	60.0	57.6	
113 Ethylbenzene	106	11.325	11.301	0.024	99	2384190	60.0	56.7	
114 m-Xylene & p-Xylene	106	11.499	11.493	0.006	99	3110883	60.0	56.8	
115 o-Xylene	106	12.073	12.050	0.023	95	2723338	60.0	54.9	
116 Styrene	104	12.091	12.085	0.006	94	4333392	60.0	55.9	
117 Bromoform	173	12.352	12.329	0.023	97	1709551	60.0	57.4	
118 Isopropylbenzene	105	12.561	12.555	0.006	96	8546684	60.0	58.8	
120 Cyclohexanone	55	12.700	12.677	0.023	92	707511	2400.0	2246.1	
122 Bromobenzene	156	12.944	12.938	0.006	92	2509391	60.0	61.9	
121 1,1,2,2-Tetrachloroethane	83	12.962	12.938	0.024	96	1509064	60.0	58.8	
123 1,2,3-Trichloropropane	110	12.997	12.991	0.005	79	398149	60.0	63.2	
124 trans-1,4-Dichloro-2-buten	53	13.031	13.008	0.023	70	286488	60.0	64.5	
125 N-Propylbenzene	120	13.084	13.060	0.024	99	2248428	60.0	56.0	
126 2-Chlorotoluene	126	13.188	13.165	0.023	96	1893190	60.0	59.6	
127 1,3,5-Trimethylbenzene	105	13.293	13.269	0.024	96	6341476	60.0	57.0	
128 4-Chlorotoluene	126	13.310	13.304	0.006	98	2144117	60.0	58.2	
129 tert-Butylbenzene	119	13.676	13.652	0.024	93	7436572	60.0	57.1	
130 1,2,4-Trimethylbenzene	105	13.728	13.705	0.023	95	5952286	60.0	56.7	
131 sec-Butylbenzene	134	13.920	13.896	0.024	94	2009287	60.0	55.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.041	14.018	0.023	97	3823224	60.0	61.7	
133 4-Isopropyltoluene	119	14.076	14.053	0.023	98	8199594	60.0	55.6	
134 1,4-Dichlorobenzene	146	14.129	14.123	0.006	96	4811544	60.0	55.8	
137 n-Butylbenzene	91	14.512	14.488	0.024	97	7057175	60.0	56.3	
138 1,2-Dichlorobenzene	146	14.529	14.523	0.006	98	3440966	60.0	55.9	
139 1,2-Dibromo-3-Chloropropan	157	15.313	15.290	0.023	93	355729	60.0	57.9	
141 1,2,4-Trichlorobenzene	180	16.079	16.056	0.023	94	2746119	60.0	59.7	
142 Hexachlorobutadiene	225	16.236	16.213	0.023	96	2774367	60.0	52.7	
143 Naphthalene	128	16.306	16.300	0.006	97	2471095	60.0	60.3	
144 1,2,3-Trichlorobenzene	180	16.532	16.509	0.023	96	2082442	60.0	58.3	
S 151 1,2-Dichloroethene, Total	96				0		120.0	121.1	
S 148 1,3-Dichloropropene, Total	1				0		120.0	117.6	
S 150 Xylenes, Total	106				0		120.0	111.7	
S 147 Total BTEX	1				0			286.0	
S 146 Xylenes, Total (URS)	1				0		120.0	111.7	
S 145 Trihalomethanes, Total	1				0		240.0	237.8	
S 149 1,2-Dichloroethene, Total	1				0		120.0	121.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00031	Amount Added: 30.00	Units: uL
MV-Gas/Ket A_00062	Amount Added: 30.00	Units: uL
MV-2cleve+AVA_00025	Amount Added: 30.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7385.D

Injection Date: 29-Jun-2017 12:25:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 16

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

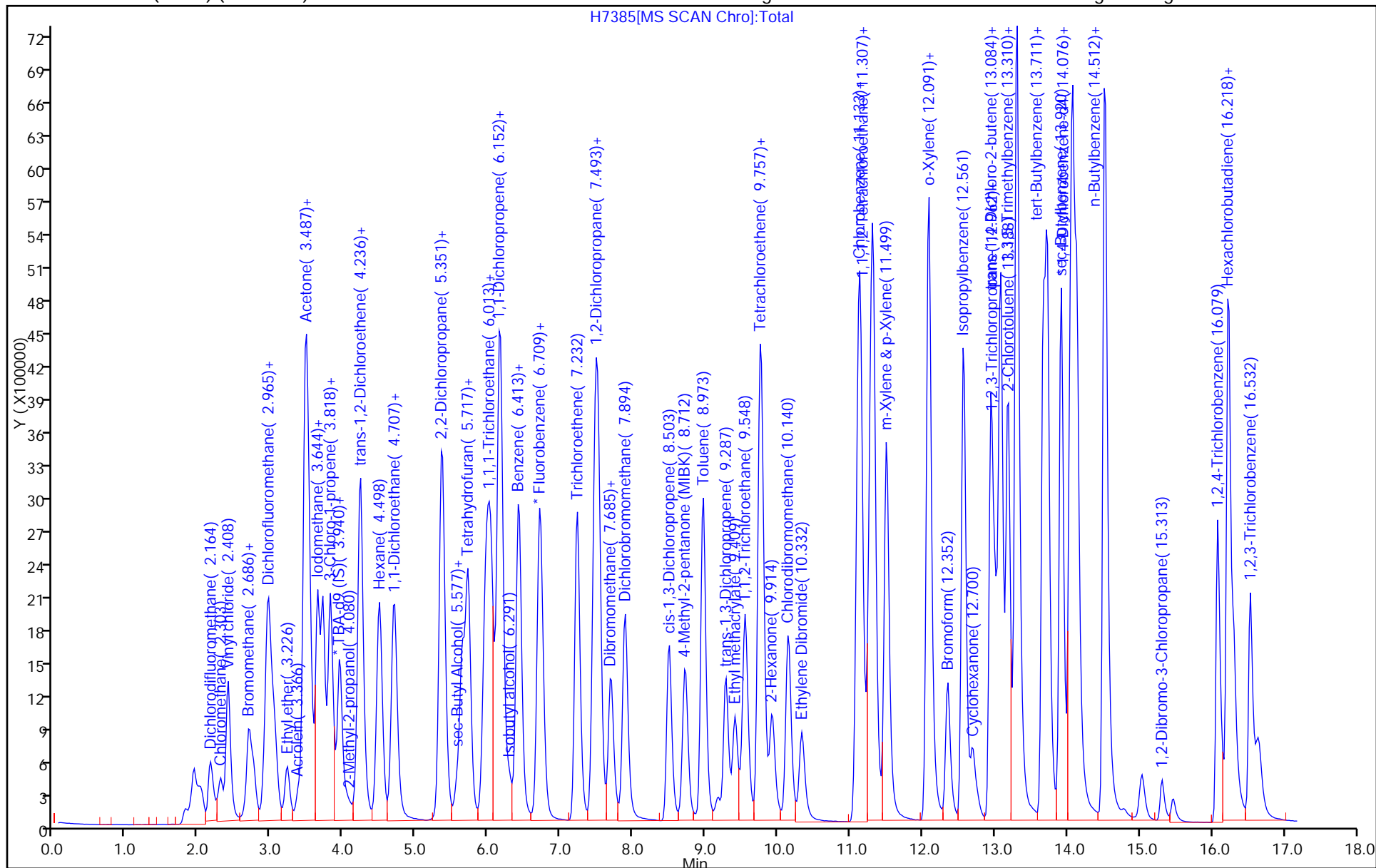
ALS Bottle#: 9

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-390481/10	H0338.D
Level 2	IC 280-390481/11	H0339.D
Level 3	IC 280-390481/12	H0340.D
Level 4	IC 280-390481/13	H0341.D
Level 5	ICIS 280-390481/14	H0342.D
Level 6	IC 280-390481/15	H0343.D
Level 7	IC 280-390481/16	H0344.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Dichlorodifluoromethane	0.6149 0.7232	0.6208 0.7098	0.5899	0.6852	0.7233	Ave		0.6667				8.5		15.0			
Chloromethane	0.3055 0.3150	0.3162 0.3286	0.2999	0.3123	0.3365	Ave		0.3163			0.1000	4.0		15.0			
Vinyl chloride	0.4110 0.3844	0.3900 0.3883	0.3697	0.3709	0.3883	Ave		0.3861				3.6		30.0			
Bromomethane	0.4138 0.3996	0.4244 0.3769	0.4079	0.3997	0.4193	Ave		0.4060				3.9		15.0			
Chloroethane	0.3055 0.2399	0.2751 0.2380	0.2659	0.2320	0.2463	Ave		0.2575				10.2		15.0			
Dichlorofluoromethane	0.9720 0.8970	0.9206 0.9422	0.8685	0.8526	0.8827	Ave		0.9051				4.7		15.0			
Trichlorofluoromethane	0.9712 0.9781	0.9969 1.0158	0.9651	0.9422	0.9844	Ave		0.9791				2.4		15.0			
Ethyl ether	0.1735 0.1844	0.1899 0.1802	0.1753	0.1812	0.1874	Ave		0.1817				3.3		15.0			
1,1-Dichloroethene	0.4937 0.4485	0.4684 0.4541	0.4514	0.4535	0.4523	Ave		0.4603				3.5		30.0			
1,1,2-Trichlorotrifluoroethane	0.6201 0.6209	0.6394 0.6257	0.6206	0.6207	0.6278	Ave		0.6250				1.1		15.0			
Acetone	++++ 0.0223	0.0399 0.0231	0.0291	0.0240	0.0250	Lin2	0.0683	0.0220							0.9960		0.9900
Iodomethane	1.1808 1.1298	1.1482 1.1348	1.0947	1.0992	1.1131	Ave		1.1287				2.7		15.0			
Carbon disulfide	++++ 1.6184	1.6750 1.6513	1.5857	1.5984	1.6050	Ave		1.6223				2.1		15.0			
3-Chloro-1-propene	0.6532 0.5835	0.6092 0.5958	0.5707	0.5686	0.5735	Ave		0.5935				5.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methyl acetate	0.0943 0.0918	0.0929 0.0895	0.0855	0.0930	0.0991	Ave		0.0923				4.6		15.0			
Methylene Chloride	++++ 0.3835	0.5263 0.3792	0.4444	0.4034	0.3891	Ave		0.4210				13.5		15.0			
t-Butyl alcohol	++++ 1.1541	1.5828 1.1270	1.3916	1.1694	1.1486	Ave		1.2623				14.7		15.0			
Acrylonitrile	++++ 0.0279	0.0273 0.0275	0.0258	0.0262	0.0280	Ave		0.0271				3.3		15.0			
Methyl tert-butyl ether	0.6653 0.6588	0.6682 0.6362	0.6304	0.6571	0.6815	Ave		0.6568				2.7		15.0			
trans-1,2-Dichloroethene	0.4837 0.4728	0.4973 0.4818	0.4854	0.4734	0.4727	Ave		0.4810				1.9		15.0			
Hexane	2.1559 2.1252	2.1984 2.2282	2.1628	2.2012	2.1371	Ave		2.1727				1.7		15.0			
1,1-Dichloroethane	0.8396 0.7825	0.8210 0.7918	0.7757	0.7749	0.7735	Ave		0.7941			0.1000	3.3		15.0			
Vinyl acetate	0.3366 0.3677	0.3186 0.3333	0.3169	0.3577	0.3800	Ave		0.3444				7.1		15.0			
cis-1,2-Dichloroethene	0.5058 0.4820	0.5127 0.4918	0.4769	0.4893	0.4823	Ave		0.4915				2.7		15.0			
2-Butanone (MEK)	++++ 0.0473	0.0491 0.0470	0.0411	0.0447	0.0506	Ave		0.0466				7.2		15.0			
2,2-Dichloropropane	++++ 0.7702	1.4150 0.7797	1.0851	0.8968	0.8108	Lin1	0.6437	0.7611							1.0000		0.9900
sec-Butyl Alcohol	1.2224 1.0358	0.9464 1.0007	0.8970	0.9912	1.0075	Ave		1.0144				10.1		15.0			
Chlorobromomethane	0.2272 0.2374	0.2354 0.2358	0.2289	0.2379	0.2433	Ave		0.2351				2.3		15.0			
Tetrahydrofuran	++++ 0.0330	0.0284 0.0317	0.0295	0.0336	0.0342	Ave		0.0317				7.4		15.0			
Chloroform	0.9949 0.9319	0.9296 0.9251	0.9346	0.9262	0.9342	Ave		0.9395				2.6		30.0			
1,1,1-Trichloroethane	0.9274 0.8886	0.9466 0.8996	0.9179	0.8945	0.8913	Ave		0.9094				2.4		15.0			
Cyclohexane	0.8537 0.7147	0.7821 0.7254	0.7242	0.7241	0.7160	Ave		0.7486				6.9		15.0			
1,1-Dichloropropene	0.8467 0.7545	0.8240 0.7683	0.7799	0.7620	0.7556	Ave		0.7844				4.6		15.0			
Carbon tetrachloride	0.9090 0.8961	0.9576 0.9094	0.9055	0.8828	0.8989	Ave		0.9085				2.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	++++ 0.3608	0.3611 0.3434	0.3471	0.3431	0.3575	Ave		0.3522				2.4		15.0			
Benzene	1.3377 1.3898	1.4176 1.3960	1.3752	1.3562	1.3883	Ave		1.3801				1.9		15.0			
1,2-Dichloroethane	0.4021 0.3486	0.3612 0.3364	0.3420	0.3516	0.3575	Ave		0.3570				6.1		15.0			
Trichloroethene	0.5907 0.6088	0.6222 0.6146	0.6031	0.6076	0.6106	Ave		0.6082				1.6		15.0			
2-Pentanone	++++ 0.1219	0.1434 ++++	0.1529	0.1410	0.1306	Ave		0.1380				8.7		15.0			
Methylcyclohexane	0.7726 0.6691	0.7128 0.6764	0.6863	0.6698	0.6650	Ave		0.6932				5.6		15.0			
1,2-Dichloropropane	0.4691 0.4684	0.5101 0.4652	0.4705	0.4711	0.4719	Ave		0.4752				3.3		30.0			
Dibromomethane	0.3061 0.2989	0.3215 0.2824	0.2874	0.3005	0.3087	Ave		0.3008				4.4		15.0			
1,4-Dioxane	++++ 0.0015	0.0010 0.0015	0.0011	0.0014	0.0016	Lin2	-0.011	0.0016							0.9960		0.9900
Dichlorobromomethane	0.7688 0.8119	0.8296 0.8068	0.7954	0.8111	0.8305	Ave		0.8077				2.6		15.0			
cis-1,3-Dichloropropene	2.2711 2.3749	2.4349 2.3251	2.3435	2.4633	2.3813	Ave		2.3706				2.8		15.0			
4-Methyl-2-pentanone (MIBK)	++++ 0.1725	0.1695 0.1625	0.1568	0.1774	0.1870	Ave		0.1709				6.3		15.0			
Toluene	1.7961 1.6236	1.6791 1.6076	1.6499	1.6027	1.6572	Ave		1.6594				4.0		30.0			
trans-1,3-Dichloropropene	0.6211 0.5240	0.5291 0.5014	0.4735	0.5031	0.5528	Ave		0.5293				9.0		15.0			
Ethyl methacrylate	1.2970 1.2657	1.2170 1.1925	1.1617	1.2760	1.3030	Ave		1.2447				4.4		15.0			
1,1,2-Trichloroethane	++++ 0.3153	0.4833 0.2875	0.4300	0.3476	0.3458	Lin2	0.1866	0.3107							0.9940		0.9900
Tetrachloroethene	1.7646 1.8705	1.9700 1.8850	1.9453	1.9783	1.8929	Ave		1.9009				3.9		15.0			
1,3-Dichloropropane	1.5011 1.7588	1.7736 1.6896	1.6907	1.8133	1.7613	Ave		1.7126				6.0		15.0			
2-Hexanone	0.2761 0.3681	0.3403 0.3513	0.3465	0.3684	0.4048	Ave		0.3508				11.2		15.0			
Chlorodibromomethane	1.9461 2.1073	2.1220 2.0312	1.9994	2.1431	2.1082	Ave		2.0653				3.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dibromoethane	1.2021 1.3997	1.4125 1.3301	1.3258	1.4261	1.4267	Ave		1.3604				6.0		15.0			
1-Chlorohexane	2.8142 2.7536	3.1113 2.8319	2.9602	2.8898	2.7346	Ave		2.8708				4.6		15.0			
Chlorobenzene	3.8192 3.8380	3.9347 3.8354	3.8158	3.9667	3.8920	Ave		3.8717			0.3000	1.6		15.0			
1,1,1,2-Tetrachloroethane	1.8570 2.0032	2.2429 1.9650	2.0304	2.1149	2.0047	Ave		2.0312				6.0		15.0			
Ethylbenzene	1.8294 1.9300	1.9668 1.9219	1.9563	2.0040	1.9210	Ave		1.9328				2.8		30.0			
m-Xylene & p-Xylene	2.4951 2.4989	2.7224 2.4847	2.5228	2.5713	2.5003	Ave		2.5422				3.3		15.0			
o-Xylene	2.1022 2.2531	2.3626 2.2236	2.3263	2.3278	2.2339	Ave		2.2614				3.9		15.0			
Styrene	3.4141 3.5762	3.6185 3.5368	3.5396	3.6794	3.5974	Ave		3.5660				2.3		15.0			
Bromoform	1.0271 1.1818	1.1399 1.1132	1.1192	1.2241	1.2227	Ave		1.1469			0.1000	6.1		15.0			
Isopropylbenzene	4.6750 4.2759	4.5883 4.4443	4.2869	4.3008	4.2093	Ave		4.3972				4.0		15.0			
Cyclohexanone	0.0199 0.0148	0.0140 0.0150	0.0157	0.0157	0.0164	Ave		0.0159				12.0		15.0			
Bromobenzene	1.0800 1.0918	1.0493 1.1193	1.0308	1.0482	1.0764	Ave		1.0708				2.8		15.0			
1,1,2,2-Tetrachloroethane	0.9808 0.8691	0.8487 0.8296	0.8186	0.8621	0.8901	Ave		0.8713			0.3000	6.2		15.0			
1,2,3-Trichloropropane	++++ 0.1995	0.3418 0.1941	0.2525	0.2234	0.2157	Lin2	0.1425	0.1939							0.9980		0.9900
trans-1,4-Dichloro-2-butene	++++ 0.1453	0.1579 0.1430	0.1586	0.1376	0.1546	Ave		0.1495				5.8		15.0			
N-Propylbenzene	1.3521 1.0914	1.1874 1.1134	1.1259	1.0869	1.0816	Ave		1.1484				8.4		15.0			
2-Chlorotoluene	1.0908 0.8949	0.9775 0.8979	0.8507	0.8353	0.8725	Ave		0.9171				9.7		15.0			
1,3,5-Trimethylbenzene	3.3761 3.2524	3.4566 3.3312	3.3121	3.2390	3.2341	Ave		3.3145				2.5		15.0			
4-Chlorotoluene	0.9259 1.0723	1.0086 1.0821	1.0411	1.0976	1.0713	Ave		1.0427				5.7		15.0			
tert-Butylbenzene	3.9328 3.6236	3.8039 3.6817	3.6853	3.6568	3.6103	Ave		3.7135				3.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	3.2924 3.0920	3.1698 3.1652	3.1216	3.1397	3.1319	Ave		3.1589				2.0		15.0			
sec-Butylbenzene	1.1493 0.9719	1.0443 0.9988	1.0064	0.9994	0.9904	Ave		1.0230				5.9		15.0			
1,3-Dichlorobenzene	1.6763 1.6962	1.6090 1.6544	1.5340	1.5992	1.6263	Ave		1.6279				3.3		15.0			
4-Isopropyltoluene	4.4580 4.0962	4.2742 4.1249	4.1936	4.1956	4.1440	Ave		4.2124				2.9		15.0			
1,4-Dichlorobenzene	2.7091 2.2452	2.4547 2.2977	2.3093	2.3988	2.3401	Ave		2.3936				6.5		15.0			
n-Butylbenzene	4.1030 3.9487	3.9788 4.0938	3.9962	3.9816	3.9643	Ave		4.0094				1.6		15.0			
1,2-Dichlorobenzene	1.8366 1.6465	1.6323 1.6413	1.5041	1.6896	1.6373	Ave		1.6554				5.9		15.0			
1,2-Dibromo-3-Chloropropane	++++ 0.1512	0.1543 0.1453	0.1390	0.1562	0.1623	Ave		0.1514				5.5		15.0			
1,2,4-Trichlorobenzene	1.2290 1.1035	1.0396 1.0916	1.0225	1.1100	1.1487	Ave		1.1064				6.2		15.0			
Hexachlorobutadiene	1.2997 1.0915	1.1842 1.0900	1.1661	1.1872	1.1761	Ave		1.1707				6.0		15.0			
Naphthalene	1.3910 1.1492	0.9921 1.1107	0.9372	1.1321	1.1645	Ave		1.1253				12.9		15.0			
1,2,3-Trichlorobenzene	0.9438 0.8114	0.7497 0.7907	0.7481	0.8166	0.8624	Ave		0.8175				8.4		15.0			
Dibromofluoromethane (Surr)	++++ 0.7273	0.8013 0.7347	0.7532	0.7328	0.7368	Ave		0.7477				3.7		15.0			
1,2-Dichloroethane-d4 (Surr)	++++ 0.3191	0.3419 0.3136	0.3322	0.3242	0.3326	Ave		0.3273				3.1		15.0			
Toluene-d8 (Surr)	++++ 5.0000	5.6281 5.0892	5.4518	5.2331	5.0279	Ave		5.2384				4.8		15.0			
4-Bromofluorobenzene (Surr)	++++ 1.6357	1.8746 1.6856	1.6786	1.6595	1.6452	Ave		1.6965				5.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-390481/10	H0338.D
Level 2	IC 280-390481/11	H0339.D
Level 3	IC 280-390481/12	H0340.D
Level 4	IC 280-390481/13	H0341.D
Level 5	ICIS 280-390481/14	H0342.D
Level 6	IC 280-390481/15	H0343.D
Level 7	IC 280-390481/16	H0344.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	19147 2130545	61062 4099674	118558	351763	730593	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	9512 927908	31099 1897713	60277	160356	339916	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	12799 1132300	38364 2242381	74307	190425	392185	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	12886 1177180	41747 2177046	81978	205213	423552	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	9513 706834	27054 1374500	53436	119114	248757	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	30267 2642568	90546 5441549	174547	437723	891675	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	30244 2881299	98055 5866860	193975	483706	994354	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	5402 543222	18679 1040895	35235	93039	189330	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethene	FB	Ave	15374 1321217	46070 2622612	90713	232836	456933	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	19311 1829096	62893 3613515	124738	318685	634150	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Lin2	++++ 263056	15704 534455	23386	49330	100993	++++ 120	4.00 240	8.00	20.0	40.0
Iodomethane	FB	Ave	36769 3328403	112936 6554236	220013	564310	1124353	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	++++ 4767640	164745 9537332	318701	820626	1621274	++++ 30.0	1.00 60.0	2.00	5.00	10.0
3-Chloro-1-propene	FB	Ave	20339 1718833	59922 3441106	114697	291896	579269	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	14681 1352178	45686 2584275	85887	238683	500577	1.50 150	5.00 300	10.0	25.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methylene Chloride	FB	Ave	++++ 1129724	51766 2190184	89313	207083	393086	++++ 30.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd 9	Ave	++++ 328948	14956 652782	26510	59055	125115	++++ 300	10.0 600	20.0	50.0	100
Acrylonitrile	FB	Ave	++++ 821108	26853 1586870	51936	134734	282926	++++ 300	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	20718 1940924	65718 3674491	126690	337359	688425	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	15062 1392789	48917 2782624	97549	243016	477520	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	21681 1876961	65061 3811436	127900	329396	655959	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	26146 2305048	80750 4573342	155896	397823	781386	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	20963 2166159	62680 3850033	127368	367245	767603	0.600 60.0	2.00 120	4.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	15751 1419997	50425 2840601	95838	251182	487174	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	++++ 556887	19311 1085547	33077	91749	204630	++++ 120	4.00 240	8.00	20.0	40.0
2,2-Dichloropropane	FB	Lin1	++++ 2268810	139176 4503343	218090	460426	819043	++++ 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butyl Alcohol	TBAd 9	Ave	11250 885701	26827 1738821	51262	150165	329236	9.00 900	30.0 1800	60.0	150	300
Chlorobromomethane	FB	Ave	7074 699495	23158 1361992	46007	122148	245736	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	++++ 194710	5580 365920	11874	34454	69168	++++ 60.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	30981 2745261	91429 5343075	187833	475524	943673	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	28879 2617858	93106 5195446	184483	459207	900373	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	26583 2105584	76924 4189347	145559	371768	723227	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	26366 2222579	81042 4437307	156736	391207	763283	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	28307 2639816	94191 5252174	181997	453221	908031	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd 9	Ave	++++ 257061	8530 497293	16530	43319	97358	++++ 750	25.0 1500	50.0	125	250
Benzene	FB	Ave	41654 4094250	139436 8062667	276398	696270	1402387	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	12521 1026856	35529 1942984	68730	180492	361072	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	18395 1793514	61200 3549460	121217	311949	616753	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	++++ 1436458	56426 ++++	122936	289556	527621	++++ 120	4.00 ++++	8.00	20.0	40.0
Methylcyclohexane	FB	Ave	24058 1971163	70112 3906842	137930	343894	671779	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	14607 1379888	50174 2686550	94568	241855	476692	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	9533 880512	31622 1631058	57764	154253	311808	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	++++ 89405	2050 177378	4567	14595	32562	++++ 600	20.0 1200	40.0	100	200
Dichlorobromomethane	FB	Ave	23941 2391758	81601 4659452	159854	416437	838899	0.300 30.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	22840 2097515	72060 3977266	138589	368618	730905	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	++++ 2032827	66697 3753561	126072	364203	755482	++++ 120	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	55929 4783025	165152 9284762	331598	822803	1673947	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	19341 1543704	52038 2895713	95160	258271	558359	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	13044 1117898	36016 2039858	68700	190938	399937	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Lin2	++++ 928920	47536 1660305	86416	178440	349321	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	17746 1652019	58301 3224469	115038	296041	580988	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	15096 1553370	52489 2890243	99983	271351	540591	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	11108 1300483	40287 2403934	81972	220520	497005	1.20 120	4.00 240	8.00	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	19571 1861109	62800 3474543	118240	320703	647071	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	12089 1236241	41803 2275282	78403	213406	437887	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	28302 2431930	92078 4844083	175056	432442	839352	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	38409 3389721	116444 6560674	225652	593588	1194590	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	18675 1769188	66377 3361331	120071	316486	615299	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	18398 1704534	58205 3287589	115692	299878	589619	0.300 30.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	25093 2206982	80568 4250328	149189	384784	767421	0.300 30.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	21141 1989934	69920 3803647	137571	348337	685672	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	34335 3158430	107087 6049875	209319	550601	1104159	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	10329 1043800	33735 1904220	66185	183177	375303	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	71443 6337641	232565 12243977	440965	1135596	2211446	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	7991 521831	16572 1026737	37058	93859	201365	12.0 1200	40.0 2400	80.0	200	400
Bromobenzene	DCBd 4	Ave	16504 1618194	53188 3083645	106035	276766	565501	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	14988 1288127	43016 2285577	84200	227629	467612	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Lin2	++++ 295720	17326 534874	25975	58998	113308	++++ 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	++++ 215435	8002 393839	16317	36331	81209	++++ 30.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	20663 1617734	60184 3067258	115810	286983	568220	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	16670 1326413	49548 2473691	87502	220548	458363	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	51593 4820739	175204 9177307	340694	855234	1699116	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	14150 1589311	51125 2981107	107094	289799	562836	0.300 30.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	60101 5370842	192806 10143094	379085	965532	1896762	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	50314 4582929	160668 8719931	321097	829012	1645401	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	17564 1440590	52931 2751802	103526	263882	520343	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	25617 2514039	81553 4557781	157790	422242	854415	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	68126 6071385	216647 11364048	431369	1107821	2177115	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-102119-1 Analy Batch No.: 390481

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2017 09:00 Calibration End Date: 10/09/2017 11:12 Calibration ID: 30552

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	41400 3327796	124421 6330062	237543	633377	1229415	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	62701 5852715	201652 11278283	411057	1051311	2082731	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	28066 2440502	82737 4521834	154713	446116	860194	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	++++ 224164	7820 400396	14297	41238	85266	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	18782 1635629	52694 3007307	105175	293094	603482	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	19862 1617811	60022 3002990	119947	313472	617900	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	21257 1703388	50287 3059838	96402	298928	611773	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	14423 1202626	38001 2178348	76949	215626	453088	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	++++ 2142430	78816 4243209	151371	376198	744294	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	++++ 940082	33630 1811160	66774	166419	335937	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	++++ 4415995	166561 8705432	322403	783096	1543228	++++ 30.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	++++ 2424465	95015 4643724	172667	438165	864361	++++ 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0338.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 09-Oct-2017 09:00:30 ALS Bottle#: 12 Worklist Smp#: 10
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:28:52 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 12:06:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.970	3.970	0.000	97	255642	250.0	250.0	
* 2 Fluorobenzene	96	6.722	6.739	-0.017	98	1297486	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.076	11.076	0.000	87	419032	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.072	14.071	0.001	98	636743	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111		5.903				ND	ND	
\$ 9 1,2-Dichloroethane-d4 (Sur	65		6.321				ND	ND	
\$ 10 Toluene-d8 (Surr)	98		8.846				ND	ND	
\$ 11 4-Bromofluorobenzene (Surr	95		12.730				ND	ND	
28 Dichlorodifluoromethane	85	2.142	2.159	-0.017	97	19147	0.3000	0.2767	
30 Chloromethane	50	2.246	2.263	-0.017	95	9512	0.3000	0.2897	
32 Vinyl chloride	62	2.368	2.403	-0.035	96	12799	0.3000	0.3194	
35 Bromomethane	94	2.664	2.681	-0.017	92	12886	0.3000	0.3058	
36 Chloroethane	64	2.734	2.751	-0.017	96	9513	0.3000	0.3559	
37 Dichlorofluoromethane	67	2.925	2.925	0.000	96	30267	0.3000	0.3222	
38 Trichlorofluoromethane	101	2.960	2.977	-0.017	97	30244	0.3000	0.2976	
40 Ethyl ether	59	3.204	3.204	0.000	89	5402	0.3000	0.2864	
45 1,1-Dichloroethene	96	3.465	3.465	0.000	98	15374	0.3000	0.3218	
46 1,1,2-Trichloro-1,2,2-trif	151	3.483	3.482	0.001	96	19311	0.3000	0.2976	
47 Acetone	43		3.500				ND	ND	
48 Iodomethane	142	3.640	3.639	0.001	100	36769	0.3000	0.3139	
50 Carbon disulfide	76		3.709				ND	ND	
52 3-Chloro-1-propene	41	3.814	3.813	0.001	86	20339	0.3000	0.3302	
53 Methyl acetate	43	3.814	3.813	0.001	74	14681	1.50	1.53	
54 Methylene Chloride	84		3.935				ND	ND	
55 2-Methyl-2-propanol	59		4.057				ND	ND	
57 Acrylonitrile	53		4.196				ND	ND	
58 trans-1,2-Dichloroethene	96	4.214	4.214	0.000	99	15062	0.3000	0.3017	
56 Methyl tert-butyl ether	73	4.214	4.214	0.000	82	20718	0.3000	0.3039	
59 Hexane	57	4.475	4.475	0.000	90	21681	0.3000	0.2977	
60 1,1-Dichloroethane	63	4.667	4.667	0.000	95	26146	0.3000	0.3172	
61 Vinyl acetate	43	4.702	4.701	0.001	96	20963	0.6000	0.5864	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.329	5.328	0.001	81	15751	0.3000	0.3087	
66 2,2-Dichloropropane	77		5.346				ND	ND	
67 2-Butanone (MEK)	43	5.329	5.346	-0.017	37	8415	1.20	1.74	
71 sec-Butyl Alcohol	45	5.573	5.555	0.018	90	11250	9.00	10.8	
73 Chlorobromomethane	128	5.625	5.624	0.001	96	7074	0.3000	0.2898	
74 Tetrahydrofuran	42		5.694				ND	ND	
75 Chloroform	83	5.712	5.694	0.018	91	30981	0.3000	0.3177	
76 1,1,1-Trichloroethane	97	5.938	5.938	0.000	97	28879	0.3000	0.3059	
77 Cyclohexane	56	6.008	6.008	0.000	89	26583	0.3000	0.3421	
78 1,1-Dichloropropene	75	6.130	6.130	0.000	97	26366	0.3000	0.3238	
79 Carbon tetrachloride	117	6.147	6.147	0.000	95	28307	0.3000	0.3002	
80 Isobutyl alcohol	41		6.269				ND	ND	
81 Benzene	78	6.391	6.391	0.000	93	41654	0.3000	0.2908	
82 1,2-Dichloroethane	62	6.409	6.408	0.001	50	12521	0.3000	0.3379	
84 n-Heptane	43	6.687	6.687	0.000	91	25747	0.3000	0.3055	
86 Trichloroethene	95	7.210	7.209	0.001	98	18395	0.3000	0.2914	
88 2-Pentanone	43		7.436				ND	ND	
89 Methylcyclohexane	55	7.454	7.453	0.001	90	24058	0.3000	0.3344	
90 1,2-Dichloropropane	63	7.488	7.505	-0.017	92	14607	0.3000	0.2961	
92 Dibromomethane	93	7.680	7.662	0.018	96	9533	0.3000	0.3053	
93 1,4-Dioxane	88		7.697				ND	ND	
94 Dichlorobromomethane	83	7.872	7.854	0.018	98	23941	0.3000	0.2856	
97 cis-1,3-Dichloropropene	75	8.481	8.463	0.018	97	22840	0.3000	0.2874	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
98 4-Methyl-2-pentanone (MIBK)	43	8.690	8.690	0.000	94	18440	1.20	1.04	
99 Toluene	91	8.934	8.934	0.000	97	55929	0.3000	0.3247	
100 trans-1,3-Dichloropropene	75	9.247	9.247	0.000	42	19341	0.3000	0.3521	
101 Ethyl methacrylate	69	9.387	9.386	0.001	43	13044	0.3000	0.3126	
102 1,1,2-Trichloroethane	97	9.526	9.508	0.018	38	27496	0.3000	0.2519	
103 Tetrachloroethene	164	9.718	9.717	0.001	95	17746	0.3000	0.2785	
104 1,3-Dichloropropane	76	9.770	9.752	0.018	84	15096	0.3000	0.2629	
105 2-Hexanone	43	9.909	9.891	0.018	92	11108	1.20	0.9446	
108 Chlorodibromomethane	129	10.101	10.118	-0.017	90	19571	0.3000	0.2827	
109 Ethylene Dibromide	107	10.292	10.292	0.000	98	12089	0.3000	0.2651	
110 1-Chlorohexane	91	11.076	11.076	0.000	89	28302	0.3000	0.2941	
111 Chlorobenzene	112	11.111	11.111	0.000	96	38409	0.3000	0.2959	
112 1,1,1,2-Tetrachloroethane	131	11.250	11.250	0.000	76	18675	0.3000	0.2743	
113 Ethylbenzene	106	11.285	11.285	0.000	96	18398	0.3000	0.2840	
114 m-Xylene & p-Xylene	106	11.477	11.459	0.018	97	25093	0.3000	0.2944	
115 o-Xylene	106	12.034	12.034	0.000	97	21141	0.3000	0.2789	
116 Styrene	104	12.069	12.068	0.001	93	34335	0.3000	0.2872	
117 Bromoform	173	12.313	12.312	0.001	93	10329	0.3000	0.2687	
118 Isopropylbenzene	105	12.539	12.539	0.000	96	71443	0.3000	0.3190	
120 Cyclohexanone	55	12.696	12.661	0.035	36	7991	12.0	15.0	
121 1,1,2,2-Tetrachloroethane	83	12.922	12.922	0.000	64	14988	0.3000	0.3377	
122 Bromobenzene	156	12.922	12.922	0.000	86	16504	0.3000	0.3026	
123 1,2,3-Trichloropropane	110		12.974				ND	ND	
124 trans-1,4-Dichloro-2-buten	53		12.991				ND	ND	
125 N-Propylbenzene	120	13.044	13.044	0.000	99	20663	0.3000	0.3532	
126 2-Chlorotoluene	126	13.149	13.148	0.001	97	16670	0.3000	0.3568	
127 1,3,5-Trimethylbenzene	105	13.271	13.270	0.001	95	51593	0.3000	0.3056	
128 4-Chlorotoluene	126	13.288	13.288	0.000	98	14150	0.3000	0.2664	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.636	13.636	0.000	93	60101	0.3000	0.3177	
130 1,2,4-Trimethylbenzene	105	13.689	13.688	0.000	94	50314	0.3000	0.3127	
131 sec-Butylbenzene	134	13.880	13.880	0.000	94	17564	0.3000	0.3371	
132 1,3-Dichlorobenzene	146	14.002	14.002	0.000	93	25617	0.3000	0.3089	
133 4-Isopropyltoluene	119	14.054	14.036	0.018	96	68126	0.3000	0.3175	
134 1,4-Dichlorobenzene	146	14.106	14.106	0.000	92	41400	0.3000	0.3395	
137 n-Butylbenzene	91	14.472	14.472	0.000	98	62701	0.3000	0.3070	
138 1,2-Dichlorobenzene	146	14.507	14.507	0.000	96	28066	0.3000	0.3328	
139 1,2-Dibromo-3-Chloropropan	157		15.290				ND	ND	
141 1,2,4-Trichlorobenzene	180	16.057	16.057	0.000	91	18782	0.3000	0.3332	
142 Hexachlorobutadiene	225	16.196	16.196	0.000	96	19862	0.3000	0.3331	
143 Naphthalene	128	16.283	16.283	0.000	94	21257	0.3000	0.3708	
144 1,2,3-Trichlorobenzene	180	16.510	16.492	0.018	92	14423	0.3000	0.3463	
S 151 1,2-Dichloroethene, Total	96				0		0.6000	0.6104	
S 149 1,2-Dichloroethene, Total	1				0		0.6000	0.6104	
S 150 Xylenes, Total	106				0		0.6000	0.5733	
S 147 Total BTEX	1				0			1.47	
S 146 Xylenes, Total (URS)	1				0		0.6000	0.5733	
S 148 1,3-Dichloropropene, Total	1				0		0.6000	0.6395	
S 145 Trihalomethanes, Total	1				0		1.20	1.15	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 0.15	Units: uL
MV-Gas/Ket A_00065	Amount Added: 0.15	Units: uL
MV-2cleve+AVA_00029	Amount Added: 0.15	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.04	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0338.D

Injection Date: 09-Oct-2017 09:00:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 10

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

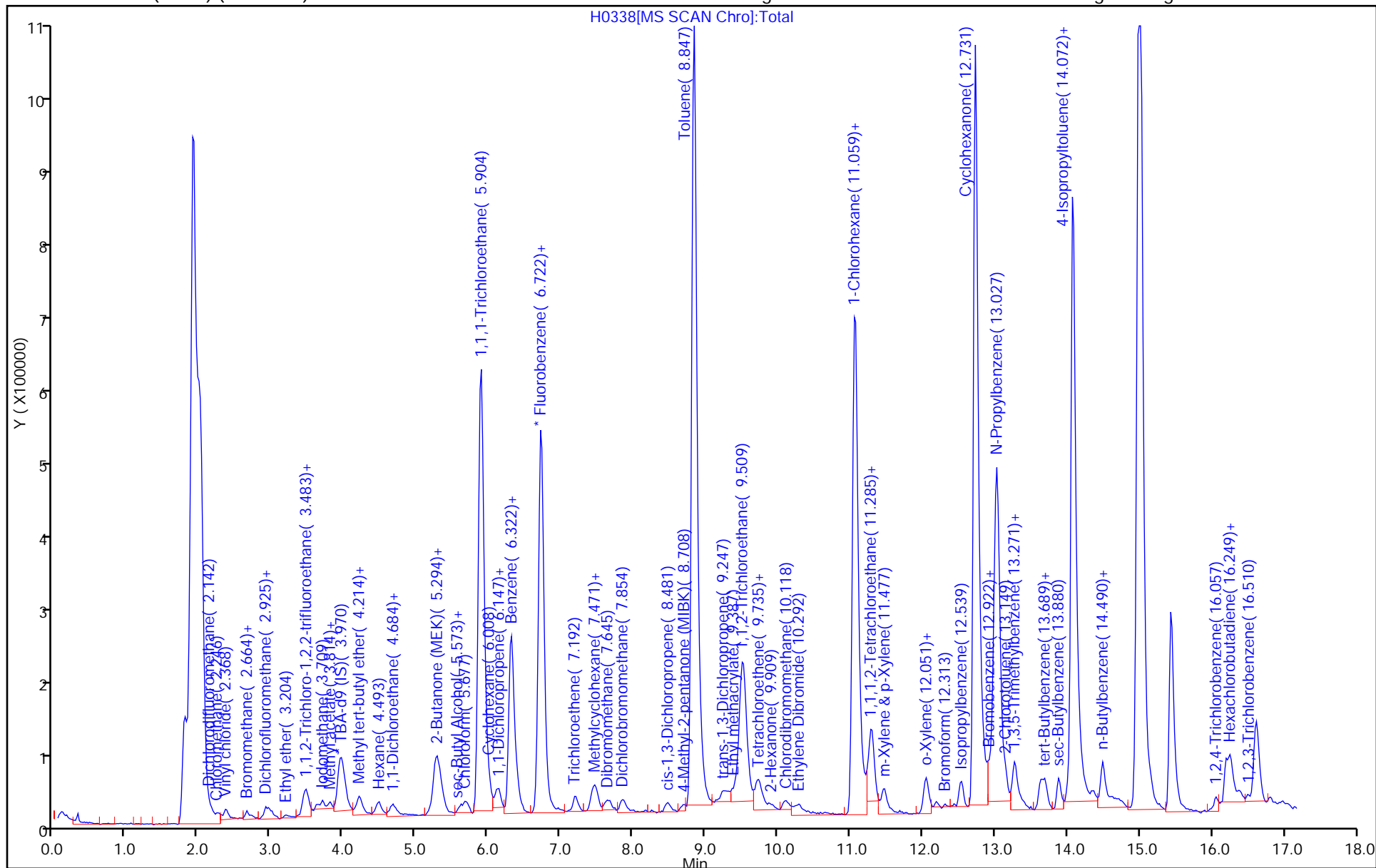
ALS Bottle#: 12

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0339.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 09-Oct-2017 09:22:30 ALS Bottle#: 13 Worklist Smp#: 11
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:28:53 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 12:06:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.970	-0.001	95	236221	250.0	250.0	
* 2 Fluorobenzene	96	6.720	6.739	-0.019	98	1229470	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.074	11.076	-0.002	87	369929	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.071	0.016	97	633585	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.903	-0.001	93	78816	1.00	1.07	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.321	-0.001	100	33630	1.00	1.04	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.846	-0.001	93	166561	1.00	1.07	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.730	-0.001	85	95015	1.00	1.10	
28 Dichlorodifluoromethane	85	2.157	2.159	-0.002	97	61062	1.00	0.9311	
30 Chloromethane	50	2.244	2.263	-0.019	97	31099	1.00	1.00	
32 Vinyl chloride	62	2.384	2.403	-0.019	97	38364	1.00	1.01	
35 Bromomethane	94	2.662	2.681	-0.019	90	41747	1.00	1.05	
36 Chloroethane	64	2.750	2.751	-0.001	99	27054	1.00	1.07	
37 Dichlorofluoromethane	67	2.924	2.925	-0.001	97	90546	1.00	1.02	
38 Trichlorofluoromethane	101	2.976	2.977	-0.001	99	98055	1.00	1.02	
40 Ethyl ether	59	3.202	3.204	-0.002	92	18679	1.00	1.05	
45 1,1-Dichloroethene	96	3.464	3.465	-0.001	99	46070	1.00	1.02	
46 1,1,2-Trichloro-1,2,2-trif	151	3.481	3.482	-0.001	96	62893	1.00	1.02	
47 Acetone	43	3.498	3.500	-0.002	38	15704	4.00	4.16	
48 Iodomethane	142	3.638	3.639	-0.001	99	112936	1.00	1.02	
50 Carbon disulfide	76	3.707	3.709	-0.002	99	164745	1.00	1.03	
53 Methyl acetate	43	3.812	3.813	-0.001	74	45686	5.00	5.03	
52 3-Chloro-1-propene	41	3.812	3.813	-0.001	87	59922	1.00	1.03	
54 Methylene Chloride	84	3.934	3.935	-0.001	91	51766	1.00	1.25	
55 2-Methyl-2-propanol	59	4.056	4.057	-0.001	92	14956	10.0	12.5	
57 Acrylonitrile	53	4.195	4.196	-0.001	46	26853	10.0	10.1	
56 Methyl tert-butyl ether	73	4.212	4.214	-0.002	77	65718	1.00	1.02	
58 trans-1,2-Dichloroethene	96	4.212	4.214	-0.002	99	48917	1.00	1.03	
59 Hexane	57	4.474	4.475	-0.001	91	65061	1.00	1.01	
60 1,1-Dichloroethane	63	4.665	4.667	-0.002	95	80750	1.00	1.03	
61 Vinyl acetate	43	4.700	4.701	-0.001	96	62680	2.00	1.85	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.327	5.328	-0.001	81	50425	1.00	1.04	
67 2-Butanone (MEK)	43	5.344	5.346	-0.002	37	19311	4.00	4.21	
66 2,2-Dichloropropane	77	5.327	5.346	-0.019	73	139176	1.00	1.01	
71 sec-Butyl Alcohol	45	5.571	5.555	0.016	95	26827	30.0	28.0	
73 Chlorobromomethane	128	5.623	5.624	-0.001	92	23158	1.00	1.00	
75 Chloroform	83	5.693	5.694	-0.001	93	91429	1.00	0.9894	
74 Tetrahydrofuran	42	5.693	5.694	-0.001	37	5580	2.00	1.79	M
76 1,1,1-Trichloroethane	97	5.937	5.938	-0.001	98	93106	1.00	1.04	
77 Cyclohexane	56	6.006	6.008	-0.002	86	76924	1.00	1.04	
78 1,1-Dichloropropene	75	6.128	6.130	-0.002	97	81042	1.00	1.05	
79 Carbon tetrachloride	117	6.146	6.147	-0.001	96	94191	1.00	1.05	
80 Isobutyl alcohol	41	6.285	6.269	0.016	37	8530	25.0	25.6	
81 Benzene	78	6.389	6.391	-0.002	96	139436	1.00	1.03	
82 1,2-Dichloroethane	62	6.407	6.408	-0.001	95	35529	1.00	1.01	
84 n-Heptane	43	6.686	6.687	-0.001	91	82011	1.00	1.03	
86 Trichloroethene	95	7.208	7.209	-0.001	99	61200	1.00	1.02	
88 2-Pentanone	43	7.434	7.436	-0.002	77	56426	4.00	4.16	
89 Methylcyclohexane	55	7.452	7.453	-0.001	91	70112	1.00	1.03	
90 1,2-Dichloropropane	63	7.504	7.505	-0.001	95	50174	1.00	1.07	
92 Dibromomethane	93	7.661	7.662	-0.001	96	31622	1.00	1.07	
93 1,4-Dioxane	88	7.696	7.697	-0.001	30	2050	20.0	20.8	
94 Dichlorobromomethane	83	7.852	7.854	-0.002	99	81601	1.00	1.03	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.462	8.463	-0.001	98	72060	1.00	1.03	
98 4-Methyl-2-pentanone (MIBK)	43	8.688	8.690	-0.002	95	66697	4.00	3.97	
99 Toluene	91	8.932	8.934	-0.002	99	165152	1.00	1.01	
100 trans-1,3-Dichloropropene	75	9.263	9.247	0.016	68	52038	1.00	1.00	
101 Ethyl methacrylate	69	9.385	9.386	-0.001	83	36016	1.00	0.9777	
102 1,1,2-Trichloroethane	97	9.524	9.508	0.016	40	47536	1.00	0.9548	
103 Tetrachloroethene	164	9.716	9.717	-0.001	97	58301	1.00	1.04	
104 1,3-Dichloropropane	76	9.751	9.752	-0.001	84	52489	1.00	1.04	
105 2-Hexanone	43	9.907	9.891	0.016	98	40287	4.00	3.88	
108 Chlorodibromomethane	129	10.116	10.118	-0.002	90	62800	1.00	1.03	
109 Ethylene Dibromide	107	10.291	10.292	-0.001	97	41803	1.00	1.04	
110 1-Chlorohexane	91	11.074	11.076	-0.002	89	92078	1.00	1.08	
111 Chlorobenzene	112	11.109	11.111	-0.002	92	116444	1.00	1.02	
112 1,1,1,2-Tetrachloroethane	131	11.248	11.250	-0.002	85	66377	1.00	1.10	
113 Ethylbenzene	106	11.283	11.285	-0.002	99	58205	1.00	1.02	
114 m-Xylene & p-Xylene	106	11.475	11.459	0.016	97	80568	1.00	1.07	
115 o-Xylene	106	12.032	12.034	-0.002	97	69920	1.00	1.04	
116 Styrene	104	12.067	12.068	-0.001	91	107087	1.00	1.01	
117 Bromoform	173	12.311	12.312	-0.001	95	33735	1.00	0.99	
118 Isopropylbenzene	105	12.537	12.539	-0.002	96	232565	1.00	1.04	
120 Cyclohexanone	55	12.677	12.661	0.016	86	16572	40.0	35.2	
122 Bromobenzene	156	12.920	12.922	-0.002	91	53188	1.00	0.9799	
121 1,1,2,2-Tetrachloroethane	83	12.920	12.922	-0.002	94	43016	1.00	0.9741	
123 1,2,3-Trichloropropane	110	12.973	12.974	-0.001	72	17326	1.00	1.03	
124 trans-1,4-Dichloro-2-buten	53	13.008	12.991	0.017	56	8002	1.00	1.06	
125 N-Propylbenzene	120	13.042	13.044	-0.002	99	60184	1.00	1.03	
126 2-Chlorotoluene	126	13.147	13.148	-0.001	96	49548	1.00	1.07	
127 1,3,5-Trimethylbenzene	105	13.269	13.270	-0.001	95	175204	1.00	1.04	
128 4-Chlorotoluene	126	13.286	13.288	-0.002	98	51125	1.00	0.9673	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.634	13.636	-0.002	93	192806	1.00	1.02	
130 1,2,4-Trimethylbenzene	105	13.687	13.688	-0.001	96	160668	1.00	1.00	
131 sec-Butylbenzene	134	13.878	13.880	-0.002	94	52931	1.00	1.02	
132 1,3-Dichlorobenzene	146	14.000	14.002	-0.002	96	81553	1.00	0.9884	
133 4-Isopropyltoluene	119	14.052	14.036	0.016	97	216647	1.00	1.01	
134 1,4-Dichlorobenzene	146	14.105	14.106	-0.001	94	124421	1.00	1.03	
137 n-Butylbenzene	91	14.470	14.472	-0.002	98	201652	1.00	0.99	
138 1,2-Dichlorobenzene	146	14.505	14.507	-0.002	96	82737	1.00	0.9861	
139 1,2-Dibromo-3-Chloropropan	157	15.289	15.290	-0.001	89	7820	1.00	1.02	
141 1,2,4-Trichlorobenzene	180	16.055	16.057	-0.002	94	52694	1.00	0.9396	
142 Hexachlorobutadiene	225	16.195	16.196	-0.001	98	60022	1.00	1.01	
143 Naphthalene	128	16.282	16.283	-0.001	97	50287	1.00	0.8817	
144 1,2,3-Trichlorobenzene	180	16.508	16.492	0.016	95	38001	1.00	0.9171	
S 151 1,2-Dichloroethene, Total	96				0		2.00	2.08	
S 148 1,3-Dichloropropene, Total	1				0		2.00	2.03	
S 145 Trihalomethanes, Total	1				0		4.00	4.04	
S 146 Xylenes, Total (URS)	1				0		2.00	2.12	
S 149 1,2-Dichloroethene, Total	1				0		2.00	2.08	
S 150 Xylenes, Total	106				0		2.00	2.12	
S 147 Total BTEX	1				0			5.17	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 0.50	Units: uL
MV-Gas/Ket A_00065	Amount Added: 0.50	Units: uL
MV-2cleve+AVA_00029	Amount Added: 0.50	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.08	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0339.D

Injection Date: 09-Oct-2017 09:22:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 11

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

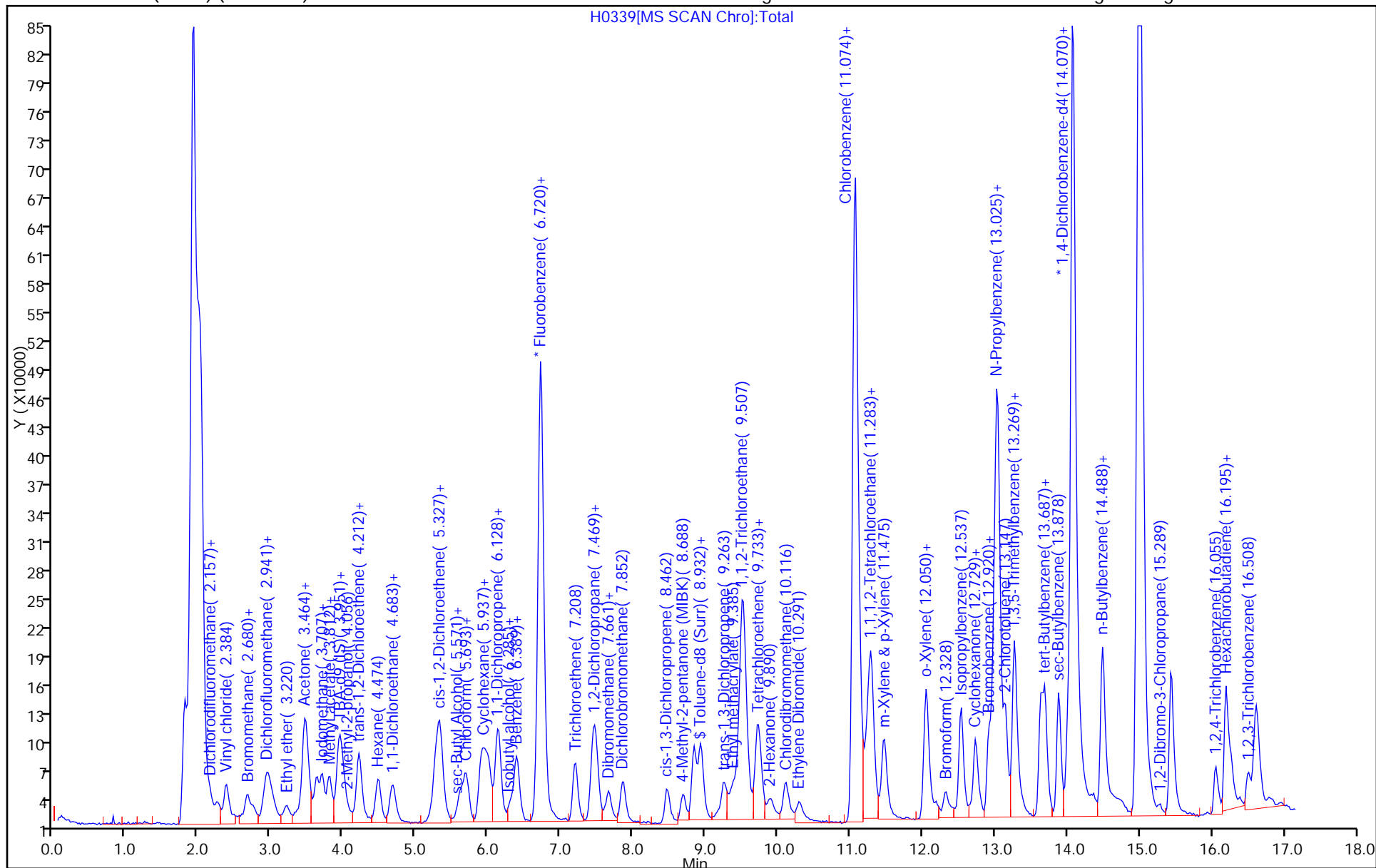
ALS Bottle#: 13

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

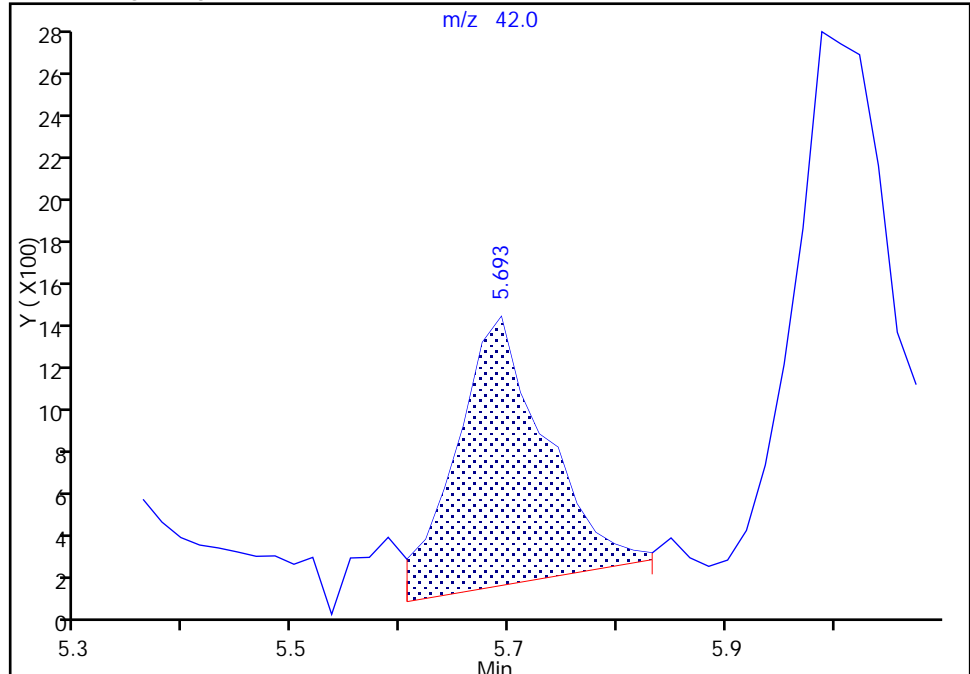
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Injection Date: 09-Oct-2017 09:22:30 Instrument ID: VMS_H
Lims ID: ic
Client ID:
Operator ID: moanm ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector: MS SCAN

74 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

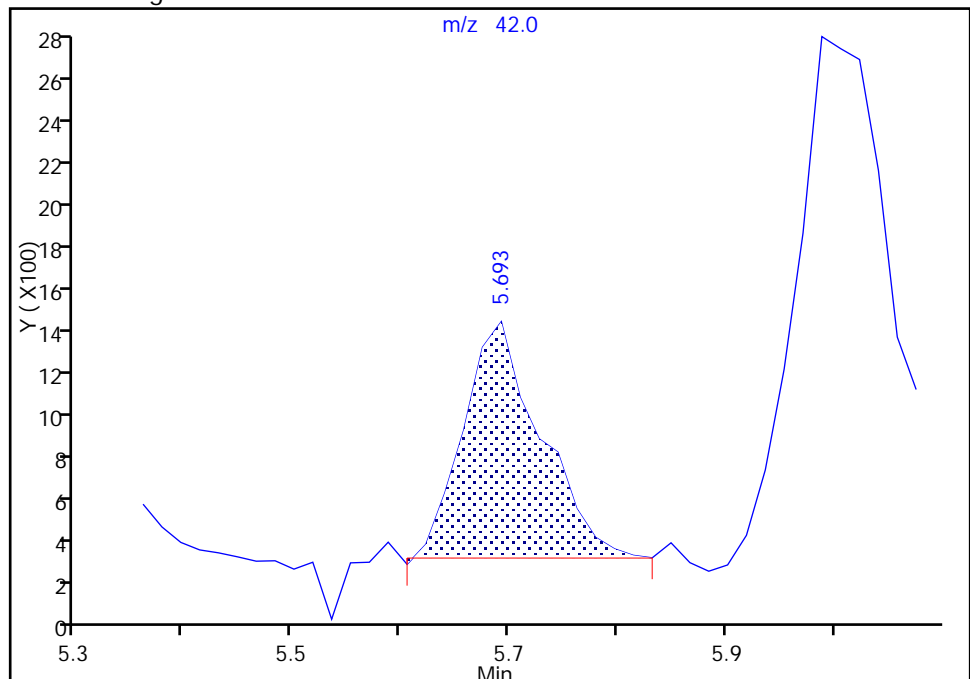
RT: 5.69
Area: 7504
Amount: 2.244150
Amount Units: ug/l

Processing Integration Results



RT: 5.69
Area: 5580
Amount: 1.787542
Amount Units: ug/l

Manual Integration Results



Reviewer: moanm, 09-Oct-2017 12:11:07

Audit Action: Manually Integrated

Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0340.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 09-Oct-2017 09:44:30 ALS Bottle#: 14 Worklist Smp#: 12
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:28:55 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 12:07:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.970	-0.001	95	238117	250.0	250.0	
* 2 Fluorobenzene	96	6.721	6.739	-0.018	98	1256129	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.075	11.076	-0.001	89	369606	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.071	0.017	97	642895	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.903	5.903	0.000	93	151371	2.00	2.01	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.321	6.321	0.000	100	66774	2.00	2.03	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.846	0.000	92	322403	2.00	2.08	
\$ 11 4-Bromofluorobenzene (Surr	95	12.730	12.730	0.000	86	172667	2.00	1.98	
28 Dichlorodifluoromethane	85	2.141	2.159	-0.018	99	118558	2.00	1.77	
30 Chloromethane	50	2.245	2.263	-0.018	98	60277	2.00	1.90	
32 Vinyl chloride	62	2.385	2.403	-0.018	97	74307	2.00	1.92	
35 Bromomethane	94	2.663	2.681	-0.018	90	81978	2.00	2.01	
36 Chloroethane	64	2.750	2.751	-0.001	99	53436	2.00	2.06	
37 Dichlorofluoromethane	67	2.924	2.925	-0.001	97	174547	2.00	1.92	
38 Trichlorofluoromethane	101	2.977	2.977	0.000	99	193975	2.00	1.97	
40 Ethyl ether	59	3.203	3.204	-0.001	91	35235	2.00	1.93	
45 1,1-Dichloroethene	96	3.464	3.465	-0.001	98	90713	2.00	1.96	
46 1,1,2-Trichloro-1,2,2-trif	151	3.482	3.482	0.000	97	124738	2.00	1.99	
47 Acetone	43	3.499	3.500	-0.001	32	23386	8.00	7.48	
48 Iodomethane	142	3.638	3.639	-0.001	100	220013	2.00	1.94	
50 Carbon disulfide	76	3.708	3.709	-0.001	98	318701	2.00	1.95	
52 3-Chloro-1-propene	41	3.795	3.813	-0.018	86	114697	2.00	1.92	
53 Methyl acetate	43	3.813	3.813	0.000	96	85887	10.0	9.26	
54 Methylene Chloride	84	3.935	3.935	0.000	90	89313	2.00	2.11	
55 2-Methyl-2-propanol	59	4.056	4.057	-0.001	93	26510	20.0	22.0	
57 Acrylonitrile	53	4.196	4.196	0.000	97	51936	20.0	19.1	
58 trans-1,2-Dichloroethene	96	4.213	4.214	-0.001	99	97549	2.00	2.02	
56 Methyl tert-butyl ether	73	4.213	4.214	-0.001	86	126690	2.00	1.92	
59 Hexane	57	4.474	4.475	-0.001	90	127900	2.00	1.99	
60 1,1-Dichloroethane	63	4.666	4.667	-0.001	95	155896	2.00	1.95	
61 Vinyl acetate	43	4.701	4.701	0.000	96	127368	4.00	3.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.328	5.328	0.000	82	95838	2.00	1.94	
66 2,2-Dichloropropane	77	5.328	5.346	-0.018	88	218090	2.00	2.01	
67 2-Butanone (MEK)	43	5.328	5.346	-0.018	48	33077	8.00	7.06	
71 sec-Butyl Alcohol	45	5.554	5.555	-0.001	97	51262	60.0	53.1	
73 Chlorobromomethane	128	5.624	5.624	0.000	94	46007	2.00	1.95	
74 Tetrahydrofuran	42	5.676	5.694	-0.018	37	11874	4.00	3.72	M
75 Chloroform	83	5.694	5.694	0.000	93	187833	2.00	1.99	
76 1,1,1-Trichloroethane	97	5.937	5.938	-0.001	98	184483	2.00	2.02	
77 Cyclohexane	56	6.007	6.008	-0.001	87	145559	2.00	1.93	
78 1,1-Dichloropropene	75	6.129	6.130	-0.001	98	156736	2.00	1.99	
79 Carbon tetrachloride	117	6.146	6.147	-0.001	97	181997	2.00	1.99	
80 Isobutyl alcohol	41	6.268	6.269	-0.001	93	16530	50.0	49.3	
81 Benzene	78	6.390	6.391	-0.001	95	276398	2.00	1.99	
82 1,2-Dichloroethane	62	6.408	6.408	0.000	95	68730	2.00	1.92	
84 n-Heptane	43	6.686	6.687	-0.001	90	162503	2.00	1.99	
86 Trichloroethene	95	7.191	7.209	-0.018	98	121217	2.00	1.98	
88 2-Pentanone	43	7.453	7.436	0.017	98	122936	8.00	8.87	
89 Methylcyclohexane	55	7.453	7.453	0.000	90	137930	2.00	1.98	
90 1,2-Dichloropropane	63	7.505	7.505	0.000	95	94568	2.00	1.98	
92 Dibromomethane	93	7.662	7.662	0.000	97	57764	2.00	1.91	
93 1,4-Dioxane	88	7.696	7.697	-0.001	30	4567	40.0	36.6	
94 Dichlorobromomethane	83	7.853	7.854	-0.001	99	159854	2.00	1.97	
97 cis-1,3-Dichloropropene	75	8.463	8.463	0.000	98	138589	2.00	1.98	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
98 4-Methyl-2-pentanone (MIBK)	43	8.689	8.690	-0.001	95	126072	8.00	7.34	
99 Toluene	91	8.933	8.934	-0.001	99	331598	2.00	1.99	
100 trans-1,3-Dichloropropene	75	9.246	9.247	-0.001	88	95160	2.00	1.79	
101 Ethyl methacrylate	69	9.386	9.386	0.000	82	68700	2.00	1.87	
102 1,1,2-Trichloroethane	97	9.525	9.508	0.017	37	86416	2.00	2.17	
103 Tetrachloroethene	164	9.717	9.717	0.000	97	115038	2.00	2.05	
104 1,3-Dichloropropane	76	9.769	9.752	0.017	85	99983	2.00	1.97	
105 2-Hexanone	43	9.891	9.891	0.000	96	81972	8.00	7.90	
108 Chlorodibromomethane	129	10.117	10.118	-0.001	89	118240	2.00	1.94	
109 Ethylene Dibromide	107	10.309	10.292	0.017	99	78403	2.00	1.95	
110 1-Chlorohexane	91	11.075	11.076	-0.001	94	175056	2.00	2.06	
111 Chlorobenzene	112	11.110	11.111	-0.001	93	225652	2.00	1.97	
112 1,1,1,2-Tetrachloroethane	131	11.249	11.250	-0.001	91	120071	2.00	2.00	
113 Ethylbenzene	106	11.284	11.285	-0.001	99	115692	2.00	2.02	
114 m-Xylene & p-Xylene	106	11.476	11.459	0.017	98	149189	2.00	1.98	
115 o-Xylene	106	12.033	12.034	-0.001	97	137571	2.00	2.06	
116 Styrene	104	12.068	12.068	0.000	93	209319	2.00	1.99	
117 Bromoform	173	12.312	12.312	0.000	95	66185	2.00	1.95	
118 Isopropylbenzene	105	12.538	12.539	-0.001	96	440965	2.00	1.95	
120 Cyclohexanone	55	12.677	12.661	0.016	87	37058	80.0	78.8	
121 1,1,2,2-Tetrachloroethane	83	12.921	12.922	-0.001	93	84200	2.00	1.88	
122 Bromobenzene	156	12.921	12.922	-0.001	92	106035	2.00	1.93	
123 1,2,3-Trichloropropane	110	12.973	12.974	-0.001	79	25975	2.00	1.87	
124 trans-1,4-Dichloro-2-buten	53	12.991	12.991	0.000	60	16317	2.00	2.12	
125 N-Propylbenzene	120	13.043	13.044	-0.001	99	115810	2.00	1.96	
126 2-Chlorotoluene	126	13.148	13.148	0.000	97	87502	2.00	1.86	
127 1,3,5-Trimethylbenzene	105	13.270	13.270	0.000	95	340694	2.00	2.00	
128 4-Chlorotoluene	126	13.287	13.288	-0.001	98	107094	2.00	2.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.635	13.636	-0.001	93	379085	2.00	1.98	
130 1,2,4-Trimethylbenzene	105	13.687	13.688	-0.001	96	321097	2.00	1.98	
131 sec-Butylbenzene	134	13.879	13.880	-0.001	94	103526	2.00	1.97	
132 1,3-Dichlorobenzene	146	14.001	14.002	-0.001	94	157790	2.00	1.88	
133 4-Isopropyltoluene	119	14.053	14.036	0.017	97	431369	2.00	1.99	
134 1,4-Dichlorobenzene	146	14.105	14.106	-0.001	94	237543	2.00	1.93	
137 n-Butylbenzene	91	14.489	14.472	0.017	98	411057	2.00	1.99	
138 1,2-Dichlorobenzene	146	14.506	14.507	-0.001	96	154713	2.00	1.82	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	89	14297	2.00	1.84	
141 1,2,4-Trichlorobenzene	180	16.056	16.057	-0.001	94	105175	2.00	1.85	
142 Hexachlorobutadiene	225	16.195	16.196	-0.001	96	119947	2.00	1.99	
143 Naphthalene	128	16.282	16.283	-0.001	97	96402	2.00	1.67	
144 1,2,3-Trichlorobenzene	180	16.509	16.492	0.017	94	76949	2.00	1.83	
S 151 1,2-Dichloroethene, Total	96				0		4.00	3.96	
S 149 1,2-Dichloroethene, Total	1				0		4.00	3.96	
S 150 Xylenes, Total	106				0		4.00	4.04	
S 147 Total BTEX	1				0			10.0	
S 146 Xylenes, Total (URS)	1				0		4.00	4.04	
S 148 1,3-Dichloropropene, Total	1				0		4.00	3.77	
S 145 Trihalomethanes, Total	1				0		8.00	7.85	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 1.00	Units: uL
MV-Gas/Ket A_00065	Amount Added: 1.00	Units: uL
MV-2cleve+AVA_00029	Amount Added: 1.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.16	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0340.D

Injection Date: 09-Oct-2017 09:44:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 12

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

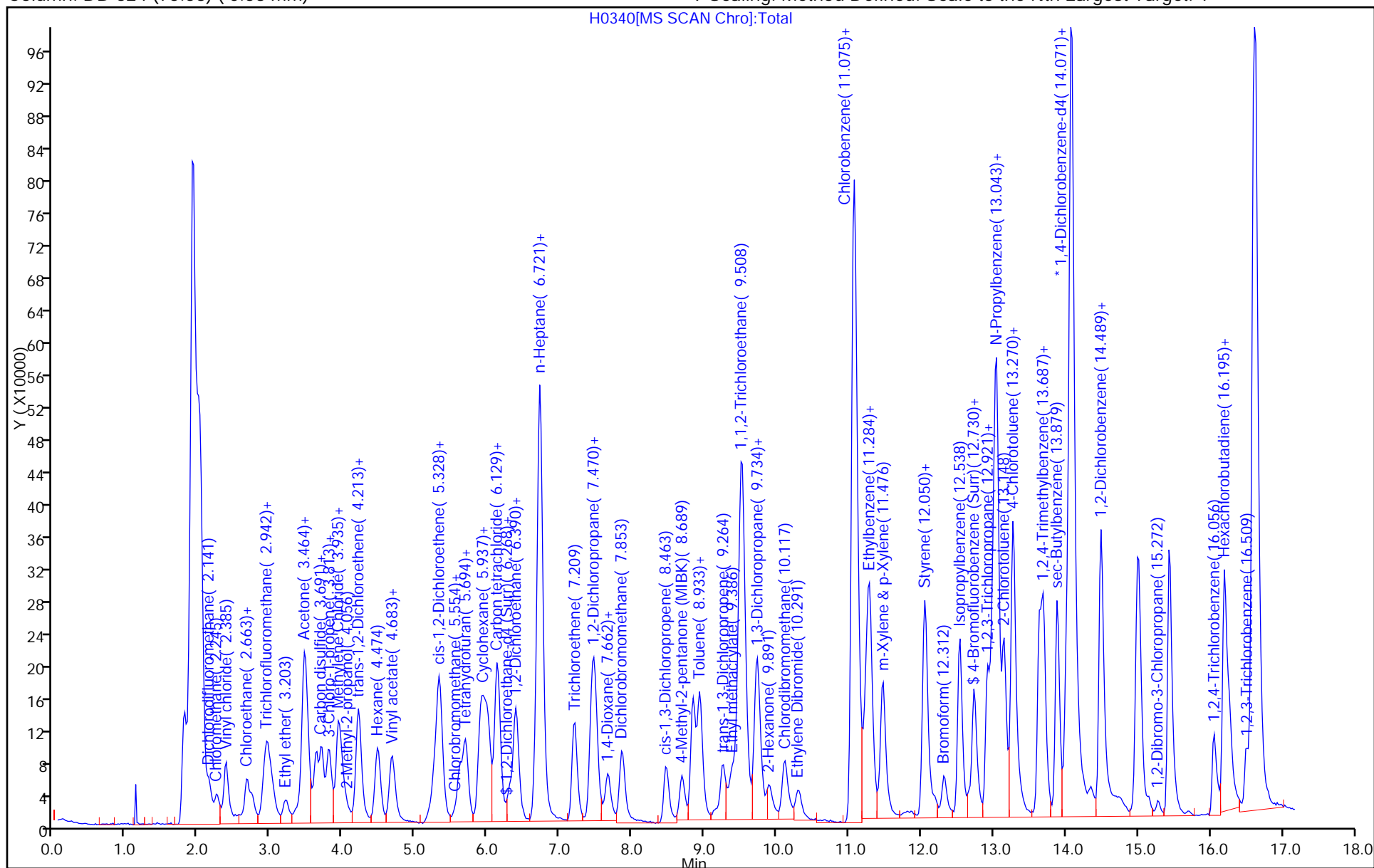
ALS Bottle#: 14

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

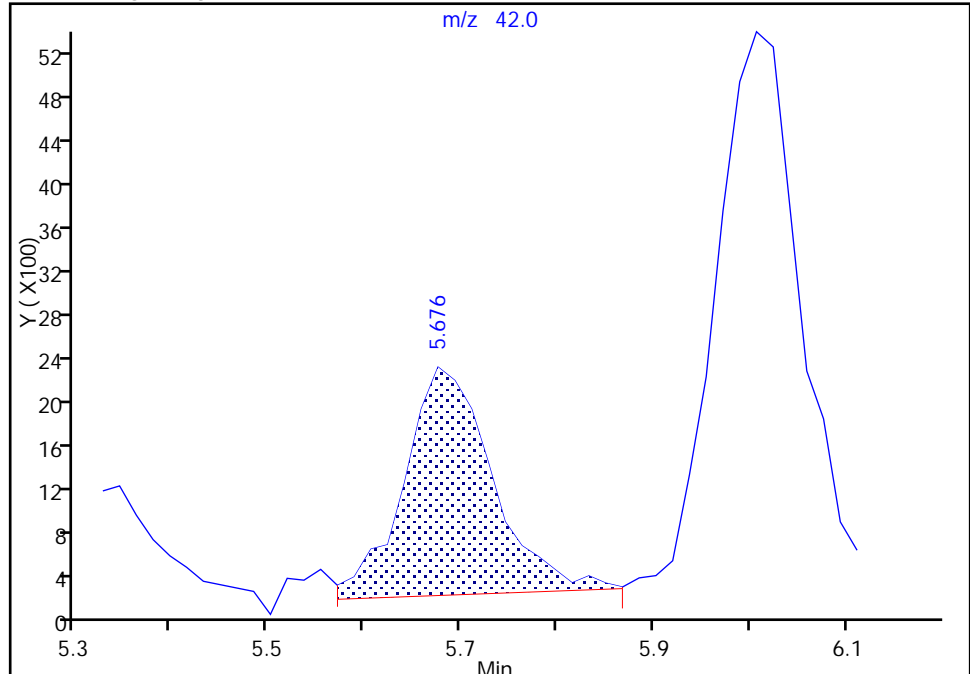
Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0340.D
Injection Date: 09-Oct-2017 09:44:30 Instrument ID: VMS_H
Lims ID: ic
Client ID:
Operator ID: moanm ALS Bottle#: 14 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector: MS SCAN

74 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

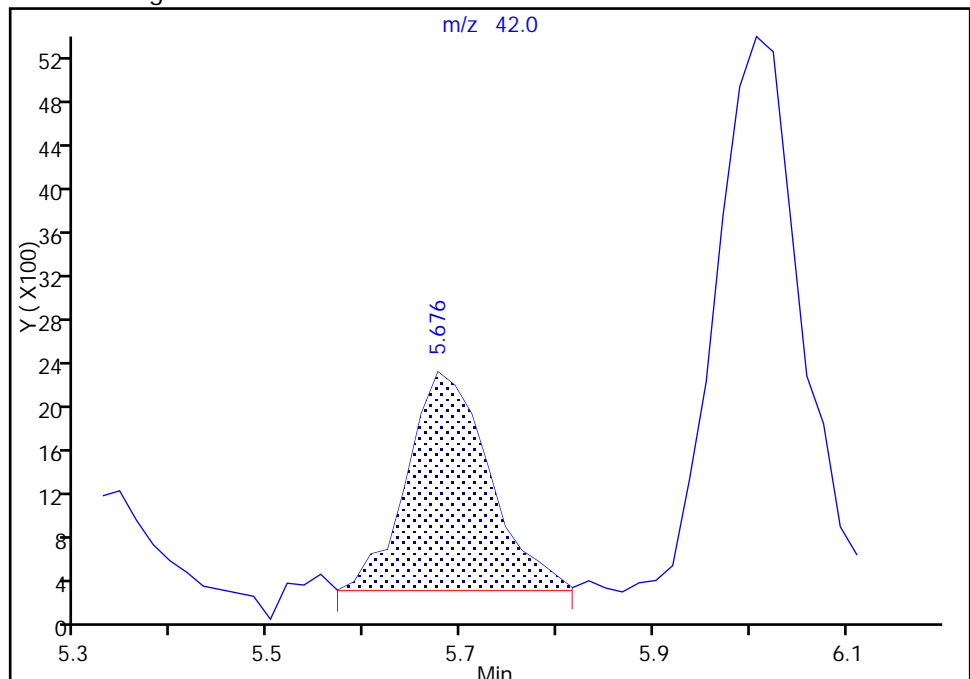
RT: 5.68
Area: 13391
Amount: 4.117141
Amount Units: ug/l

Processing Integration Results



RT: 5.68
Area: 11874
Amount: 3.723084
Amount Units: ug/l

Manual Integration Results



Reviewer: moanm, 09-Oct-2017 12:11:22
Audit Action: Manually Integrated

Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0341.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 09-Oct-2017 10:06:30 ALS Bottle#: 15 Worklist Smp#: 13
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:28:56 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 12:08:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.970	-0.001	95	252503	250.0	250.0	
* 2 Fluorobenzene	96	6.738	6.739	-0.001	98	1283483	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.075	11.076	-0.001	88	374108	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.071	0.017	97	660102	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.903	-0.001	93	376198	5.00	4.90	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.321	-0.001	100	166419	5.00	4.95	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.846	0.000	92	783096	5.00	4.99	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.730	-0.001	86	438165	5.00	4.89	
28 Dichlorodifluoromethane	85	2.140	2.159	-0.019	98	351763	5.00	5.14	
30 Chloromethane	50	2.262	2.263	-0.001	98	160356	5.00	4.94	
32 Vinyl chloride	62	2.384	2.403	-0.019	98	190425	5.00	4.80	
35 Bromomethane	94	2.663	2.681	-0.018	90	205213	5.00	4.92	
36 Chloroethane	64	2.750	2.751	-0.001	99	119114	5.00	4.50	
37 Dichlorofluoromethane	67	2.924	2.925	-0.001	97	437723	5.00	4.71	
38 Trichlorofluoromethane	101	2.976	2.977	-0.001	99	483706	5.00	4.81	
40 Ethyl ether	59	3.203	3.204	-0.001	91	93039	5.00	4.99	
45 1,1-Dichloroethene	96	3.464	3.465	-0.001	99	232836	5.00	4.93	
46 1,1,2-Trichloro-1,2,2-trif	151	3.482	3.482	0.000	97	318685	5.00	4.97	
47 Acetone	43	3.499	3.500	-0.001	100	49330	20.0	18.7	
48 Iodomethane	142	3.621	3.639	-0.018	100	564310	5.00	4.87	
50 Carbon disulfide	76	3.708	3.709	-0.001	98	820626	5.00	4.93	
53 Methyl acetate	43	3.812	3.813	-0.001	95	238683	25.0	25.2	
52 3-Chloro-1-propene	41	3.812	3.813	-0.001	87	291896	5.00	4.79	
54 Methylene Chloride	84	3.934	3.935	-0.001	90	207083	5.00	4.79	
55 2-Methyl-2-propanol	59	4.056	4.057	-0.001	92	59055	50.0	46.3	
57 Acrylonitrile	53	4.196	4.196	0.000	99	134734	50.0	48.4	
56 Methyl tert-butyl ether	73	4.213	4.214	-0.001	88	337359	5.00	5.00	
58 trans-1,2-Dichloroethene	96	4.213	4.214	-0.001	100	243016	5.00	4.92	
59 Hexane	57	4.474	4.475	-0.001	90	329396	5.00	5.07	
60 1,1-Dichloroethane	63	4.666	4.667	-0.001	95	397823	5.00	4.88	
61 Vinyl acetate	43	4.701	4.701	0.000	96	367245	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.328	5.328	0.000	82	251182	5.00	4.98	
67 2-Butanone (MEK)	43	5.345	5.346	-0.001	41	91749	20.0	19.2	
66 2,2-Dichloropropane	77	5.345	5.346	-0.001	83	460426	5.00	5.05	
71 sec-Butyl Alcohol	45	5.554	5.555	-0.001	97	150165	150.0	146.6	
73 Chlorobromomethane	128	5.624	5.624	0.000	92	122148	5.00	5.06	
75 Chloroform	83	5.693	5.694	-0.001	93	475524	5.00	4.93	
74 Tetrahydrofuran	42	5.676	5.694	-0.018	37	34454	10.0	10.6	
76 1,1,1-Trichloroethane	97	5.937	5.938	-0.001	98	459207	5.00	4.92	
77 Cyclohexane	56	6.007	6.008	-0.001	86	371768	5.00	4.84	
78 1,1-Dichloropropene	75	6.129	6.130	-0.001	98	391207	5.00	4.86	
79 Carbon tetrachloride	117	6.146	6.147	-0.001	96	453221	5.00	4.86	
80 Isobutyl alcohol	41	6.268	6.269	-0.001	93	43319	125.0	121.8	
81 Benzene	78	6.390	6.391	-0.001	95	696270	5.00	4.91	
82 1,2-Dichloroethane	62	6.407	6.408	-0.001	96	180492	5.00	4.92	
84 n-Heptane	43	6.686	6.687	-0.001	92	414069	5.00	4.97	
86 Trichloroethene	95	7.209	7.209	-0.001	99	311949	5.00	4.99	
88 2-Pentanone	43	7.435	7.436	-0.001	98	289556	20.0	20.4	
89 Methylcyclohexane	55	7.452	7.453	-0.001	91	343894	5.00	4.83	
90 1,2-Dichloropropane	63	7.505	7.505	0.000	96	241855	5.00	4.96	
92 Dibromomethane	93	7.661	7.662	-0.001	96	154253	5.00	4.99	
93 1,4-Dioxane	88	7.679	7.697	-0.018	31	14595	100.0	98.9	
94 Dichlorobromomethane	83	7.853	7.854	-0.001	99	416437	5.00	5.02	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.462	8.463	-0.001	98	368618	5.00	5.20	
98 4-Methyl-2-pentanone (MIBK)	43	8.689	8.690	-0.001	95	364203	20.0	20.7	
99 Toluene	91	8.933	8.934	-0.001	99	822803	5.00	4.83	
100 trans-1,3-Dichloropropene	75	9.246	9.247	-0.001	89	258271	5.00	4.75	
101 Ethyl methacrylate	69	9.386	9.386	0.000	86	190938	5.00	5.13	
102 1,1,2-Trichloroethane	97	9.525	9.508	0.017	49	178440	5.00	4.99	
103 Tetrachloroethene	164	9.716	9.717	-0.001	96	296041	5.00	5.20	
104 1,3-Dichloropropane	76	9.769	9.752	0.017	85	271351	5.00	5.29	
105 2-Hexanone	43	9.891	9.891	0.000	96	220520	20.0	21.0	
108 Chlorodibromomethane	129	10.117	10.118	-0.001	90	320703	5.00	5.19	
109 Ethylene Dibromide	107	10.291	10.292	-0.001	99	213406	5.00	5.24	
110 1-Chlorohexane	91	11.075	11.076	-0.001	93	432442	5.00	5.03	
111 Chlorobenzene	112	11.110	11.111	-0.001	93	593588	5.00	5.12	
112 1,1,1,2-Tetrachloroethane	131	11.249	11.250	-0.001	95	316486	5.00	5.21	
113 Ethylbenzene	106	11.284	11.285	-0.001	99	299878	5.00	5.18	
114 m-Xylene & p-Xylene	106	11.475	11.459	0.016	98	384784	5.00	5.06	
115 o-Xylene	106	12.050	12.034	0.016	98	348337	5.00	5.15	
116 Styrene	104	12.068	12.068	0.000	94	550601	5.00	5.16	
117 Bromoform	173	12.311	12.312	-0.001	95	183177	5.00	5.34	
118 Isopropylbenzene	105	12.538	12.539	-0.001	96	1135596	5.00	4.89	
120 Cyclohexanone	55	12.660	12.661	-0.001	87	93859	200.0	197.1	
122 Bromobenzene	156	12.921	12.922	-0.001	92	276766	5.00	4.89	
121 1,1,2,2-Tetrachloroethane	83	12.921	12.922	-0.001	93	227629	5.00	4.95	
123 1,2,3-Trichloropropane	110	12.973	12.974	-0.001	79	58998	5.00	5.03	
124 trans-1,4-Dichloro-2-buten	53	12.991	12.991	0.000	69	36331	5.00	4.60	
125 N-Propylbenzene	120	13.043	13.044	-0.001	99	286983	5.00	4.73	
126 2-Chlorotoluene	126	13.147	13.148	-0.001	97	220548	5.00	4.55	
127 1,3,5-Trimethylbenzene	105	13.269	13.270	-0.001	94	855234	5.00	4.89	
128 4-Chlorotoluene	126	13.287	13.288	-0.001	98	289799	5.00	5.26	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.635	13.636	-0.001	93	965532	5.00	4.92	
130 1,2,4-Trimethylbenzene	105	13.687	13.688	-0.001	96	829012	5.00	4.97	
131 sec-Butylbenzene	134	13.879	13.880	-0.001	94	263882	5.00	4.88	
132 1,3-Dichlorobenzene	146	14.001	14.002	-0.001	96	422242	5.00	4.91	
133 4-Isopropyltoluene	119	14.053	14.036	0.017	97	1107821	5.00	4.98	
134 1,4-Dichlorobenzene	146	14.105	14.106	-0.001	92	633377	5.00	5.01	
137 n-Butylbenzene	91	14.471	14.472	-0.001	97	1051311	5.00	4.97	
138 1,2-Dichlorobenzene	146	14.506	14.507	-0.001	97	446116	5.00	5.10	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	88	41238	5.00	5.16	
141 1,2,4-Trichlorobenzene	180	16.056	16.057	-0.001	95	293094	5.00	5.02	
142 Hexachlorobutadiene	225	16.195	16.196	-0.001	98	313472	5.00	5.07	
143 Naphthalene	128	16.282	16.283	-0.001	97	298928	5.00	5.03	
144 1,2,3-Trichlorobenzene	180	16.509	16.492	0.017	95	215626	5.00	4.99	
S 151 1,2-Dichloroethene, Total	96				0		10.0	9.90	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.95	
S 145 Trihalomethanes, Total	1				0		20.0	20.5	
S 146 Xylenes, Total (URS)	1				0		10.0	10.2	
S 149 1,2-Dichloroethene, Total	1				0		10.0	9.90	
S 150 Xylenes, Total	106				0		10.0	10.2	
S 147 Total BTEX	1				0			25.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 2.50	Units: uL
MV-Gas/Ket A_00065	Amount Added: 2.50	Units: uL
MV-2cleve+AVA_00029	Amount Added: 2.50	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.40	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0341.D

Injection Date: 09-Oct-2017 10:06:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 13

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

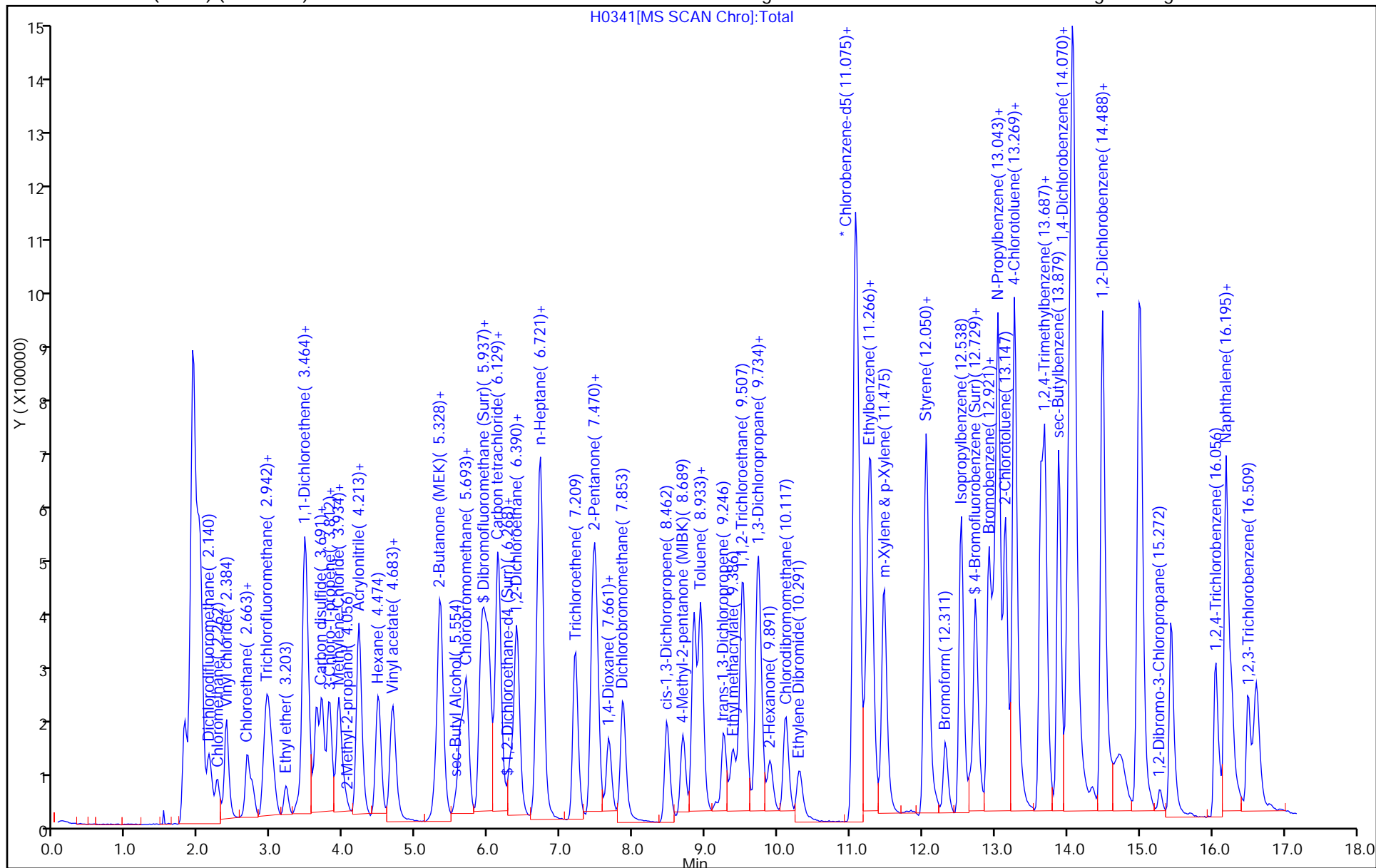
ALS Bottle#: 15

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0342.D
 Lims ID: icis
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 09-Oct-2017 10:28:30 ALS Bottle#: 16 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:28:57 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 10:53:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.970	3.970	0.000	95	272314	250.0	250.0	
* 2 Fluorobenzene	96	6.739	6.739	0.000	98	1262666	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.076	11.076	0.000	89	383667	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.071	14.071	0.000	96	656711	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.903	5.903	0.000	93	744294	10.0	9.86	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.321	6.321	0.000	99	335937	10.0	10.2	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.846	0.000	92	1543228	10.0	9.60	
\$ 11 4-Bromofluorobenzene (Surr	95	12.730	12.730	0.000	85	864361	10.0	9.70	
28 Dichlorodifluoromethane	85	2.159	2.159	0.000	99	730593	10.0	10.8	
30 Chloromethane	50	2.263	2.263	0.000	98	339916	10.0	10.6	
32 Vinyl chloride	62	2.403	2.403	0.000	98	392185	10.0	10.1	
35 Bromomethane	94	2.681	2.681	0.000	90	423552	10.0	10.3	
36 Chloroethane	64	2.751	2.751	0.000	99	248757	10.0	9.56	
37 Dichlorofluoromethane	67	2.925	2.925	0.000	98	891675	10.0	9.75	
38 Trichlorofluoromethane	101	2.977	2.977	0.000	99	994354	10.0	10.1	
40 Ethyl ether	59	3.204	3.204	0.000	91	189330	10.0	10.3	
45 1,1-Dichloroethene	96	3.465	3.465	0.000	99	456933	10.0	9.83	
46 1,1,2-Trichloro-1,2,2-trif	151	3.482	3.482	0.000	97	634150	10.0	10.0	
47 Acetone	43	3.500	3.500	0.000	100	100993	40.0	42.4	
48 Iodomethane	142	3.639	3.639	0.000	100	1124353	10.0	9.86	
50 Carbon disulfide	76	3.709	3.709	0.000	98	1621274	10.0	9.89	
52 3-Chloro-1-propene	41	3.813	3.813	0.000	88	579269	10.0	9.66	
53 Methyl acetate	43	3.813	3.813	0.000	80	500577	50.0	53.7	
54 Methylene Chloride	84	3.935	3.935	0.000	91	393086	10.0	9.24	
55 2-Methyl-2-propanol	59	4.057	4.057	0.000	99	125115	100.0	91.0	
57 Acrylonitrile	53	4.196	4.196	0.000	98	282926	100.0	103.3	
58 trans-1,2-Dichloroethene	96	4.214	4.214	0.000	100	477520	10.0	9.83	
56 Methyl tert-butyl ether	73	4.214	4.214	0.000	90	688425	10.0	10.4	
59 Hexane	57	4.475	4.475	0.000	90	655959	10.0	9.84	
60 1,1-Dichloroethane	63	4.667	4.667	0.000	95	781386	10.0	9.74	
61 Vinyl acetate	43	4.701	4.701	0.000	96	767603	20.0	22.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.328	5.328	0.000	82	487174	10.0	9.81	
66 2,2-Dichloropropane	77	5.346	5.346	0.000	84	819043	10.0	9.81	
67 2-Butanone (MEK)	43	5.346	5.346	0.000	43	204630	40.0	43.4	
71 sec-Butyl Alcohol	45	5.555	5.555	0.000	97	329236	300.0	298.0	
73 Chlorobromomethane	128	5.624	5.624	0.000	93	245736	10.0	10.3	
74 Tetrahydrofuran	42	5.694	5.694	0.000	91	69168	20.0	21.6	
75 Chloroform	83	5.694	5.694	0.000	93	943673	10.0	9.94	
76 1,1,1-Trichloroethane	97	5.938	5.938	0.000	98	900373	10.0	9.80	
77 Cyclohexane	56	6.008	6.008	0.000	88	723227	10.0	9.56	
78 1,1-Dichloropropene	75	6.130	6.130	0.000	98	763283	10.0	9.63	
79 Carbon tetrachloride	117	6.147	6.147	0.000	96	908031	10.0	9.89	
80 Isobutyl alcohol	41	6.269	6.269	0.000	94	97358	250.0	253.8	
81 Benzene	78	6.391	6.391	0.000	95	1402387	10.0	10.1	
82 1,2-Dichloroethane	62	6.408	6.408	0.000	97	361072	10.0	10.0	
84 n-Heptane	43	6.687	6.687	0.000	91	810391	10.0	9.88	
86 Trichloroethene	95	7.209	7.209	0.000	99	616753	10.0	10.0	
88 2-Pentanone	43	7.436	7.436	0.000	98	527621	40.0	37.9	
89 Methylcyclohexane	55	7.453	7.453	0.000	91	671779	10.0	9.59	
90 1,2-Dichloropropane	63	7.505	7.505	0.000	96	476692	10.0	9.93	
92 Dibromomethane	93	7.662	7.662	0.000	96	311808	10.0	10.3	
93 1,4-Dioxane	88	7.697	7.697	0.000	57	32562	200.0	214.9	
94 Dichlorobromomethane	83	7.854	7.854	0.000	99	838899	10.0	10.3	
97 cis-1,3-Dichloropropene	75	8.463	8.463	0.000	98	730905	10.0	10.0	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
98 4-Methyl-2-pentanone (MIBK)	43	8.690	8.690	0.000	95	755482	40.0	43.8	
99 Toluene	91	8.934	8.934	0.000	98	1673947	10.0	9.99	
100 trans-1,3-Dichloropropene	75	9.247	9.247	0.000	90	558359	10.0	10.4	
101 Ethyl methacrylate	69	9.386	9.386	0.000	86	399937	10.0	10.5	
102 1,1,2-Trichloroethane	97	9.508	9.508	0.000	71	349321	10.0	10.5	
103 Tetrachloroethene	164	9.717	9.717	0.000	97	580988	10.0	9.96	
104 1,3-Dichloropropane	76	9.752	9.752	0.000	85	540591	10.0	10.3	
105 2-Hexanone	43	9.891	9.891	0.000	95	497005	40.0	46.2	
108 Chlorodibromomethane	129	10.118	10.118	0.000	90	647071	10.0	10.2	
109 Ethylene Dibromide	107	10.292	10.292	0.000	99	437887	10.0	10.5	
110 1-Chlorohexane	91	11.076	11.076	0.000	92	839352	10.0	9.53	
111 Chlorobenzene	112	11.111	11.111	0.000	93	1194590	10.0	10.1	
112 1,1,1,2-Tetrachloroethane	131	11.250	11.250	0.000	95	615299	10.0	9.87	
113 Ethylbenzene	106	11.285	11.285	0.000	99	589619	10.0	9.94	
114 m-Xylene & p-Xylene	106	11.459	11.459	0.000	98	767421	10.0	9.84	
115 o-Xylene	106	12.034	12.034	0.000	98	685672	10.0	9.88	
116 Styrene	104	12.068	12.068	0.000	93	1104159	10.0	10.1	
117 Bromoform	173	12.312	12.312	0.000	95	375303	10.0	10.7	
118 Isopropylbenzene	105	12.539	12.539	0.000	96	2211446	10.0	9.57	
120 Cyclohexanone	55	12.661	12.661	0.000	87	201365	400.0	412.3	
121 1,1,2,2-Tetrachloroethane	83	12.922	12.922	0.000	94	467612	10.0	10.2	
122 Bromobenzene	156	12.922	12.922	0.000	93	565501	10.0	10.1	
123 1,2,3-Trichloropropane	110	12.974	12.974	0.000	79	113308	10.0	10.4	
124 trans-1,4-Dichloro-2-buten	53	12.991	12.991	0.000	68	81209	10.0	10.3	
125 N-Propylbenzene	120	13.044	13.044	0.000	99	568220	10.0	9.42	
126 2-Chlorotoluene	126	13.148	13.148	0.000	98	458363	10.0	9.51	
127 1,3,5-Trimethylbenzene	105	13.270	13.270	0.000	95	1699116	10.0	9.76	
128 4-Chlorotoluene	126	13.288	13.288	0.000	98	562836	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.636	13.636	0.000	92	1896762	10.0	9.72	
130 1,2,4-Trimethylbenzene	105	13.688	13.688	0.000	96	1645401	10.0	9.91	
131 sec-Butylbenzene	134	13.880	13.880	0.000	96	520343	10.0	9.68	
132 1,3-Dichlorobenzene	146	14.002	14.002	0.000	96	854415	10.0	10.0	
133 4-Isopropyltoluene	119	14.036	14.036	0.000	97	2177115	10.0	9.84	
134 1,4-Dichlorobenzene	146	14.106	14.106	0.000	94	1229415	10.0	9.78	
137 n-Butylbenzene	91	14.472	14.472	0.000	98	2082731	10.0	9.89	
138 1,2-Dichlorobenzene	146	14.507	14.507	0.000	96	860194	10.0	9.89	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	89	85266	10.0	10.7	
141 1,2,4-Trichlorobenzene	180	16.057	16.057	0.000	95	603482	10.0	10.4	
142 Hexachlorobutadiene	225	16.196	16.196	0.000	98	617900	10.0	10.0	
143 Naphthalene	128	16.283	16.283	0.000	97	611773	10.0	10.3	
144 1,2,3-Trichlorobenzene	180	16.492	16.492	0.000	95	453088	10.0	10.5	
S 151 1,2-Dichloroethene, Total	96				0		20.0	19.6	
S 149 1,2-Dichloroethene, Total	1				0		20.0	19.6	
S 150 Xylenes, Total	106				0		20.0	19.7	
S 146 Xylenes, Total (URS)	1				0		20.0	19.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.5	
S 145 Trihalomethanes, Total	1				0		40.0	41.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0342.D

Injection Date: 09-Oct-2017 10:28:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: icis

Worklist Smp#: 14

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

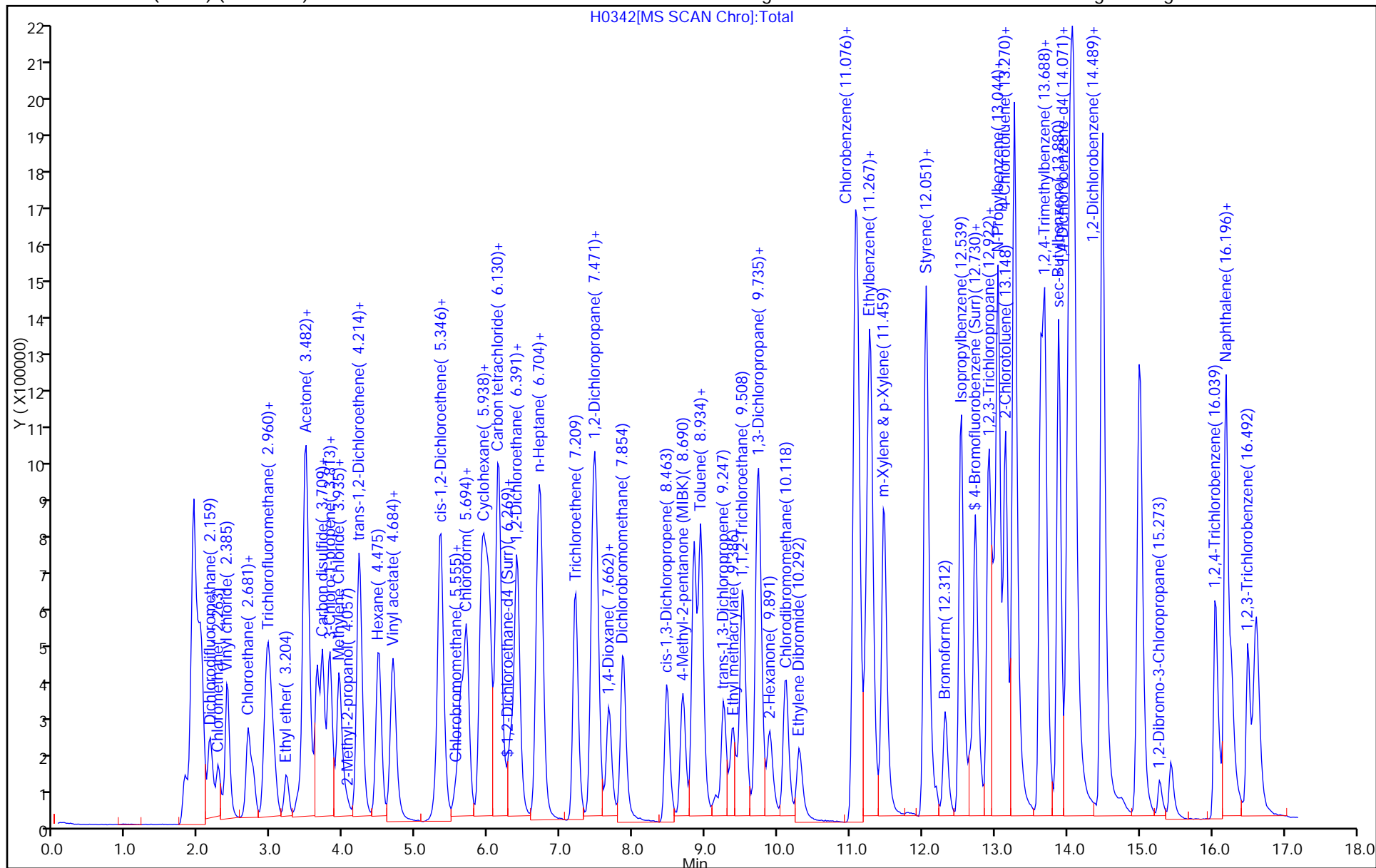
ALS Bottle#: 16

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0343.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 09-Oct-2017 10:50:30 ALS Bottle#: 17 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:28:59 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 11:09:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.957	3.970	-0.013	94	237519	250.0	250.0	
* 2 Fluorobenzene	96	6.726	6.739	-0.013	99	1227471	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.062	11.076	-0.014	89	367997	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.071	0.004	96	617580	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.890	5.903	-0.013	93	2142430	30.0	29.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.308	6.321	-0.013	100	940082	30.0	29.3	
\$ 10 Toluene-d8 (Surr)	98	8.833	8.846	-0.013	92	4415995	30.0	28.6	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.730	0.004	86	2424465	30.0	28.9	
28 Dichlorodifluoromethane	85	2.145	2.159	-0.014	99	2130545	30.0	32.5	
30 Chloromethane	50	2.267	2.263	0.004	98	927908	30.0	29.9	
32 Vinyl chloride	62	2.389	2.403	-0.014	98	1132300	30.0	29.9	
35 Bromomethane	94	2.668	2.681	-0.013	90	1177180	30.0	29.5	
36 Chloroethane	64	2.737	2.751	-0.014	99	706834	30.0	28.0	
37 Dichlorofluoromethane	67	2.929	2.925	0.004	98	2642568	30.0	29.7	
38 Trichlorofluoromethane	101	2.964	2.977	-0.013	99	2881299	30.0	30.0	
40 Ethyl ether	59	3.208	3.204	0.004	91	543222	30.0	30.4	
45 1,1-Dichloroethene	96	3.451	3.465	-0.014	99	1321217	30.0	29.2	
46 1,1,2-Trichloro-1,2,2-trif	151	3.486	3.482	0.004	97	1829096	30.0	29.8	
47 Acetone	43	3.504	3.500	0.004	100	263056	120.0	118.8	
48 Iodomethane	142	3.626	3.639	-0.013	100	3328403	30.0	30.0	
50 Carbon disulfide	76	3.695	3.709	-0.014	98	4767640	30.0	29.9	
53 Methyl acetate	43	3.800	3.813	-0.013	96	1352178	150.0	149.2	
52 3-Chloro-1-propene	41	3.800	3.813	-0.013	87	1718833	30.0	29.5	
54 Methylene Chloride	84	3.922	3.935	-0.013	90	1129724	30.0	27.3	
55 2-Methyl-2-propanol	59	4.044	4.057	-0.013	92	328948	300.0	274.3	
57 Acrylonitrile	53	4.183	4.196	-0.013	99	821108	300.0	308.3	
56 Methyl tert-butyl ether	73	4.218	4.214	0.004	93	1940924	30.0	30.1	
58 trans-1,2-Dichloroethene	96	4.218	4.214	0.004	100	1392789	30.0	29.5	
59 Hexane	57	4.479	4.475	0.004	90	1876961	30.0	29.3	
60 1,1-Dichloroethane	63	4.671	4.667	0.004	95	2305048	30.0	29.6	
61 Vinyl acetate	43	4.688	4.701	-0.013	96	2166159	60.0	64.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.332	5.328	0.004	82	1419997	30.0	29.4	
67 2-Butanone (MEK)	43	5.332	5.346	-0.014	62	556887	120.0	121.6	
66 2,2-Dichloropropane	77	5.350	5.346	0.004	83	2268810	30.0	29.5	
71 sec-Butyl Alcohol	45	5.541	5.555	-0.014	97	885701	900.0	919.0	
73 Chlorobromomethane	128	5.611	5.624	-0.013	92	699495	30.0	30.3	
75 Chloroform	83	5.698	5.694	0.004	93	2745261	30.0	29.8	
74 Tetrahydrofuran	42	5.681	5.694	-0.013	91	194710	60.0	62.5	
76 1,1,1-Trichloroethane	97	5.942	5.938	0.004	98	2617858	30.0	29.3	
77 Cyclohexane	56	6.012	6.008	0.004	87	2105584	30.0	28.6	
78 1,1-Dichloropropene	75	6.134	6.130	0.004	97	2222579	30.0	28.9	
79 Carbon tetrachloride	117	6.151	6.147	0.004	96	2639816	30.0	29.6	
80 Isobutyl alcohol	41	6.255	6.269	-0.014	92	257061	750.0	768.3	
81 Benzene	78	6.395	6.391	0.004	96	4094250	30.0	30.2	
82 1,2-Dichloroethane	62	6.412	6.408	0.004	96	1026856	30.0	29.3	
84 n-Heptane	43	6.691	6.687	0.004	91	2347183	30.0	29.4	
86 Trichloroethene	95	7.196	7.209	-0.013	99	1793514	30.0	30.0	
88 2-Pentanone	43	7.440	7.436	0.004	98	1436458	120.0	106.0	
89 Methylcyclohexane	55	7.457	7.453	0.004	91	1971163	30.0	29.0	
90 1,2-Dichloropropane	63	7.492	7.505	-0.013	94	1379888	30.0	29.6	
92 Dibromomethane	93	7.666	7.662	0.004	96	880512	30.0	29.8	
93 1,4-Dioxane	88	7.684	7.697	-0.013	63	89405	600.0	593.6	
94 Dichlorobromomethane	83	7.858	7.854	0.004	99	2391758	30.0	30.2	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
97 cis-1,3-Dichloropropene	75	8.467	8.463	0.004	98	2097515	30.0	30.1	
98 4-Methyl-2-pentanone (MIBK)	43	8.676	8.690	-0.014	95	2032827	120.0	121.1	
99 Toluene	91	8.937	8.934	0.003	99	4783025	30.0	29.4	
100 trans-1,3-Dichloropropene	75	9.251	9.247	0.004	89	1543704	30.0	29.7	
101 Ethyl methacrylate	69	9.373	9.386	-0.013	85	1117898	30.0	30.5	
102 1,1,2-Trichloroethane	97	9.512	9.508	0.004	90	928920	30.0	29.8	
103 Tetrachloroethene	164	9.721	9.717	0.004	97	1652019	30.0	29.5	
104 1,3-Dichloropropane	76	9.756	9.752	0.004	86	1553370	30.0	30.8	
105 2-Hexanone	43	9.878	9.891	-0.013	95	1300483	120.0	125.9	
108 Chlorodibromomethane	129	10.104	10.118	-0.014	90	1861109	30.0	30.6	
109 Ethylene Dibromide	107	10.296	10.292	0.004	99	1236241	30.0	30.9	
110 1-Chlorohexane	91	11.080	11.076	0.004	95	2431930	30.0	28.8	
111 Chlorobenzene	112	11.114	11.111	0.003	92	3389721	30.0	29.7	
112 1,1,1,2-Tetrachloroethane	131	11.236	11.250	-0.014	97	1769188	30.0	29.6	
113 Ethylbenzene	106	11.289	11.285	0.004	99	1704534	30.0	30.0	
114 m-Xylene & p-Xylene	106	11.463	11.459	0.004	98	2206982	30.0	29.5	
115 o-Xylene	106	12.038	12.034	0.004	97	1989934	30.0	29.9	
116 Styrene	104	12.055	12.068	-0.013	92	3158430	30.0	30.1	
117 Bromoform	173	12.316	12.312	0.004	95	1043800	30.0	30.9	
118 Isopropylbenzene	105	12.525	12.539	-0.014	96	6337641	30.0	29.2	
120 Cyclohexanone	55	12.664	12.661	0.003	87	521831	1200.0	1113.9	
122 Bromobenzene	156	12.908	12.922	-0.014	93	1618194	30.0	30.6	
121 1,1,2,2-Tetrachloroethane	83	12.926	12.922	0.004	94	1288127	30.0	29.9	
123 1,2,3-Trichloropropane	110	12.961	12.974	-0.013	79	295720	30.0	30.1	
124 trans-1,4-Dichloro-2-buten	53	12.995	12.991	0.004	68	215435	30.0	29.2	
125 N-Propylbenzene	120	13.048	13.044	0.004	99	1617734	30.0	28.5	
126 2-Chlorotoluene	126	13.152	13.148	0.004	98	1326413	30.0	29.3	
127 1,3,5-Trimethylbenzene	105	13.257	13.270	-0.013	94	4820739	30.0	29.4	
128 4-Chlorotoluene	126	13.274	13.288	-0.014	99	1589311	30.0	30.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.640	13.636	0.004	92	5370842	30.0	29.3	
130 1,2,4-Trimethylbenzene	105	13.692	13.688	0.004	96	4582929	30.0	29.4	
131 sec-Butylbenzene	134	13.884	13.880	0.004	94	1440590	30.0	28.5	
132 1,3-Dichlorobenzene	146	14.006	14.002	0.004	98	2514039	30.0	31.3	
133 4-Isopropyltoluene	119	14.040	14.036	0.004	98	6071385	30.0	29.2	
134 1,4-Dichlorobenzene	146	14.093	14.106	-0.013	94	3327796	30.0	28.1	
137 n-Butylbenzene	91	14.476	14.472	0.004	98	5852715	30.0	29.5	
138 1,2-Dichlorobenzene	146	14.493	14.507	-0.014	96	2440502	30.0	29.8	
139 1,2-Dibromo-3-Chloropropan	157	15.277	15.290	-0.013	89	224164	30.0	30.0	
141 1,2,4-Trichlorobenzene	180	16.043	16.057	-0.014	94	1635629	30.0	29.9	
142 Hexachlorobutadiene	225	16.200	16.196	0.004	98	1617811	30.0	28.0	
143 Naphthalene	128	16.270	16.283	-0.013	97	1703388	30.0	30.6	
144 1,2,3-Trichlorobenzene	180	16.496	16.492	0.004	95	1202626	30.0	29.8	
S 151 1,2-Dichloroethene, Total	96				0		60.0	58.9	
S 148 1,3-Dichloropropene, Total	1				0		60.0	59.8	
S 145 Trihalomethanes, Total	1				0		120.0	121.4	
S 146 Xylenes, Total (URS)	1				0		60.0	59.4	
S 149 1,2-Dichloroethene, Total	1				0		60.0	58.9	
S 150 Xylenes, Total	106				0		60.0	59.4	
S 147 Total BTEX	1				0			148.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 15.00	Units: uL
MV-Gas/Ket A_00065	Amount Added: 15.00	Units: uL
MV-2cleve+AVA_00029	Amount Added: 15.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 2.40	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0343.D

Injection Date: 09-Oct-2017 10:50:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 15

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

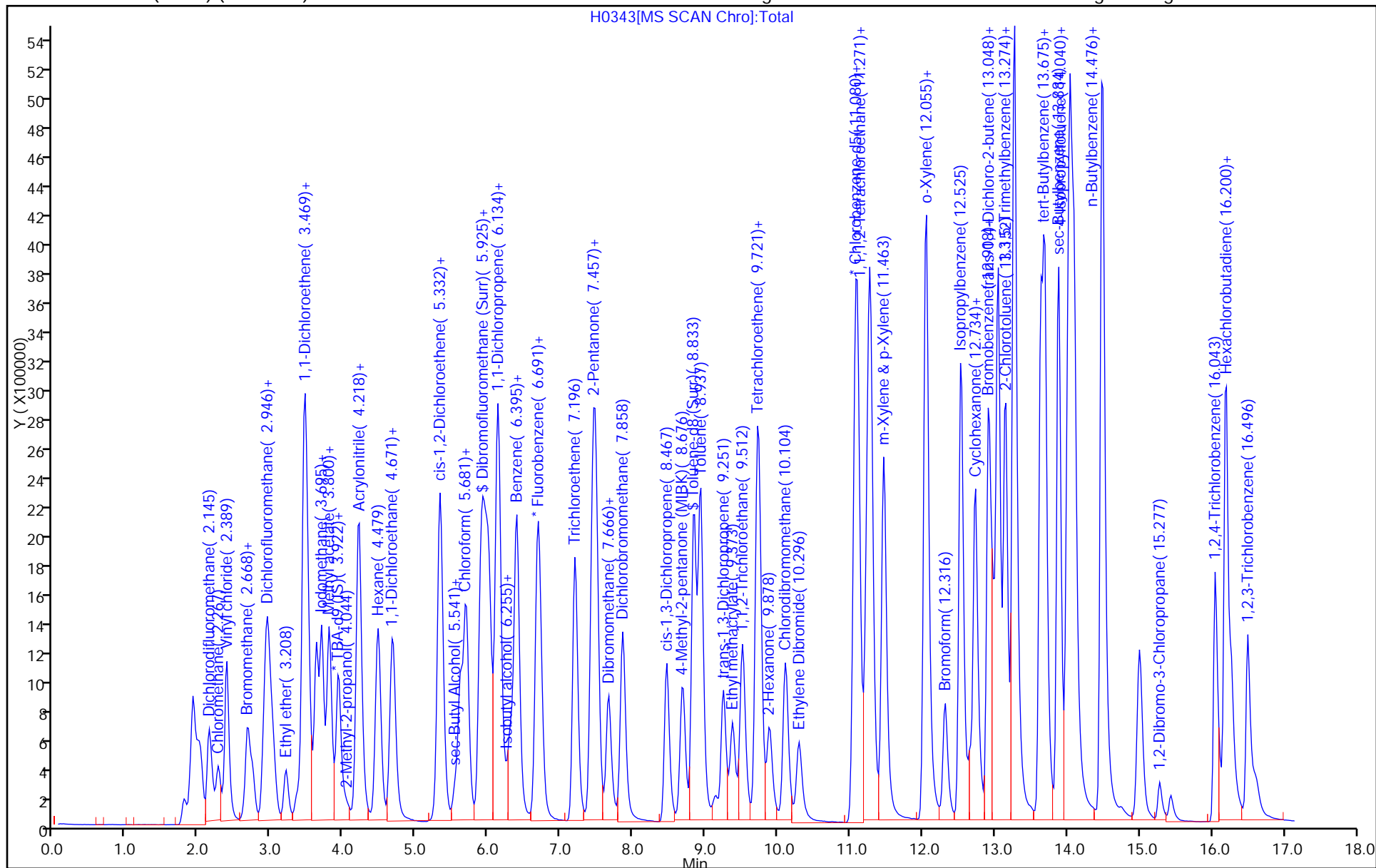
ALS Bottle#: 17

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 09-Oct-2017 11:12:30 ALS Bottle#: 18 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: lcs
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2017 15:29:00 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 12:05:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.987	3.970	0.017	94	241345	250.0	250.0	
* 2 Fluorobenzene	96	6.739	6.739	-0.001	98	1203245	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.075	11.076	-0.001	89	356369	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.088	14.071	0.017	92	573953	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.903	5.903	0.000	93	4243209	60.0	59.0	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.321	6.321	0.000	100	1811160	60.0	57.5	
\$ 10 Toluene-d8 (Surr)	98	8.846	8.846	0.000	93	8705432	60.0	58.3	
\$ 11 4-Bromofluorobenzene (Surr	95	12.730	12.730	0.000	86	4643724	60.0	59.6	
28 Dichlorodifluoromethane	85	2.141	2.159	-0.018	99	4099674	60.0	63.9	
30 Chloromethane	50	2.280	2.263	0.017	98	1897713	60.0	62.3	
32 Vinyl chloride	62	2.402	2.403	-0.001	98	2242381	60.0	60.3	
35 Bromomethane	94	2.681	2.681	0.000	90	2177046	60.0	55.7	
36 Chloroethane	64	2.750	2.751	-0.001	99	1374500	60.0	55.4	
37 Dichlorofluoromethane	67	2.924	2.925	-0.001	98	5441549	60.0	62.5	
38 Trichlorofluoromethane	101	2.977	2.977	0.000	100	5866860	60.0	62.2	
40 Ethyl ether	59	3.203	3.204	-0.001	92	1040895	60.0	59.5	
45 1,1-Dichloroethene	96	3.464	3.465	-0.001	98	2622612	60.0	59.2	
46 1,1,2-Trichloro-1,2,2-trif	151	3.482	3.482	0.000	97	3613515	60.0	60.1	
47 Acetone	43	3.499	3.500	-0.001	100	534455	240.0	249.5	
48 Iodomethane	142	3.621	3.639	-0.018	99	6554236	60.0	60.3	
50 Carbon disulfide	76	3.708	3.709	-0.001	98	9537332	60.0	61.1	
52 3-Chloro-1-propene	41	3.795	3.813	-0.018	94	3441106	60.0	60.2	
53 Methyl acetate	43	3.813	3.813	0.000	96	2584275	300.0	290.9	
54 Methylene Chloride	84	3.935	3.935	0.000	91	2190184	60.0	54.0	
55 2-Methyl-2-propanol	59	4.074	4.057	0.017	95	652782	600.0	535.7	
57 Acrylonitrile	53	4.196	4.196	0.000	99	1586870	600.0	607.8	
58 trans-1,2-Dichloroethene	96	4.213	4.214	-0.001	100	2782624	60.0	60.1	
56 Methyl tert-butyl ether	73	4.213	4.214	-0.001	92	3674491	60.0	58.1	
59 Hexane	57	4.474	4.475	-0.001	90	3811436	60.0	61.5	
60 1,1-Dichloroethane	63	4.666	4.667	-0.001	95	4573342	60.0	59.8	
61 Vinyl acetate	43	4.701	4.701	0.000	96	3850033	120.0	116.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.328	5.328	0.000	83	2840601	60.0	60.0	
66 2,2-Dichloropropane	77	5.345	5.346	-0.001	83	4503343	60.0	60.6	
67 2-Butanone (MEK)	43	5.345	5.346	-0.001	43	1085547	240.0	241.8	
71 sec-Butyl Alcohol	45	5.554	5.555	-0.001	97	1738821	1800.0	1775.6	
73 Chlorobromomethane	128	5.624	5.624	0.000	92	1361992	60.0	60.2	
74 Tetrahydrofuran	42	5.694	5.694	0.000	92	365920	120.0	119.8	
75 Chloroform	83	5.694	5.694	0.000	93	5343075	60.0	59.1	
76 1,1,1-Trichloroethane	97	5.937	5.938	-0.001	98	5195446	60.0	59.3	
77 Cyclohexane	56	6.007	6.008	-0.001	88	4189347	60.0	58.1	
78 1,1-Dichloropropene	75	6.129	6.130	-0.001	98	4437307	60.0	58.8	
79 Carbon tetrachloride	117	6.146	6.147	-0.001	97	5252174	60.0	60.1	
80 Isobutyl alcohol	41	6.268	6.269	-0.001	92	497293	1500.0	1462.7	
81 Benzene	78	6.390	6.391	-0.001	96	8062667	60.0	60.7	
82 1,2-Dichloroethane	62	6.408	6.408	0.000	96	1942984	60.0	56.5	
84 n-Heptane	43	6.686	6.687	-0.001	90	4670279	60.0	59.8	
86 Trichloroethene	95	7.209	7.209	0.000	99	3549460	60.0	60.6	
88 2-Pentanone	43	7.435	7.436	-0.001	98	4779080	240.0	359.9	
89 Methylcyclohexane	55	7.453	7.453	0.000	91	3906842	60.0	58.6	
90 1,2-Dichloropropane	63	7.505	7.505	0.000	94	2686550	60.0	58.7	
92 Dibromomethane	93	7.662	7.662	0.000	96	1631058	60.0	56.3	
93 1,4-Dioxane	88	7.679	7.697	-0.018	47	177378	1200.0	1193.8	
94 Dichlorobromomethane	83	7.853	7.854	-0.001	99	4659452	60.0	59.9	
97 cis-1,3-Dichloropropene	75	8.463	8.463	0.000	98	3977266	60.0	58.8	
96 2-Chloroethyl vinyl ether	63		8.463				ND	ND	
98 4-Methyl-2-pentanone (MIBK)	43	8.689	8.690	-0.001	95	3753561	240.0	228.1	
99 Toluene	91	8.933	8.934	-0.001	99	9284762	60.0	58.1	
100 trans-1,3-Dichloropropene	75	9.246	9.247	-0.001	89	2895713	60.0	56.8	
101 Ethyl methacrylate	69	9.386	9.386	0.000	85	2039858	60.0	57.5	
102 1,1,2-Trichloroethane	97	9.525	9.508	0.017	90	1660305	60.0	54.9	
103 Tetrachloroethene	164	9.717	9.717	0.000	96	3224469	60.0	59.5	
104 1,3-Dichloropropane	76	9.751	9.752	-0.001	84	2890243	60.0	59.2	
105 2-Hexanone	43	9.891	9.891	0.000	95	2403934	240.0	240.4	
108 Chlorodibromomethane	129	10.117	10.118	-0.001	90	3474543	60.0	59.0	
109 Ethylene Dibromide	107	10.291	10.292	-0.001	99	2275282	60.0	58.7	
110 1-Chlorohexane	91	11.075	11.076	-0.001	95	4844083	60.0	59.2	
111 Chlorobenzene	112	11.110	11.111	-0.001	92	6560674	60.0	59.4	
112 1,1,1,2-Tetrachloroethane	131	11.249	11.250	-0.001	97	3361331	60.0	58.0	
113 Ethylbenzene	106	11.284	11.285	-0.001	98	3287589	60.0	59.7	
114 m-Xylene & p-Xylene	106	11.476	11.459	0.017	98	4250328	60.0	58.6	
115 o-Xylene	106	12.050	12.034	0.016	98	3803647	60.0	59.0	
116 Styrene	104	12.068	12.068	0.000	93	6049875	60.0	59.5	
117 Bromoform	173	12.312	12.312	0.000	95	1904220	60.0	58.2	
118 Isopropylbenzene	105	12.538	12.539	-0.001	96	12243977	60.0	60.6	
120 Cyclohexanone	55	12.660	12.661	-0.001	87	1026737	2400.0	2263.2	
121 1,1,2,2-Tetrachloroethane	83	12.921	12.922	-0.001	94	2285577	60.0	57.1	
122 Bromobenzene	156	12.921	12.922	-0.001	93	3083645	60.0	62.7	
123 1,2,3-Trichloropropane	110	12.973	12.974	-0.001	78	534874	60.0	59.3	
124 trans-1,4-Dichloro-2-buten	53	12.991	12.991	0.000	68	393839	60.0	57.4	
125 N-Propylbenzene	120	13.043	13.044	-0.001	99	3067258	60.0	58.2	
126 2-Chlorotoluene	126	13.148	13.148	0.000	98	2473691	60.0	58.7	
127 1,3,5-Trimethylbenzene	105	13.269	13.270	-0.001	95	9177307	60.0	60.3	
128 4-Chlorotoluene	126	13.287	13.288	-0.001	99	2981107	60.0	62.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.635	13.636	-0.001	93	10143094	60.0	59.5	
130 1,2,4-Trimethylbenzene	105	13.687	13.688	-0.001	96	8719931	60.0	60.1	
131 sec-Butylbenzene	134	13.879	13.880	-0.001	94	2751802	60.0	58.6	
132 1,3-Dichlorobenzene	146	14.001	14.002	-0.001	96	4557781	60.0	61.0	
133 4-Isopropyltoluene	119	14.053	14.036	0.017	97	11364048	60.0	58.8	
134 1,4-Dichlorobenzene	146	14.105	14.106	-0.001	94	6330062	60.0	57.6	
137 n-Butylbenzene	91	14.471	14.472	-0.001	98	11278283	60.0	61.3	
138 1,2-Dichlorobenzene	146	14.506	14.507	-0.001	96	4521834	60.0	59.5	
139 1,2-Dibromo-3-Chloropropan	157	15.272	15.290	-0.018	89	400396	60.0	57.6	
141 1,2,4-Trichlorobenzene	180	16.056	16.057	-0.001	95	3007307	60.0	59.2	
142 Hexachlorobutadiene	225	16.195	16.196	-0.001	98	3002990	60.0	55.9	
143 Naphthalene	128	16.282	16.283	-0.001	97	3059838	60.0	59.2	
144 1,2,3-Trichlorobenzene	180	16.491	16.492	-0.001	95	2178348	60.0	58.0	
S 151 1,2-Dichloroethene, Total	96				0		120.0	120.1	
S 149 1,2-Dichloroethene, Total	1				0		120.0	120.1	
S 150 Xylenes, Total	106				0		120.0	117.6	
S 147 Total BTEX	1				0			296.1	
S 146 Xylenes, Total (URS)	1				0		120.0	117.6	
S 148 1,3-Dichloropropene, Total	1				0		120.0	115.7	
S 145 Trihalomethanes, Total	1				0		240.0	236.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main A_00032	Amount Added: 30.00	Units: uL
MV-Gas/Ket A_00065	Amount Added: 30.00	Units: uL
MV-2cleve+AVA_00029	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 4.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D

Injection Date: 09-Oct-2017 11:12:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 16

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

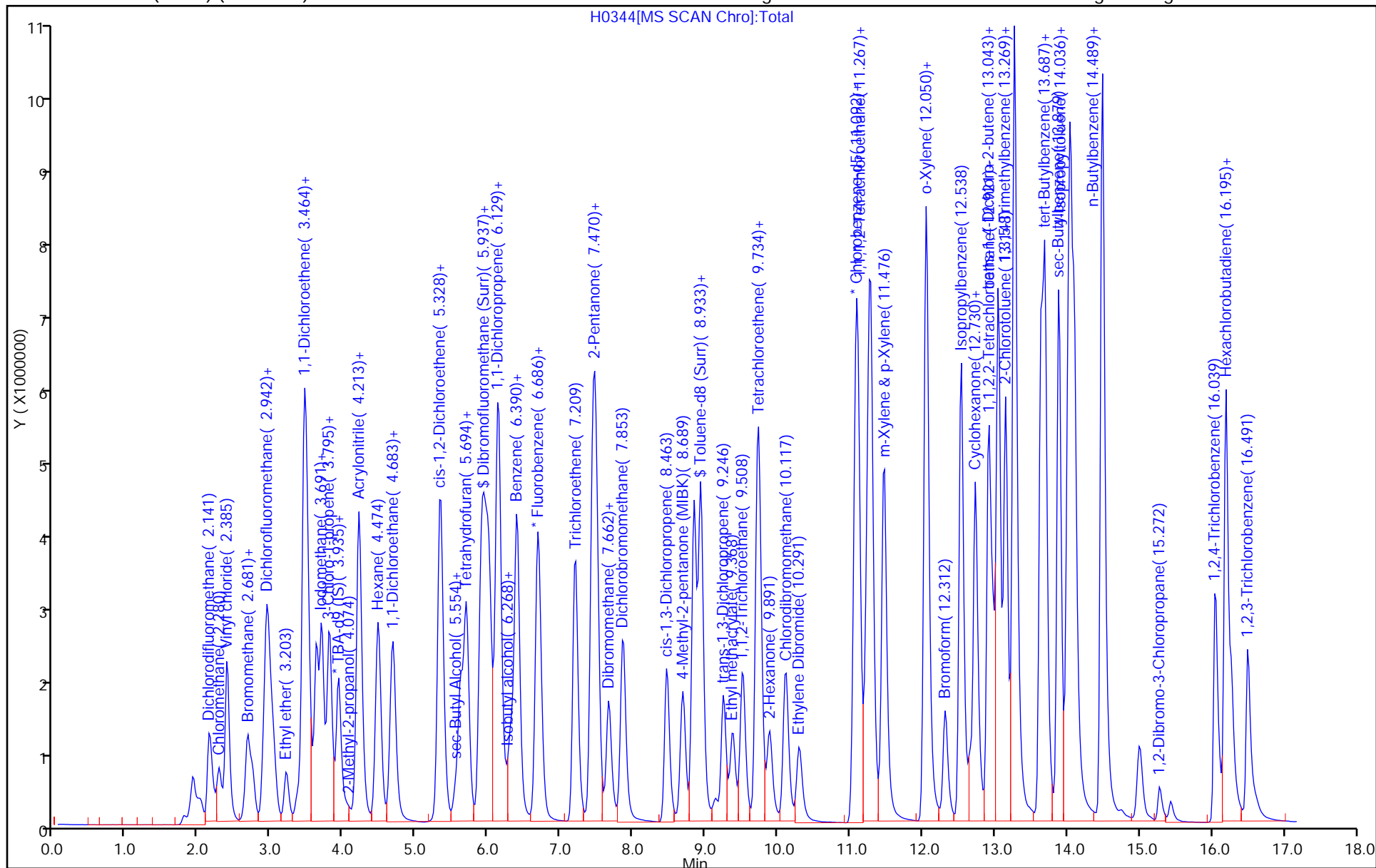
ALS Bottle#: 18

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: ICV 280-379245/17 Calibration Date: 06/29/2017 13:09

Instrument ID: VMS_H Calib Start Date: 06/29/2017 10:14

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 06/29/2017 12:25

Lab File ID: H7387.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.4087		10.7	10.0	6.5	20.0
Chloromethane	Ave	0.1995	0.2182	0.1000	10.9	10.0	9.4	20.0
Vinyl chloride	Ave	0.3067	0.2840		9.26	10.0	-7.4	20.0
Bromomethane	Ave	0.3611	0.3255		9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2091	0.2064		9.87	10.0	-1.3	20.0
Dichlorofluoromethane	Ave	0.8368	0.8264		9.88	10.0	-1.2	20.0
Trichlorofluoromethane	Ave	0.9080	0.8449		9.31	10.0	-6.9	20.0
Ethyl ether	Ave	0.1831	0.1630		8.90	10.0	-11.0	20.0
1,1-Dichloroethene	Ave	0.4345	0.3894		8.96	10.0	-10.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.7409	0.6507		8.78	10.0	-12.2	20.0
Acetone	Lin2		0.0253		37.4	40.0	-6.5	20.0
Iodomethane	Ave	1.294	1.178		9.10	10.0	-9.0	20.0
Carbon disulfide	Ave	1.563	1.390		8.89	10.0	-11.1	20.0
3-Chloro-1-propene	Lin1		0.5346		9.39	10.0	-6.1	20.0
Methyl acetate	Ave	0.0879	0.0842		47.9	50.0	-4.2	20.0
Methylene Chloride	Lin2		0.3901		10.2	10.0	2.5	20.0
t-Butyl alcohol	Ave	1.579	1.412		89.4	100	-10.6	20.0
Acrylonitrile	Ave	0.0237	0.0227		95.8	100	-4.2	20.0
Methyl tert-butyl ether	Ave	0.5995	0.5686		9.49	10.0	-5.1	20.0
trans-1,2-Dichloroethene	Ave	0.4656	0.4387		9.42	10.0	-5.8	20.0
Hexane	Ave	2.500	2.231		8.92	10.0	-10.8	20.0
1,1-Dichloroethane	Ave	0.7636	0.7213	0.1000	9.45	10.0	-5.5	20.0
cis-1,2-Dichloroethene	Ave	0.4639	0.4430		9.55	10.0	-4.5	20.0
2,2-Dichloropropane	Lin2		0.6851		8.79	10.0	-12.1	20.0
2-Butanone (MEK)	Ave	0.0493	0.0469		38.0	40.0	-4.9	20.0
sec-Butyl Alcohol	Ave	1.211	1.238		307	300	2.2	20.0
Bromochloromethane	Ave	0.2631	0.2323		8.83	10.0	-11.7	20.0
Tetrahydrofuran	Ave	0.0313	0.0303		19.4	20.0	-3.2	20.0
Chloroform	Ave	0.8626	0.8164		9.46	10.0	-5.4	20.0
1,1,1-Trichloroethane	Ave	0.9128	0.8247		9.04	10.0	-9.6	20.0
Cyclohexane	Ave	0.6831	0.6318		9.25	10.0	-7.5	20.0
1,1-Dichloropropene	Ave	0.7502	0.6777		9.03	10.0	-9.7	20.0
Carbon tetrachloride	Ave	0.9942	0.8819		8.87	10.0	-11.3	20.0
Isobutyl alcohol	Ave	0.4804	0.4805		250	250	0.0	20.0
Benzene	Ave	1.268	1.190		9.38	10.0	-6.2	20.0
1,2-Dichloroethane	Ave	0.3636	0.3273		9.00	10.0	-10.0	20.0
Trichloroethene	Ave	0.5931	0.5480		9.24	10.0	-7.6	20.0
2-Pentanone	Ave	0.1772	0.1454		32.8	40.0	-18.0	20.0
Methylcyclohexane	Ave	0.6449	0.5772		8.95	10.0	-10.5	20.0
1,2-Dichloropropane	Ave	0.4282	0.4166		9.73	10.0	-2.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: ICV 280-379245/17 Calibration Date: 06/29/2017 13:09

Instrument ID: VMS_H Calib Start Date: 06/29/2017 10:14

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 06/29/2017 12:25

Lab File ID: H7387.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.2834	0.2565		9.05	10.0	-9.5	20.0
1,4-Dioxane	Ave	0.0014	0.0012		167	200	-16.7	20.0
Bromodichloromethane	Ave	0.7476	0.7425		9.93	10.0	-0.7	20.0
cis-1,3-Dichloropropene	Ave	2.593	2.438		9.40	10.0	-6.0	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1647	0.1660		40.3	40.0	0.8	20.0
Toluene	Ave	1.476	1.396		9.46	10.0	-5.4	20.0
trans-1,3-Dichloropropene	Ave	0.4621	0.4236		9.17	10.0	-8.3	20.0
Ethyl methacrylate	Ave	1.373	1.307		9.52	10.0	-4.8	20.0
1,1,2-Trichloroethane	Lin2		0.2881		9.35	10.0	-6.5	20.0
Tetrachloroethene	Ave	2.598	2.441		9.40	10.0	-6.0	20.0
1,3-Dichloropropane	Ave	1.912	1.736		9.08	10.0	-9.2	20.0
2-Hexanone	Ave	0.4138	0.4291		41.5	40.0	3.7	20.0
Dibromochloromethane	Ave	2.535	2.448		9.66	10.0	-3.4	20.0
1,2-Dibromoethane (EDB)	Ave	1.591	1.501		9.43	10.0	-5.7	20.0
1-Chlorohexane	Ave	3.092	2.898		9.37	10.0	-6.3	20.0
Chlorobenzene	Ave	4.581	4.349	0.3000	9.50	10.0	-5.0	20.0
1,1,1,2-Tetrachloroethane	Ave	2.476	2.413		9.75	10.0	-2.5	20.0
Ethylbenzene	Ave	2.233	2.089		9.36	10.0	-6.4	20.0
m-Xylene & p-Xylene	Ave	2.911	2.828		9.72	10.0	-2.8	20.0
o-Xylene	Ave	2.635	2.474		9.39	10.0	-6.1	20.0
Styrene	Ave	4.117	3.884		9.43	10.0	-5.7	20.0
Bromoform	Ave	1.583	1.550	0.1000	9.79	10.0	-2.1	20.0
Isopropylbenzene	Ave	4.837	4.293		8.88	10.0	-11.2	20.0
Cyclohexanone	Ave	0.0167	0.0169		404	400	1.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.8548	0.7713	0.3000	9.02	10.0	-9.8	20.0
Bromobenzene	Ave	1.349	1.253		9.29	10.0	-7.1	20.0
1,2,3-Trichloropropane	Lin2		0.2221		9.77	10.0	-2.3	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1479	0.1370		9.26	10.0	-7.4	20.0
N-Propylbenzene	Ave	1.337	1.134		8.48	10.0	-15.2	20.0
2-Chlorotoluene	Ave	1.057	0.9542		9.02	10.0	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	3.707	3.439		9.28	10.0	-7.2	20.0
4-Chlorotoluene	Ave	1.226	1.135		9.25	10.0	-7.5	20.0
tert-Butylbenzene	Ave	4.340	3.968		9.14	10.0	-8.6	20.0
1,2,4-Trimethylbenzene	Ave	3.496	3.235		9.26	10.0	-7.4	20.0
sec-Butylbenzene	Ave	1.204	1.083		9.00	10.0	-10.0	20.0
1,3-Dichlorobenzene	Ave	2.063	1.890		9.16	10.0	-8.4	20.0
4-Isopropyltoluene	Ave	4.907	4.477		9.12	10.0	-8.8	20.0
1,4-Dichlorobenzene	Ave	2.870	2.713		9.45	10.0	-5.5	20.0
n-Butylbenzene	Ave	4.178	3.844		9.20	10.0	-8.0	20.0
1,2-Dichlorobenzene	Ave	2.051	1.975		9.63	10.0	-3.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2046	0.1951		9.53	10.0	-4.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: ICV 280-379245/17 Calibration Date: 06/29/2017 13:09
Instrument ID: VMS_H Calib Start Date: 06/29/2017 10:14
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 06/29/2017 12:25
Lab File ID: H7387.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.532	1.518		9.91	10.0	-0.9	20.0
Hexachlorobutadiene	Ave	1.755	1.658		9.45	10.0	-5.5	20.0
Naphthalene	Ave	1.366	1.345		9.85	10.0	-1.5	20.0
1,2,3-Trichlorobenzene	Ave	1.190	1.221		10.3	10.0	2.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7387.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 29-Jun-2017 13:09:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: icv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 29-Jun-2017 16:32:25 Calib Date: 29-Jun-2017 15:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: moanm

Date: 29-Jun-2017 13:50:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.970	3.969	0.001	95	146491	250.0	250.0	
* 2 Fluorobenzene	96	6.739	6.738	0.001	98	1037828	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.093	11.092	0.001	86	260311	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.089	14.088	0.000	96	471241	12.5	12.5	
28 Dichlorodifluoromethane	85	2.159	2.175	-0.016	100	339348	10.0	10.7	
30 Chloromethane	50	2.281	2.280	0.000	98	181138	10.0	10.9	
32 Vinyl chloride	62	2.402	2.419	-0.017	98	235759	10.0	9.26	
35 Bromomethane	94	2.681	2.698	-0.017	91	270264	10.0	9.02	
36 Chloroethane	64	2.751	2.768	-0.017	99	171391	10.0	9.87	
37 Dichlorofluoromethane	67	2.942	2.942	0.000	99	686090	10.0	9.88	
38 Trichlorofluoromethane	101	2.995	2.994	0.001	100	701501	10.0	9.31	
40 Ethyl ether	59	3.221	3.220	0.001	90	135304	10.0	8.90	
45 1,1-Dichloroethene	96	3.465	3.482	-0.017	99	323296	10.0	8.96	
46 1,1,2-Trichloro-1,2,2-trif	151	3.500	3.499	0.001	96	540208	10.0	8.78	
47 Acetone	43	3.517	3.516	0.001	99	83885	40.0	37.4	
48 Iodomethane	142	3.639	3.638	0.001	99	977702	10.0	9.10	
50 Carbon disulfide	76	3.709	3.725	-0.016	99	1154093	10.0	8.89	
52 3-Chloro-1-propene	41	3.813	3.812	0.001	90	443851	10.0	9.39	
53 Methyl acetate	43	3.831	3.830	0.001	96	349321	50.0	47.9	
54 Methylene Chloride	84	3.952	3.952	0.000	91	323893	10.0	10.2	
55 2-Methyl-2-propanol	59	4.074	4.056	0.018	98	82732	100.0	89.4	
57 Acrylonitrile	53	4.196	4.213	-0.017	100	188417	100.0	95.8	
58 trans-1,2-Dichloroethene	96	4.231	4.230	0.001	99	364255	10.0	9.42	
56 Methyl tert-butyl ether	73	4.231	4.230	0.001	86	472112	10.0	9.49	
59 Hexane	57	4.492	4.492	0.000	92	464664	10.0	8.92	
60 1,1-Dichloroethane	63	4.684	4.683	0.001	96	598896	10.0	9.45	
65 cis-1,2-Dichloroethene	96	5.346	5.345	0.001	84	367762	10.0	9.55	
67 2-Butanone (MEK)	43	5.363	5.363	0.000	45	155703	40.0	38.0	
66 2,2-Dichloropropane	77	5.363	5.363	0.000	87	568800	10.0	8.79	
71 sec-Butyl Alcohol	45	5.572	5.572	0.000	98	217570	300.0	306.6	
73 Chlorobromomethane	128	5.642	5.641	0.001	94	192863	10.0	8.83	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
74 Tetrahydrofuran	42	5.694	5.693	0.001	90	50355	20.0	19.4	
75 Chloroform	83	5.711	5.711	0.000	95	677856	10.0	9.46	
76 1,1,1-Trichloroethane	97	5.955	5.955	0.000	98	684697	10.0	9.04	
77 Cyclohexane	56	6.025	6.024	0.001	90	524515	10.0	9.25	
78 1,1-Dichloropropene	75	6.147	6.146	0.001	98	562655	10.0	9.03	
79 Carbon tetrachloride	117	6.164	6.164	0.000	98	732205	10.0	8.87	
80 Isobutyl alcohol	41	6.286	6.286	0.000	92	70393	250.0	250.0	
81 Benzene	78	6.408	6.407	0.001	95	987815	10.0	9.38	
82 1,2-Dichloroethane	62	6.425	6.425	0.000	97	271759	10.0	9.00	
84 n-Heptane	43	6.704	6.704	0.000	93	561985	10.0	8.93	
86 Trichloroethene	95	7.209	7.209	0.000	95	454944	10.0	9.24	
88 2-Pentanone	43	7.453	7.452	0.001	98	482859	40.0	32.8	
89 Methylcyclohexane	55	7.470	7.470	0.000	90	479251	10.0	8.95	
90 1,2-Dichloropropane	63	7.523	7.522	0.001	95	345869	10.0	9.73	
92 Dibromomethane	93	7.679	7.679	0.000	91	212923	10.0	9.05	
93 1,4-Dioxane	88	7.697	7.714	-0.017	29	19663	200.0	166.6	
94 Dichlorobromomethane	83	7.871	7.870	0.001	99	616484	10.0	9.93	
97 cis-1,3-Dichloropropene	75	8.481	8.480	0.001	96	507613	10.0	9.40	
98 4-Methyl-2-pentanone (MIBK)	43	8.707	8.706	0.001	96	551270	40.0	40.3	
99 Toluene	91	8.951	8.950	0.001	99	1159360	10.0	9.46	
100 trans-1,3-Dichloropropene	75	9.264	9.264	0.000	93	351711	10.0	9.17	
101 Ethyl methacrylate	69	9.404	9.403	0.001	88	272202	10.0	9.52	
102 1,1,2-Trichloroethane	97	9.526	9.525	0.001	93	239193	10.0	9.35	
103 Tetrachloroethene	164	9.735	9.734	0.001	98	508412	10.0	9.40	
104 1,3-Dichloropropane	76	9.787	9.786	0.001	86	361606	10.0	9.08	
105 2-Hexanone	43	9.909	9.908	0.001	97	357430	40.0	41.5	
108 Chlorodibromomethane	129	10.135	10.134	0.001	89	509738	10.0	9.66	
109 Ethylene Dibromide	107	10.327	10.309	0.018	99	312541	10.0	9.43	
110 1-Chlorohexane	91	11.093	11.092	0.001	91	603411	10.0	9.37	
111 Chlorobenzene	112	11.128	11.127	0.001	96	905730	10.0	9.50	
112 1,1,1,2-Tetrachloroethane	131	11.267	11.267	0.000	96	502424	10.0	9.75	
113 Ethylbenzene	106	11.302	11.301	0.001	98	434978	10.0	9.36	
114 m-Xylene & p-Xylene	106	11.494	11.493	0.001	99	589015	10.0	9.72	
115 o-Xylene	106	12.068	12.050	0.018	97	515250	10.0	9.39	
116 Styrene	104	12.086	12.085	0.001	94	808896	10.0	9.43	
117 Bromoform	173	12.329	12.329	0.000	97	322815	10.0	9.79	
118 Isopropylbenzene	105	12.556	12.555	0.001	96	1618448	10.0	8.88	
120 Cyclohexanone	55	12.678	12.677	0.001	90	140897	400.0	404.4	
121 1,1,2,2-Tetrachloroethane	83	12.939	12.938	0.001	95	290772	10.0	9.02	
122 Bromobenzene	156	12.939	12.938	0.001	94	472372	10.0	9.29	
123 1,2,3-Trichloropropane	110	12.991	12.991	0.000	78	83718	10.0	9.77	
124 trans-1,4-Dichloro-2-buten	53	13.009	13.008	0.001	65	51631	10.0	9.26	
125 N-Propylbenzene	120	13.061	13.060	0.001	99	427445	10.0	8.48	
126 2-Chlorotoluene	126	13.165	13.165	0.000	96	359743	10.0	9.02	
127 1,3,5-Trimethylbenzene	105	13.287	13.269	0.018	95	1296643	10.0	9.28	
128 4-Chlorotoluene	126	13.305	13.304	0.001	99	427865	10.0	9.25	
129 tert-Butylbenzene	119	13.653	13.652	0.001	94	1496024	10.0	9.14	
130 1,2,4-Trimethylbenzene	105	13.705	13.705	0.000	95	1219664	10.0	9.26	
131 sec-Butylbenzene	134	13.897	13.896	0.001	94	408457	10.0	9.00	
132 1,3-Dichlorobenzene	146	14.019	14.018	0.001	97	712520	10.0	9.16	
133 4-Isopropyltoluene	119	14.054	14.053	0.001	97	1687856	10.0	9.12	
134 1,4-Dichlorobenzene	146	14.123	14.123	0.000	94	1022820	10.0	9.45	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 n-Butylbenzene	91	14.489	14.488	0.001	97	1449033	10.0	9.20	
138 1,2-Dichlorobenzene	146	14.524	14.523	0.001	98	744659	10.0	9.63	
139 1,2-Dibromo-3-Chloropropan	157	15.290	15.290	0.000	92	73542	10.0	9.53	
141 1,2,4-Trichlorobenzene	180	16.074	16.056	0.018	94	572295	10.0	9.91	
142 Hexachlorobutadiene	225	16.213	16.213	0.000	96	624882	10.0	9.45	
143 Naphthalene	128	16.300	16.300	0.000	97	506931	10.0	9.85	
144 1,2,3-Trichlorobenzene	180	16.509	16.509	0.000	95	460308	10.0	10.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	19.0	
S 146 Xylenes, Total (URS)	1				0		20.0	19.1	
S 145 Trihalomethanes, Total	1				0		40.0	38.8	
S 149 1,2-Dichloroethene, Total	1				0		10.0	19.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.6	
S 150 Xylenes, Total	106				0		20.0	19.1	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main B_00018	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00035	Amount Added: 5.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7387.D

Injection Date: 29-Jun-2017 13:09:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: icv

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

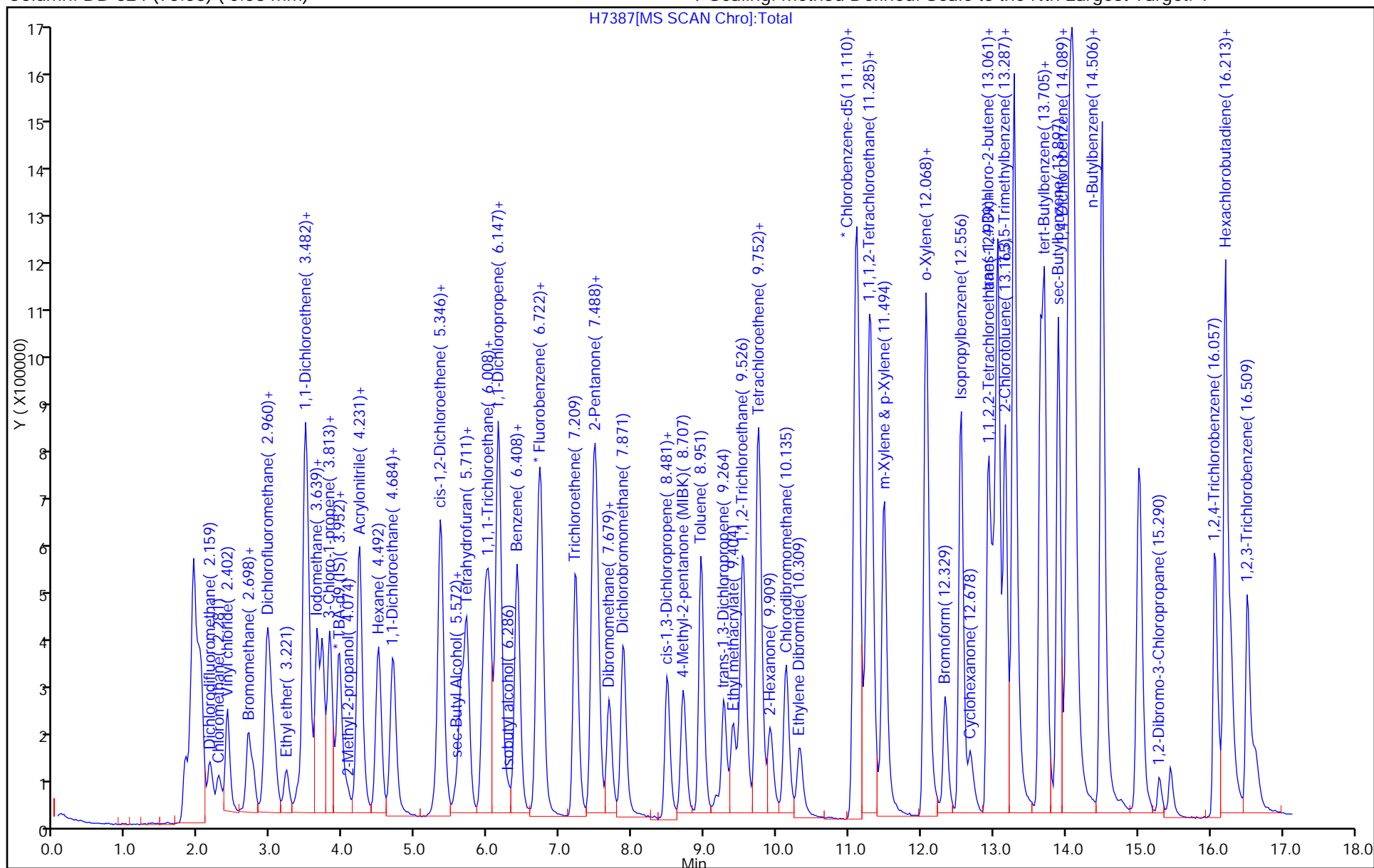
ALS Bottle#: 11

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: ICV 280-390481/17 Calibration Date: 10/09/2017 11:56
Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 04/04/2017 12:48
Lab File ID: H0346.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2		0.0035			10.0		20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0346.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 09-Oct-2017 11:56:30 ALS Bottle#: 20 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: icv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 10-Oct-2017 08:43:39 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK023

First Level Reviewer: wickhamt

Date: 10-Oct-2017 08:43:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.958	0.014	95	228910	250.0	250.0	
* 2 Fluorobenzene	96	6.723	6.727	-0.004	99	1245401	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.060	11.063	-0.003	89	371306	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.076	-0.003	96	631920	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.891	0.014	93	727180	10.0	9.76	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.309	0.014	100	310390	10.0	9.52	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.834	0.014	92	1489297	10.0	9.57	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.718	0.014	86	813909	10.0	9.49	
28 Dichlorodifluoromethane	85	2.143	2.147	-0.003	99	620070	10.0	9.33	
30 Chloromethane	50	2.265	2.251	0.014	98	311103	10.0	9.87	
32 Vinyl chloride	62	2.387	2.390	-0.003	98	390884	10.0	10.2	
35 Bromomethane	94	2.683	2.669	0.014	90	426232	10.0	10.5	
36 Chloroethane	64	2.753	2.739	0.014	99	246323	10.0	9.60	
37 Dichlorofluoromethane	67	2.927	2.913	0.014	98	975130	10.0	10.8	
38 Trichlorofluoromethane	101	2.979	2.965	0.014	99	999516	10.0	10.2	
40 Ethyl ether	59	3.205	3.209	-0.004	90	172454	10.0	9.53	
44 Acrolein	56	3.362	3.359	0.003	99	128953	100.0	231.0	
45 1,1-Dichloroethene	96	3.467	3.453	0.014	99	449855	10.0	9.81	
46 1,1,2-Trichloro-1,2,2-trif	151	3.484	3.470	0.014	97	618823	10.0	9.94	
47 Acetone	43	3.502	3.488	0.014	100	91636	40.0	38.7	
48 Iodomethane	142	3.623	3.627	-0.004	100	1089006	10.0	9.68	
50 Carbon disulfide	76	3.711	3.697	0.014	98	1606604	10.0	9.94	
53 Methyl acetate	43	3.815	3.801	0.014	95	409098	50.0	44.5	
52 3-Chloro-1-propene	41	3.798	3.801	-0.003	86	568521	10.0	9.61	
54 Methylene Chloride	84	3.937	3.923	0.014	90	372160	10.0	8.87	
55 2-Methyl-2-propanol	59	4.041	4.045	-0.004	97	105000	100.0	90.8	
57 Acrylonitrile	53	4.181	4.184	-0.003	100	247746	100.0	91.7	
58 trans-1,2-Dichloroethene	96	4.216	4.202	0.014	100	479761	10.0	10.0	
56 Methyl tert-butyl ether	73	4.216	4.202	0.014	83	616843	10.0	9.43	
59 Hexane	57	4.477	4.480	-0.003	90	662926	10.0	10.3	
60 1,1-Dichloroethane	63	4.668	4.672	-0.004	96	767218	10.0	9.70	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2-Butanone (MEK)	43	5.348	5.334	0.014	41	179724	40.0	38.7	
65 cis-1,2-Dichloroethene	96	5.330	5.334	-0.004	82	481059	10.0	9.82	
66 2,2-Dichloropropane	77	5.348	5.334	0.014	83	838543	10.0	10.2	
71 sec-Butyl Alcohol	45	5.557	5.560	-0.003	97	275201	300.0	296.3	
73 Chlorobromomethane	128	5.626	5.612	0.014	92	225242	10.0	9.61	
74 Tetrahydrofuran	42	5.679	5.682	-0.003	37	60114	20.0	19.0	
75 Chloroform	83	5.696	5.699	-0.003	93	906001	10.0	9.68	
76 1,1,1-Trichloroethane	97	5.940	5.943	-0.003	98	903987	10.0	9.98	
77 Cyclohexane	56	6.009	5.995	0.014	86	729325	10.0	9.78	
78 1,1-Dichloropropene	75	6.131	6.117	0.014	98	789294	10.0	10.1	
79 Carbon tetrachloride	117	6.149	6.135	0.014	97	892170	10.0	9.86	
80 Isobutyl alcohol	41	6.271	6.257	0.014	91	80485	250.0	249.6	
81 Benzene	78	6.393	6.379	0.014	95	1387463	10.0	10.1	
82 1,2-Dichloroethane	62	6.410	6.413	-0.003	96	326829	10.0	9.19	
84 n-Heptane	43	6.689	6.675	0.014	91	819082	10.0	10.1	
86 Trichloroethene	95	7.194	7.197	-0.003	99	618062	10.0	10.2	
88 2-Pentanone	43	7.438	7.441	-0.003	98	458872	40.0	33.4	
89 Methylcyclohexane	55	7.455	7.441	0.014	90	673866	10.0	9.76	
90 1,2-Dichloropropane	63	7.507	7.493	0.014	96	450931	10.0	9.52	
92 Dibromomethane	93	7.664	7.650	0.014	96	275534	10.0	9.19	
93 1,4-Dioxane	88	7.681	7.685	-0.004	30	28775	200.0	193.3	
94 Dichlorobromomethane	83	7.856	7.859	-0.003	99	797390	10.0	9.91	
96 2-Chloroethyl vinyl ether	63	8.465	8.451	0.014	35	3461	NC	NC	
97 cis-1,3-Dichloropropene	75	8.465	8.468	-0.003	98	686305	10.0	9.75	
98 4-Methyl-2-pentanone (MIBK)	43	8.691	8.677	0.014	95	668541	40.0	39.3	
99 Toluene	91	8.935	8.939	-0.004	99	1630829	10.0	9.86	
100 trans-1,3-Dichloropropene	75	9.249	9.252	-0.003	90	472917	10.0	8.97	
101 Ethyl methacrylate	69	9.388	9.374	0.014	85	347126	10.0	9.39	
102 1,1,2-Trichloroethane	97	9.510	9.513	-0.003	64	328038	10.0	10.0	
103 Tetrachloroethene	164	9.719	9.722	-0.003	96	569180	10.0	10.1	
104 1,3-Dichloropropane	76	9.754	9.757	-0.003	84	490471	10.0	9.64	
105 2-Hexanone	43	9.893	9.879	0.014	95	427156	40.0	41.0	
108 Chlorodibromomethane	129	10.102	10.106	-0.004	90	594577	10.0	9.69	
109 Ethylene Dibromide	107	10.294	10.297	-0.003	99	392832	10.0	9.72	
110 1-Chlorohexane	91	11.077	11.063	0.014	91	828305	10.0	9.71	
111 Chlorobenzene	112	11.112	11.116	-0.004	94	1145193	10.0	9.96	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.238	0.014	98	596048	10.0	9.88	
113 Ethylbenzene	106	11.286	11.290	-0.004	99	580228	10.0	10.1	
114 m-Xylene & p-Xylene	106	11.461	11.464	-0.003	98	760646	10.0	10.1	
115 o-Xylene	106	12.035	12.039	-0.004	96	667247	10.0	9.93	
116 Styrene	104	12.053	12.056	-0.003	94	1040689	10.0	9.82	
117 Bromoform	173	12.314	12.317	-0.003	95	327025	10.0	9.60	
118 Isopropylbenzene	105	12.540	12.526	0.014	96	2190988	10.0	9.86	
120 Cyclohexanone	55	12.662	12.666	-0.004	88	180211	400.0	381.3	
122 Bromobenzene	156	12.924	12.910	0.014	92	528748	10.0	9.77	
121 1,1,2,2-Tetrachloroethane	83	12.924	12.910	0.014	93	402796	10.0	9.14	
123 1,2,3-Trichloropropane	110	12.976	12.962	0.014	79	101745	10.0	9.64	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.997	-0.004	62	73445	10.0	9.72	
125 N-Propylbenzene	120	13.045	13.049	-0.004	99	559944	10.0	9.65	
126 2-Chlorotoluene	126	13.150	13.153	-0.003	98	446747	10.0	9.64	
127 1,3,5-Trimethylbenzene	105	13.254	13.258	-0.004	94	1677024	10.0	10.0	
128 4-Chlorotoluene	126	13.272	13.275	-0.003	98	547047	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.638	13.641	-0.003	92	1861809	10.0	9.92	
130 1,2,4-Trimethylbenzene	105	13.690	13.693	-0.003	96	1576268	10.0	9.87	
131 sec-Butylbenzene	134	13.881	13.885	-0.004	94	515778	10.0	9.97	
132 1,3-Dichlorobenzene	146	14.003	14.007	-0.004	96	827279	10.0	10.1	
133 4-Isopropyltoluene	119	14.038	14.042	-0.004	97	2111502	10.0	9.92	
134 1,4-Dichlorobenzene	146	14.108	14.094	0.014	94	1158496	10.0	9.57	
137 n-Butylbenzene	91	14.474	14.477	-0.003	98	2072328	10.0	10.2	
138 1,2-Dichlorobenzene	146	14.508	14.494	0.014	96	800001	10.0	9.56	
139 1,2-Dibromo-3-Chloropropan	157	15.275	15.278	-0.003	89	73558	10.0	9.61	
141 1,2,4-Trichlorobenzene	180	16.058	16.044	0.014	95	554812	10.0	9.92	
142 Hexachlorobutadiene	225	16.198	16.201	-0.003	98	596251	10.0	10.1	
143 Naphthalene	128	16.267	16.271	-0.004	97	541350	10.0	9.52	
144 1,2,3-Trichlorobenzene	180	16.494	16.497	-0.003	94	424980	10.0	10.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	19.8	
S 149 1,2-Dichloroethene, Total	1				0		10.0	19.8	
S 150 Xylenes, Total	106				0		20.0	20.0	
S 146 Xylenes, Total (URS)	1				0		20.0	20.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.7	
S 145 Trihalomethanes, Total	1				0		40.0	38.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main B_00019	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00037	Amount Added: 5.00	Units: uL
MV-SS 2-Cleve_00039	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0346.D

Injection Date: 09-Oct-2017 11:56:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: icv

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

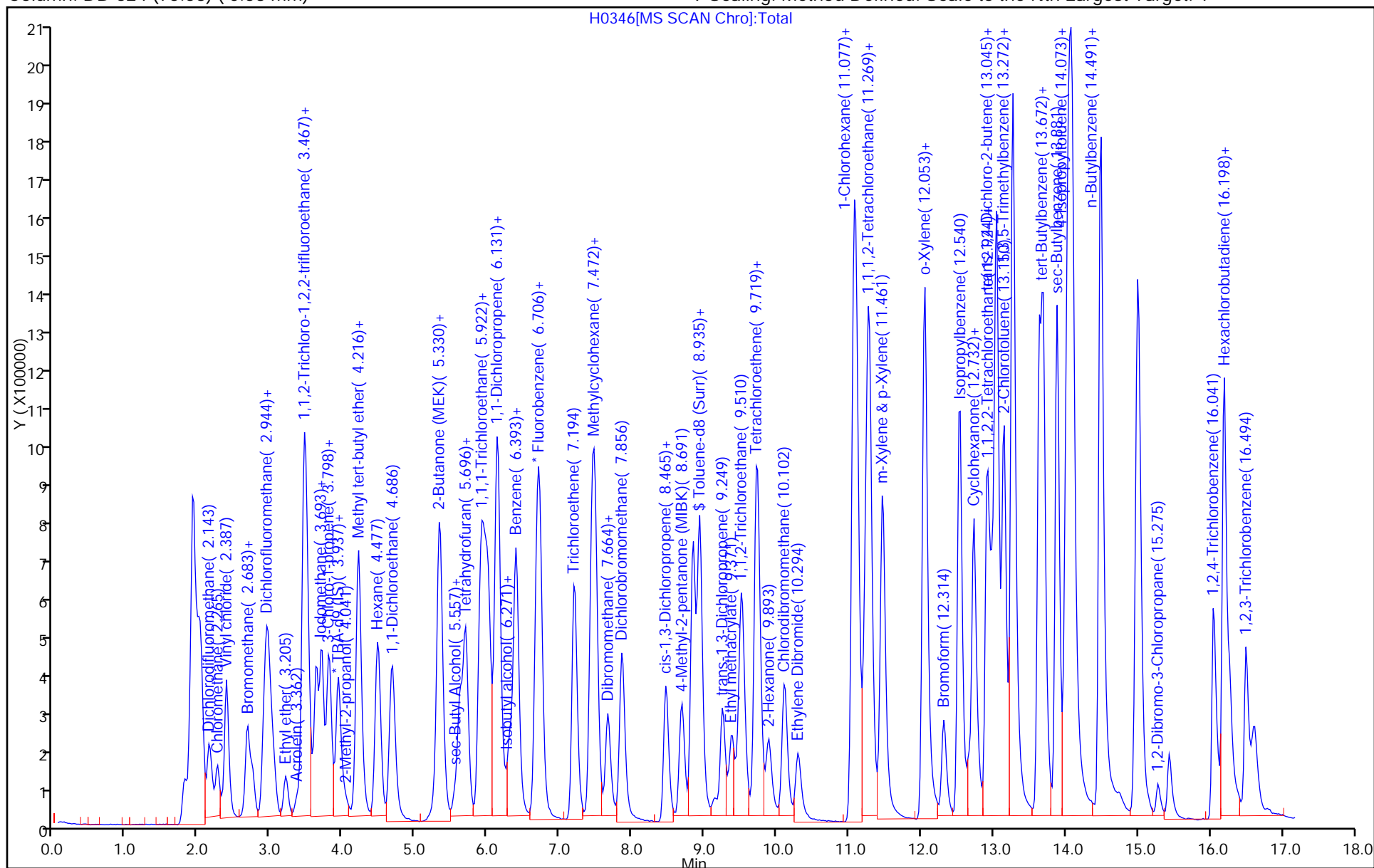
ALS Bottle#: 20

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: ICV 280-390481/17 Calibration Date: 10/09/2017 11:56
Instrument ID: VMS_H Calib Start Date: 09/22/2017 13:48
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 09/22/2017 15:58
Lab File ID: H0346.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acrolein	Lin1		0.0129		231	100	131.0*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0346.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 09-Oct-2017 11:56:30 ALS Bottle#: 20 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: icv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 10-Oct-2017 08:43:39 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK023

First Level Reviewer: wickhamt

Date: 10-Oct-2017 08:43:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.958	0.014	95	228910	250.0	250.0	
* 2 Fluorobenzene	96	6.723	6.727	-0.004	99	1245401	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.060	11.063	-0.003	89	371306	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.076	-0.003	96	631920	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.891	0.014	93	727180	10.0	9.76	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.309	0.014	100	310390	10.0	9.52	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.834	0.014	92	1489297	10.0	9.57	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.718	0.014	86	813909	10.0	9.49	
28 Dichlorodifluoromethane	85	2.143	2.147	-0.003	99	620070	10.0	9.33	
30 Chloromethane	50	2.265	2.251	0.014	98	311103	10.0	9.87	
32 Vinyl chloride	62	2.387	2.390	-0.003	98	390884	10.0	10.2	
35 Bromomethane	94	2.683	2.669	0.014	90	426232	10.0	10.5	
36 Chloroethane	64	2.753	2.739	0.014	99	246323	10.0	9.60	
37 Dichlorofluoromethane	67	2.927	2.913	0.014	98	975130	10.0	10.8	
38 Trichlorofluoromethane	101	2.979	2.965	0.014	99	999516	10.0	10.2	
40 Ethyl ether	59	3.205	3.209	-0.004	90	172454	10.0	9.53	
44 Acrolein	56	3.362	3.359	0.003	99	128953	100.0	231.0	
45 1,1-Dichloroethene	96	3.467	3.453	0.014	99	449855	10.0	9.81	
46 1,1,2-Trichloro-1,2,2-trif	151	3.484	3.470	0.014	97	618823	10.0	9.94	
47 Acetone	43	3.502	3.488	0.014	100	91636	40.0	38.7	
48 Iodomethane	142	3.623	3.627	-0.004	100	1089006	10.0	9.68	
50 Carbon disulfide	76	3.711	3.697	0.014	98	1606604	10.0	9.94	
53 Methyl acetate	43	3.815	3.801	0.014	95	409098	50.0	44.5	
52 3-Chloro-1-propene	41	3.798	3.801	-0.003	86	568521	10.0	9.61	
54 Methylene Chloride	84	3.937	3.923	0.014	90	372160	10.0	8.87	
55 2-Methyl-2-propanol	59	4.041	4.045	-0.004	97	105000	100.0	90.8	
57 Acrylonitrile	53	4.181	4.184	-0.003	100	247746	100.0	91.7	
58 trans-1,2-Dichloroethene	96	4.216	4.202	0.014	100	479761	10.0	10.0	
56 Methyl tert-butyl ether	73	4.216	4.202	0.014	83	616843	10.0	9.43	
59 Hexane	57	4.477	4.480	-0.003	90	662926	10.0	10.3	
60 1,1-Dichloroethane	63	4.668	4.672	-0.004	96	767218	10.0	9.70	

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65 cis-1,2-Dichloroethene	96	5.330	5.334	-0.004	82	481059	10.0	9.82	
66 2,2-Dichloropropane	77	5.348	5.334	0.014	83	838543	10.0	10.2	
71 sec-Butyl Alcohol	45	5.557	5.560	-0.003	97	275201	300.0	296.3	
73 Chlorobromomethane	128	5.626	5.612	0.014	92	225242	10.0	9.61	
74 Tetrahydrofuran	42	5.679	5.682	-0.003	37	60114	20.0	19.0	
75 Chloroform	83	5.696	5.699	-0.003	93	906001	10.0	9.68	
76 1,1,1-Trichloroethane	97	5.940	5.943	-0.003	98	903987	10.0	9.98	
77 Cyclohexane	56	6.009	5.995	0.014	86	729325	10.0	9.78	
78 1,1-Dichloropropene	75	6.131	6.117	0.014	98	789294	10.0	10.1	
79 Carbon tetrachloride	117	6.149	6.135	0.014	97	892170	10.0	9.86	
80 Isobutyl alcohol	41	6.271	6.257	0.014	91	80485	250.0	249.6	
81 Benzene	78	6.393	6.379	0.014	95	1387463	10.0	10.1	
82 1,2-Dichloroethane	62	6.410	6.413	-0.003	96	326829	10.0	9.19	
84 n-Heptane	43	6.689	6.675	0.014	91	819082	10.0	10.1	
86 Trichloroethene	95	7.194	7.197	-0.003	99	618062	10.0	10.2	
88 2-Pentanone	43	7.438	7.441	-0.003	98	458872	40.0	33.4	
89 Methylcyclohexane	55	7.455	7.441	0.014	90	673866	10.0	9.76	
90 1,2-Dichloropropane	63	7.507	7.493	0.014	96	450931	10.0	9.52	
92 Dibromomethane	93	7.664	7.650	0.014	96	275534	10.0	9.19	
93 1,4-Dioxane	88	7.681	7.685	-0.004	30	28775	200.0	193.3	
94 Dichlorobromomethane	83	7.856	7.859	-0.003	99	797390	10.0	9.91	
96 2-Chloroethyl vinyl ether	63	8.465	8.451	0.014	35	3461	NC	NC	
97 cis-1,3-Dichloropropene	75	8.465	8.468	-0.003	98	686305	10.0	9.75	
98 4-Methyl-2-pentanone (MIBK)	43	8.691	8.677	0.014	95	668541	40.0	39.3	
99 Toluene	91	8.935	8.939	-0.004	99	1630829	10.0	9.86	
100 trans-1,3-Dichloropropene	75	9.249	9.252	-0.003	90	472917	10.0	8.97	
101 Ethyl methacrylate	69	9.388	9.374	0.014	85	347126	10.0	9.39	
102 1,1,2-Trichloroethane	97	9.510	9.513	-0.003	64	328038	10.0	10.0	
103 Tetrachloroethene	164	9.719	9.722	-0.003	96	569180	10.0	10.1	
104 1,3-Dichloropropane	76	9.754	9.757	-0.003	84	490471	10.0	9.64	
105 2-Hexanone	43	9.893	9.879	0.014	95	427156	40.0	41.0	
108 Chlorodibromomethane	129	10.102	10.106	-0.004	90	594577	10.0	9.69	
109 Ethylene Dibromide	107	10.294	10.297	-0.003	99	392832	10.0	9.72	
110 1-Chlorohexane	91	11.077	11.063	0.014	91	828305	10.0	9.71	
111 Chlorobenzene	112	11.112	11.116	-0.004	94	1145193	10.0	9.96	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.238	0.014	98	596048	10.0	9.88	
113 Ethylbenzene	106	11.286	11.290	-0.004	99	580228	10.0	10.1	
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118 Isopropylbenzene	105	12.540	12.526	0.014	96	2190988	10.0	9.86	
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122 Bromobenzene	156	12.924	12.910	0.014	92	528748	10.0	9.77	
121 1,1,2,2-Tetrachloroethane	83	12.924	12.910	0.014	93	402796	10.0	9.14	
123 1,2,3-Trichloropropane	110	12.976	12.962	0.014	79	101745	10.0	9.64	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.997	-0.004	62	73445	10.0	9.72	
125 N-Propylbenzene	120	13.045	13.049	-0.004	99	559944	10.0	9.65	
126 2-Chlorotoluene	126	13.150	13.153	-0.003	98	446747	10.0	9.64	
127 1,3,5-Trimethylbenzene	105	13.254	13.258	-0.004	94	1677024	10.0	10.0	
128 4-Chlorotoluene	126	13.272	13.275	-0.003	98	547047	10.0	10.4	

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131 sec-Butylbenzene	134	13.881	13.885	-0.004	94	515778	10.0	9.97	
132 1,3-Dichlorobenzene	146	14.003	14.007	-0.004	96	827279	10.0	10.1	
133 4-Isopropyltoluene	119	14.038	14.042	-0.004	97	2111502	10.0	9.92	
134 1,4-Dichlorobenzene	146	14.108	14.094	0.014	94	1158496	10.0	9.57	
137 n-Butylbenzene	91	14.474	14.477	-0.003	98	2072328	10.0	10.2	
138 1,2-Dichlorobenzene	146	14.508	14.494	0.014	96	800001	10.0	9.56	
139 1,2-Dibromo-3-Chloropropan	157	15.275	15.278	-0.003	89	73558	10.0	9.61	
141 1,2,4-Trichlorobenzene	180	16.058	16.044	0.014	95	554812	10.0	9.92	
142 Hexachlorobutadiene	225	16.198	16.201	-0.003	98	596251	10.0	10.1	
143 Naphthalene	128	16.267	16.271	-0.004	97	541350	10.0	9.52	
144 1,2,3-Trichlorobenzene	180	16.494	16.497	-0.003	94	424980	10.0	10.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	19.8	
S 149 1,2-Dichloroethene, Total	1				0		10.0	19.8	
S 150 Xylenes, Total	106				0		20.0	20.0	
S 146 Xylenes, Total (URS)	1				0		20.0	20.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.7	
S 145 Trihalomethanes, Total	1				0		40.0	38.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main B_00019	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00037	Amount Added: 5.00	Units: uL
MV-SS 2-Cleve_00039	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0346.D

Injection Date: 09-Oct-2017 11:56:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: icv

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

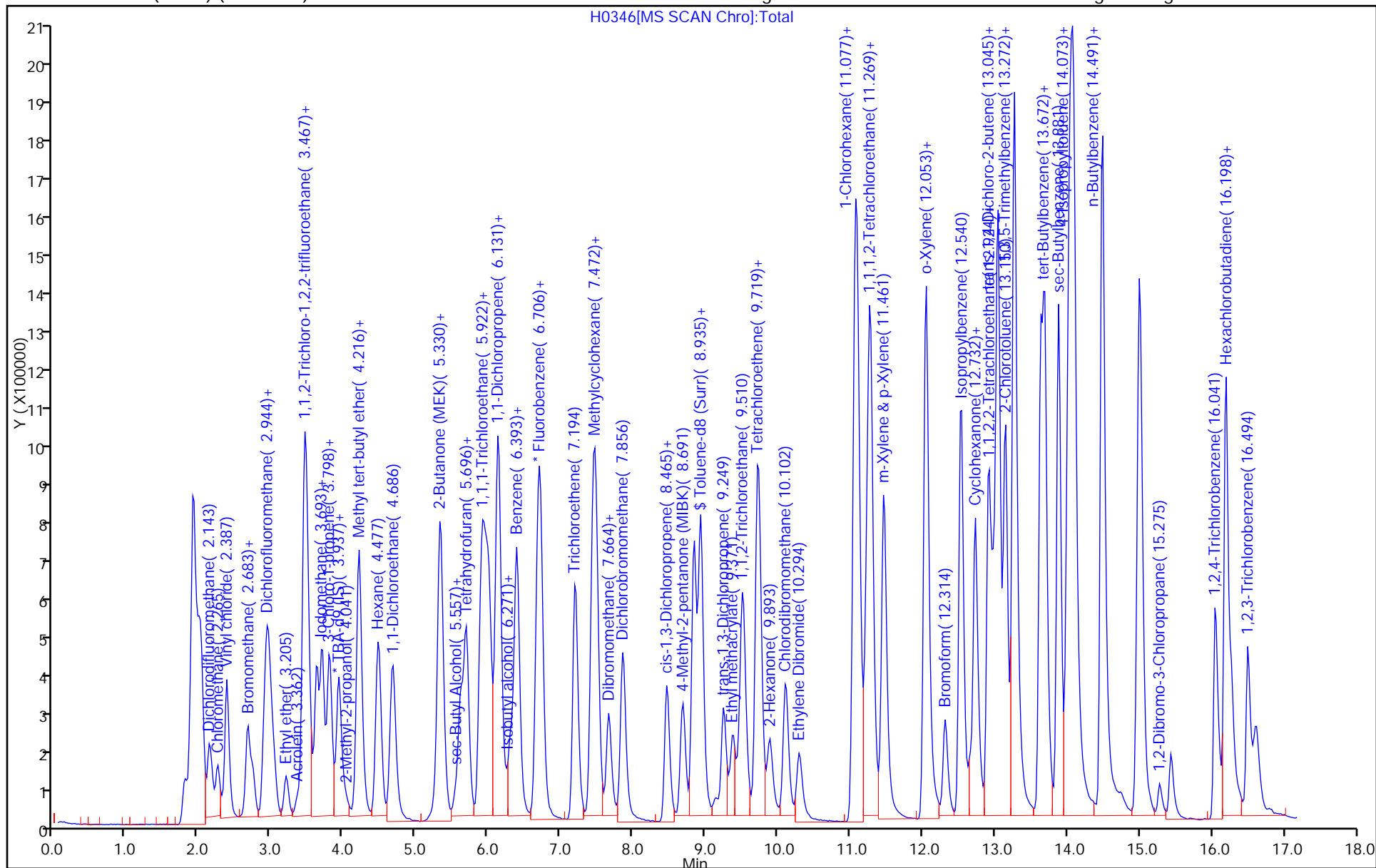
ALS Bottle#: 20

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: ICV 280-390481/17 Calibration Date: 10/09/2017 11:56

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0346.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.6667	0.6224		9.33	10.0	-6.7	20.0
Chloromethane	Ave	0.3163	0.3123	0.1000	9.87	10.0	-1.3	20.0
Vinyl chloride	Ave	0.3861	0.3923		10.2	10.0	1.6	20.0
Bromomethane	Ave	0.4060	0.4278		10.5	10.0	5.4	20.0
Chloroethane	Ave	0.2575	0.2472		9.60	10.0	-4.0	20.0
Dichlorofluoromethane	Ave	0.9051	0.9787		10.8	10.0	8.1	20.0
Trichlorofluoromethane	Ave	0.9791	1.003		10.2	10.0	2.5	20.0
Ethyl ether	Ave	0.1817	0.1731		9.53	10.0	-4.7	20.0
1,1-Dichloroethene	Ave	0.4603	0.4515		9.81	10.0	-1.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.6250	0.6211		9.94	10.0	-0.6	20.0
Acetone	Lin2		0.0230		38.7	40.0	-3.2	20.0
Iodomethane	Ave	1.129	1.093		9.68	10.0	-3.2	20.0
Carbon disulfide	Ave	1.622	1.613		9.94	10.0	-0.6	20.0
3-Chloro-1-propene	Ave	0.5935	0.5706		9.61	10.0	-3.9	20.0
Methyl acetate	Ave	0.0923	0.0821		44.5	50.0	-11.0	20.0
Methylene Chloride	Ave	0.4210	0.3735		8.87	10.0	-11.3	20.0
t-Butyl alcohol	Ave	1.262	1.147		90.8	100	-9.2	20.0
Acrylonitrile	Ave	0.0271	0.0249		91.7	100	-8.3	20.0
Methyl tert-butyl ether	Ave	0.6568	0.6191		9.43	10.0	-5.7	20.0
trans-1,2-Dichloroethene	Ave	0.4810	0.4815		10.0	10.0	0.1	20.0
Hexane	Ave	2.173	2.232		10.3	10.0	2.7	20.0
1,1-Dichloroethane	Ave	0.7941	0.7701	0.1000	9.70	10.0	-3.0	20.0
cis-1,2-Dichloroethene	Ave	0.4915	0.4828		9.82	10.0	-1.8	20.0
2,2-Dichloropropane	Lin1		0.8416		10.2	10.0	2.1	20.0
2-Butanone (MEK)	Ave	0.0466	0.0451		38.7	40.0	-3.3	20.0
sec-Butyl Alcohol	Ave	1.014	1.002		296	300	-1.2	20.0
Chlorobromomethane	Ave	0.2351	0.2261		9.61	10.0	-3.9	20.0
Tetrahydrofuran	Ave	0.0317	0.0302		19.0	20.0	-4.9	20.0
Chloroform	Ave	0.9395	0.9094		9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.9094	0.9073		9.98	10.0	-0.2	20.0
Cyclohexane	Ave	0.7486	0.7320		9.78	10.0	-2.2	20.0
1,1-Dichloropropene	Ave	0.7844	0.7922		10.1	10.0	1.0	20.0
Carbon tetrachloride	Ave	0.9085	0.8955		9.86	10.0	-1.4	20.0
Isobutyl alcohol	Ave	0.3522	0.3516		250	250	-0.2	20.0
Benzene	Ave	1.380	1.393		10.1	10.0	0.9	20.0
1,2-Dichloroethane	Ave	0.3570	0.3280		9.19	10.0	-8.1	20.0
Trichloroethene	Ave	0.6082	0.6203		10.2	10.0	2.0	20.0
2-Pentanone	Ave	0.1380	0.1151		33.4	40.0	-16.5	20.0
Methylcyclohexane	Ave	0.6932	0.6764		9.76	10.0	-2.4	20.0
1,2-Dichloropropane	Ave	0.4752	0.4526		9.52	10.0	-4.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: ICV 280-390481/17 Calibration Date: 10/09/2017 11:56

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0346.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.3008	0.2766		9.19	10.0	-8.1	20.0
1,4-Dioxane	Lin2		0.0014		193	200	-3.4	20.0
Dichlorobromomethane	Ave	0.8077	0.8003		9.91	10.0	-0.9	20.0
cis-1,3-Dichloropropene	Ave	2.371	2.310		9.75	10.0	-2.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1709	0.1678		39.3	40.0	-1.9	20.0
Toluene	Ave	1.659	1.637		9.86	10.0	-1.4	20.0
trans-1,3-Dichloropropene	Ave	0.5293	0.4747		8.97	10.0	-10.3	20.0
Ethyl methacrylate	Ave	1.245	1.169		9.39	10.0	-6.1	20.0
1,1,2-Trichloroethane	Lin2		0.3293		10.0	10.0	-0.0	20.0
Tetrachloroethene	Ave	1.901	1.916		10.1	10.0	0.8	20.0
1,3-Dichloropropane	Ave	1.713	1.651		9.64	10.0	-3.6	20.0
2-Hexanone	Ave	0.3508	0.3595		41.0	40.0	2.5	20.0
Chlorodibromomethane	Ave	2.065	2.002		9.69	10.0	-3.1	20.0
1,2-Dibromoethane	Ave	1.360	1.322		9.72	10.0	-2.8	20.0
1-Chlorohexane	Ave	2.871	2.788		9.71	10.0	-2.9	20.0
Chlorobenzene	Ave	3.872	3.855	0.3000	9.96	10.0	-0.4	20.0
1,1,1,2-Tetrachloroethane	Ave	2.031	2.007		9.88	10.0	-1.2	20.0
Ethylbenzene	Ave	1.933	1.953		10.1	10.0	1.1	20.0
m-Xylene & p-Xylene	Ave	2.542	2.561		10.1	10.0	0.7	20.0
o-Xylene	Ave	2.261	2.246		9.93	10.0	-0.7	20.0
Styrene	Ave	3.566	3.503		9.82	10.0	-1.8	20.0
Bromoform	Ave	1.147	1.101	0.1000	9.60	10.0	-4.0	20.0
Isopropylbenzene	Ave	4.397	4.334		9.86	10.0	-1.4	20.0
Cyclohexanone	Ave	0.0159	0.0152		381	400	-4.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.8713	0.7968	0.3000	9.14	10.0	-8.6	20.0
Bromobenzene	Ave	1.071	1.046		9.77	10.0	-2.3	20.0
1,2,3-Trichloropropane	Lin2		0.2013		9.64	10.0	-3.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1495	0.1453		9.72	10.0	-2.8	20.0
N-Propylbenzene	Ave	1.148	1.108		9.65	10.0	-3.5	20.0
2-Chlorotoluene	Ave	0.9171	0.8837		9.64	10.0	-3.6	20.0
1,3,5-Trimethylbenzene	Ave	3.315	3.317		10.0	10.0	0.0	20.0
4-Chlorotoluene	Ave	1.043	1.082		10.4	10.0	3.8	20.0
tert-Butylbenzene	Ave	3.713	3.683		9.92	10.0	-0.8	20.0
1,2,4-Trimethylbenzene	Ave	3.159	3.118		9.87	10.0	-1.3	20.0
sec-Butylbenzene	Ave	1.023	1.020		9.97	10.0	-0.3	20.0
1,3-Dichlorobenzene	Ave	1.628	1.636		10.1	10.0	0.5	20.0
4-Isopropyltoluene	Ave	4.212	4.177		9.92	10.0	-0.8	20.0
1,4-Dichlorobenzene	Ave	2.394	2.292		9.57	10.0	-4.3	20.0
n-Butylbenzene	Ave	4.009	4.099		10.2	10.0	2.2	20.0
1,2-Dichlorobenzene	Ave	1.655	1.582		9.56	10.0	-4.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1514	0.1455		9.61	10.0	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab Sample ID: ICV 280-390481/17 Calibration Date: 10/09/2017 11:56
 Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12
 Lab File ID: H0346.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.106	1.097		9.92	10.0	-0.8	20.0
Hexachlorobutadiene	Ave	1.171	1.179		10.1	10.0	0.7	20.0
Naphthalene	Ave	1.125	1.071		9.52	10.0	-4.8	20.0
1,2,3-Trichlorobenzene	Ave	0.8175	0.8407		10.3	10.0	2.8	20.0
Dibromofluoromethane (Surr)	Ave	0.7477	0.7299		9.76	10.0	-2.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3273	0.3115		9.52	10.0	-4.8	20.0
Toluene-d8 (Surr)	Ave	5.238	5.014		9.57	10.0	-4.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.697	1.610		9.49	10.0	-5.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0346.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 09-Oct-2017 11:56:30 ALS Bottle#: 20 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: icv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 10-Oct-2017 08:43:39 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK023

First Level Reviewer: wickhamt

Date: 10-Oct-2017 08:43:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.958	0.014	95	228910	250.0	250.0	
* 2 Fluorobenzene	96	6.723	6.727	-0.004	99	1245401	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.060	11.063	-0.003	89	371306	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.076	-0.003	96	631920	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.891	0.014	93	727180	10.0	9.76	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.309	0.014	100	310390	10.0	9.52	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.834	0.014	92	1489297	10.0	9.57	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.718	0.014	86	813909	10.0	9.49	
28 Dichlorodifluoromethane	85	2.143	2.147	-0.003	99	620070	10.0	9.33	
30 Chloromethane	50	2.265	2.251	0.014	98	311103	10.0	9.87	
32 Vinyl chloride	62	2.387	2.390	-0.003	98	390884	10.0	10.2	
35 Bromomethane	94	2.683	2.669	0.014	90	426232	10.0	10.5	
36 Chloroethane	64	2.753	2.739	0.014	99	246323	10.0	9.60	
37 Dichlorofluoromethane	67	2.927	2.913	0.014	98	975130	10.0	10.8	
38 Trichlorofluoromethane	101	2.979	2.965	0.014	99	999516	10.0	10.2	
40 Ethyl ether	59	3.205	3.209	-0.004	90	172454	10.0	9.53	
44 Acrolein	56	3.362	3.359	0.003	99	128953	100.0	231.0	
45 1,1-Dichloroethene	96	3.467	3.453	0.014	99	449855	10.0	9.81	
46 1,1,2-Trichloro-1,2,2-trif	151	3.484	3.470	0.014	97	618823	10.0	9.94	
47 Acetone	43	3.502	3.488	0.014	100	91636	40.0	38.7	
48 Iodomethane	142	3.623	3.627	-0.004	100	1089006	10.0	9.68	
50 Carbon disulfide	76	3.711	3.697	0.014	98	1606604	10.0	9.94	
53 Methyl acetate	43	3.815	3.801	0.014	95	409098	50.0	44.5	
52 3-Chloro-1-propene	41	3.798	3.801	-0.003	86	568521	10.0	9.61	
54 Methylene Chloride	84	3.937	3.923	0.014	90	372160	10.0	8.87	
55 2-Methyl-2-propanol	59	4.041	4.045	-0.004	97	105000	100.0	90.8	
57 Acrylonitrile	53	4.181	4.184	-0.003	100	247746	100.0	91.7	
58 trans-1,2-Dichloroethene	96	4.216	4.202	0.014	100	479761	10.0	10.0	
56 Methyl tert-butyl ether	73	4.216	4.202	0.014	83	616843	10.0	9.43	
59 Hexane	57	4.477	4.480	-0.003	90	662926	10.0	10.3	
60 1,1-Dichloroethane	63	4.668	4.672	-0.004	96	767218	10.0	9.70	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2-Butanone (MEK)	43	5.348	5.334	0.014	41	179724	40.0	38.7	
65 cis-1,2-Dichloroethene	96	5.330	5.334	-0.004	82	481059	10.0	9.82	
66 2,2-Dichloropropane	77	5.348	5.334	0.014	83	838543	10.0	10.2	
71 sec-Butyl Alcohol	45	5.557	5.560	-0.003	97	275201	300.0	296.3	
73 Chlorobromomethane	128	5.626	5.612	0.014	92	225242	10.0	9.61	
74 Tetrahydrofuran	42	5.679	5.682	-0.003	37	60114	20.0	19.0	
75 Chloroform	83	5.696	5.699	-0.003	93	906001	10.0	9.68	
76 1,1,1-Trichloroethane	97	5.940	5.943	-0.003	98	903987	10.0	9.98	
77 Cyclohexane	56	6.009	5.995	0.014	86	729325	10.0	9.78	
78 1,1-Dichloropropene	75	6.131	6.117	0.014	98	789294	10.0	10.1	
79 Carbon tetrachloride	117	6.149	6.135	0.014	97	892170	10.0	9.86	
80 Isobutyl alcohol	41	6.271	6.257	0.014	91	80485	250.0	249.6	
81 Benzene	78	6.393	6.379	0.014	95	1387463	10.0	10.1	
82 1,2-Dichloroethane	62	6.410	6.413	-0.003	96	326829	10.0	9.19	
84 n-Heptane	43	6.689	6.675	0.014	91	819082	10.0	10.1	
86 Trichloroethene	95	7.194	7.197	-0.003	99	618062	10.0	10.2	
88 2-Pentanone	43	7.438	7.441	-0.003	98	458872	40.0	33.4	
89 Methylcyclohexane	55	7.455	7.441	0.014	90	673866	10.0	9.76	
90 1,2-Dichloropropane	63	7.507	7.493	0.014	96	450931	10.0	9.52	
92 Dibromomethane	93	7.664	7.650	0.014	96	275534	10.0	9.19	
93 1,4-Dioxane	88	7.681	7.685	-0.004	30	28775	200.0	193.3	
94 Dichlorobromomethane	83	7.856	7.859	-0.003	99	797390	10.0	9.91	
96 2-Chloroethyl vinyl ether	63	8.465	8.451	0.014	35	3461	NC	NC	
97 cis-1,3-Dichloropropene	75	8.465	8.468	-0.003	98	686305	10.0	9.75	
98 4-Methyl-2-pentanone (MIBK)	43	8.691	8.677	0.014	95	668541	40.0	39.3	
99 Toluene	91	8.935	8.939	-0.004	99	1630829	10.0	9.86	
100 trans-1,3-Dichloropropene	75	9.249	9.252	-0.003	90	472917	10.0	8.97	
101 Ethyl methacrylate	69	9.388	9.374	0.014	85	347126	10.0	9.39	
102 1,1,2-Trichloroethane	97	9.510	9.513	-0.003	64	328038	10.0	10.0	
103 Tetrachloroethene	164	9.719	9.722	-0.003	96	569180	10.0	10.1	
104 1,3-Dichloropropane	76	9.754	9.757	-0.003	84	490471	10.0	9.64	
105 2-Hexanone	43	9.893	9.879	0.014	95	427156	40.0	41.0	
108 Chlorodibromomethane	129	10.102	10.106	-0.004	90	594577	10.0	9.69	
109 Ethylene Dibromide	107	10.294	10.297	-0.003	99	392832	10.0	9.72	
110 1-Chlorohexane	91	11.077	11.063	0.014	91	828305	10.0	9.71	
111 Chlorobenzene	112	11.112	11.116	-0.004	94	1145193	10.0	9.96	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.238	0.014	98	596048	10.0	9.88	
113 Ethylbenzene	106	11.286	11.290	-0.004	99	580228	10.0	10.1	
114 m-Xylene & p-Xylene	106	11.461	11.464	-0.003	98	760646	10.0	10.1	
115 o-Xylene	106	12.035	12.039	-0.004	96	667247	10.0	9.93	
116 Styrene	104	12.053	12.056	-0.003	94	1040689	10.0	9.82	
117 Bromoform	173	12.314	12.317	-0.003	95	327025	10.0	9.60	
118 Isopropylbenzene	105	12.540	12.526	0.014	96	2190988	10.0	9.86	
120 Cyclohexanone	55	12.662	12.666	-0.004	88	180211	400.0	381.3	
122 Bromobenzene	156	12.924	12.910	0.014	92	528748	10.0	9.77	
121 1,1,2,2-Tetrachloroethane	83	12.924	12.910	0.014	93	402796	10.0	9.14	
123 1,2,3-Trichloropropane	110	12.976	12.962	0.014	79	101745	10.0	9.64	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.997	-0.004	62	73445	10.0	9.72	
125 N-Propylbenzene	120	13.045	13.049	-0.004	99	559944	10.0	9.65	
126 2-Chlorotoluene	126	13.150	13.153	-0.003	98	446747	10.0	9.64	
127 1,3,5-Trimethylbenzene	105	13.254	13.258	-0.004	94	1677024	10.0	10.0	
128 4-Chlorotoluene	126	13.272	13.275	-0.003	98	547047	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.638	13.641	-0.003	92	1861809	10.0	9.92	
130 1,2,4-Trimethylbenzene	105	13.690	13.693	-0.003	96	1576268	10.0	9.87	
131 sec-Butylbenzene	134	13.881	13.885	-0.004	94	515778	10.0	9.97	
132 1,3-Dichlorobenzene	146	14.003	14.007	-0.004	96	827279	10.0	10.1	
133 4-Isopropyltoluene	119	14.038	14.042	-0.004	97	2111502	10.0	9.92	
134 1,4-Dichlorobenzene	146	14.108	14.094	0.014	94	1158496	10.0	9.57	
137 n-Butylbenzene	91	14.474	14.477	-0.003	98	2072328	10.0	10.2	
138 1,2-Dichlorobenzene	146	14.508	14.494	0.014	96	800001	10.0	9.56	
139 1,2-Dibromo-3-Chloropropan	157	15.275	15.278	-0.003	89	73558	10.0	9.61	
141 1,2,4-Trichlorobenzene	180	16.058	16.044	0.014	95	554812	10.0	9.92	
142 Hexachlorobutadiene	225	16.198	16.201	-0.003	98	596251	10.0	10.1	
143 Naphthalene	128	16.267	16.271	-0.004	97	541350	10.0	9.52	
144 1,2,3-Trichlorobenzene	180	16.494	16.497	-0.003	94	424980	10.0	10.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	19.8	
S 149 1,2-Dichloroethene, Total	1				0		10.0	19.8	
S 150 Xylenes, Total	106				0		20.0	20.0	
S 146 Xylenes, Total (URS)	1				0		20.0	20.0	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.7	
S 145 Trihalomethanes, Total	1				0		40.0	38.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-Main B_00019	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00037	Amount Added: 5.00	Units: uL
MV-SS 2-Cleve_00039	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00086	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0346.D

Injection Date: 09-Oct-2017 11:56:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: icv

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

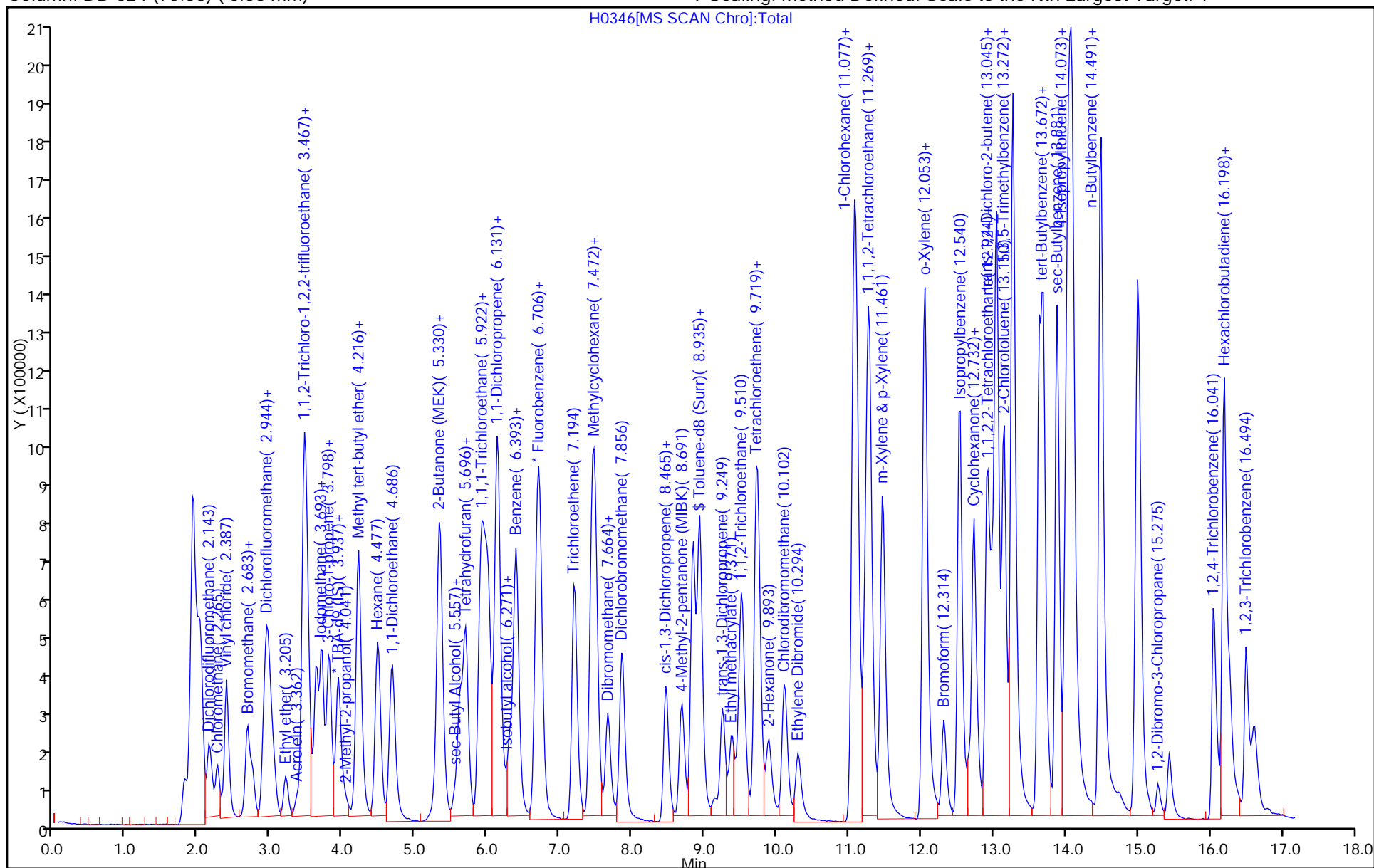
ALS Bottle#: 20

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: CCV 280-391324/2 Calibration Date: 10/15/2017 09:20
Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 04/04/2017 12:48
Lab File ID: H0628.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2		0.0031			10.0		20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0628.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 15-Oct-2017 09:20:30 ALS Bottle#: 11 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: MOANM Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:11:33 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 16:53:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.969	0.000	95	267325	250.0	250.0	
* 2 Fluorobenzene	96	6.721	6.721	0.000	99	1288821	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.057	11.057	0.000	88	400764	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.070	14.070	0.000	96	728395	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.885	5.885	0.000	93	838793	10.3	10.9	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.320	0.000	99	361041	10.3	10.7	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.845	0.000	92	1771311	10.3	10.5	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.729	0.000	86	965297	10.3	9.76	
28 Dichlorodifluoromethane	85	2.158	2.158	0.000	98	657191	10.0	9.56	
30 Chloromethane	50	2.262	2.262	0.000	98	304094	10.0	9.33	
32 Vinyl chloride	62	2.384	2.384	0.000	98	362473	10.0	9.11	
35 Bromomethane	94	2.680	2.680	0.000	90	396512	10.0	9.47	
36 Chloroethane	64	2.750	2.750	0.000	98	242576	10.0	9.14	
37 Dichlorofluoromethane	67	2.924	2.924	0.000	97	958663	10.0	10.3	
38 Trichlorofluoromethane	101	2.976	2.976	0.000	99	1006272	10.0	9.97	
40 Ethyl ether	59	3.203	3.203	0.000	91	195480	10.0	10.4	
45 1,1-Dichloroethene	96	3.464	3.464	0.000	98	506819	10.0	10.7	
46 1,1,2-Trichloro-1,2,2-trif	151	3.481	3.481	0.000	96	700202	10.0	10.9	
47 Acetone	43	3.499	3.499	0.000	100	109004	40.0	45.0	
48 Iodomethane	142	3.621	3.621	0.000	100	1223909	10.0	10.5	
50 Carbon disulfide	76	3.708	3.708	0.000	98	1809094	10.0	10.8	
52 3-Chloro-1-propene	41	3.795	3.795	0.000	91	645272	10.0	10.5	
53 Methyl acetate	43	3.812	3.812	0.000	96	509465	50.0	53.5	
54 Methylene Chloride	84	3.934	3.934	0.000	90	430349	10.0	9.91	
55 2-Methyl-2-propanol	59	4.056	4.056	0.000	92	124318	100.0	92.1	
57 Acrylonitrile	53	4.178	4.178	0.000	99	286139	100.0	102.3	
56 Methyl tert-butyl ether	73	4.213	4.213	0.000	86	706700	10.0	10.4	
58 trans-1,2-Dichloroethene	96	4.213	4.213	0.000	100	535512	10.0	10.8	
59 Hexane	57	4.474	4.474	0.000	90	724527	10.0	10.4	
60 1,1-Dichloroethane	63	4.665	4.665	0.000	95	859789	10.0	10.5	
61 Vinyl acetate	43	4.700	4.700	0.000	96	823076	20.0	23.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.327	5.327	0.000	82	542898	10.0	10.7	
67 2-Butanone (MEK)	43	5.345	5.345	0.000	42	202874	40.0	42.2	
66 2,2-Dichloropropane	77	5.345	5.345	0.000	83	965147	10.0	11.5	
71 sec-Butyl Alcohol	45	5.554	5.554	0.000	97	306276	300.0	282.4	
73 Chlorobromomethane	128	5.623	5.623	0.000	92	263792	10.0	10.9	
74 Tetrahydrofuran	42	5.676	5.676	0.000	91	71622	20.0	21.9	
75 Chloroform	83	5.693	5.693	0.000	93	1019133	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.937	5.937	0.000	98	1001907	10.0	10.7	
77 Cyclohexane	56	6.007	6.007	0.000	86	817535	10.0	10.6	
78 1,1-Dichloropropene	75	6.128	6.128	0.000	98	847054	10.0	10.5	
79 Carbon tetrachloride	117	6.146	6.146	0.000	97	1000721	10.0	10.7	
80 Isobutyl alcohol	41	6.268	6.268	0.000	92	88107	250.0	234.0	
81 Benzene	78	6.390	6.390	0.000	95	1548970	10.0	10.9	
82 1,2-Dichloroethane	62	6.407	6.407	0.000	96	378491	10.0	10.3	
84 n-Heptane	43	6.686	6.686	0.000	91	905239	10.0	10.8	
86 Trichloroethene	95	7.191	7.191	0.000	98	689318	10.0	11.0	
88 2-Pentanone	43	7.435	7.435	0.000	98	1036239	40.0	72.8	
89 Methylcyclohexane	55	7.452	7.452	0.000	91	759924	10.0	10.6	
90 1,2-Dichloropropane	63	7.487	7.487	0.000	94	510766	10.0	10.4	
92 Dibromomethane	93	7.661	7.661	0.000	97	325683	10.0	10.5	
93 1,4-Dioxane	88	7.678	7.678	0.000	30	30726	200.0	199.2	
94 Dichlorobromomethane	83	7.853	7.853	0.000	99	898638	10.0	10.8	
97 cis-1,3-Dichloropropene	75	8.462	8.462	0.000	98	775747	10.0	10.2	
96 2-Chloroethyl vinyl ether	63	8.462	8.462	0.000	35	3206	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.671	8.671	0.000	96	762722	40.0	43.3	
99 Toluene	91	8.932	8.932	0.000	99	1825828	10.0	10.7	
100 trans-1,3-Dichloropropene	75	9.246	9.246	0.000	90	573912	10.0	10.5	
101 Ethyl methacrylate	69	9.368	9.368	0.000	86	416059	10.0	10.4	
102 1,1,2-Trichloroethane	97	9.507	9.507	0.000	90	355523	10.0	10.5	
103 Tetrachloroethene	164	9.716	9.716	0.000	97	642339	10.0	10.5	
104 1,3-Dichloropropane	76	9.751	9.751	0.000	94	576915	10.0	10.5	
105 2-Hexanone	43	9.890	9.890	0.000	96	493176	40.0	43.8	
108 Chlorodibromomethane	129	10.099	10.099	0.000	90	689799	10.0	10.4	
109 Ethylene Dibromide	107	10.291	10.291	0.000	99	455365	10.0	10.4	
110 1-Chlorohexane	91	11.075	11.075	0.000	92	949981	10.0	10.3	
111 Chlorobenzene	112	11.109	11.109	0.000	93	1279502	10.0	10.3	
112 1,1,1,2-Tetrachloroethane	131	11.231	11.231	0.000	96	660469	10.0	10.1	
113 Ethylbenzene	106	11.284	11.284	0.000	99	640844	10.0	10.3	
114 m-Xylene & p-Xylene	106	11.458	11.458	0.000	98	864006	10.0	10.6	
115 o-Xylene	106	12.032	12.032	0.000	96	744765	10.0	10.3	
116 Styrene	104	12.050	12.050	0.000	93	1171534	10.0	10.2	
117 Bromoform	173	12.311	12.311	0.000	95	385064	10.0	10.5	
118 Isopropylbenzene	105	12.520	12.520	0.000	96	2442444	10.0	9.53	
120 Cyclohexanone	55	12.659	12.659	0.000	87	187056	400.0	366.6	
122 Bromobenzene	156	12.903	12.903	0.000	93	608894	10.0	9.76	
121 1,1,2,2-Tetrachloroethane	83	12.921	12.921	0.000	94	475523	10.0	9.37	
123 1,2,3-Trichloropropane	110	12.955	12.955	0.000	79	114215	10.0	9.37	
124 trans-1,4-Dichloro-2-buten	53	12.990	12.990	0.000	66	75740	10.0	8.69	
125 N-Propylbenzene	120	13.043	13.043	0.000	99	620344	10.0	9.27	
126 2-Chlorotoluene	126	13.147	13.147	0.000	98	502024	10.0	9.39	
127 1,3,5-Trimethylbenzene	105	13.252	13.252	0.000	94	1833921	10.0	9.50	
128 4-Chlorotoluene	126	13.269	13.269	0.000	99	612914	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.635	13.635	0.000	92	2061683	10.0	9.53	
130 1,2,4-Trimethylbenzene	105	13.687	13.687	0.000	96	1738756	10.0	9.45	
131 sec-Butylbenzene	134	13.879	13.879	0.000	94	558626	10.0	9.37	
132 1,3-Dichlorobenzene	146	14.000	14.000	0.000	97	938308	10.0	9.89	
133 4-Isopropyltoluene	119	14.035	14.035	0.000	97	2343675	10.0	9.55	
134 1,4-Dichlorobenzene	146	14.087	14.087	0.000	94	1272468	10.0	9.12	
137 n-Butylbenzene	91	14.471	14.471	0.000	97	2216849	10.0	9.49	
138 1,2-Dichlorobenzene	146	14.488	14.488	0.000	96	932449	10.0	9.67	
139 1,2-Dibromo-3-Chloropropan	157	15.272	15.272	0.000	89	82592	10.0	9.36	
141 1,2,4-Trichlorobenzene	180	16.038	16.038	0.000	94	577132	10.0	8.95	
142 Hexachlorobutadiene	225	16.195	16.195	0.000	98	597947	10.0	8.77	
143 Naphthalene	128	16.264	16.264	0.000	97	572101	10.0	8.72	
144 1,2,3-Trichlorobenzene	180	16.491	16.491	0.000	95	410400	10.0	8.61	
S 151 1,2-Dichloroethene, Total	96				0		20.0	21.5	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.7	
S 145 Trihalomethanes, Total	1				0		40.0	42.2	
S 146 Xylenes, Total (URS)	1				0		20.0	20.9	
S 149 1,2-Dichloroethene, Total	1				0		20.0	21.5	
S 150 Xylenes, Total	106				0		20.0	20.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0628.D

Injection Date: 15-Oct-2017 09:20:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

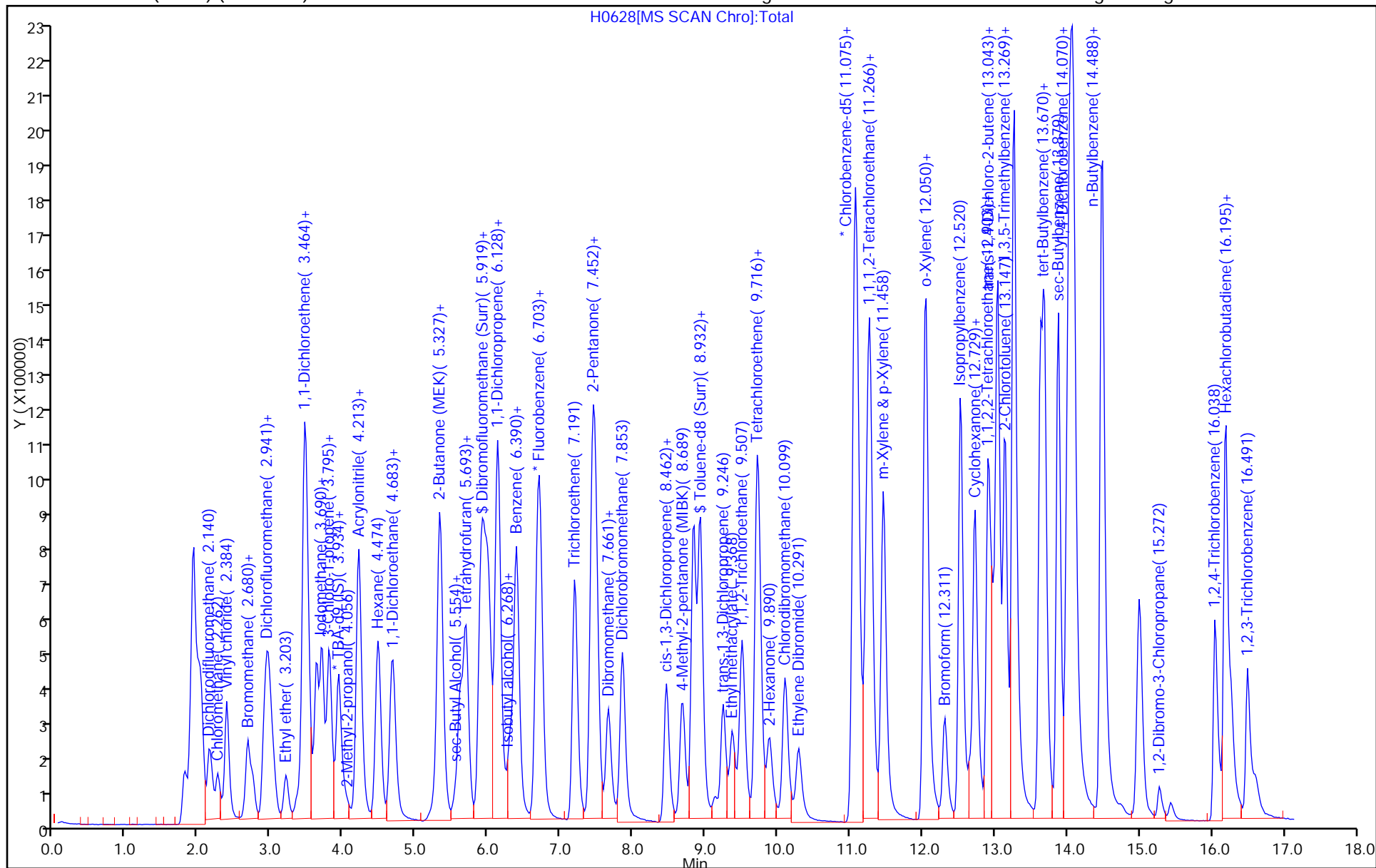
ALS Bottle#: 11

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCV 280-391324/2 Calibration Date: 10/15/2017 09:20

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0628.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.6667	0.6374		9.56	10.0	-4.4	20.0
Chloromethane	Ave	0.3163	0.2949	0.1000	9.33	10.0	-6.7	20.0
Vinyl chloride	Ave	0.3861	0.3516		9.11	10.0	-8.9	20.0
Bromomethane	Ave	0.4060	0.3846		9.47	10.0	-5.3	20.0
Chloroethane	Ave	0.2575	0.2353		9.14	10.0	-8.6	20.0
Dichlorofluoromethane	Ave	0.9051	0.9298		10.3	10.0	2.7	20.0
Trichlorofluoromethane	Ave	0.9791	0.9760		9.97	10.0	-0.3	20.0
Ethyl ether	Ave	0.1817	0.1896		10.4	10.0	4.3	20.0
1,1-Dichloroethene	Ave	0.4603	0.4916		10.7	10.0	6.8	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.6250	0.6791		10.9	10.0	8.7	20.0
Acetone	Lin2		0.0264		45.0	40.0	12.5	20.0
Iodomethane	Ave	1.129	1.187		10.5	10.0	5.2	20.0
Carbon disulfide	Ave	1.622	1.755		10.8	10.0	8.2	20.0
3-Chloro-1-propene	Ave	0.5935	0.6258		10.5	10.0	5.5	20.0
Methyl acetate	Ave	0.0923	0.0988		53.5	50.0	7.1	20.0
Methylene Chloride	Ave	0.4210	0.4174		9.91	10.0	-0.9	20.0
t-Butyl alcohol	Ave	1.262	1.163		92.1	100	-7.9	20.0
Acrylonitrile	Ave	0.0271	0.0278		102	100	2.3	20.0
Methyl tert-butyl ether	Ave	0.6568	0.6854		10.4	10.0	4.4	20.0
trans-1,2-Dichloroethene	Ave	0.4810	0.5194		10.8	10.0	8.0	20.0
Hexane	Ave	2.173	2.260		10.4	10.0	4.0	20.0
1,1-Dichloroethane	Ave	0.7941	0.8339	0.1000	10.5	10.0	5.0	20.0
Vinyl acetate	Ave	0.3444	0.3991		23.2	20.0	15.9	20.0
cis-1,2-Dichloroethene	Ave	0.4915	0.5266		10.7	10.0	7.1	20.0
2,2-Dichloropropane	Lin1		0.9361		11.5	10.0	14.5	20.0
2-Butanone (MEK)	Ave	0.0466	0.0492		42.2	40.0	5.5	20.0
sec-Butyl Alcohol	Ave	1.014	0.9548		282	300	-5.9	20.0
Chlorobromomethane	Ave	0.2351	0.2559		10.9	10.0	8.8	20.0
Tetrahydrofuran	Ave	0.0317	0.0347		21.9	20.0	9.4	20.0
Chloroform	Ave	0.9395	0.9884		10.5	10.0	5.2	20.0
1,1,1-Trichloroethane	Ave	0.9094	0.9717		10.7	10.0	6.9	20.0
Cyclohexane	Ave	0.7486	0.7929		10.6	10.0	5.9	20.0
1,1-Dichloropropene	Ave	0.7844	0.8215		10.5	10.0	4.7	20.0
Carbon tetrachloride	Ave	0.9085	0.9706		10.7	10.0	6.8	20.0
Isobutyl alcohol	Ave	0.3522	0.3296		234	250	-6.4	20.0
Benzene	Ave	1.380	1.502		10.9	10.0	8.9	20.0
1,2-Dichloroethane	Ave	0.3570	0.3671		10.3	10.0	2.8	20.0
Trichloroethene	Ave	0.6082	0.6686		11.0	10.0	9.9	20.0
2-Pentanone	Ave	0.1380	0.2513		72.8	40.0	82.1*	20.0
Methylcyclohexane	Ave	0.6932	0.7370		10.6	10.0	6.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCV 280-391324/2 Calibration Date: 10/15/2017 09:20

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0628.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.4752	0.4954		10.4	10.0	4.3	20.0
Dibromomethane	Ave	0.3008	0.3159		10.5	10.0	5.0	20.0
1,4-Dioxane	Lin2		0.0015		199	200	-0.4	20.0
Dichlorobromomethane	Ave	0.8077	0.8716		10.8	10.0	7.9	20.0
cis-1,3-Dichloropropene	Ave	2.371	2.420		10.2	10.0	2.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1709	0.1849		43.3	40.0	8.2	20.0
Toluene	Ave	1.659	1.771		10.7	10.0	6.7	20.0
trans-1,3-Dichloropropene	Ave	0.5293	0.5566		10.5	10.0	5.2	20.0
Ethyl methacrylate	Ave	1.245	1.298		10.4	10.0	4.3	20.0
1,1,2-Trichloroethane	Lin2		0.3448		10.5	10.0	5.0	20.0
Tetrachloroethene	Ave	1.901	2.003		10.5	10.0	5.4	20.0
1,3-Dichloropropane	Ave	1.713	1.799		10.5	10.0	5.1	20.0
2-Hexanone	Ave	0.3508	0.3846		43.8	40.0	9.6	20.0
Chlorodibromomethane	Ave	2.065	2.152		10.4	10.0	4.2	20.0
1,2-Dibromoethane	Ave	1.360	1.420		10.4	10.0	4.4	20.0
1-Chlorohexane	Ave	2.871	2.963		10.3	10.0	3.2	20.0
Chlorobenzene	Ave	3.872	3.991	0.3000	10.3	10.0	3.1	20.0
1,1,1,2-Tetrachloroethane	Ave	2.031	2.060		10.1	10.0	1.4	20.0
Ethylbenzene	Ave	1.933	1.999		10.3	10.0	3.4	20.0
m-Xylene & p-Xylene	Ave	2.542	2.695		10.6	10.0	6.0	20.0
o-Xylene	Ave	2.261	2.323		10.3	10.0	2.7	20.0
Styrene	Ave	3.566	3.654		10.2	10.0	2.5	20.0
Bromoform	Ave	1.147	1.201	0.1000	10.5	10.0	4.7	20.0
Isopropylbenzene	Ave	4.397	4.191		9.53	10.0	-4.7	20.0
Cyclohexanone	Ave	0.0159	0.0146		367	400	-8.3	20.0
Bromobenzene	Ave	1.071	1.045		9.76	10.0	-2.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.8713	0.8161	0.3000	9.37	10.0	-6.3	20.0
1,2,3-Trichloropropane	Lin2		0.1960		9.37	10.0	-6.3	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1495	0.1300		8.69	10.0	-13.1	20.0
N-Propylbenzene	Ave	1.148	1.065		9.27	10.0	-7.3	20.0
2-Chlorotoluene	Ave	0.9171	0.8615		9.39	10.0	-6.1	20.0
1,3,5-Trimethylbenzene	Ave	3.315	3.147		9.50	10.0	-5.0	20.0
4-Chlorotoluene	Ave	1.043	1.052		10.1	10.0	0.9	20.0
tert-Butylbenzene	Ave	3.713	3.538		9.53	10.0	-4.7	20.0
1,2,4-Trimethylbenzene	Ave	3.159	2.984		9.45	10.0	-5.5	20.0
sec-Butylbenzene	Ave	1.023	0.9587		9.37	10.0	-6.3	20.0
1,3-Dichlorobenzene	Ave	1.628	1.610		9.89	10.0	-1.1	20.0
4-Isopropyltoluene	Ave	4.212	4.022		9.55	10.0	-4.5	20.0
1,4-Dichlorobenzene	Ave	2.394	2.184		9.12	10.0	-8.8	20.0
n-Butylbenzene	Ave	4.009	3.804		9.49	10.0	-5.1	20.0
1,2-Dichlorobenzene	Ave	1.655	1.600		9.67	10.0	-3.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab Sample ID: CCV 280-391324/2 Calibration Date: 10/15/2017 09:20
 Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12
 Lab File ID: H0628.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1514	0.1417		9.36	10.0	-6.4	20.0
1,2,4-Trichlorobenzene	Ave	1.106	0.9904		8.95	10.0	-10.5	20.0
Hexachlorobutadiene	Ave	1.171	1.026		8.77	10.0	-12.3	20.0
Naphthalene	Ave	1.125	0.9818		8.72	10.0	-12.8	20.0
1,2,3-Trichlorobenzene	Ave	0.8175	0.7043		8.61	10.0	-13.9	20.0
Dibromofluoromethane (Surr)	Ave	0.7477	0.7937		10.9	10.3	6.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3273	0.3416		10.7	10.3	4.4	20.0
Toluene-d8 (Surr)	Ave	5.238	5.390		10.5	10.3	2.9	20.0
4-Bromofluorobenzene (Surr)	Ave	1.697	1.616		9.76	10.3	-4.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0628.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 15-Oct-2017 09:20:30 ALS Bottle#: 11 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: MOANM Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:11:33 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 16:53:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.969	0.000	95	267325	250.0	250.0	
* 2 Fluorobenzene	96	6.721	6.721	0.000	99	1288821	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.057	11.057	0.000	88	400764	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.070	14.070	0.000	96	728395	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.885	5.885	0.000	93	838793	10.3	10.9	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.320	0.000	99	361041	10.3	10.7	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.845	0.000	92	1771311	10.3	10.5	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.729	0.000	86	965297	10.3	9.76	
28 Dichlorodifluoromethane	85	2.158	2.158	0.000	98	657191	10.0	9.56	
30 Chloromethane	50	2.262	2.262	0.000	98	304094	10.0	9.33	
32 Vinyl chloride	62	2.384	2.384	0.000	98	362473	10.0	9.11	
35 Bromomethane	94	2.680	2.680	0.000	90	396512	10.0	9.47	
36 Chloroethane	64	2.750	2.750	0.000	98	242576	10.0	9.14	
37 Dichlorofluoromethane	67	2.924	2.924	0.000	97	958663	10.0	10.3	
38 Trichlorofluoromethane	101	2.976	2.976	0.000	99	1006272	10.0	9.97	
40 Ethyl ether	59	3.203	3.203	0.000	91	195480	10.0	10.4	
45 1,1-Dichloroethene	96	3.464	3.464	0.000	98	506819	10.0	10.7	
46 1,1,2-Trichloro-1,2,2-trif	151	3.481	3.481	0.000	96	700202	10.0	10.9	
47 Acetone	43	3.499	3.499	0.000	100	109004	40.0	45.0	
48 Iodomethane	142	3.621	3.621	0.000	100	1223909	10.0	10.5	
50 Carbon disulfide	76	3.708	3.708	0.000	98	1809094	10.0	10.8	
52 3-Chloro-1-propene	41	3.795	3.795	0.000	91	645272	10.0	10.5	
53 Methyl acetate	43	3.812	3.812	0.000	96	509465	50.0	53.5	
54 Methylene Chloride	84	3.934	3.934	0.000	90	430349	10.0	9.91	
55 2-Methyl-2-propanol	59	4.056	4.056	0.000	92	124318	100.0	92.1	
57 Acrylonitrile	53	4.178	4.178	0.000	99	286139	100.0	102.3	
56 Methyl tert-butyl ether	73	4.213	4.213	0.000	86	706700	10.0	10.4	
58 trans-1,2-Dichloroethene	96	4.213	4.213	0.000	100	535512	10.0	10.8	
59 Hexane	57	4.474	4.474	0.000	90	724527	10.0	10.4	
60 1,1-Dichloroethane	63	4.665	4.665	0.000	95	859789	10.0	10.5	
61 Vinyl acetate	43	4.700	4.700	0.000	96	823076	20.0	23.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.327	5.327	0.000	82	542898	10.0	10.7	
67 2-Butanone (MEK)	43	5.345	5.345	0.000	42	202874	40.0	42.2	
66 2,2-Dichloropropane	77	5.345	5.345	0.000	83	965147	10.0	11.5	
71 sec-Butyl Alcohol	45	5.554	5.554	0.000	97	306276	300.0	282.4	
73 Chlorobromomethane	128	5.623	5.623	0.000	92	263792	10.0	10.9	
74 Tetrahydrofuran	42	5.676	5.676	0.000	91	71622	20.0	21.9	
75 Chloroform	83	5.693	5.693	0.000	93	1019133	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.937	5.937	0.000	98	1001907	10.0	10.7	
77 Cyclohexane	56	6.007	6.007	0.000	86	817535	10.0	10.6	
78 1,1-Dichloropropene	75	6.128	6.128	0.000	98	847054	10.0	10.5	
79 Carbon tetrachloride	117	6.146	6.146	0.000	97	1000721	10.0	10.7	
80 Isobutyl alcohol	41	6.268	6.268	0.000	92	88107	250.0	234.0	
81 Benzene	78	6.390	6.390	0.000	95	1548970	10.0	10.9	
82 1,2-Dichloroethane	62	6.407	6.407	0.000	96	378491	10.0	10.3	
84 n-Heptane	43	6.686	6.686	0.000	91	905239	10.0	10.8	
86 Trichloroethene	95	7.191	7.191	0.000	98	689318	10.0	11.0	
88 2-Pentanone	43	7.435	7.435	0.000	98	1036239	40.0	72.8	
89 Methylcyclohexane	55	7.452	7.452	0.000	91	759924	10.0	10.6	
90 1,2-Dichloropropane	63	7.487	7.487	0.000	94	510766	10.0	10.4	
92 Dibromomethane	93	7.661	7.661	0.000	97	325683	10.0	10.5	
93 1,4-Dioxane	88	7.678	7.678	0.000	30	30726	200.0	199.2	
94 Dichlorobromomethane	83	7.853	7.853	0.000	99	898638	10.0	10.8	
97 cis-1,3-Dichloropropene	75	8.462	8.462	0.000	98	775747	10.0	10.2	
96 2-Chloroethyl vinyl ether	63	8.462	8.462	0.000	35	3206	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.671	8.671	0.000	96	762722	40.0	43.3	
99 Toluene	91	8.932	8.932	0.000	99	1825828	10.0	10.7	
100 trans-1,3-Dichloropropene	75	9.246	9.246	0.000	90	573912	10.0	10.5	
101 Ethyl methacrylate	69	9.368	9.368	0.000	86	416059	10.0	10.4	
102 1,1,2-Trichloroethane	97	9.507	9.507	0.000	90	355523	10.0	10.5	
103 Tetrachloroethene	164	9.716	9.716	0.000	97	642339	10.0	10.5	
104 1,3-Dichloropropane	76	9.751	9.751	0.000	94	576915	10.0	10.5	
105 2-Hexanone	43	9.890	9.890	0.000	96	493176	40.0	43.8	
108 Chlorodibromomethane	129	10.099	10.099	0.000	90	689799	10.0	10.4	
109 Ethylene Dibromide	107	10.291	10.291	0.000	99	455365	10.0	10.4	
110 1-Chlorohexane	91	11.075	11.075	0.000	92	949981	10.0	10.3	
111 Chlorobenzene	112	11.109	11.109	0.000	93	1279502	10.0	10.3	
112 1,1,1,2-Tetrachloroethane	131	11.231	11.231	0.000	96	660469	10.0	10.1	
113 Ethylbenzene	106	11.284	11.284	0.000	99	640844	10.0	10.3	
114 m-Xylene & p-Xylene	106	11.458	11.458	0.000	98	864006	10.0	10.6	
115 o-Xylene	106	12.032	12.032	0.000	96	744765	10.0	10.3	
116 Styrene	104	12.050	12.050	0.000	93	1171534	10.0	10.2	
117 Bromoform	173	12.311	12.311	0.000	95	385064	10.0	10.5	
118 Isopropylbenzene	105	12.520	12.520	0.000	96	2442444	10.0	9.53	
120 Cyclohexanone	55	12.659	12.659	0.000	87	187056	400.0	366.6	
122 Bromobenzene	156	12.903	12.903	0.000	93	608894	10.0	9.76	
121 1,1,2,2-Tetrachloroethane	83	12.921	12.921	0.000	94	475523	10.0	9.37	
123 1,2,3-Trichloropropane	110	12.955	12.955	0.000	79	114215	10.0	9.37	
124 trans-1,4-Dichloro-2-buten	53	12.990	12.990	0.000	66	75740	10.0	8.69	
125 N-Propylbenzene	120	13.043	13.043	0.000	99	620344	10.0	9.27	
126 2-Chlorotoluene	126	13.147	13.147	0.000	98	502024	10.0	9.39	
127 1,3,5-Trimethylbenzene	105	13.252	13.252	0.000	94	1833921	10.0	9.50	
128 4-Chlorotoluene	126	13.269	13.269	0.000	99	612914	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.635	13.635	0.000	92	2061683	10.0	9.53	
130 1,2,4-Trimethylbenzene	105	13.687	13.687	0.000	96	1738756	10.0	9.45	
131 sec-Butylbenzene	134	13.879	13.879	0.000	94	558626	10.0	9.37	
132 1,3-Dichlorobenzene	146	14.000	14.000	0.000	97	938308	10.0	9.89	
133 4-Isopropyltoluene	119	14.035	14.035	0.000	97	2343675	10.0	9.55	
134 1,4-Dichlorobenzene	146	14.087	14.087	0.000	94	1272468	10.0	9.12	
137 n-Butylbenzene	91	14.471	14.471	0.000	97	2216849	10.0	9.49	
138 1,2-Dichlorobenzene	146	14.488	14.488	0.000	96	932449	10.0	9.67	
139 1,2-Dibromo-3-Chloropropan	157	15.272	15.272	0.000	89	82592	10.0	9.36	
141 1,2,4-Trichlorobenzene	180	16.038	16.038	0.000	94	577132	10.0	8.95	
142 Hexachlorobutadiene	225	16.195	16.195	0.000	98	597947	10.0	8.77	
143 Naphthalene	128	16.264	16.264	0.000	97	572101	10.0	8.72	
144 1,2,3-Trichlorobenzene	180	16.491	16.491	0.000	95	410400	10.0	8.61	
S 151 1,2-Dichloroethene, Total	96				0		20.0	21.5	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.7	
S 145 Trihalomethanes, Total	1				0		40.0	42.2	
S 146 Xylenes, Total (URS)	1				0		20.0	20.9	
S 149 1,2-Dichloroethene, Total	1				0		20.0	21.5	
S 150 Xylenes, Total	106				0		20.0	20.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0628.D

Injection Date: 15-Oct-2017 09:20:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

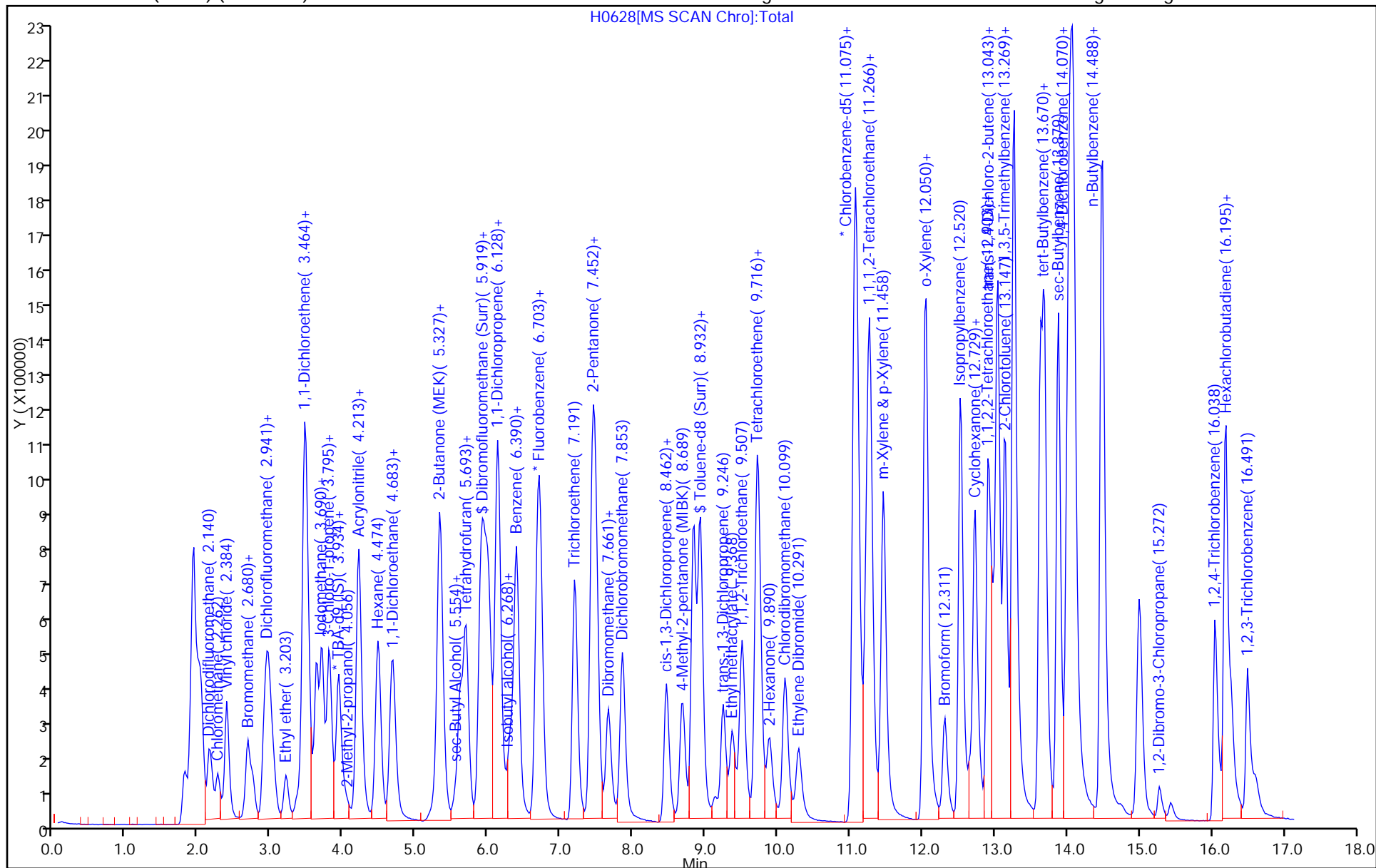
ALS Bottle#: 11

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: CCVC 280-391324/33 Calibration Date: 10/15/2017 19:37
Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 04/04/2017 12:48
Lab File ID: H0656.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2		0.0035			10.0		50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0656.D
 Lims ID: ccvc
 Client ID:
 Sample Type: CCVC
 Inject. Date: 15-Oct-2017 19:37:30 ALS Bottle#: 39 Worklist Smp#: 33
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccvc
 Operator ID: MOANM Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:50:04 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:26:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.969	0.000	95	263568	250.0	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	99	1174148	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.074	11.074	0.000	88	376605	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.087	0.000	96	689069	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	799838	10.3	11.4	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.320	0.000	99	337794	10.3	11.0	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.845	0.000	92	1684803	10.3	10.7	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.729	0.000	87	916610	10.3	9.80	
28 Dichlorodifluoromethane	85	2.157	2.157	0.000	99	569443	10.0	9.09	
30 Chloromethane	50	2.262	2.262	0.000	98	255103	10.0	8.59	
32 Vinyl chloride	62	2.401	2.401	0.000	98	295802	10.0	8.16	
35 Bromomethane	94	2.680	2.680	0.000	90	343529	10.0	9.01	
36 Chloroethane	64	2.749	2.749	0.000	99	200225	10.0	8.28	
37 Dichlorofluoromethane	67	2.924	2.924	0.000	98	822919	10.0	9.68	
38 Trichlorofluoromethane	101	2.976	2.976	0.000	99	813574	10.0	8.85	
40 Ethyl ether	59	3.220	3.220	0.000	91	180041	10.0	10.5	
45 1,1-Dichloroethene	96	3.463	3.463	0.000	98	434780	10.0	10.1	
46 1,1,2-Trichloro-1,2,2-trif	151	3.498	3.498	0.000	97	596641	10.0	10.2	
47 Acetone	43	3.516	3.516	0.000	100	92394	40.0	41.6	
48 Iodomethane	142	3.638	3.638	0.000	99	1130573	10.0	10.7	
50 Carbon disulfide	76	3.707	3.707	0.000	98	1518437	10.0	9.96	
52 3-Chloro-1-propene	41	3.812	3.812	0.000	86	537672	10.0	9.64	
53 Methyl acetate	43	3.812	3.812	0.000	95	437657	50.0	50.5	
54 Methylene Chloride	84	3.934	3.934	0.000	90	387555	10.0	9.80	
55 2-Methyl-2-propanol	59	4.056	4.056	0.000	97	123588	100.0	92.9	
57 Acrylonitrile	53	4.195	4.195	0.000	99	265285	100.0	104.1	
56 Methyl tert-butyl ether	73	4.212	4.212	0.000	91	668503	10.0	10.8	
58 trans-1,2-Dichloroethene	96	4.230	4.230	0.000	100	462336	10.0	10.2	
59 Hexane	57	4.491	4.491	0.000	90	568636	10.0	8.69	
60 1,1-Dichloroethane	63	4.683	4.683	0.000	95	766492	10.0	10.3	
61 Vinyl acetate	43	4.700	4.700	0.000	96	702934	20.0	21.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.344	5.344	0.000	81	491073	10.0	10.6	
67 2-Butanone (MEK)	43	5.344	5.344	0.000	46	185850	40.0	42.4	
66 2,2-Dichloropropane	77	5.344	5.344	0.000	84	690546	10.0	8.81	
71 sec-Butyl Alcohol	45	5.571	5.571	0.000	97	307363	300.0	287.4	
73 Chlorobromomethane	128	5.623	5.623	0.000	90	243060	10.0	11.0	
74 Tetrahydrofuran	42	5.693	5.693	0.000	86	66769	20.0	22.4	
75 Chloroform	83	5.710	5.710	0.000	93	925622	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.954	5.954	0.000	98	847792	10.0	9.92	
77 Cyclohexane	56	6.024	6.024	0.000	86	658264	10.0	9.36	
78 1,1-Dichloropropene	75	6.128	6.128	0.000	98	704632	10.0	9.56	
79 Carbon tetrachloride	117	6.146	6.146	0.000	96	848767	10.0	9.95	
80 Isobutyl alcohol	41	6.285	6.285	0.000	92	88118	250.0	237.3	
81 Benzene	78	6.389	6.389	0.000	96	1366926	10.0	10.5	
82 1,2-Dichloroethane	62	6.424	6.424	0.000	96	341879	10.0	10.2	
84 n-Heptane	43	6.685	6.685	0.000	90	701180	10.0	9.19	
86 Trichloroethene	95	7.208	7.208	0.000	98	596149	10.0	10.4	
88 2-Pentanone	43	7.452	7.452	0.000	98	470891	40.0	36.3	
89 Methylcyclohexane	55	7.452	7.452	0.000	90	603721	10.0	9.27	
90 1,2-Dichloropropane	63	7.504	7.504	0.000	96	459765	10.0	10.3	
92 Dibromomethane	93	7.678	7.678	0.000	97	305091	10.0	10.8	
93 1,4-Dioxane	88	7.713	7.713	0.000	84	31281	200.0	221.8	
94 Dichlorobromomethane	83	7.870	7.870	0.000	99	825710	10.0	10.9	
97 cis-1,3-Dichloropropene	75	8.479	8.479	0.000	98	685201	10.0	9.59	
96 2-Chloroethyl vinyl ether	63	8.479	8.479	0.000	35	3289	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.688	8.688	0.000	95	680384	40.0	42.4	
99 Toluene	91	8.949	8.949	0.000	99	1603987	10.0	10.3	
100 trans-1,3-Dichloropropene	75	9.263	9.263	0.000	89	509429	10.0	10.2	
101 Ethyl methacrylate	69	9.385	9.385	0.000	85	375540	10.0	10.0	
102 1,1,2-Trichloroethane	97	9.524	9.524	0.000	91	328600	10.0	10.7	
103 Tetrachloroethene	164	9.733	9.733	0.000	97	542355	10.0	9.47	
104 1,3-Dichloropropane	76	9.768	9.768	0.000	83	524817	10.0	10.2	
105 2-Hexanone	43	9.907	9.907	0.000	94	426917	40.0	40.4	
108 Chlorodibromomethane	129	10.116	10.116	0.000	89	641002	10.0	10.3	
109 Ethylene Dibromide	107	10.308	10.308	0.000	99	419010	10.0	10.2	
110 1-Chlorohexane	91	11.074	11.074	0.000	91	761652	10.0	8.81	
111 Chlorobenzene	112	11.126	11.126	0.000	94	1153269	10.0	9.89	
112 1,1,1,2-Tetrachloroethane	131	11.248	11.248	0.000	96	587675	10.0	9.60	
113 Ethylbenzene	106	11.301	11.301	0.000	99	553418	10.0	9.50	
114 m-Xylene & p-Xylene	106	11.475	11.475	0.000	98	753742	10.0	9.84	
115 o-Xylene	106	12.050	12.050	0.000	97	671393	10.0	9.85	
116 Styrene	104	12.067	12.067	0.000	93	1065119	10.0	9.91	
117 Bromoform	173	12.328	12.328	0.000	95	364868	10.0	10.6	
118 Isopropylbenzene	105	12.537	12.537	0.000	96	2081096	10.0	8.59	
120 Cyclohexanone	55	12.677	12.677	0.000	87	190749	400.0	397.9	
122 Bromobenzene	156	12.920	12.920	0.000	93	556885	10.0	9.43	
121 1,1,2,2-Tetrachloroethane	83	12.920	12.920	0.000	93	442447	10.0	9.21	
123 1,2,3-Trichloropropane	110	12.973	12.973	0.000	79	111382	10.0	9.69	
124 trans-1,4-Dichloro-2-buten	53	13.007	13.007	0.000	67	67025	10.0	8.13	
125 N-Propylbenzene	120	13.060	13.060	0.000	99	537124	10.0	8.48	
126 2-Chlorotoluene	126	13.147	13.147	0.000	98	459073	10.0	9.08	
127 1,3,5-Trimethylbenzene	105	13.269	13.269	0.000	95	1602186	10.0	8.77	
128 4-Chlorotoluene	126	13.286	13.286	0.000	99	525551	10.0	9.14	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.634	13.634	0.000	93	1788572	10.0	8.74	
130 1,2,4-Trimethylbenzene	105	13.704	13.704	0.000	96	1550306	10.0	8.90	
131 sec-Butylbenzene	134	13.896	13.896	0.000	94	480148	10.0	8.51	
132 1,3-Dichlorobenzene	146	14.018	14.018	0.000	97	791009	10.0	8.81	
133 4-Isopropyltoluene	119	14.052	14.052	0.000	97	2026658	10.0	8.73	
134 1,4-Dichlorobenzene	146	14.105	14.105	0.000	93	1232012	10.0	9.34	
137 n-Butylbenzene	91	14.488	14.488	0.000	97	1868661	10.0	8.45	
138 1,2-Dichlorobenzene	146	14.505	14.505	0.000	97	870209	10.0	9.54	
139 1,2-Dibromo-3-Chloropropan	157	15.289	15.289	0.000	89	80158	10.0	9.61	
141 1,2,4-Trichlorobenzene	180	16.055	16.055	0.000	94	570896	10.0	9.36	
142 Hexachlorobutadiene	225	16.195	16.195	0.000	98	557512	10.0	8.64	
143 Naphthalene	128	16.282	16.282	0.000	97	594390	10.0	9.58	
144 1,2,3-Trichlorobenzene	180	16.508	16.508	0.000	95	439461	10.0	9.75	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.9	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	42.2	
S 146 Xylenes, Total (URS)	1				0		20.0	19.7	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.9	
S 150 Xylenes, Total	106				0		20.0	19.7	
S 147 Total BTEX	1				0			50.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0656.D

Injection Date: 15-Oct-2017 19:37:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: ccvc

Worklist Smp#: 33

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

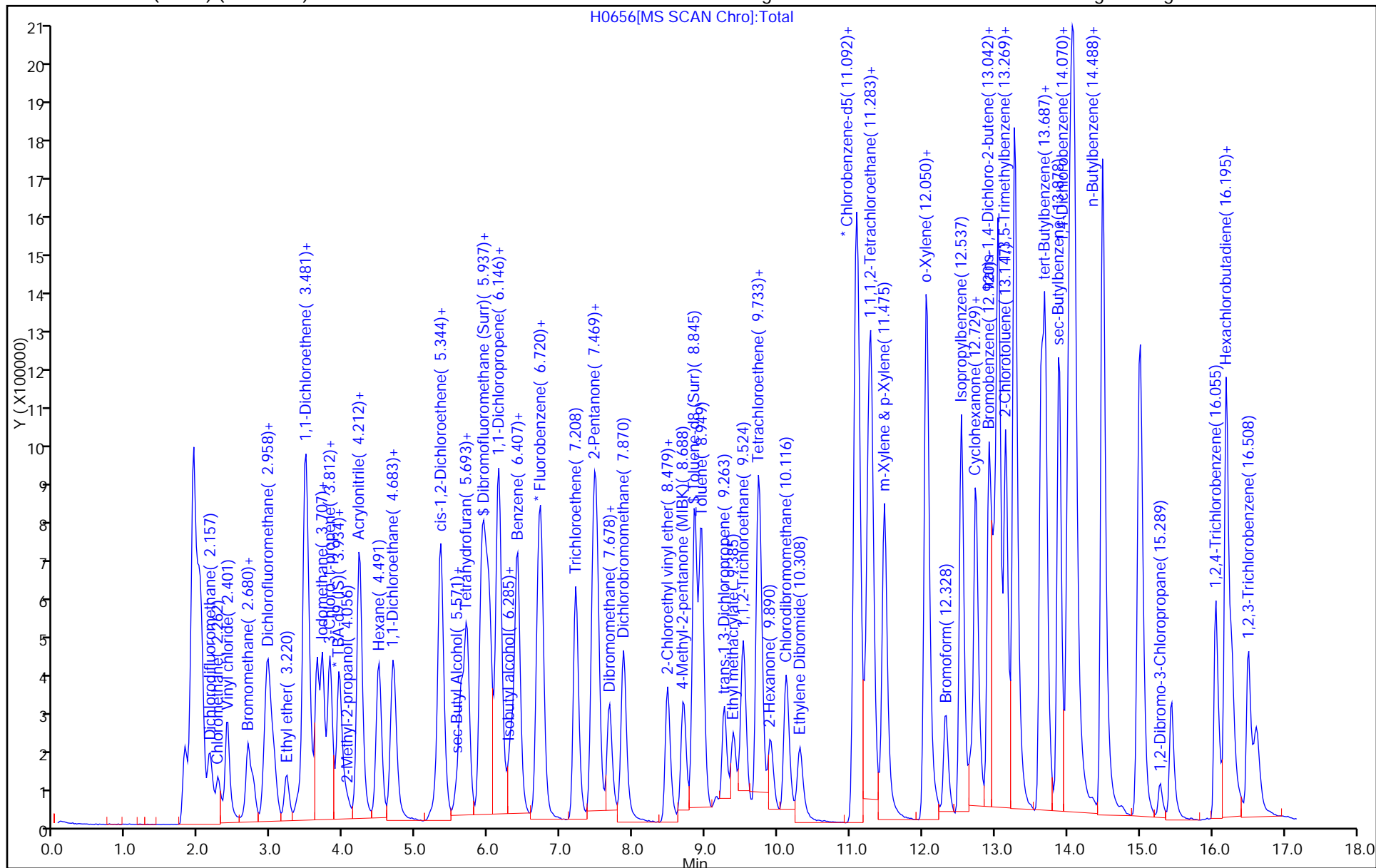
ALS Bottle#: 39

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCVC 280-391324/33 Calibration Date: 10/15/2017 19:37

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0656.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.6667	0.6062		9.09	10.0	-9.1	50.0
Chloromethane	Ave	0.3163	0.2716	0.1000	8.59	10.0	-14.1	50.0
Vinyl chloride	Ave	0.3861	0.3149		8.16	10.0	-18.4	50.0
Bromomethane	Ave	0.4060	0.3657		9.01	10.0	-9.9	50.0
Chloroethane	Ave	0.2575	0.2132		8.28	10.0	-17.2	50.0
Dichlorofluoromethane	Ave	0.9051	0.8761		9.68	10.0	-3.2	50.0
Trichlorofluoromethane	Ave	0.9791	0.8661		8.85	10.0	-11.5	50.0
Ethyl ether	Ave	0.1817	0.1917		10.5	10.0	5.5	50.0
1,1-Dichloroethene	Ave	0.4603	0.4629		10.1	10.0	0.6	50.0
1,1,2-Trichlorotrifluoroethane	Ave	0.6250	0.6352		10.2	10.0	1.6	50.0
Acetone	Lin2		0.0246		41.6	40.0	4.1	50.0
Iodomethane	Ave	1.129	1.204		10.7	10.0	6.6	50.0
Carbon disulfide	Ave	1.622	1.617		9.96	10.0	-0.4	50.0
3-Chloro-1-propene	Ave	0.5935	0.5724		9.64	10.0	-3.6	50.0
Methyl acetate	Ave	0.0923	0.0932		50.5	50.0	1.0	50.0
Methylene Chloride	Ave	0.4210	0.4126		9.80	10.0	-2.0	50.0
t-Butyl alcohol	Ave	1.262	1.172		92.9	100	-7.1	50.0
Acrylonitrile	Ave	0.0271	0.0282		104	100	4.1	50.0
Methyl tert-butyl ether	Ave	0.6568	0.7117		10.8	10.0	8.4	50.0
trans-1,2-Dichloroethene	Ave	0.4810	0.4922		10.2	10.0	2.3	50.0
Hexane	Ave	2.173	1.887		8.69	10.0	-13.1	50.0
1,1-Dichloroethane	Ave	0.7941	0.8160	0.1000	10.3	10.0	2.8	50.0
Vinyl acetate	Ave	0.3444	0.3742		21.7	20.0	8.7	50.0
2,2-Dichloropropane	Lin1		0.7352		8.81	10.0	-11.9	50.0
2-Butanone (MEK)	Ave	0.0466	0.0495		42.4	40.0	6.1	50.0
cis-1,2-Dichloroethene	Ave	0.4915	0.5228		10.6	10.0	6.4	50.0
sec-Butyl Alcohol	Ave	1.014	0.9718		287	300	-4.2	50.0
Chlorobromomethane	Ave	0.2351	0.2588		11.0	10.0	10.0	50.0
Tetrahydrofuran	Ave	0.0317	0.0355		22.4	20.0	12.0	50.0
Chloroform	Ave	0.9395	0.9854		10.5	10.0	4.9	50.0
1,1,1-Trichloroethane	Ave	0.9094	0.9026		9.92	10.0	-0.8	50.0
Cyclohexane	Ave	0.7486	0.7008		9.36	10.0	-6.4	50.0
1,1-Dichloropropene	Ave	0.7844	0.7502		9.56	10.0	-4.4	50.0
Carbon tetrachloride	Ave	0.9085	0.9036		9.95	10.0	-0.5	50.0
Isobutyl alcohol	Ave	0.3522	0.3343		237	250	-5.1	50.0
Benzene	Ave	1.380	1.455		10.5	10.0	5.4	50.0
1,2-Dichloroethane	Ave	0.3570	0.3640		10.2	10.0	1.9	50.0
Trichloroethene	Ave	0.6082	0.6347		10.4	10.0	4.3	50.0
2-Pentanone	Ave	0.1380	0.1253		36.3	40.0	-9.2	50.0
Methylcyclohexane	Ave	0.6932	0.6427		9.27	10.0	-7.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCVC 280-391324/33 Calibration Date: 10/15/2017 19:37

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0656.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.4752	0.4895		10.3	10.0	3.0	50.0
Dibromomethane	Ave	0.3008	0.3248		10.8	10.0	8.0	50.0
1,4-Dioxane	Lin2		0.0017		222	200	10.9	50.0
Dichlorobromomethane	Ave	0.8077	0.8791		10.9	10.0	8.8	50.0
cis-1,3-Dichloropropene	Ave	2.371	2.274		9.59	10.0	-4.1	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1709	0.1811		42.4	40.0	5.9	50.0
Toluene	Ave	1.659	1.708		10.3	10.0	2.9	50.0
trans-1,3-Dichloropropene	Ave	0.5293	0.5423		10.2	10.0	2.5	50.0
Ethyl methacrylate	Ave	1.245	1.246		10.0	10.0	0.1	50.0
1,1,2-Trichloroethane	Lin2		0.3498		10.7	10.0	6.6	50.0
Tetrachloroethene	Ave	1.901	1.800		9.47	10.0	-5.3	50.0
1,3-Dichloropropane	Ave	1.713	1.742		10.2	10.0	1.7	50.0
2-Hexanone	Ave	0.3508	0.3543		40.4	40.0	1.0	50.0
Chlorodibromomethane	Ave	2.065	2.128		10.3	10.0	3.0	50.0
1,2-Dibromoethane	Ave	1.360	1.391		10.2	10.0	2.2	50.0
1-Chlorohexane	Ave	2.871	2.528		8.81	10.0	-11.9	50.0
Chlorobenzene	Ave	3.872	3.828	0.3000	9.89	10.0	-1.1	50.0
1,1,1,2-Tetrachloroethane	Ave	2.031	1.951		9.60	10.0	-4.0	50.0
Ethylbenzene	Ave	1.933	1.837		9.50	10.0	-5.0	50.0
m-Xylene & p-Xylene	Ave	2.542	2.502		9.84	10.0	-1.6	50.0
o-Xylene	Ave	2.261	2.228		9.85	10.0	-1.5	50.0
Styrene	Ave	3.566	3.535		9.91	10.0	-0.9	50.0
Bromoform	Ave	1.147	1.211	0.1000	10.6	10.0	5.6	50.0
Isopropylbenzene	Ave	4.397	3.775		8.59	10.0	-14.1	50.0
Cyclohexanone	Ave	0.0159	0.0158		398	400	-0.5	50.0
1,1,2,2-Tetrachloroethane	Ave	0.8713	0.8026	0.3000	9.21	10.0	-7.9	50.0
Bromobenzene	Ave	1.071	1.010		9.43	10.0	-5.7	50.0
1,2,3-Trichloropropane	Lin2		0.2021		9.69	10.0	-3.1	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1495	0.1216		8.13	10.0	-18.7	50.0
N-Propylbenzene	Ave	1.148	0.9744		8.48	10.0	-15.2	50.0
2-Chlorotoluene	Ave	0.9171	0.8328		9.08	10.0	-9.2	50.0
1,3,5-Trimethylbenzene	Ave	3.315	2.906		8.77	10.0	-12.3	50.0
4-Chlorotoluene	Ave	1.043	0.9534		9.14	10.0	-8.6	50.0
tert-Butylbenzene	Ave	3.713	3.245		8.74	10.0	-12.6	50.0
1,2,4-Trimethylbenzene	Ave	3.159	2.812		8.90	10.0	-11.0	50.0
sec-Butylbenzene	Ave	1.023	0.8710		8.51	10.0	-14.9	50.0
1,3-Dichlorobenzene	Ave	1.628	1.435		8.81	10.0	-11.9	50.0
4-Isopropyltoluene	Ave	4.212	3.676		8.73	10.0	-12.7	50.0
1,4-Dichlorobenzene	Ave	2.394	2.235		9.34	10.0	-6.6	50.0
n-Butylbenzene	Ave	4.009	3.390		8.45	10.0	-15.5	50.0
1,2-Dichlorobenzene	Ave	1.655	1.579		9.54	10.0	-4.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab Sample ID: CCVC 280-391324/33 Calibration Date: 10/15/2017 19:37
 Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12
 Lab File ID: H0656.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1514	0.1454		9.61	10.0	-3.9	50.0
1,2,4-Trichlorobenzene	Ave	1.106	1.036		9.36	10.0	-6.4	50.0
Hexachlorobutadiene	Ave	1.171	1.011		8.64	10.0	-13.6	50.0
Naphthalene	Ave	1.125	1.078		9.58	10.0	-4.2	50.0
1,2,3-Trichlorobenzene	Ave	0.8175	0.7972		9.75	10.0	-2.5	50.0
Dibromofluoromethane (Surr)	Ave	0.7477	0.8307		11.4	10.3	11.1	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3273	0.3508		11.0	10.3	7.2	50.0
Toluene-d8 (Surr)	Ave	5.238	5.456		10.7	10.3	4.1	50.0
4-Bromofluorobenzene (Surr)	Ave	1.697	1.622		9.80	10.3	-4.4	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0656.D
 Lims ID: ccvc
 Client ID:
 Sample Type: CCVC
 Inject. Date: 15-Oct-2017 19:37:30 ALS Bottle#: 39 Worklist Smp#: 33
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccvc
 Operator ID: MOANM Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 07:50:04 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 07:26:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.969	0.000	95	263568	250.0	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	99	1174148	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.074	11.074	0.000	88	376605	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.087	0.000	96	689069	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	799838	10.3	11.4	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.320	0.000	99	337794	10.3	11.0	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.845	0.000	92	1684803	10.3	10.7	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.729	0.000	87	916610	10.3	9.80	
28 Dichlorodifluoromethane	85	2.157	2.157	0.000	99	569443	10.0	9.09	
30 Chloromethane	50	2.262	2.262	0.000	98	255103	10.0	8.59	
32 Vinyl chloride	62	2.401	2.401	0.000	98	295802	10.0	8.16	
35 Bromomethane	94	2.680	2.680	0.000	90	343529	10.0	9.01	
36 Chloroethane	64	2.749	2.749	0.000	99	200225	10.0	8.28	
37 Dichlorofluoromethane	67	2.924	2.924	0.000	98	822919	10.0	9.68	
38 Trichlorofluoromethane	101	2.976	2.976	0.000	99	813574	10.0	8.85	
40 Ethyl ether	59	3.220	3.220	0.000	91	180041	10.0	10.5	
45 1,1-Dichloroethene	96	3.463	3.463	0.000	98	434780	10.0	10.1	
46 1,1,2-Trichloro-1,2,2-trif	151	3.498	3.498	0.000	97	596641	10.0	10.2	
47 Acetone	43	3.516	3.516	0.000	100	92394	40.0	41.6	
48 Iodomethane	142	3.638	3.638	0.000	99	1130573	10.0	10.7	
50 Carbon disulfide	76	3.707	3.707	0.000	98	1518437	10.0	9.96	
52 3-Chloro-1-propene	41	3.812	3.812	0.000	86	537672	10.0	9.64	
53 Methyl acetate	43	3.812	3.812	0.000	95	437657	50.0	50.5	
54 Methylene Chloride	84	3.934	3.934	0.000	90	387555	10.0	9.80	
55 2-Methyl-2-propanol	59	4.056	4.056	0.000	97	123588	100.0	92.9	
57 Acrylonitrile	53	4.195	4.195	0.000	99	265285	100.0	104.1	
56 Methyl tert-butyl ether	73	4.212	4.212	0.000	91	668503	10.0	10.8	
58 trans-1,2-Dichloroethene	96	4.230	4.230	0.000	100	462336	10.0	10.2	
59 Hexane	57	4.491	4.491	0.000	90	568636	10.0	8.69	
60 1,1-Dichloroethane	63	4.683	4.683	0.000	95	766492	10.0	10.3	
61 Vinyl acetate	43	4.700	4.700	0.000	96	702934	20.0	21.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.344	5.344	0.000	81	491073	10.0	10.6	
67 2-Butanone (MEK)	43	5.344	5.344	0.000	46	185850	40.0	42.4	
66 2,2-Dichloropropane	77	5.344	5.344	0.000	84	690546	10.0	8.81	
71 sec-Butyl Alcohol	45	5.571	5.571	0.000	97	307363	300.0	287.4	
73 Chlorobromomethane	128	5.623	5.623	0.000	90	243060	10.0	11.0	
74 Tetrahydrofuran	42	5.693	5.693	0.000	86	66769	20.0	22.4	
75 Chloroform	83	5.710	5.710	0.000	93	925622	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.954	5.954	0.000	98	847792	10.0	9.92	
77 Cyclohexane	56	6.024	6.024	0.000	86	658264	10.0	9.36	
78 1,1-Dichloropropene	75	6.128	6.128	0.000	98	704632	10.0	9.56	
79 Carbon tetrachloride	117	6.146	6.146	0.000	96	848767	10.0	9.95	
80 Isobutyl alcohol	41	6.285	6.285	0.000	92	88118	250.0	237.3	
81 Benzene	78	6.389	6.389	0.000	96	1366926	10.0	10.5	
82 1,2-Dichloroethane	62	6.424	6.424	0.000	96	341879	10.0	10.2	
84 n-Heptane	43	6.685	6.685	0.000	90	701180	10.0	9.19	
86 Trichloroethene	95	7.208	7.208	0.000	98	596149	10.0	10.4	
88 2-Pentanone	43	7.452	7.452	0.000	98	470891	40.0	36.3	
89 Methylcyclohexane	55	7.452	7.452	0.000	90	603721	10.0	9.27	
90 1,2-Dichloropropane	63	7.504	7.504	0.000	96	459765	10.0	10.3	
92 Dibromomethane	93	7.678	7.678	0.000	97	305091	10.0	10.8	
93 1,4-Dioxane	88	7.713	7.713	0.000	84	31281	200.0	221.8	
94 Dichlorobromomethane	83	7.870	7.870	0.000	99	825710	10.0	10.9	
97 cis-1,3-Dichloropropene	75	8.479	8.479	0.000	98	685201	10.0	9.59	
96 2-Chloroethyl vinyl ether	63	8.479	8.479	0.000	35	3289	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.688	8.688	0.000	95	680384	40.0	42.4	
99 Toluene	91	8.949	8.949	0.000	99	1603987	10.0	10.3	
100 trans-1,3-Dichloropropene	75	9.263	9.263	0.000	89	509429	10.0	10.2	
101 Ethyl methacrylate	69	9.385	9.385	0.000	85	375540	10.0	10.0	
102 1,1,2-Trichloroethane	97	9.524	9.524	0.000	91	328600	10.0	10.7	
103 Tetrachloroethene	164	9.733	9.733	0.000	97	542355	10.0	9.47	
104 1,3-Dichloropropane	76	9.768	9.768	0.000	83	524817	10.0	10.2	
105 2-Hexanone	43	9.907	9.907	0.000	94	426917	40.0	40.4	
108 Chlorodibromomethane	129	10.116	10.116	0.000	89	641002	10.0	10.3	
109 Ethylene Dibromide	107	10.308	10.308	0.000	99	419010	10.0	10.2	
110 1-Chlorohexane	91	11.074	11.074	0.000	91	761652	10.0	8.81	
111 Chlorobenzene	112	11.126	11.126	0.000	94	1153269	10.0	9.89	
112 1,1,1,2-Tetrachloroethane	131	11.248	11.248	0.000	96	587675	10.0	9.60	
113 Ethylbenzene	106	11.301	11.301	0.000	99	553418	10.0	9.50	
114 m-Xylene & p-Xylene	106	11.475	11.475	0.000	98	753742	10.0	9.84	
115 o-Xylene	106	12.050	12.050	0.000	97	671393	10.0	9.85	
116 Styrene	104	12.067	12.067	0.000	93	1065119	10.0	9.91	
117 Bromoform	173	12.328	12.328	0.000	95	364868	10.0	10.6	
118 Isopropylbenzene	105	12.537	12.537	0.000	96	2081096	10.0	8.59	
120 Cyclohexanone	55	12.677	12.677	0.000	87	190749	400.0	397.9	
122 Bromobenzene	156	12.920	12.920	0.000	93	556885	10.0	9.43	
121 1,1,2,2-Tetrachloroethane	83	12.920	12.920	0.000	93	442447	10.0	9.21	
123 1,2,3-Trichloropropane	110	12.973	12.973	0.000	79	111382	10.0	9.69	
124 trans-1,4-Dichloro-2-buten	53	13.007	13.007	0.000	67	67025	10.0	8.13	
125 N-Propylbenzene	120	13.060	13.060	0.000	99	537124	10.0	8.48	
126 2-Chlorotoluene	126	13.147	13.147	0.000	98	459073	10.0	9.08	
127 1,3,5-Trimethylbenzene	105	13.269	13.269	0.000	95	1602186	10.0	8.77	
128 4-Chlorotoluene	126	13.286	13.286	0.000	99	525551	10.0	9.14	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.634	13.634	0.000	93	1788572	10.0	8.74	
130 1,2,4-Trimethylbenzene	105	13.704	13.704	0.000	96	1550306	10.0	8.90	
131 sec-Butylbenzene	134	13.896	13.896	0.000	94	480148	10.0	8.51	
132 1,3-Dichlorobenzene	146	14.018	14.018	0.000	97	791009	10.0	8.81	
133 4-Isopropyltoluene	119	14.052	14.052	0.000	97	2026658	10.0	8.73	
134 1,4-Dichlorobenzene	146	14.105	14.105	0.000	93	1232012	10.0	9.34	
137 n-Butylbenzene	91	14.488	14.488	0.000	97	1868661	10.0	8.45	
138 1,2-Dichlorobenzene	146	14.505	14.505	0.000	97	870209	10.0	9.54	
139 1,2-Dibromo-3-Chloropropan	157	15.289	15.289	0.000	89	80158	10.0	9.61	
141 1,2,4-Trichlorobenzene	180	16.055	16.055	0.000	94	570896	10.0	9.36	
142 Hexachlorobutadiene	225	16.195	16.195	0.000	98	557512	10.0	8.64	
143 Naphthalene	128	16.282	16.282	0.000	97	594390	10.0	9.58	
144 1,2,3-Trichlorobenzene	180	16.508	16.508	0.000	95	439461	10.0	9.75	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.9	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	42.2	
S 146 Xylenes, Total (URS)	1				0		20.0	19.7	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.9	
S 150 Xylenes, Total	106				0		20.0	19.7	
S 147 Total BTEX	1				0			50.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0656.D

Injection Date: 15-Oct-2017 19:37:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: ccvc

Worklist Smp#: 33

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

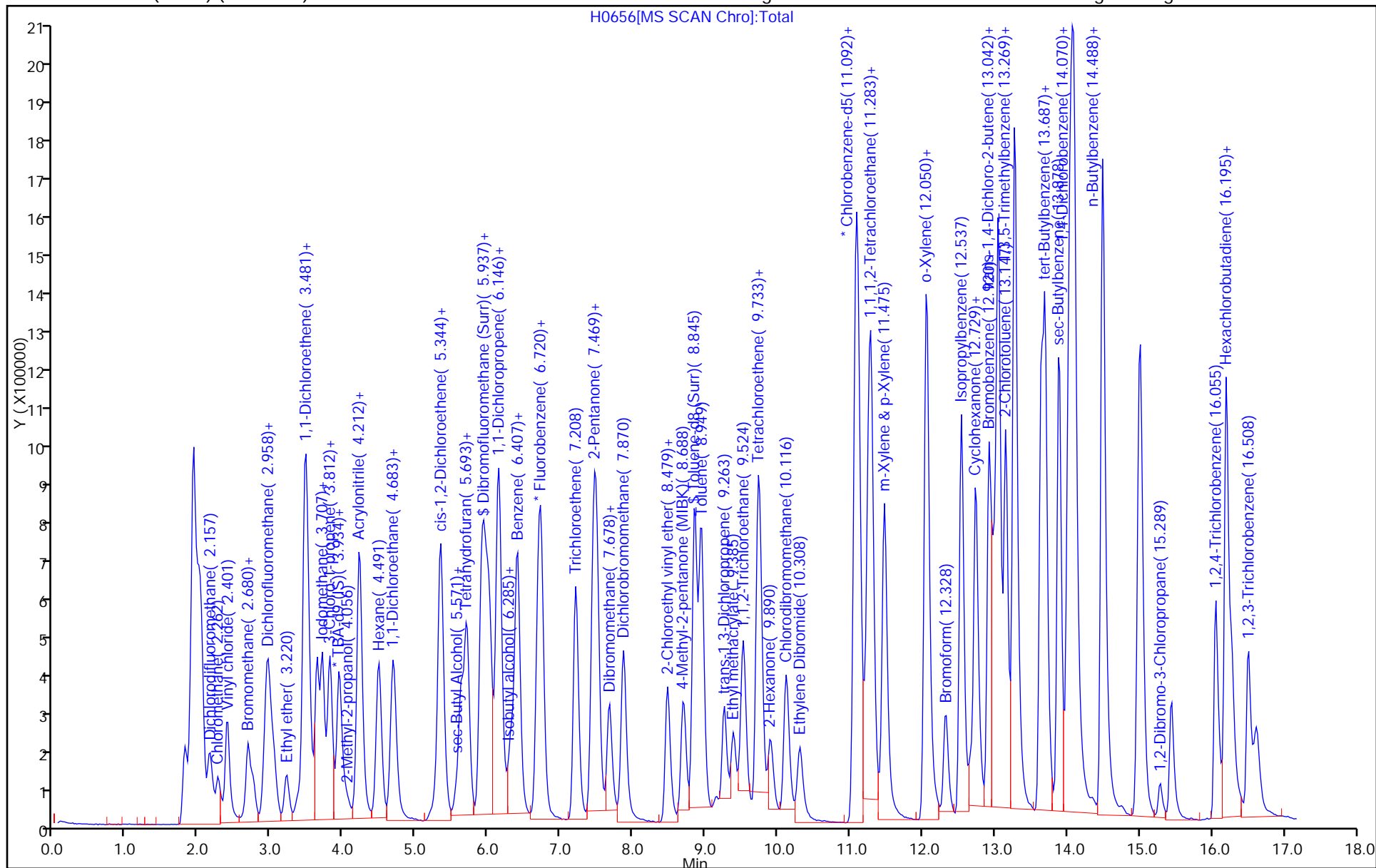
ALS Bottle#: 39

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: CCV 280-391346/2 Calibration Date: 10/16/2017 06:52
Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 04/04/2017 12:48
Lab File ID: H0661.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2		0.0029			10.0		20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0661.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 16-Oct-2017 06:52:30 ALS Bottle#: 10 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 19:35:26 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: linesj

Date: 16-Oct-2017 19:26:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.973	3.973	0.000	95	258724	250.0	250.0	
* 2 Fluorobenzene	96	6.725	6.725	0.000	98	1226829	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.062	11.062	0.000	88	406593	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.075	0.000	96	723172	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.907	5.907	0.000	93	818958	10.3	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.325	6.325	0.000	100	351205	10.3	10.9	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.850	0.000	92	1721833	10.3	10.1	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.734	0.000	86	948406	10.3	9.66	
28 Dichlorodifluoromethane	85	2.162	2.162	0.000	98	594919	10.0	9.09	
30 Chloromethane	50	2.267	2.267	0.000	98	257541	10.0	8.30	
32 Vinyl chloride	62	2.406	2.406	0.000	98	326035	10.0	8.60	
35 Bromomethane	94	2.685	2.685	0.000	90	354627	10.0	8.90	
36 Chloroethane	64	2.754	2.754	0.000	98	220664	10.0	8.73	
37 Dichlorofluoromethane	67	2.928	2.928	0.000	98	901754	10.0	10.2	
38 Trichlorofluoromethane	101	2.981	2.981	0.000	99	925125	10.0	9.63	
40 Ethyl ether	59	3.225	3.225	0.000	90	191458	10.0	10.7	
45 1,1-Dichloroethene	96	3.468	3.468	0.000	99	486456	10.0	10.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.486	3.486	0.000	97	697542	10.0	11.4	
47 Acetone	43	3.503	3.503	0.000	99	97634	40.0	42.2	
48 Iodomethane	142	3.642	3.642	0.000	100	1199504	10.0	10.8	
50 Carbon disulfide	76	3.712	3.712	0.000	98	1764468	10.0	11.1	
52 3-Chloro-1-propene	41	3.817	3.817	0.000	88	617480	10.0	10.6	
53 Methyl acetate	43	3.817	3.817	0.000	95	493049	50.0	54.4	
54 Methylene Chloride	84	3.939	3.939	0.000	90	416937	10.0	10.1	
55 2-Methyl-2-propanol	59	4.060	4.060	0.000	96	111611	100.0	85.4	
57 Acrylonitrile	53	4.200	4.200	0.000	99	283792	100.0	106.6	
56 Methyl tert-butyl ether	73	4.217	4.217	0.000	86	685124	10.0	10.6	
58 trans-1,2-Dichloroethene	96	4.217	4.217	0.000	100	520374	10.0	11.0	
59 Hexane	57	4.496	4.496	0.000	90	712766	10.0	10.1	
60 1,1-Dichloroethane	63	4.670	4.670	0.000	95	834449	10.0	10.7	
61 Vinyl acetate	43	4.705	4.705	0.000	96	826427	20.0	24.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.332	5.332	0.000	82	524171	10.0	10.9	
67 2-Butanone (MEK)	43	5.349	5.349	0.000	41	199762	40.0	43.6	
66 2,2-Dichloropropane	77	5.349	5.349	0.000	84	939118	10.0	11.7	
71 sec-Butyl Alcohol	45	5.558	5.558	0.000	97	289935	300.0	276.2	
73 Chlorobromomethane	128	5.628	5.628	0.000	92	259538	10.0	11.2	
74 Tetrahydrofuran	42	5.698	5.698	0.000	91	71483	20.0	22.9	
75 Chloroform	83	5.698	5.698	0.000	93	990839	10.0	10.7	
76 1,1,1-Trichloroethane	97	5.941	5.941	0.000	98	986252	10.0	11.0	
77 Cyclohexane	56	6.011	6.011	0.000	87	793148	10.0	10.8	
78 1,1-Dichloropropene	75	6.133	6.133	0.000	97	835807	10.0	10.9	
79 Carbon tetrachloride	117	6.150	6.150	0.000	96	987854	10.0	11.1	
80 Isobutyl alcohol	41	6.272	6.272	0.000	92	83711	250.0	229.7	
81 Benzene	78	6.394	6.394	0.000	95	1492746	10.0	11.0	
82 1,2-Dichloroethane	62	6.412	6.412	0.000	96	362415	10.0	10.3	
84 n-Heptane	43	6.690	6.690	0.000	90	884950	10.0	11.1	
86 Trichloroethene	95	7.195	7.195	0.000	98	673629	10.0	11.3	
88 2-Pentanone	43	7.439	7.439	0.000	98	830416	40.0	61.3	
89 Methylcyclohexane	55	7.457	7.457	0.000	90	737424	10.0	10.8	
90 1,2-Dichloropropane	63	7.491	7.491	0.000	94	489804	10.0	10.5	
92 Dibromomethane	93	7.666	7.666	0.000	98	317724	10.0	10.8	
93 1,4-Dioxane	88	7.683	7.683	0.000	88	28984	200.0	197.5	
94 Dichlorobromomethane	83	7.857	7.857	0.000	99	871830	10.0	11.0	
97 cis-1,3-Dichloropropene	75	8.467	8.467	0.000	98	748700	10.0	9.71	
96 2-Chloroethyl vinyl ether	63	8.467	8.467	0.000	35	2805	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.693	8.693	0.000	95	745679	40.0	44.4	
99 Toluene	91	8.937	8.937	0.000	99	1742117	10.0	10.7	
100 trans-1,3-Dichloropropene	75	9.250	9.250	0.000	89	524730	10.0	10.1	
101 Ethyl methacrylate	69	9.372	9.372	0.000	85	401301	10.0	9.91	
102 1,1,2-Trichloroethane	97	9.512	9.512	0.000	90	340628	10.0	10.6	
103 Tetrachloroethene	164	9.721	9.721	0.000	97	631909	10.0	10.2	
104 1,3-Dichloropropane	76	9.755	9.755	0.000	84	555737	10.0	9.98	
105 2-Hexanone	43	9.895	9.895	0.000	95	483346	40.0	42.4	
108 Chlorodibromomethane	129	10.104	10.104	0.000	90	669180	10.0	9.96	
109 Ethylene Dibromide	107	10.295	10.295	0.000	99	445417	10.0	10.1	
110 1-Chlorohexane	91	11.079	11.079	0.000	92	937956	10.0	10.0	
111 Chlorobenzene	112	11.114	11.114	0.000	94	1245844	10.0	9.89	
112 1,1,1,2-Tetrachloroethane	131	11.236	11.236	0.000	96	642502	10.0	9.72	
113 Ethylbenzene	106	11.288	11.288	0.000	98	622808	10.0	9.91	
114 m-Xylene & p-Xylene	106	11.462	11.462	0.000	98	840226	10.0	10.2	
115 o-Xylene	106	12.037	12.037	0.000	98	731904	10.0	9.95	
116 Styrene	104	12.054	12.054	0.000	93	1152008	10.0	9.93	
117 Bromoform	173	12.316	12.316	0.000	95	379639	10.0	10.2	
118 Isopropylbenzene	105	12.525	12.525	0.000	96	2393186	10.0	9.41	
120 Cyclohexanone	55	12.664	12.664	0.000	87	177046	400.0	342.1	
122 Bromobenzene	156	12.908	12.908	0.000	93	588922	10.0	9.51	
121 1,1,2,2-Tetrachloroethane	83	12.925	12.925	0.000	94	466922	10.0	9.26	
123 1,2,3-Trichloropropane	110	12.960	12.960	0.000	79	112219	10.0	9.27	
124 trans-1,4-Dichloro-2-buten	53	12.995	12.995	0.000	69	72937	10.0	8.43	
125 N-Propylbenzene	120	13.047	13.047	0.000	99	617966	10.0	9.30	
126 2-Chlorotoluene	126	13.152	13.152	0.000	98	492545	10.0	9.28	
127 1,3,5-Trimethylbenzene	105	13.256	13.256	0.000	94	1805438	10.0	9.42	
128 4-Chlorotoluene	126	13.273	13.273	0.000	98	571886	10.0	9.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.639	13.639	0.000	93	2037939	10.0	9.49	
130 1,2,4-Trimethylbenzene	105	13.691	13.691	0.000	96	1715234	10.0	9.39	
131 sec-Butylbenzene	134	13.883	13.883	0.000	94	558070	10.0	9.43	
132 1,3-Dichlorobenzene	146	14.005	14.005	0.000	97	935467	10.0	9.93	
133 4-Isopropyltoluene	119	14.040	14.040	0.000	97	2344402	10.0	9.62	
134 1,4-Dichlorobenzene	146	14.092	14.092	0.000	94	1248826	10.0	9.02	
137 n-Butylbenzene	91	14.475	14.475	0.000	97	2230123	10.0	9.61	
138 1,2-Dichlorobenzene	146	14.493	14.493	0.000	97	885210	10.0	9.24	
139 1,2-Dibromo-3-Chloropropan	157	15.276	15.276	0.000	89	82462	10.0	9.42	
141 1,2,4-Trichlorobenzene	180	16.043	16.043	0.000	95	599361	10.0	9.36	
142 Hexachlorobutadiene	225	16.199	16.199	0.000	98	639531	10.0	9.44	
143 Naphthalene	128	16.269	16.269	0.000	97	595960	10.0	9.15	
144 1,2,3-Trichlorobenzene	180	16.495	16.495	0.000	95	447052	10.0	9.45	
S 151 1,2-Dichloroethene, Total	96				0		20.0	21.9	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	41.9	
S 146 Xylenes, Total (URS)	1				0		20.0	20.1	
S 149 1,2-Dichloroethene, Total	1				0		20.0	21.9	
S 150 Xylenes, Total	106				0		20.0	20.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0661.D

Injection Date: 16-Oct-2017 06:52:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

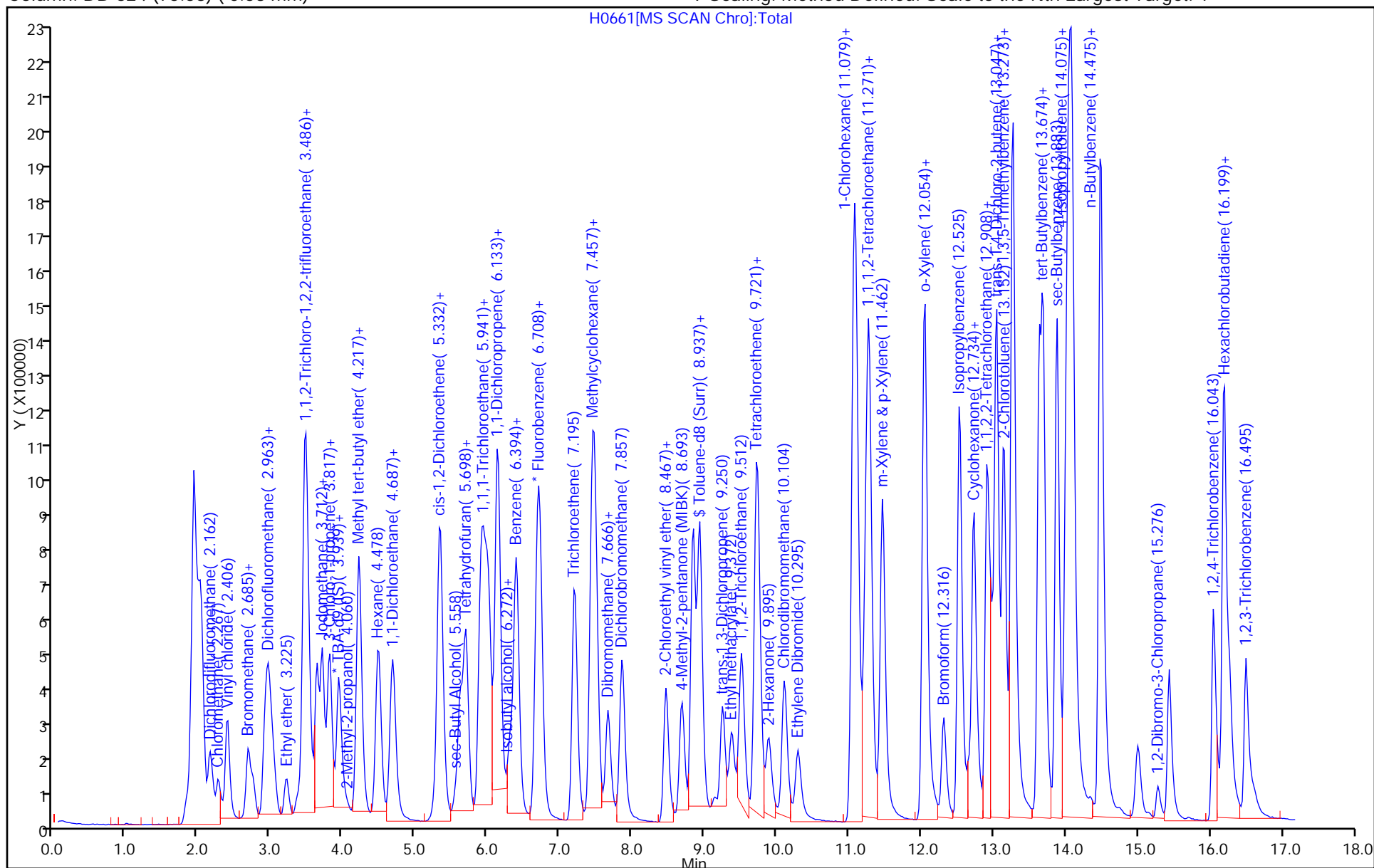
ALS Bottle#: 10

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCV 280-391346/2 Calibration Date: 10/16/2017 06:52

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0661.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.6667	0.6062		9.09	10.0	-9.1	20.0
Chloromethane	Ave	0.3163	0.2624	0.1000	8.30	10.0	-17.0	20.0
Vinyl chloride	Ave	0.3861	0.3322		8.60	10.0	-14.0	20.0
Bromomethane	Ave	0.4060	0.3613		8.90	10.0	-11.0	20.0
Chloroethane	Ave	0.2575	0.2248		8.73	10.0	-12.7	20.0
Dichlorofluoromethane	Ave	0.9051	0.9188		10.2	10.0	1.5	20.0
Trichlorofluoromethane	Ave	0.9791	0.9426		9.63	10.0	-3.7	20.0
Ethyl ether	Ave	0.1817	0.1951		10.7	10.0	7.4	20.0
1,1-Dichloroethene	Ave	0.4603	0.4956		10.8	10.0	7.7	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.6250	0.7107		11.4	10.0	13.7	20.0
Acetone	Lin2		0.0249		42.2	40.0	5.4	20.0
Iodomethane	Ave	1.129	1.222		10.8	10.0	8.3	20.0
Carbon disulfide	Ave	1.622	1.798		11.1	10.0	10.8	20.0
3-Chloro-1-propene	Ave	0.5935	0.6291		10.6	10.0	6.0	20.0
Methyl acetate	Ave	0.0923	0.1005		54.4	50.0	8.9	20.0
Methylene Chloride	Ave	0.4210	0.4248		10.1	10.0	0.9	20.0
t-Butyl alcohol	Ave	1.262	1.078		85.4	100	-14.6	20.0
Acrylonitrile	Ave	0.0271	0.0289		107	100	6.6	20.0
Methyl tert-butyl ether	Ave	0.6568	0.6981		10.6	10.0	6.3	20.0
trans-1,2-Dichloroethene	Ave	0.4810	0.5302		11.0	10.0	10.2	20.0
Hexane	Ave	2.173	2.191		10.1	10.0	0.9	20.0
1,1-Dichloroethane	Ave	0.7941	0.8502	0.1000	10.7	10.0	7.1	20.0
Vinyl acetate	Ave	0.3444	0.4210		24.5	20.0	22.3*	20.0
cis-1,2-Dichloroethene	Ave	0.4915	0.5341		10.9	10.0	8.7	20.0
2,2-Dichloropropane	Lin1		0.9569		11.7	10.0	17.3	20.0
2-Butanone (MEK)	Ave	0.0466	0.0509		43.6	40.0	9.1	20.0
sec-Butyl Alcohol	Ave	1.014	0.9339		276	300	-7.9	20.0
Chlorobromomethane	Ave	0.2351	0.2644		11.2	10.0	12.5	20.0
Chloroform	Ave	0.9395	1.010		10.7	10.0	7.5	20.0
Tetrahydrofuran	Ave	0.0317	0.0364		22.9	20.0	14.7	20.0
1,1,1-Trichloroethane	Ave	0.9094	1.005		11.0	10.0	10.5	20.0
Cyclohexane	Ave	0.7486	0.8081		10.8	10.0	8.0	20.0
1,1-Dichloropropene	Ave	0.7844	0.8516		10.9	10.0	8.6	20.0
Carbon tetrachloride	Ave	0.9085	1.007		11.1	10.0	10.8	20.0
Isobutyl alcohol	Ave	0.3522	0.3236		230	250	-8.1	20.0
Benzene	Ave	1.380	1.521		11.0	10.0	10.2	20.0
1,2-Dichloroethane	Ave	0.3570	0.3693		10.3	10.0	3.4	20.0
Trichloroethene	Ave	0.6082	0.6864		11.3	10.0	12.8	20.0
2-Pentanone	Ave	0.1380	0.2115		61.3	40.0	53.3*	20.0
Methylcyclohexane	Ave	0.6932	0.7514		10.8	10.0	8.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCV 280-391346/2 Calibration Date: 10/16/2017 06:52

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0661.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.4752	0.4991		10.5	10.0	5.0	20.0
Dibromomethane	Ave	0.3008	0.3237		10.8	10.0	7.6	20.0
1,4-Dioxane	Lin2		0.0015		197	200	-1.3	20.0
Dichlorobromomethane	Ave	0.8077	0.8883		11.0	10.0	10.0	20.0
cis-1,3-Dichloropropene	Ave	2.371	2.302		9.71	10.0	-2.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1709	0.1899		44.4	40.0	11.1	20.0
Toluene	Ave	1.659	1.775		10.7	10.0	7.0	20.0
trans-1,3-Dichloropropene	Ave	0.5293	0.5346		10.1	10.0	1.0	20.0
Ethyl methacrylate	Ave	1.245	1.234		9.91	10.0	-0.9	20.0
1,1,2-Trichloroethane	Lin2		0.3471		10.6	10.0	5.7	20.0
Tetrachloroethene	Ave	1.901	1.943		10.2	10.0	2.2	20.0
1,3-Dichloropropane	Ave	1.713	1.709		9.98	10.0	-0.2	20.0
2-Hexanone	Ave	0.3508	0.3715		42.4	40.0	5.9	20.0
Chlorodibromomethane	Ave	2.065	2.057		9.96	10.0	-0.4	20.0
1,2-Dibromoethane	Ave	1.360	1.369		10.1	10.0	0.7	20.0
1-Chlorohexane	Ave	2.871	2.884		10.0	10.0	0.4	20.0
Chlorobenzene	Ave	3.872	3.830	0.3000	9.89	10.0	-1.1	20.0
1,1,1,2-Tetrachloroethane	Ave	2.031	1.975		9.72	10.0	-2.8	20.0
Ethylbenzene	Ave	1.933	1.915		9.91	10.0	-0.9	20.0
m-Xylene & p-Xylene	Ave	2.542	2.583		10.2	10.0	1.6	20.0
o-Xylene	Ave	2.261	2.250		9.95	10.0	-0.5	20.0
Styrene	Ave	3.566	3.542		9.93	10.0	-0.7	20.0
Bromoform	Ave	1.147	1.167	0.1000	10.2	10.0	1.8	20.0
Isopropylbenzene	Ave	4.397	4.137		9.41	10.0	-5.9	20.0
Cyclohexanone	Ave	0.0159	0.0136		342	400	-14.5	20.0
Bromobenzene	Ave	1.071	1.018		9.51	10.0	-4.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.8713	0.8071	0.3000	9.26	10.0	-7.4	20.0
1,2,3-Trichloropropane	Lin2		0.1940		9.27	10.0	-7.3	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1495	0.1261		8.43	10.0	-15.7	20.0
N-Propylbenzene	Ave	1.148	1.068		9.30	10.0	-7.0	20.0
2-Chlorotoluene	Ave	0.9171	0.8514		9.28	10.0	-7.2	20.0
1,3,5-Trimethylbenzene	Ave	3.315	3.121		9.42	10.0	-5.8	20.0
4-Chlorotoluene	Ave	1.043	0.9885		9.48	10.0	-5.2	20.0
tert-Butylbenzene	Ave	3.713	3.523		9.49	10.0	-5.1	20.0
1,2,4-Trimethylbenzene	Ave	3.159	2.965		9.39	10.0	-6.1	20.0
sec-Butylbenzene	Ave	1.023	0.9646		9.43	10.0	-5.7	20.0
1,3-Dichlorobenzene	Ave	1.628	1.617		9.93	10.0	-0.7	20.0
4-Isopropyltoluene	Ave	4.212	4.052		9.62	10.0	-3.8	20.0
1,4-Dichlorobenzene	Ave	2.394	2.159		9.02	10.0	-9.8	20.0
n-Butylbenzene	Ave	4.009	3.855		9.61	10.0	-3.9	20.0
1,2-Dichlorobenzene	Ave	1.655	1.530		9.24	10.0	-7.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab Sample ID: CCV 280-391346/2 Calibration Date: 10/16/2017 06:52
 Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12
 Lab File ID: H0661.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1514	0.1425		9.42	10.0	-5.8	20.0
1,2,4-Trichlorobenzene	Ave	1.106	1.036		9.36	10.0	-6.4	20.0
Hexachlorobutadiene	Ave	1.171	1.105		9.44	10.0	-5.6	20.0
Naphthalene	Ave	1.125	1.030		9.15	10.0	-8.5	20.0
1,2,3-Trichlorobenzene	Ave	0.8175	0.7727		9.45	10.0	-5.5	20.0
Dibromofluoromethane (Surr)	Ave	0.7477	0.8141		11.2	10.3	8.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3273	0.3491		10.9	10.3	6.7	20.0
Toluene-d8 (Surr)	Ave	5.238	5.164		10.1	10.3	-1.4	20.0
4-Bromofluorobenzene (Surr)	Ave	1.697	1.599		9.66	10.3	-5.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0661.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 16-Oct-2017 06:52:30 ALS Bottle#: 10 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 19:35:26 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: linesj

Date: 16-Oct-2017 19:26:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.973	3.973	0.000	95	258724	250.0	250.0	
* 2 Fluorobenzene	96	6.725	6.725	0.000	98	1226829	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.062	11.062	0.000	88	406593	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.075	14.075	0.000	96	723172	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.907	5.907	0.000	93	818958	10.3	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.325	6.325	0.000	100	351205	10.3	10.9	
\$ 10 Toluene-d8 (Surr)	98	8.850	8.850	0.000	92	1721833	10.3	10.1	
\$ 11 4-Bromofluorobenzene (Surr	95	12.734	12.734	0.000	86	948406	10.3	9.66	
28 Dichlorodifluoromethane	85	2.162	2.162	0.000	98	594919	10.0	9.09	
30 Chloromethane	50	2.267	2.267	0.000	98	257541	10.0	8.30	
32 Vinyl chloride	62	2.406	2.406	0.000	98	326035	10.0	8.60	
35 Bromomethane	94	2.685	2.685	0.000	90	354627	10.0	8.90	
36 Chloroethane	64	2.754	2.754	0.000	98	220664	10.0	8.73	
37 Dichlorofluoromethane	67	2.928	2.928	0.000	98	901754	10.0	10.2	
38 Trichlorofluoromethane	101	2.981	2.981	0.000	99	925125	10.0	9.63	
40 Ethyl ether	59	3.225	3.225	0.000	90	191458	10.0	10.7	
45 1,1-Dichloroethene	96	3.468	3.468	0.000	99	486456	10.0	10.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.486	3.486	0.000	97	697542	10.0	11.4	
47 Acetone	43	3.503	3.503	0.000	99	97634	40.0	42.2	
48 Iodomethane	142	3.642	3.642	0.000	100	1199504	10.0	10.8	
50 Carbon disulfide	76	3.712	3.712	0.000	98	1764468	10.0	11.1	
52 3-Chloro-1-propene	41	3.817	3.817	0.000	88	617480	10.0	10.6	
53 Methyl acetate	43	3.817	3.817	0.000	95	493049	50.0	54.4	
54 Methylene Chloride	84	3.939	3.939	0.000	90	416937	10.0	10.1	
55 2-Methyl-2-propanol	59	4.060	4.060	0.000	96	111611	100.0	85.4	
57 Acrylonitrile	53	4.200	4.200	0.000	99	283792	100.0	106.6	
56 Methyl tert-butyl ether	73	4.217	4.217	0.000	86	685124	10.0	10.6	
58 trans-1,2-Dichloroethene	96	4.217	4.217	0.000	100	520374	10.0	11.0	
59 Hexane	57	4.496	4.496	0.000	90	712766	10.0	10.1	
60 1,1-Dichloroethane	63	4.670	4.670	0.000	95	834449	10.0	10.7	
61 Vinyl acetate	43	4.705	4.705	0.000	96	826427	20.0	24.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.332	5.332	0.000	82	524171	10.0	10.9	
67 2-Butanone (MEK)	43	5.349	5.349	0.000	41	199762	40.0	43.6	
66 2,2-Dichloropropane	77	5.349	5.349	0.000	84	939118	10.0	11.7	
71 sec-Butyl Alcohol	45	5.558	5.558	0.000	97	289935	300.0	276.2	
73 Chlorobromomethane	128	5.628	5.628	0.000	92	259538	10.0	11.2	
74 Tetrahydrofuran	42	5.698	5.698	0.000	91	71483	20.0	22.9	
75 Chloroform	83	5.698	5.698	0.000	93	990839	10.0	10.7	
76 1,1,1-Trichloroethane	97	5.941	5.941	0.000	98	986252	10.0	11.0	
77 Cyclohexane	56	6.011	6.011	0.000	87	793148	10.0	10.8	
78 1,1-Dichloropropene	75	6.133	6.133	0.000	97	835807	10.0	10.9	
79 Carbon tetrachloride	117	6.150	6.150	0.000	96	987854	10.0	11.1	
80 Isobutyl alcohol	41	6.272	6.272	0.000	92	83711	250.0	229.7	
81 Benzene	78	6.394	6.394	0.000	95	1492746	10.0	11.0	
82 1,2-Dichloroethane	62	6.412	6.412	0.000	96	362415	10.0	10.3	
84 n-Heptane	43	6.690	6.690	0.000	90	884950	10.0	11.1	
86 Trichloroethene	95	7.195	7.195	0.000	98	673629	10.0	11.3	
88 2-Pentanone	43	7.439	7.439	0.000	98	830416	40.0	61.3	
89 Methylcyclohexane	55	7.457	7.457	0.000	90	737424	10.0	10.8	
90 1,2-Dichloropropane	63	7.491	7.491	0.000	94	489804	10.0	10.5	
92 Dibromomethane	93	7.666	7.666	0.000	98	317724	10.0	10.8	
93 1,4-Dioxane	88	7.683	7.683	0.000	88	28984	200.0	197.5	
94 Dichlorobromomethane	83	7.857	7.857	0.000	99	871830	10.0	11.0	
97 cis-1,3-Dichloropropene	75	8.467	8.467	0.000	98	748700	10.0	9.71	
96 2-Chloroethyl vinyl ether	63	8.467	8.467	0.000	35	2805	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.693	8.693	0.000	95	745679	40.0	44.4	
99 Toluene	91	8.937	8.937	0.000	99	1742117	10.0	10.7	
100 trans-1,3-Dichloropropene	75	9.250	9.250	0.000	89	524730	10.0	10.1	
101 Ethyl methacrylate	69	9.372	9.372	0.000	85	401301	10.0	9.91	
102 1,1,2-Trichloroethane	97	9.512	9.512	0.000	90	340628	10.0	10.6	
103 Tetrachloroethene	164	9.721	9.721	0.000	97	631909	10.0	10.2	
104 1,3-Dichloropropane	76	9.755	9.755	0.000	84	555737	10.0	9.98	
105 2-Hexanone	43	9.895	9.895	0.000	95	483346	40.0	42.4	
108 Chlorodibromomethane	129	10.104	10.104	0.000	90	669180	10.0	9.96	
109 Ethylene Dibromide	107	10.295	10.295	0.000	99	445417	10.0	10.1	
110 1-Chlorohexane	91	11.079	11.079	0.000	92	937956	10.0	10.0	
111 Chlorobenzene	112	11.114	11.114	0.000	94	1245844	10.0	9.89	
112 1,1,1,2-Tetrachloroethane	131	11.236	11.236	0.000	96	642502	10.0	9.72	
113 Ethylbenzene	106	11.288	11.288	0.000	98	622808	10.0	9.91	
114 m-Xylene & p-Xylene	106	11.462	11.462	0.000	98	840226	10.0	10.2	
115 o-Xylene	106	12.037	12.037	0.000	98	731904	10.0	9.95	
116 Styrene	104	12.054	12.054	0.000	93	1152008	10.0	9.93	
117 Bromoform	173	12.316	12.316	0.000	95	379639	10.0	10.2	
118 Isopropylbenzene	105	12.525	12.525	0.000	96	2393186	10.0	9.41	
120 Cyclohexanone	55	12.664	12.664	0.000	87	177046	400.0	342.1	
122 Bromobenzene	156	12.908	12.908	0.000	93	588922	10.0	9.51	
121 1,1,2,2-Tetrachloroethane	83	12.925	12.925	0.000	94	466922	10.0	9.26	
123 1,2,3-Trichloropropane	110	12.960	12.960	0.000	79	112219	10.0	9.27	
124 trans-1,4-Dichloro-2-buten	53	12.995	12.995	0.000	69	72937	10.0	8.43	
125 N-Propylbenzene	120	13.047	13.047	0.000	99	617966	10.0	9.30	
126 2-Chlorotoluene	126	13.152	13.152	0.000	98	492545	10.0	9.28	
127 1,3,5-Trimethylbenzene	105	13.256	13.256	0.000	94	1805438	10.0	9.42	
128 4-Chlorotoluene	126	13.273	13.273	0.000	98	571886	10.0	9.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.639	13.639	0.000	93	2037939	10.0	9.49	
130 1,2,4-Trimethylbenzene	105	13.691	13.691	0.000	96	1715234	10.0	9.39	
131 sec-Butylbenzene	134	13.883	13.883	0.000	94	558070	10.0	9.43	
132 1,3-Dichlorobenzene	146	14.005	14.005	0.000	97	935467	10.0	9.93	
133 4-Isopropyltoluene	119	14.040	14.040	0.000	97	2344402	10.0	9.62	
134 1,4-Dichlorobenzene	146	14.092	14.092	0.000	94	1248826	10.0	9.02	
137 n-Butylbenzene	91	14.475	14.475	0.000	97	2230123	10.0	9.61	
138 1,2-Dichlorobenzene	146	14.493	14.493	0.000	97	885210	10.0	9.24	
139 1,2-Dibromo-3-Chloropropan	157	15.276	15.276	0.000	89	82462	10.0	9.42	
141 1,2,4-Trichlorobenzene	180	16.043	16.043	0.000	95	599361	10.0	9.36	
142 Hexachlorobutadiene	225	16.199	16.199	0.000	98	639531	10.0	9.44	
143 Naphthalene	128	16.269	16.269	0.000	97	595960	10.0	9.15	
144 1,2,3-Trichlorobenzene	180	16.495	16.495	0.000	95	447052	10.0	9.45	
S 151 1,2-Dichloroethene, Total	96				0		20.0	21.9	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 145 Trihalomethanes, Total	1				0		40.0	41.9	
S 146 Xylenes, Total (URS)	1				0		20.0	20.1	
S 149 1,2-Dichloroethene, Total	1				0		20.0	21.9	
S 150 Xylenes, Total	106				0		20.0	20.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0661.D

Injection Date: 16-Oct-2017 06:52:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

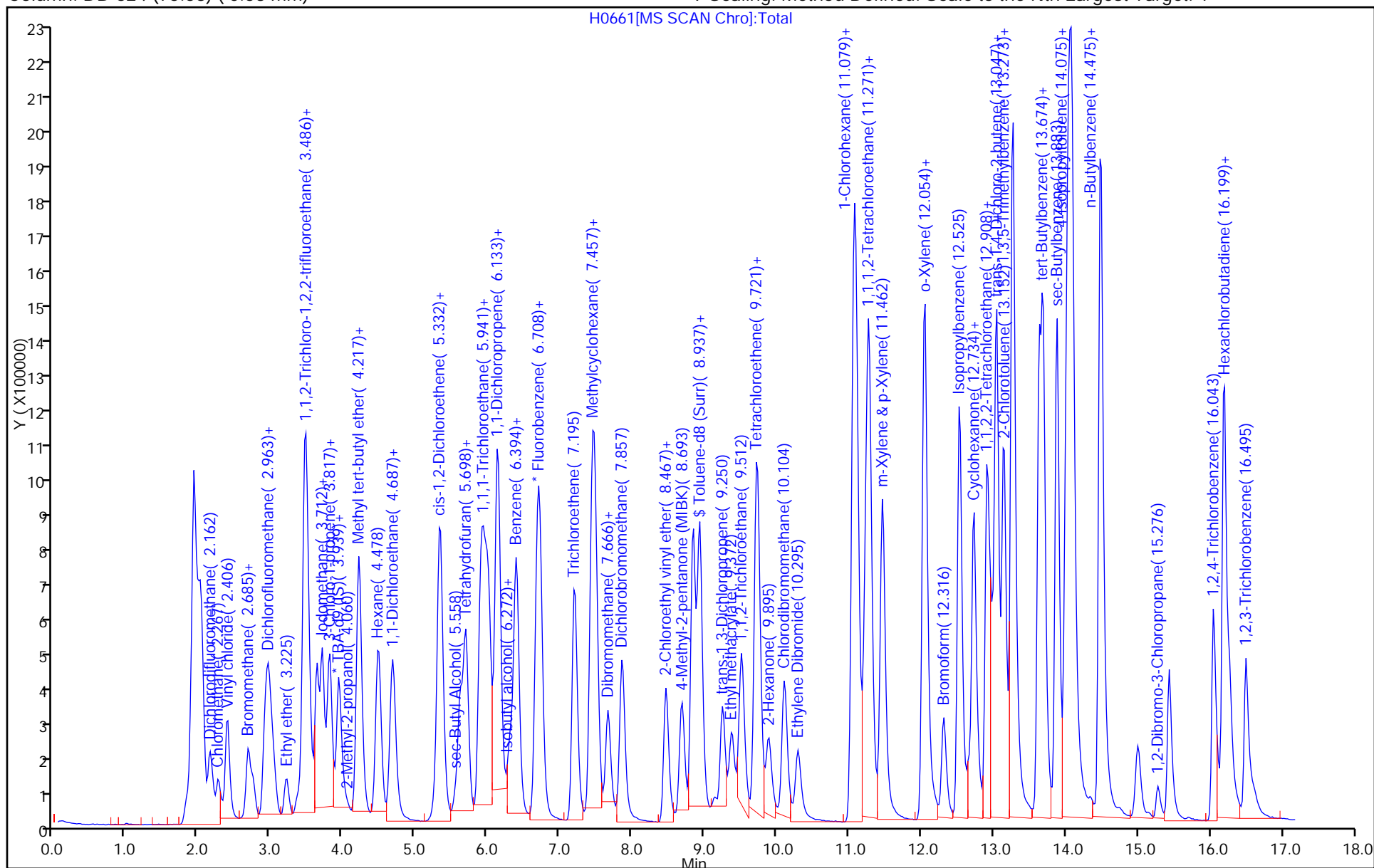
ALS Bottle#: 10

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
SDG No.: _____
Lab Sample ID: CCVC 280-391346/26 Calibration Date: 10/16/2017 14:30
Instrument ID: VMS_H Calib Start Date: 04/04/2017 10:37
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 04/04/2017 12:48
Lab File ID: H0682.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin2		0.0034			10.0		50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0682.D
 Lims ID: ccvc
 Client ID:
 Sample Type: CCVC
 Inject. Date: 16-Oct-2017 14:30:30 ALS Bottle#: 31 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccvc
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:10:48 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:51:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.972	0.000	95	290969	250.0	250.0	
* 2 Fluorobenzene	96	6.741	6.741	0.000	99	1210617	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.078	11.078	0.000	89	396995	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.073	0.000	96	716833	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.905	0.000	93	832728	10.3	11.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.323	0.000	99	348341	10.3	11.0	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.848	0.000	92	1758702	10.3	10.6	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.732	0.000	86	960616	10.3	9.87	
28 Dichlorodifluoromethane	85	2.161	2.161	0.000	97	539169	10.0	8.35	
30 Chloromethane	50	2.265	2.265	0.000	98	234891	10.0	7.67	
32 Vinyl chloride	62	2.405	2.405	0.000	97	277024	10.0	7.41	
35 Bromomethane	94	2.683	2.683	0.000	90	321406	10.0	8.17	
36 Chloroethane	64	2.753	2.753	0.000	99	192492	10.0	7.72	
37 Dichlorofluoromethane	67	2.927	2.927	0.000	97	817168	10.0	9.32	
38 Trichlorofluoromethane	101	2.979	2.979	0.000	99	785580	10.0	8.28	
40 Ethyl ether	59	3.206	3.206	0.000	91	182056	10.0	10.3	
45 1,1-Dichloroethene	96	3.467	3.467	0.000	98	436856	10.0	9.80	
46 1,1,2-Trichloro-1,2,2-trif	151	3.484	3.484	0.000	97	602481	10.0	9.95	
47 Acetone	43	3.502	3.502	0.000	100	93904	40.0	41.0	
48 Iodomethane	142	3.641	3.641	0.000	99	1144752	10.0	10.5	
50 Carbon disulfide	76	3.711	3.711	0.000	98	1551127	10.0	9.87	
52 3-Chloro-1-propene	41	3.815	3.815	0.000	86	552418	10.0	9.61	
53 Methyl acetate	43	3.815	3.815	0.000	82	454882	50.0	50.9	
54 Methylene Chloride	84	3.937	3.937	0.000	90	406569	10.0	9.97	
55 2-Methyl-2-propanol	59	4.059	4.059	0.000	93	129840	100.0	88.4	
57 Acrylonitrile	53	4.198	4.198	0.000	98	275806	100.0	105.0	
56 Methyl tert-butyl ether	73	4.216	4.216	0.000	89	679086	10.0	10.7	
58 trans-1,2-Dichloroethene	96	4.216	4.216	0.000	99	468785	10.0	10.1	
59 Hexane	57	4.477	4.477	0.000	90	582785	10.0	8.45	
60 1,1-Dichloroethane	63	4.669	4.669	0.000	95	781554	10.0	10.2	
61 Vinyl acetate	43	4.703	4.703	0.000	96	757588	20.0	22.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.330	5.330	0.000	81	488145	10.0	10.3	
67 2-Butanone (MEK)	43	5.348	5.348	0.000	47	188462	40.0	41.7	
66 2,2-Dichloropropane	77	5.348	5.348	0.000	84	735127	10.0	9.13	
71 sec-Butyl Alcohol	45	5.557	5.557	0.000	98	323841	300.0	274.3	
73 Chlorobromomethane	128	5.626	5.626	0.000	95	248387	10.0	10.9	
74 Tetrahydrofuran	42	5.679	5.679	0.000	90	67073	20.0	21.8	
75 Chloroform	83	5.696	5.696	0.000	93	953072	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.940	5.940	0.000	98	860779	10.0	9.77	
77 Cyclohexane	56	6.010	6.010	0.000	86	671418	10.0	9.26	
78 1,1-Dichloropropene	75	6.132	6.132	0.000	98	717840	10.0	9.45	
79 Carbon tetrachloride	117	6.149	6.149	0.000	96	858533	10.0	9.76	
80 Isobutyl alcohol	41	6.271	6.271	0.000	92	89963	250.0	219.5	
81 Benzene	78	6.393	6.393	0.000	95	1382759	10.0	10.3	
82 1,2-Dichloroethane	62	6.410	6.410	0.000	96	349106	10.0	10.1	
84 n-Heptane	43	6.689	6.689	0.000	90	721357	10.0	9.17	
86 Trichloroethene	95	7.194	7.194	0.000	98	606667	10.0	10.3	
88 2-Pentanone	43	7.438	7.438	0.000	98	472247	40.0	35.3	
89 Methylcyclohexane	55	7.455	7.455	0.000	90	620996	10.0	9.25	
90 1,2-Dichloropropane	63	7.507	7.507	0.000	96	471516	10.0	10.2	
92 Dibromomethane	93	7.664	7.664	0.000	97	303988	10.0	10.4	
93 1,4-Dioxane	88	7.699	7.699	0.000	85	32499	200.0	223.4	
94 Dichlorobromomethane	83	7.856	7.856	0.000	99	832594	10.0	10.6	
97 cis-1,3-Dichloropropene	75	8.465	8.465	0.000	98	705438	10.0	9.37	
96 2-Chloroethyl vinyl ether	63	8.465	8.465	0.000	35	3303	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.692	8.692	0.000	95	699880	40.0	42.3	
99 Toluene	91	8.936	8.936	0.000	99	1638509	10.0	10.2	
100 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	89	530647	10.0	10.4	
101 Ethyl methacrylate	69	9.388	9.388	0.000	84	389763	10.0	9.86	
102 1,1,2-Trichloroethane	97	9.510	9.510	0.000	90	335684	10.0	10.6	
103 Tetrachloroethene	164	9.719	9.719	0.000	96	550757	10.0	9.12	
104 1,3-Dichloropropane	76	9.754	9.754	0.000	94	543736	10.0	10.0	
105 2-Hexanone	43	9.893	9.893	0.000	95	454408	40.0	40.8	
108 Chlorodibromomethane	129	10.120	10.120	0.000	90	645814	10.0	9.85	
109 Ethylene Dibromide	107	10.294	10.294	0.000	99	428155	10.0	9.91	
110 1-Chlorohexane	91	11.078	11.078	0.000	91	785026	10.0	8.61	
111 Chlorobenzene	112	11.112	11.112	0.000	93	1186804	10.0	9.65	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.252	0.000	95	624696	10.0	9.68	
113 Ethylbenzene	106	11.287	11.287	0.000	99	579538	10.0	9.44	
114 m-Xylene & p-Xylene	106	11.478	11.478	0.000	98	757174	10.0	9.38	
115 o-Xylene	106	12.036	12.036	0.000	98	693687	10.0	9.66	
116 Styrene	104	12.070	12.070	0.000	93	1099086	10.0	9.70	
117 Bromoform	173	12.314	12.314	0.000	96	367513	10.0	10.1	
118 Isopropylbenzene	105	12.541	12.541	0.000	96	2160791	10.0	8.57	
120 Cyclohexanone	55	12.663	12.663	0.000	88	207914	400.0	411.4	
122 Bromobenzene	156	12.924	12.924	0.000	93	577099	10.0	9.40	
121 1,1,2,2-Tetrachloroethane	83	12.924	12.924	0.000	93	455558	10.0	9.12	
123 1,2,3-Trichloropropane	110	12.976	12.976	0.000	79	109559	10.0	9.12	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.993	0.000	68	69716	10.0	8.13	
125 N-Propylbenzene	120	13.046	13.046	0.000	99	553406	10.0	8.40	
126 2-Chlorotoluene	126	13.150	13.150	0.000	98	454773	10.0	8.65	
127 1,3,5-Trimethylbenzene	105	13.272	13.272	0.000	95	1688665	10.0	8.88	
128 4-Chlorotoluene	126	13.289	13.289	0.000	98	555042	10.0	9.28	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.638	13.638	0.000	93	1859281	10.0	8.73	
130 1,2,4-Trimethylbenzene	105	13.690	13.690	0.000	96	1609671	10.0	8.89	
131 sec-Butylbenzene	134	13.882	13.882	0.000	94	500735	10.0	8.54	
132 1,3-Dichlorobenzene	146	14.004	14.004	0.000	96	850609	10.0	9.11	
133 4-Isopropyltoluene	119	14.038	14.038	0.000	98	2101691	10.0	8.70	
134 1,4-Dichlorobenzene	146	14.108	14.108	0.000	94	1218253	10.0	8.88	
137 n-Butylbenzene	91	14.474	14.474	0.000	98	1971156	10.0	8.57	
138 1,2-Dichlorobenzene	146	14.509	14.509	0.000	97	838721	10.0	8.84	
139 1,2-Dibromo-3-Chloropropan	157	15.292	15.292	0.000	89	82460	10.0	9.50	
141 1,2,4-Trichlorobenzene	180	16.059	16.059	0.000	95	580878	10.0	9.15	
142 Hexachlorobutadiene	225	16.198	16.198	0.000	98	574228	10.0	8.55	
143 Naphthalene	128	16.285	16.285	0.000	97	607507	10.0	9.41	
144 1,2,3-Trichlorobenzene	180	16.511	16.511	0.000	95	443482	10.0	9.46	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.3	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.7	
S 145 Trihalomethanes, Total	1				0		40.0	41.1	
S 146 Xylenes, Total (URS)	1				0		20.0	19.0	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.3	
S 150 Xylenes, Total	106				0		20.0	19.0	
S 147 Total BTEX	1				0			49.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0682.D

Injection Date: 16-Oct-2017 14:30:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ccvc

Worklist Smp#: 26

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

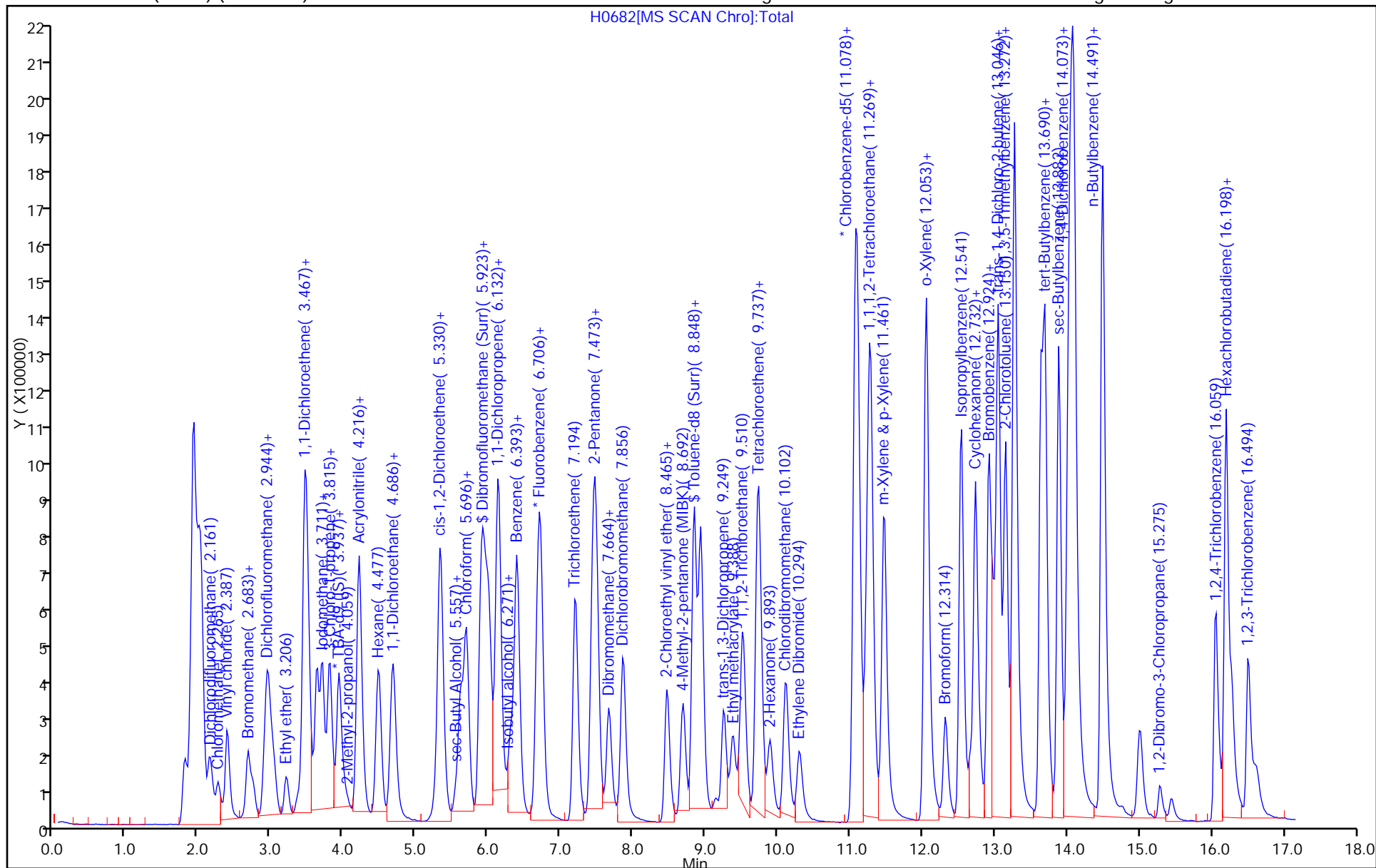
ALS Bottle#: 31

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCVC 280-391346/26 Calibration Date: 10/16/2017 14:30

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0682.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.6667	0.5567		8.35	10.0	-16.5	50.0
Chloromethane	Ave	0.3163	0.2425	0.1000	7.67	10.0	-23.3	50.0
Vinyl chloride	Ave	0.3861	0.2860		7.41	10.0	-25.9	50.0
Bromomethane	Ave	0.4060	0.3319		8.17	10.0	-18.3	50.0
Chloroethane	Ave	0.2575	0.1988		7.72	10.0	-22.8	50.0
Dichlorofluoromethane	Ave	0.9051	0.8438		9.32	10.0	-6.8	50.0
Trichlorofluoromethane	Ave	0.9791	0.8111		8.28	10.0	-17.2	50.0
Ethyl ether	Ave	0.1817	0.1880		10.3	10.0	3.4	50.0
1,1-Dichloroethene	Ave	0.4603	0.4511		9.80	10.0	-2.0	50.0
1,1,2-Trichlorotrifluoroethane	Ave	0.6250	0.6221		9.95	10.0	-0.5	50.0
Acetone	Lin2		0.0242		41.0	40.0	2.5	50.0
Iodomethane	Ave	1.129	1.182		10.5	10.0	4.7	50.0
Carbon disulfide	Ave	1.622	1.602		9.87	10.0	-1.3	50.0
3-Chloro-1-propene	Ave	0.5935	0.5704		9.61	10.0	-3.9	50.0
Methyl acetate	Ave	0.0923	0.0939		50.9	50.0	1.8	50.0
Methylene Chloride	Ave	0.4210	0.4198		9.97	10.0	-0.3	50.0
t-Butyl alcohol	Ave	1.262	1.116		88.4	100	-11.6	50.0
Acrylonitrile	Ave	0.0271	0.0285		105	100	5.0	50.0
Methyl tert-butyl ether	Ave	0.6568	0.7012		10.7	10.0	6.8	50.0
trans-1,2-Dichloroethene	Ave	0.4810	0.4840		10.1	10.0	0.6	50.0
Hexane	Ave	2.173	1.835		8.45	10.0	-15.5	50.0
1,1-Dichloroethane	Ave	0.7941	0.8070	0.1000	10.2	10.0	1.6	50.0
Vinyl acetate	Ave	0.3444	0.3911		22.7	20.0	13.6	50.0
cis-1,2-Dichloroethene	Ave	0.4915	0.5040		10.3	10.0	2.5	50.0
2,2-Dichloropropane	Lin1		0.7590		9.13	10.0	-8.7	50.0
2-Butanone (MEK)	Ave	0.0466	0.0487		41.7	40.0	4.3	50.0
sec-Butyl Alcohol	Ave	1.014	0.9275		274	300	-8.6	50.0
Chlorobromomethane	Ave	0.2351	0.2565		10.9	10.0	9.1	50.0
Tetrahydrofuran	Ave	0.0317	0.0346		21.8	20.0	9.1	50.0
Chloroform	Ave	0.9395	0.9841		10.5	10.0	4.7	50.0
1,1,1-Trichloroethane	Ave	0.9094	0.8888		9.77	10.0	-2.3	50.0
Cyclohexane	Ave	0.7486	0.6933		9.26	10.0	-7.4	50.0
1,1-Dichloropropene	Ave	0.7844	0.7412		9.45	10.0	-5.5	50.0
Carbon tetrachloride	Ave	0.9085	0.8865		9.76	10.0	-2.4	50.0
Isobutyl alcohol	Ave	0.3522	0.3092		219	250	-12.2	50.0
Benzene	Ave	1.380	1.428		10.3	10.0	3.5	50.0
1,2-Dichloroethane	Ave	0.3570	0.3605		10.1	10.0	1.0	50.0
Trichloroethene	Ave	0.6082	0.6264		10.3	10.0	3.0	50.0
2-Pentanone	Ave	0.1380	0.1219		35.3	40.0	-11.6	50.0
Methylcyclohexane	Ave	0.6932	0.6412		9.25	10.0	-7.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Lab Sample ID: CCVC 280-391346/26 Calibration Date: 10/16/2017 14:30

Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12

Lab File ID: H0682.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.4752	0.4869		10.2	10.0	2.5	50.0
Dibromomethane	Ave	0.3008	0.3139		10.4	10.0	4.4	50.0
1,4-Dioxane	Lin2		0.0017		223	200	11.7	50.0
Dichlorobromomethane	Ave	0.8077	0.8597		10.6	10.0	6.4	50.0
cis-1,3-Dichloropropene	Ave	2.371	2.221		9.37	10.0	-6.3	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1709	0.1807		42.3	40.0	5.7	50.0
Toluene	Ave	1.659	1.692		10.2	10.0	2.0	50.0
trans-1,3-Dichloropropene	Ave	0.5293	0.5479		10.4	10.0	3.5	50.0
Ethyl methacrylate	Ave	1.245	1.227		9.86	10.0	-1.4	50.0
1,1,2-Trichloroethane	Lin2		0.3466		10.6	10.0	5.6	50.0
Tetrachloroethene	Ave	1.901	1.734		9.12	10.0	-8.8	50.0
1,3-Dichloropropane	Ave	1.713	1.712		10.0	10.0	-0.0	50.0
2-Hexanone	Ave	0.3508	0.3577		40.8	40.0	2.0	50.0
Chlorodibromomethane	Ave	2.065	2.033		9.85	10.0	-1.5	50.0
1,2-Dibromoethane	Ave	1.360	1.348		9.91	10.0	-0.9	50.0
1-Chlorohexane	Ave	2.871	2.472		8.61	10.0	-13.9	50.0
Chlorobenzene	Ave	3.872	3.737	0.3000	9.65	10.0	-3.5	50.0
1,1,1,2-Tetrachloroethane	Ave	2.031	1.967		9.68	10.0	-3.2	50.0
Ethylbenzene	Ave	1.933	1.825		9.44	10.0	-5.6	50.0
m-Xylene & p-Xylene	Ave	2.542	2.384		9.38	10.0	-6.2	50.0
o-Xylene	Ave	2.261	2.184		9.66	10.0	-3.4	50.0
Styrene	Ave	3.566	3.461		9.70	10.0	-3.0	50.0
Bromoform	Ave	1.147	1.157	0.1000	10.1	10.0	0.9	50.0
Isopropylbenzene	Ave	4.397	3.768		8.57	10.0	-14.3	50.0
Cyclohexanone	Ave	0.0159	0.0164		411	400	2.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.8713	0.7944	0.3000	9.12	10.0	-8.8	50.0
Bromobenzene	Ave	1.071	1.006		9.40	10.0	-6.0	50.0
1,2,3-Trichloropropane	Lin2		0.1911		9.12	10.0	-8.8	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1495	0.1216		8.13	10.0	-18.7	50.0
N-Propylbenzene	Ave	1.148	0.9650		8.40	10.0	-16.0	50.0
2-Chlorotoluene	Ave	0.9171	0.7930		8.65	10.0	-13.5	50.0
1,3,5-Trimethylbenzene	Ave	3.315	2.945		8.88	10.0	-11.2	50.0
4-Chlorotoluene	Ave	1.043	0.9679		9.28	10.0	-7.2	50.0
tert-Butylbenzene	Ave	3.713	3.242		8.73	10.0	-12.7	50.0
1,2,4-Trimethylbenzene	Ave	3.159	2.807		8.89	10.0	-11.1	50.0
sec-Butylbenzene	Ave	1.023	0.8732		8.54	10.0	-14.6	50.0
1,3-Dichlorobenzene	Ave	1.628	1.483		9.11	10.0	-8.9	50.0
4-Isopropyltoluene	Ave	4.212	3.665		8.70	10.0	-13.0	50.0
1,4-Dichlorobenzene	Ave	2.394	2.124		8.88	10.0	-11.2	50.0
n-Butylbenzene	Ave	4.009	3.437		8.57	10.0	-14.3	50.0
1,2-Dichlorobenzene	Ave	1.655	1.463		8.84	10.0	-11.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Lab Sample ID: CCVC 280-391346/26 Calibration Date: 10/16/2017 14:30
 Instrument ID: VMS_H Calib Start Date: 10/09/2017 09:00
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 10/09/2017 11:12
 Lab File ID: H0682.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1514	0.1438		9.50	10.0	-5.0	50.0
1,2,4-Trichlorobenzene	Ave	1.106	1.013		9.15	10.0	-8.5	50.0
Hexachlorobutadiene	Ave	1.171	1.001		8.55	10.0	-14.5	50.0
Naphthalene	Ave	1.125	1.059		9.41	10.0	-5.9	50.0
1,2,3-Trichlorobenzene	Ave	0.8175	0.7733		9.46	10.0	-5.4	50.0
Dibromofluoromethane (Surr)	Ave	0.7477	0.8389		11.5	10.3	12.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3273	0.3509		11.0	10.3	7.2	50.0
Toluene-d8 (Surr)	Ave	5.238	5.402		10.6	10.3	3.1	50.0
4-Bromofluorobenzene (Surr)	Ave	1.697	1.634		9.87	10.3	-3.7	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0682.D
 Lims ID: ccvc
 Client ID:
 Sample Type: CCVC
 Inject. Date: 16-Oct-2017 14:30:30 ALS Bottle#: 31 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccvc
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub74
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:10:48 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 15:51:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.972	0.000	95	290969	250.0	250.0	
* 2 Fluorobenzene	96	6.741	6.741	0.000	99	1210617	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.078	11.078	0.000	89	396995	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.073	0.000	96	716833	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.905	0.000	93	832728	10.3	11.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.323	0.000	99	348341	10.3	11.0	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.848	0.000	92	1758702	10.3	10.6	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.732	0.000	86	960616	10.3	9.87	
28 Dichlorodifluoromethane	85	2.161	2.161	0.000	97	539169	10.0	8.35	
30 Chloromethane	50	2.265	2.265	0.000	98	234891	10.0	7.67	
32 Vinyl chloride	62	2.405	2.405	0.000	97	277024	10.0	7.41	
35 Bromomethane	94	2.683	2.683	0.000	90	321406	10.0	8.17	
36 Chloroethane	64	2.753	2.753	0.000	99	192492	10.0	7.72	
37 Dichlorofluoromethane	67	2.927	2.927	0.000	97	817168	10.0	9.32	
38 Trichlorofluoromethane	101	2.979	2.979	0.000	99	785580	10.0	8.28	
40 Ethyl ether	59	3.206	3.206	0.000	91	182056	10.0	10.3	
45 1,1-Dichloroethene	96	3.467	3.467	0.000	98	436856	10.0	9.80	
46 1,1,2-Trichloro-1,2,2-trif	151	3.484	3.484	0.000	97	602481	10.0	9.95	
47 Acetone	43	3.502	3.502	0.000	100	93904	40.0	41.0	
48 Iodomethane	142	3.641	3.641	0.000	99	1144752	10.0	10.5	
50 Carbon disulfide	76	3.711	3.711	0.000	98	1551127	10.0	9.87	
52 3-Chloro-1-propene	41	3.815	3.815	0.000	86	552418	10.0	9.61	
53 Methyl acetate	43	3.815	3.815	0.000	82	454882	50.0	50.9	
54 Methylene Chloride	84	3.937	3.937	0.000	90	406569	10.0	9.97	
55 2-Methyl-2-propanol	59	4.059	4.059	0.000	93	129840	100.0	88.4	
57 Acrylonitrile	53	4.198	4.198	0.000	98	275806	100.0	105.0	
56 Methyl tert-butyl ether	73	4.216	4.216	0.000	89	679086	10.0	10.7	
58 trans-1,2-Dichloroethene	96	4.216	4.216	0.000	99	468785	10.0	10.1	
59 Hexane	57	4.477	4.477	0.000	90	582785	10.0	8.45	
60 1,1-Dichloroethane	63	4.669	4.669	0.000	95	781554	10.0	10.2	
61 Vinyl acetate	43	4.703	4.703	0.000	96	757588	20.0	22.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.330	5.330	0.000	81	488145	10.0	10.3	
67 2-Butanone (MEK)	43	5.348	5.348	0.000	47	188462	40.0	41.7	
66 2,2-Dichloropropane	77	5.348	5.348	0.000	84	735127	10.0	9.13	
71 sec-Butyl Alcohol	45	5.557	5.557	0.000	98	323841	300.0	274.3	
73 Chlorobromomethane	128	5.626	5.626	0.000	95	248387	10.0	10.9	
74 Tetrahydrofuran	42	5.679	5.679	0.000	90	67073	20.0	21.8	
75 Chloroform	83	5.696	5.696	0.000	93	953072	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.940	5.940	0.000	98	860779	10.0	9.77	
77 Cyclohexane	56	6.010	6.010	0.000	86	671418	10.0	9.26	
78 1,1-Dichloropropene	75	6.132	6.132	0.000	98	717840	10.0	9.45	
79 Carbon tetrachloride	117	6.149	6.149	0.000	96	858533	10.0	9.76	
80 Isobutyl alcohol	41	6.271	6.271	0.000	92	89963	250.0	219.5	
81 Benzene	78	6.393	6.393	0.000	95	1382759	10.0	10.3	
82 1,2-Dichloroethane	62	6.410	6.410	0.000	96	349106	10.0	10.1	
84 n-Heptane	43	6.689	6.689	0.000	90	721357	10.0	9.17	
86 Trichloroethene	95	7.194	7.194	0.000	98	606667	10.0	10.3	
88 2-Pentanone	43	7.438	7.438	0.000	98	472247	40.0	35.3	
89 Methylcyclohexane	55	7.455	7.455	0.000	90	620996	10.0	9.25	
90 1,2-Dichloropropane	63	7.507	7.507	0.000	96	471516	10.0	10.2	
92 Dibromomethane	93	7.664	7.664	0.000	97	303988	10.0	10.4	
93 1,4-Dioxane	88	7.699	7.699	0.000	85	32499	200.0	223.4	
94 Dichlorobromomethane	83	7.856	7.856	0.000	99	832594	10.0	10.6	
97 cis-1,3-Dichloropropene	75	8.465	8.465	0.000	98	705438	10.0	9.37	
96 2-Chloroethyl vinyl ether	63	8.465	8.465	0.000	35	3303	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.692	8.692	0.000	95	699880	40.0	42.3	
99 Toluene	91	8.936	8.936	0.000	99	1638509	10.0	10.2	
100 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	89	530647	10.0	10.4	
101 Ethyl methacrylate	69	9.388	9.388	0.000	84	389763	10.0	9.86	
102 1,1,2-Trichloroethane	97	9.510	9.510	0.000	90	335684	10.0	10.6	
103 Tetrachloroethene	164	9.719	9.719	0.000	96	550757	10.0	9.12	
104 1,3-Dichloropropane	76	9.754	9.754	0.000	94	543736	10.0	10.0	
105 2-Hexanone	43	9.893	9.893	0.000	95	454408	40.0	40.8	
108 Chlorodibromomethane	129	10.120	10.120	0.000	90	645814	10.0	9.85	
109 Ethylene Dibromide	107	10.294	10.294	0.000	99	428155	10.0	9.91	
110 1-Chlorohexane	91	11.078	11.078	0.000	91	785026	10.0	8.61	
111 Chlorobenzene	112	11.112	11.112	0.000	93	1186804	10.0	9.65	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.252	0.000	95	624696	10.0	9.68	
113 Ethylbenzene	106	11.287	11.287	0.000	99	579538	10.0	9.44	
114 m-Xylene & p-Xylene	106	11.478	11.478	0.000	98	757174	10.0	9.38	
115 o-Xylene	106	12.036	12.036	0.000	98	693687	10.0	9.66	
116 Styrene	104	12.070	12.070	0.000	93	1099086	10.0	9.70	
117 Bromoform	173	12.314	12.314	0.000	96	367513	10.0	10.1	
118 Isopropylbenzene	105	12.541	12.541	0.000	96	2160791	10.0	8.57	
120 Cyclohexanone	55	12.663	12.663	0.000	88	207914	400.0	411.4	
122 Bromobenzene	156	12.924	12.924	0.000	93	577099	10.0	9.40	
121 1,1,2,2-Tetrachloroethane	83	12.924	12.924	0.000	93	455558	10.0	9.12	
123 1,2,3-Trichloropropane	110	12.976	12.976	0.000	79	109559	10.0	9.12	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.993	0.000	68	69716	10.0	8.13	
125 N-Propylbenzene	120	13.046	13.046	0.000	99	553406	10.0	8.40	
126 2-Chlorotoluene	126	13.150	13.150	0.000	98	454773	10.0	8.65	
127 1,3,5-Trimethylbenzene	105	13.272	13.272	0.000	95	1688665	10.0	8.88	
128 4-Chlorotoluene	126	13.289	13.289	0.000	98	555042	10.0	9.28	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.638	13.638	0.000	93	1859281	10.0	8.73	
130 1,2,4-Trimethylbenzene	105	13.690	13.690	0.000	96	1609671	10.0	8.89	
131 sec-Butylbenzene	134	13.882	13.882	0.000	94	500735	10.0	8.54	
132 1,3-Dichlorobenzene	146	14.004	14.004	0.000	96	850609	10.0	9.11	
133 4-Isopropyltoluene	119	14.038	14.038	0.000	98	2101691	10.0	8.70	
134 1,4-Dichlorobenzene	146	14.108	14.108	0.000	94	1218253	10.0	8.88	
137 n-Butylbenzene	91	14.474	14.474	0.000	98	1971156	10.0	8.57	
138 1,2-Dichlorobenzene	146	14.509	14.509	0.000	97	838721	10.0	8.84	
139 1,2-Dibromo-3-Chloropropan	157	15.292	15.292	0.000	89	82460	10.0	9.50	
141 1,2,4-Trichlorobenzene	180	16.059	16.059	0.000	95	580878	10.0	9.15	
142 Hexachlorobutadiene	225	16.198	16.198	0.000	98	574228	10.0	8.55	
143 Naphthalene	128	16.285	16.285	0.000	97	607507	10.0	9.41	
144 1,2,3-Trichlorobenzene	180	16.511	16.511	0.000	95	443482	10.0	9.46	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.3	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.7	
S 145 Trihalomethanes, Total	1				0		40.0	41.1	
S 146 Xylenes, Total (URS)	1				0		20.0	19.0	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.3	
S 150 Xylenes, Total	106				0		20.0	19.0	
S 147 Total BTEX	1				0			49.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main A_00032	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00065	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00029	Amount Added: 5.00	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0682.D

Injection Date: 16-Oct-2017 14:30:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ccvc

Worklist Smp#: 26

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

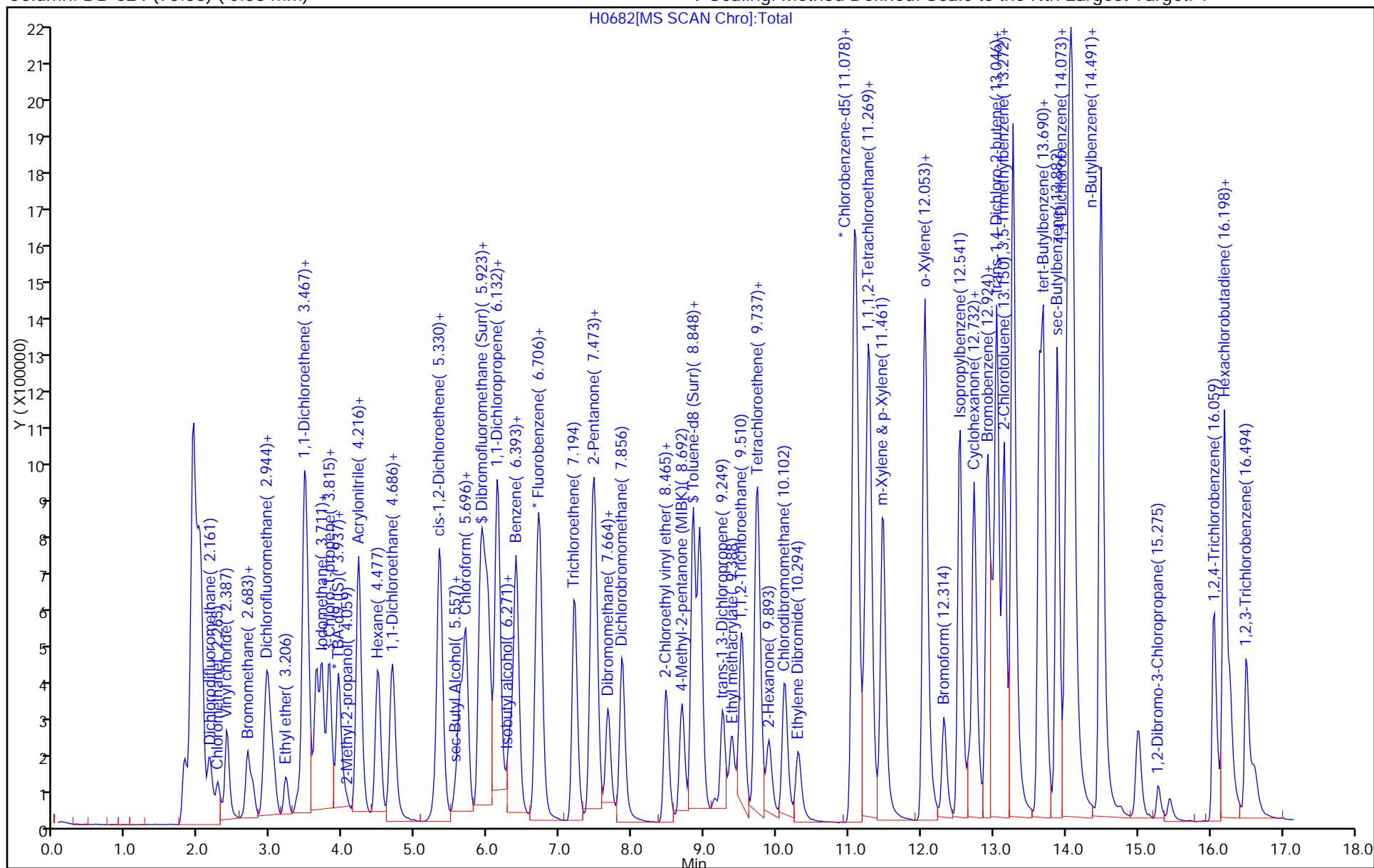
ALS Bottle#: 31

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7375.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 29-Jun-2017 09:07:30 ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: moanm Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jun-2017 16:33:01 Calib Date: 29-Jun-2017 15:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7393.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK005

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.458	2.458	0.000	89	168290	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00023

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7375.D

Injection Date: 29-Jun-2017 09:07:30

Instrument ID: VMS_H

Lims ID: BFB

Client ID:

Operator ID: moanm

ALS Bottle#: 99 Worklist Smp#: 1

Injection Vol: 1.0 uL

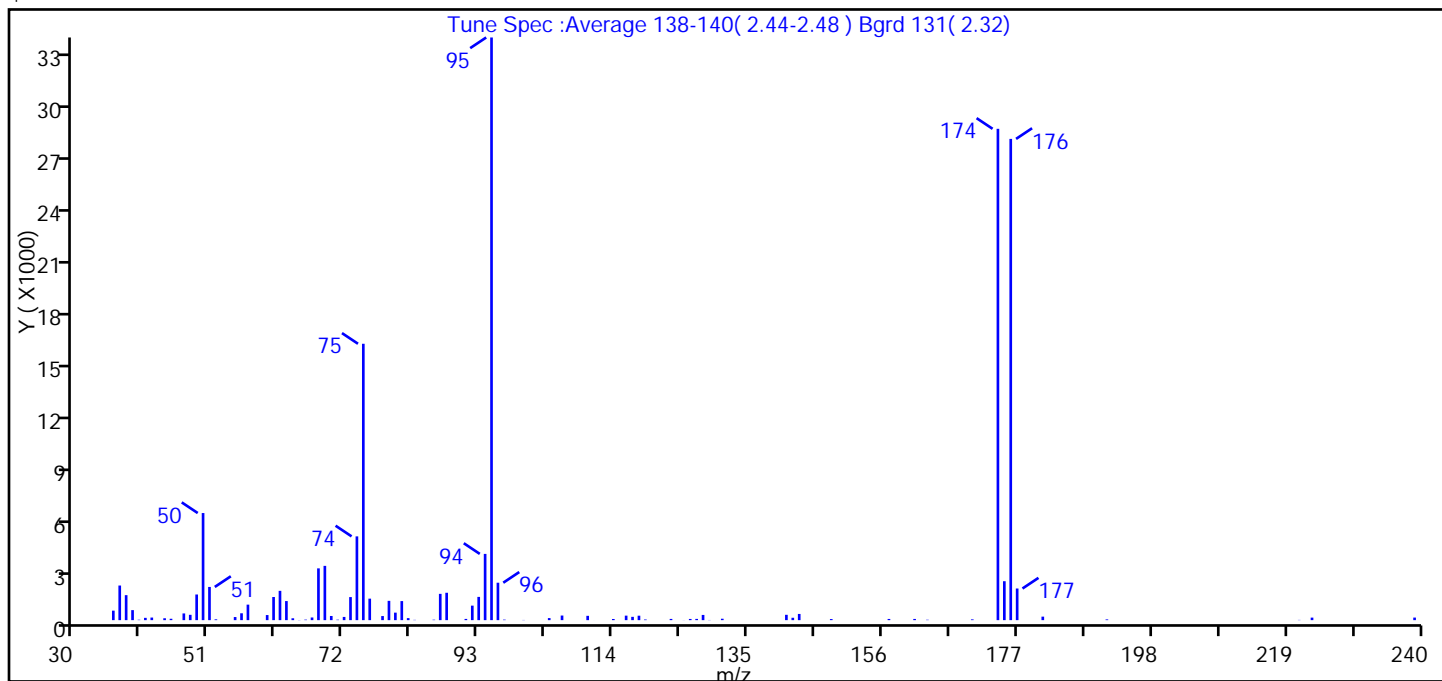
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.4
75	30 to 60% of m/z 95	47.4
96	5 to 9% of m/z 95	6.4
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	84.3
175	5 to 9% of m/z 174	6.7 (7.9)
176	Greater than 95% but less than 101% of m/z 174	82.6 (98.0)
177	5 to 9% of m/z 176	5.4 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20170629-60280.b\H7375.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 29-Jun-2017 09:07:30
Spectrum: Tune Spec :Average 138-140(2.44-2.48) Bgrd 131(2.32)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 85

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	551	64.00	108	91.00	71	129.00	10
37.00	2007	65.00	8	92.00	841	131.00	82
38.00	1449	66.00	30	93.00	1348	141.00	309
39.00	581	67.00	154	94.00	3841	142.00	138
40.00	24	68.00	3002	95.00	33784	143.00	359
41.00	133	69.00	3147	96.00	2170	148.00	63
42.00	150	70.00	241	97.00	30	157.00	69
44.00	109	71.00	27	100.00	11	161.00	70
45.00	80	72.00	186	104.00	119	163.00	23
47.00	389	73.00	1337	106.00	267	170.00	44
48.00	309	74.00	4857	110.00	250	174.00	28488
49.00	1487	75.00	16025	111.00	1	175.00	2257
50.00	6210	76.00	1246	114.00	67	176.00	27904
51.00	1925	78.00	237	116.00	261	177.00	1834
52.00	47	79.00	1119	117.00	191	181.00	203
55.00	180	80.00	435	118.00	258	191.00	43
56.00	398	81.00	1105	119.00	37	221.00	14
57.00	899	82.00	117	123.00	71	223.00	147
60.00	295	83.00	16	125.00	4	239.00	149
61.00	1342	86.00	26	126.00	69		
62.00	1699	87.00	1524	127.00	72		
63.00	1106	88.00	1587	128.00	302		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0335.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 09-Oct-2017 07:54:30 ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: moanm Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Oct-2017 15:29:03 Calib Date: 09-Oct-2017 11:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: moanm

Date: 09-Oct-2017 08:04:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.455	2.455	0.000	82	230105	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00023

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0335.D

Injection Date: 09-Oct-2017 07:54:30

Instrument ID: VMS_H

Lims ID: BFB

Client ID:

Operator ID: moanm

ALS Bottle#: 99 Worklist Smp#: 1

Injection Vol: 1.0 uL

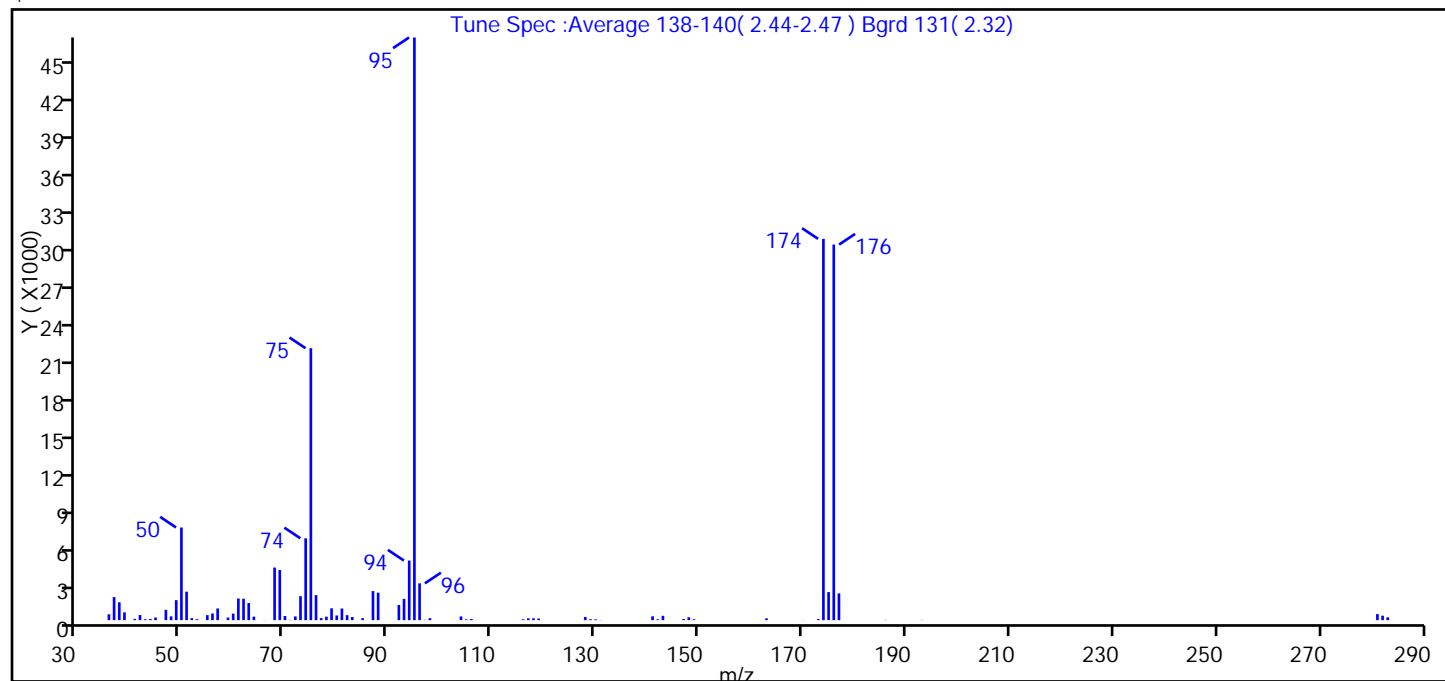
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.9
75	30 to 60% of m/z 95	46.7
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.2 (0.3)
174	50 to 120% of m/z 95	65.4
175	5 to 9% of m/z 174	4.8 (7.4)
176	Greater than 95% but less than 101% of m/z 174	64.5 (98.5)
177	5 to 9% of m/z 176	4.6 (7.1)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0335.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 09-Oct-2017 07:54:30
Spectrum: Tune Spec :Average 138-140(2.44-2.47) Bgrd 131(2.32)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 81

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	470	61.00	1736	85.00	158	141.00	308
37.00	1854	62.00	1717	87.00	2331	142.00	67
38.00	1431	63.00	1376	88.00	2203	143.00	345
39.00	624	64.00	280	92.00	1218	147.00	89
41.00	100	66.00	9	93.00	1711	148.00	231
42.00	409	68.00	4222	94.00	4783	149.00	68
43.00	72	69.00	4025	95.00	46776	163.00	142
44.00	90	70.00	333	96.00	2954	170.00	8
45.00	211	71.00	20	97.00	24	173.00	85
47.00	826	72.00	300	98.00	159	174.00	30608
48.00	304	73.00	1925	104.00	299	175.00	2252
49.00	1607	74.00	6570	105.00	63	176.00	30152
50.00	7437	75.00	21832	106.00	89	177.00	2149
51.00	2286	76.00	2009	116.00	67	186.00	17
52.00	160	77.00	164	117.00	139	193.00	17
53.00	75	78.00	276	118.00	149	281.00	485
55.00	403	79.00	950	119.00	129	282.00	357
56.00	533	80.00	373	128.00	255	283.00	225
57.00	937	81.00	933	129.00	75		
59.00	208	82.00	400	130.00	67		
60.00	525	83.00	251	131.00	14		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0626.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 15-Oct-2017 08:41:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: MOANM Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 15-Oct-2017 17:11:32 Calib Date: 09-Oct-2017 11:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 08:49:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.455	2.455	0.000	84	443184	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00023

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0626.D

Injection Date: 15-Oct-2017 08:41:30

Instrument ID: VMS_H

Lims ID: BFB

Client ID:

Operator ID: MOANM

ALS Bottle#: 100 Worklist Smp#: 1

Injection Vol: 1.0 uL

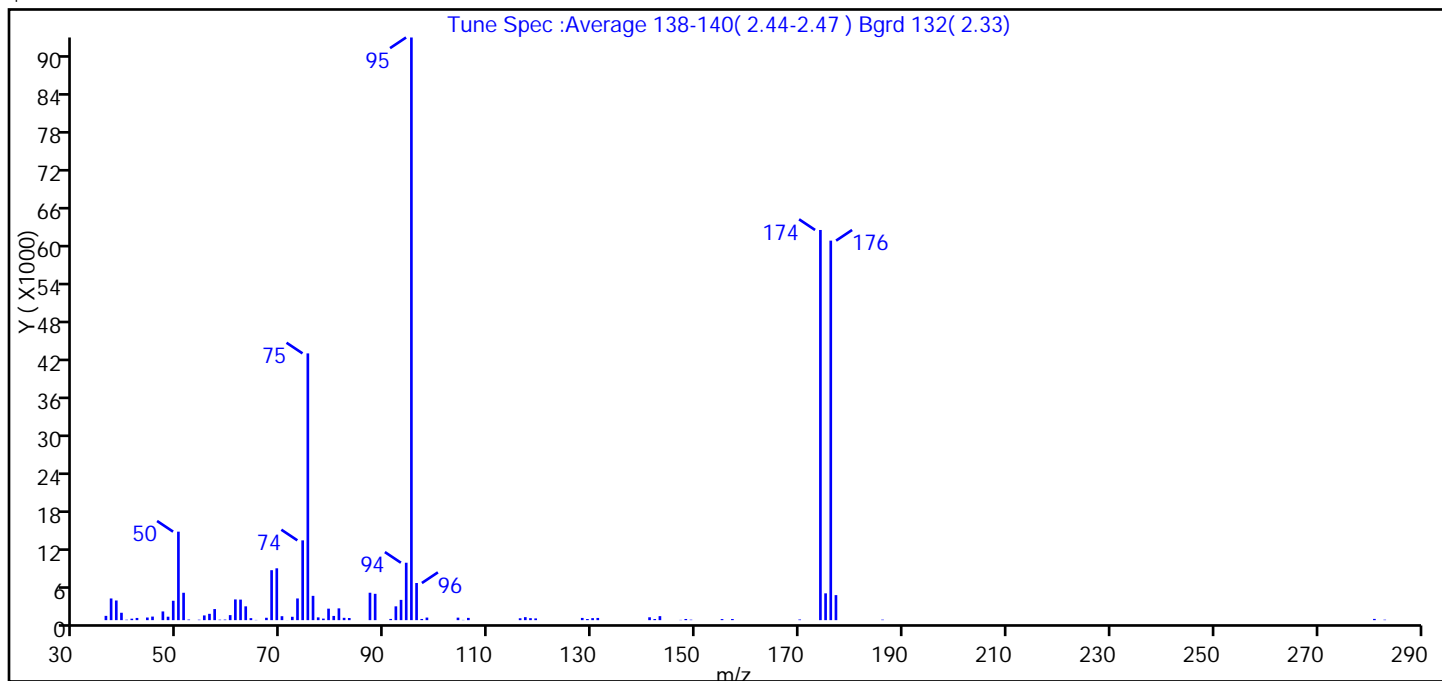
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.2
75	30 to 60% of m/z 95	45.8
96	5 to 9% of m/z 95	6.4
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	67.0
175	5 to 9% of m/z 174	4.6 (6.9)
176	Greater than 95% but less than 101% of m/z 174	65.1 (97.3)
177	5 to 9% of m/z 176	4.3 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0626.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 15-Oct-2017 08:41:30
Spectrum: Tune Spec :Average 138-140(2.44-2.47) Bgrd 132(2.33)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 81

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	682	60.00	799	82.00	370	130.00	320
37.00	3450	61.00	3297	83.00	340	131.00	350
38.00	3128	62.00	3268	87.00	4362	141.00	455
39.00	1176	63.00	2196	88.00	4190	142.00	178
40.00	69	64.00	318	91.00	193	143.00	638
41.00	233	65.00	34	92.00	2197	147.00	39
42.00	350	67.00	379	93.00	3226	148.00	184
44.00	419	68.00	7948	94.00	9136	149.00	73
45.00	567	69.00	8248	95.00	92720	155.00	169
47.00	1385	70.00	628	96.00	5908	157.00	177
48.00	549	71.00	9	97.00	187	170.00	103
49.00	3087	72.00	535	98.00	409	174.00	62088
50.00	14081	73.00	3452	104.00	397	175.00	4266
51.00	4357	74.00	12696	105.00	35	176.00	60392
52.00	95	75.00	42448	106.00	360	177.00	3983
54.00	71	76.00	3866	116.00	299	186.00	78
55.00	751	77.00	440	117.00	475	281.00	196
56.00	1005	78.00	243	118.00	315	283.00	72
57.00	1763	79.00	1829	119.00	276		
58.00	74	80.00	672	128.00	353		
59.00	91	81.00	1874	129.00	179		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0660.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 16-Oct-2017 06:40:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: moanm Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Oct-2017 16:10:51 Calib Date: 09-Oct-2017 11:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 06:47:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.454	2.454	0.000	86	437359	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00023

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0660.D

Injection Date: 16-Oct-2017 06:40:30

Instrument ID: VMS_H

Lims ID: BFB

Client ID:

Operator ID: moanm

ALS Bottle#: 100 Worklist Smp#: 1

Injection Vol: 1.0 uL

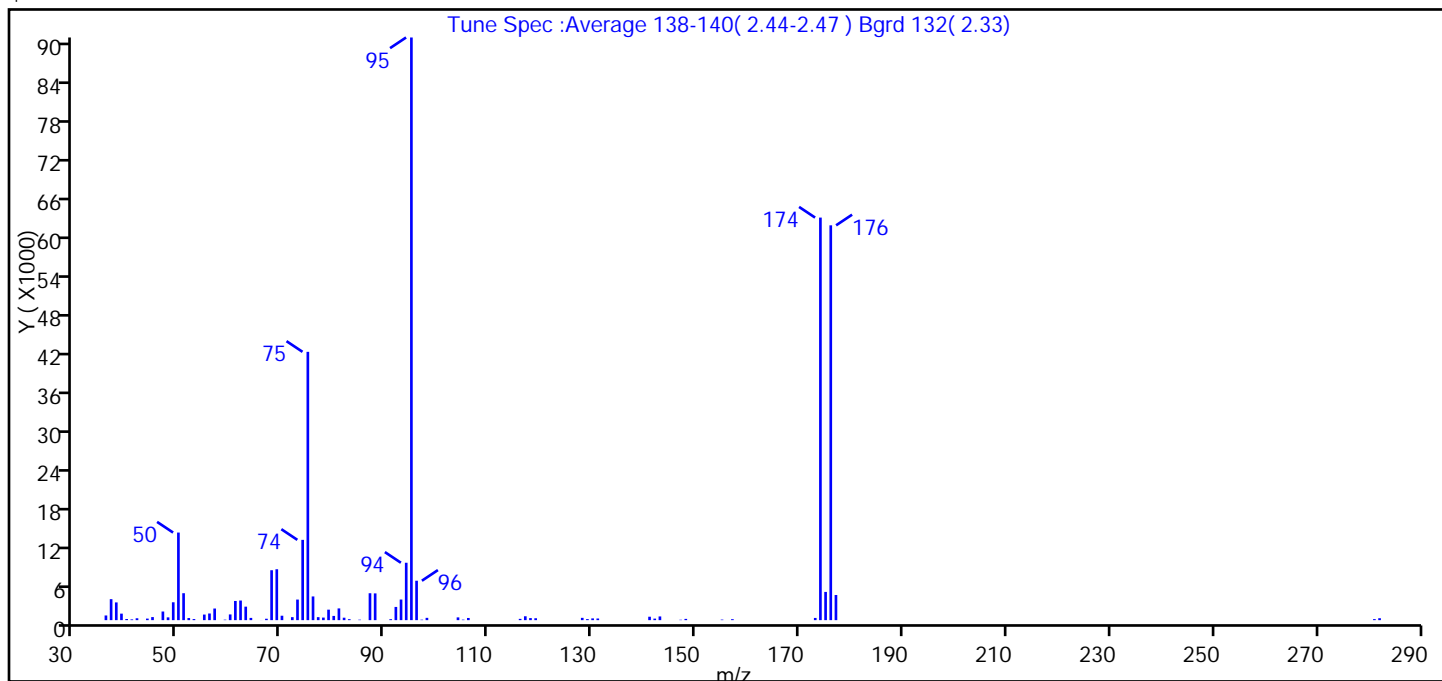
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.0
75	30 to 60% of m/z 95	46.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	69.1
175	5 to 9% of m/z 174	4.8 (7.0)
176	Greater than 95% but less than 101% of m/z 174	67.8 (98.1)
177	5 to 9% of m/z 176	4.3 (6.4)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0660.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 16-Oct-2017 06:40:30
Spectrum: Tune Spec :Average 138-140(2.44-2.47) Bgrd 132(2.33)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	729	60.00	892	82.00	381	119.00	297
37.00	3273	61.00	2991	83.00	150	128.00	358
38.00	2767	62.00	3059	85.00	72	129.00	163
39.00	1015	63.00	2104	87.00	4198	130.00	273
40.00	177	64.00	350	88.00	4173	131.00	255
41.00	117	66.00	9	91.00	147	141.00	534
42.00	292	67.00	219	92.00	2061	142.00	239
44.00	241	68.00	7787	93.00	3216	143.00	578
45.00	477	69.00	7940	94.00	8954	147.00	60
47.00	1346	70.00	690	95.00	90896	148.00	196
48.00	433	72.00	465	96.00	6147	155.00	85
49.00	2787	73.00	3212	97.00	72	157.00	148
50.00	13664	74.00	12525	98.00	358	173.00	344
51.00	4201	75.00	41856	104.00	430	174.00	62800
52.00	328	76.00	3697	105.00	79	175.00	4404
53.00	170	77.00	466	106.00	339	176.00	61592
55.00	872	78.00	400	115.00	2	177.00	3922
56.00	1038	79.00	1635	116.00	200	281.00	161
57.00	1812	80.00	660	117.00	604	282.00	300
59.00	74	81.00	1830	118.00	320		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 280-391324/6

Matrix: Water Lab File ID: H0631.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 10:26

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.372	J	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 280-391324/6

Matrix: Water Lab File ID: H0631.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 10:26

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0631.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 15-Oct-2017 10:26:30 ALS Bottle#: 14 Worklist Smp#: 6
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: mb
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:11:35 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 11:27:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.975	3.974	0.001	95	229464	250.0	250.0	
* 2 Fluorobenzene	96	6.726	6.726	0.000	98	1181417	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.063	11.062	0.001	86	400675	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.076	14.075	0.001	96	643966	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.891	5.885	0.006	93	793753	10.3	11.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.309	6.320	-0.012	100	317644	10.3	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.834	8.845	-0.011	92	1667532	10.3	9.93	
\$ 11 4-Bromofluorobenzene (Surr	95	12.735	12.729	0.006	87	932062	10.3	10.7	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95		2.455					ND	
28 Dichlorodifluoromethane	85		2.158					ND	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50		2.262					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62		2.384					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.633					ND	
35 Bromomethane	94		2.680					ND	
36 Chloroethane	64		2.750					ND	
37 Dichlorofluoromethane	67		2.924					ND	
38 Trichlorofluoromethane	101		2.976					ND	
49 Isopropyl alcohol	45	3.208	3.155	0.053	52	657		NC	
39 Ethanol	45		3.155					ND	
40 Ethyl ether	59		3.203					ND	
43 Propene oxide	58		3.295					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56		3.359					ND	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96		3.464					ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.481					ND	
47 Acetone	43		3.499					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142		3.621					ND	
50 Carbon disulfide	76		3.708					ND	
52 3-Chloro-1-propene	41		3.795					ND	
51 Acetonitrile	41		3.800					ND	
53 Methyl acetate	43		3.812					ND	
54 Methylene Chloride	84	3.923	3.934	-0.011	91	14809		0.3722	
55 2-Methyl-2-propanol	59		4.056					ND	
57 Acrylonitrile	53		4.178					ND	
56 Methyl tert-butyl ether	73		4.213					ND	
58 trans-1,2-Dichloroethene	96		4.213					ND	
59 Hexane	57		4.474					ND	
60 1,1-Dichloroethane	63		4.665					ND	
61 Vinyl acetate	43		4.700					ND	
62 Isopropyl ether	87		4.723					ND	
63 2-Chloro-1,3-butadiene	53		4.775					ND	
64 Tert-butyl ethyl ether	59		5.141					ND	
65 cis-1,2-Dichloroethene	96		5.327					ND	
67 2-Butanone (MEK)	43		5.345					ND	
66 2,2-Dichloropropane	77		5.345					ND	
69 Ethyl acetate	43		5.402					ND	
70 Propionitrile	54		5.437					ND	
71 sec-Butyl Alcohol	45		5.554					ND	
72 Methacrylonitrile	41		5.594					ND	
73 Chlorobromomethane	128		5.623					ND	
74 Tetrahydrofuran	42		5.676					ND	
75 Chloroform	83		5.693					ND	
76 1,1,1-Trichloroethane	97		5.937					ND	
77 Cyclohexane	56		6.007					ND	
78 1,1-Dichloropropene	75		6.128					ND	
79 Carbon tetrachloride	117		6.146					ND	
80 Isobutyl alcohol	41		6.268					ND	
81 Benzene	78		6.390					ND	
82 1,2-Dichloroethane	62		6.407					ND	
83 Tert-amyl methyl ether	73		6.517					ND	
84 n-Heptane	43		6.686					ND	
85 n-Butanol	56		7.144					ND	
86 Trichloroethene	95		7.191					ND	
88 2-Pentanone	43		7.435					ND	
89 Methylcyclohexane	55		7.452					ND	
90 1,2-Dichloropropane	63		7.487					ND	
91 Methyl methacrylate	100		7.631					ND	
92 Dibromomethane	93		7.661					ND	
93 1,4-Dioxane	88		7.678					ND	
94 Dichlorobromomethane	83		7.853					ND	
95 2-Nitropropane	41		8.171					ND	
97 cis-1,3-Dichloropropene	75		8.462					ND	
96 2-Chloroethyl vinyl ether	63		8.462					ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.671					ND	
99 Toluene	91		8.932					ND	
100 trans-1,3-Dichloropropene	75		9.246					ND	
101 Ethyl methacrylate	69		9.368					ND	
102 1,1,2-Trichloroethane	97		9.507					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164		9.716					ND	
104 1,3-Dichloropropane	76		9.751					ND	
105 2-Hexanone	43		9.890					ND	
108 Chlorodibromomethane	129		10.099					ND	
107 Tetrahydrothiophene	60		10.104					ND	
109 Ethylene Dibromide	107		10.291					ND	
110 1-Chlorohexane	91		11.075					ND	
111 Chlorobenzene	112		11.109					ND	
112 1,1,1,2-Tetrachloroethane	131		11.231					ND	
113 Ethylbenzene	106		11.284					ND	
114 m-Xylene & p-Xylene	106		11.458					ND	
115 o-Xylene	106		12.032					ND	
116 Styrene	104		12.050					ND	
117 Bromoform	173		12.311					ND	
118 Isopropylbenzene	105		12.520					ND	
119 cis-1,4-Dichloro-2-butene	53		12.630					ND	
120 Cyclohexanone	55		12.659					ND	
122 Bromobenzene	156		12.903					ND	
121 1,1,2,2-Tetrachloroethane	83		12.921					ND	
123 1,2,3-Trichloropropane	110		12.955					ND	
124 trans-1,4-Dichloro-2-buten	53		12.990					ND	
125 N-Propylbenzene	120		13.043					ND	
126 2-Chlorotoluene	126		13.147					ND	
127 1,3,5-Trimethylbenzene	105		13.252					ND	
128 4-Chlorotoluene	126		13.269					ND	
129 tert-Butylbenzene	119		13.635					ND	
130 1,2,4-Trimethylbenzene	105		13.687					ND	
22 Pentachloroethane	167		13.716					ND	
131 sec-Butylbenzene	134		13.879					ND	
132 1,3-Dichlorobenzene	146		14.000					ND	
133 4-Isopropyltoluene	119		14.035					ND	
134 1,4-Dichlorobenzene	146		14.087					ND	
135 1,2,3-Trimethylbenzene	105		14.145					ND	
137 n-Butylbenzene	91		14.471					ND	
138 1,2-Dichlorobenzene	146		14.488					ND	
139 1,2-Dibromo-3-Chloropropan	157		15.272					ND	
140 1,3,5-Trichlorobenzene	180		15.468					ND	
141 1,2,4-Trichlorobenzene	180		16.038					ND	
142 Hexachlorobutadiene	225		16.195					ND	
143 Naphthalene	128		16.264					ND	
144 1,2,3-Trichlorobenzene	180		16.491					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
21 2,4-Dimethylpentane	1		0.000					ND	
162 1-Chlorohexane TIC	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
S 151 1,2-Dichloroethene, Total	96		2.000					ND	
S 148 1,3-Dichloropropene, Total	1		0.000					ND	
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1		0.000					ND	
S 146 Xylenes, Total (URS)	1		0.000					ND	
S 149 1,2-Dichloroethene, Total	1		0.000					ND	
S 150 Xylenes, Total	106		0.000					ND	
S 147 Total BTEX	1		0.000					ND	
T 165 Cyclohexane TIC	56		6.023					ND	
T 163 Methyl cyclohexane TIC	55		7.469					ND	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0631.D

Injection Date: 15-Oct-2017 10:26:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

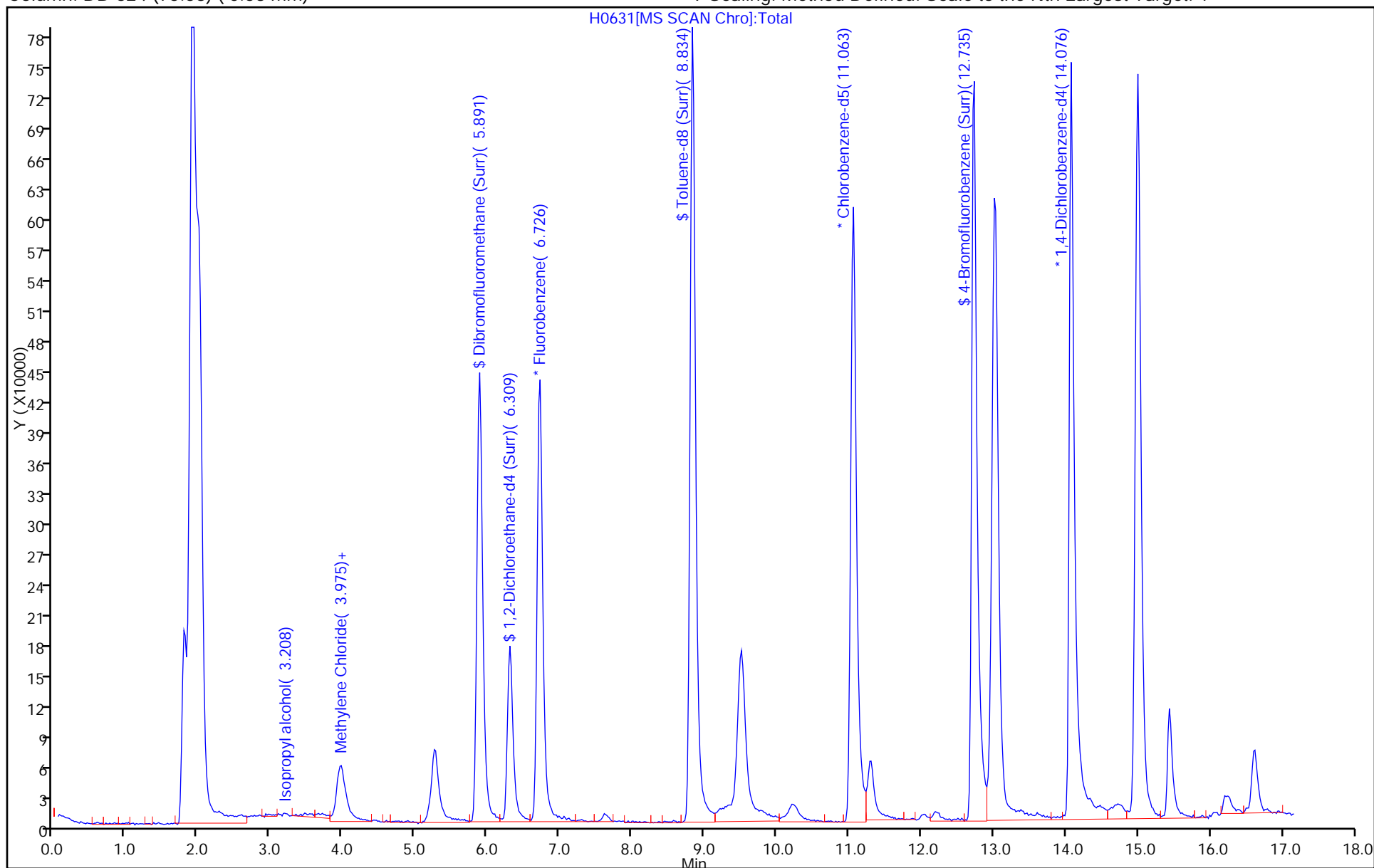
ALS Bottle#: 14

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0631.D

Injection Date: 15-Oct-2017 10:26:30

Instrument ID: VMS_H

Lims ID: MB

Client ID:

Operator ID: MOANM

ALS Bottle#: 14

Worklist Smp#: 6

Purge Vol: 20.000 mL

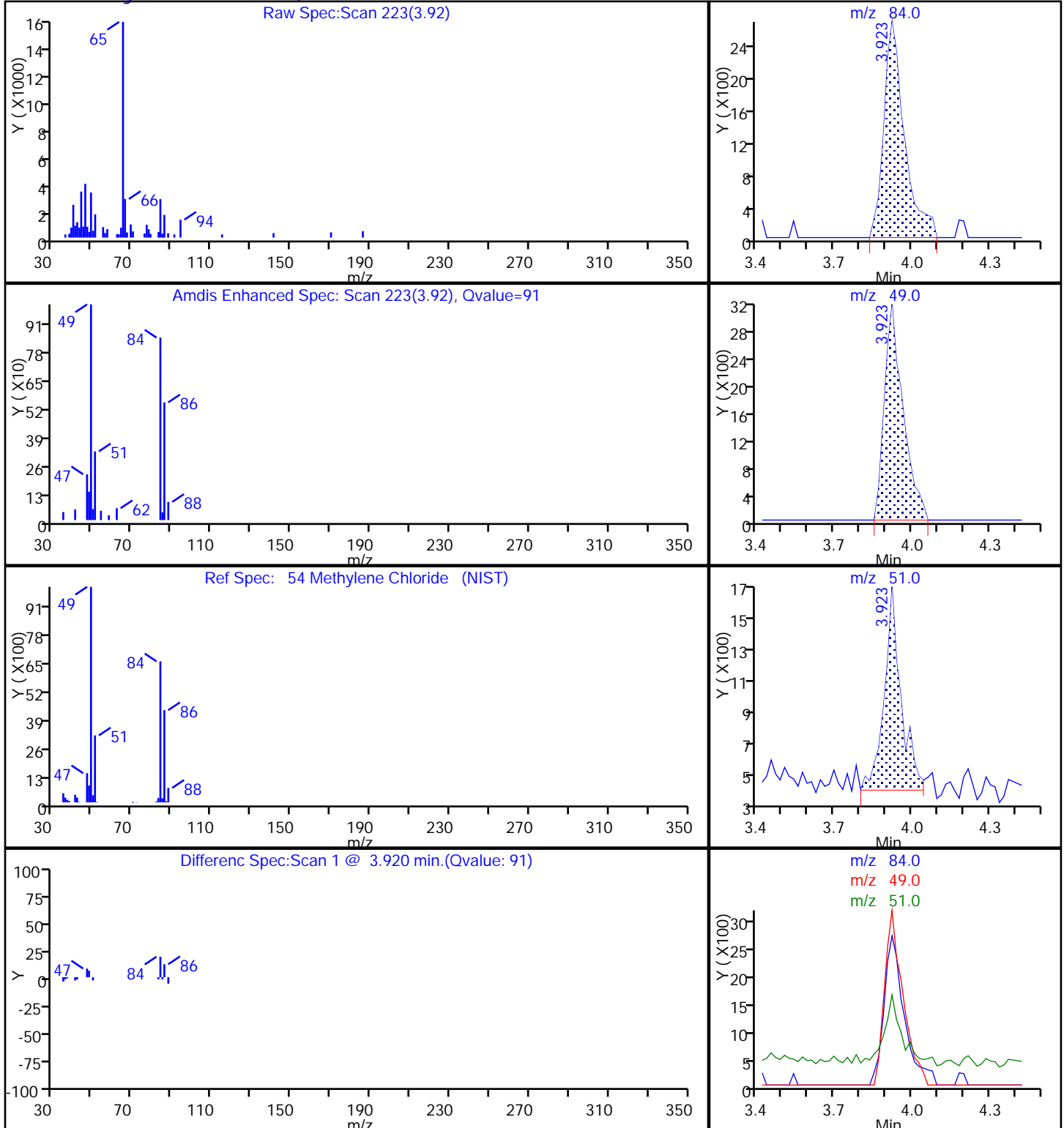
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

54 Methylene Chloride, CAS: 75-09-2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 280-391346/6

Matrix: Water Lab File ID: H0664.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 07:58

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Chlorobromomethane	0.20	U	1.0	0.20	0.10
124-48-1	Chlorodibromomethane	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
75-27-4	Dichlorobromomethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
123-91-1	1,4-Dioxane	160	U	220	160	71
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
108-87-2	Methylcyclohexane	0.80	U	2.0	0.80	0.36
75-09-2	Methylene Chloride	0.392	J	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 280-391346/6
 Matrix: Water Lab File ID: H0664.D
 Analysis Method: 8260B Date Collected: _____
 Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 07:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.34
95-47-6	o-Xylene	0.40	U	1.0	0.40	0.19
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	3.0	1.6	0.79
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	109		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		81-118
2037-26-5	Toluene-d8 (Surr)	95		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0664.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 16-Oct-2017 07:58:30 ALS Bottle#: 13 Worklist Smp#: 6
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: mb
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:10:54 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 14:49:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.986	3.969	0.017	95	236244	250.0	250.0	
* 2 Fluorobenzene	96	6.720	6.738	-0.018	98	1194261	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.057	11.057	0.000	86	405464	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.070	14.070	0.000	96	656197	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.907	-0.005	94	796077	10.3	11.1	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.325	-0.005	100	310704	10.3	9.94	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.850	-0.005	92	1659615	10.3	9.77	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.734	-0.005	86	930646	10.3	10.4	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95	2.871	2.454	0.417	0	1225		NR	7
28 Dichlorodifluoromethane	85		2.162					ND	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50		2.267					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62		2.406					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.628					ND	
35 Bromomethane	94		2.685					ND	
36 Chloroethane	64		2.754					ND	
37 Dichlorofluoromethane	67		2.928					ND	
38 Trichlorofluoromethane	101		2.981					ND	
49 Isopropyl alcohol	45	3.133	3.150	-0.017	17	147		NC	
39 Ethanol	45		3.150					ND	
40 Ethyl ether	59		3.225					ND	
43 Propene oxide	58		3.289					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56		3.359					ND	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96		3.468					ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.486					ND	
47 Acetone	43		3.503					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142		3.642					ND	
50 Carbon disulfide	76		3.712					ND	
51 Acetonitrile	41		3.794					ND	
52 3-Chloro-1-propene	41		3.817					ND	
53 Methyl acetate	43		3.817					ND	
54 Methylene Chloride	84	3.934	3.939	-0.005	92	15747		0.3915	
55 2-Methyl-2-propanol	59		4.060					ND	
57 Acrylonitrile	53		4.200					ND	
56 Methyl tert-butyl ether	73		4.217					ND	
58 trans-1,2-Dichloroethene	96		4.217					ND	
59 Hexane	57		4.496					ND	
60 1,1-Dichloroethane	63		4.670					ND	
61 Vinyl acetate	43		4.705					ND	
62 Isopropyl ether	87		4.717					ND	
63 2-Chloro-1,3-butadiene	53		4.770					ND	
64 Tert-butyl ethyl ether	59		5.135					ND	
65 cis-1,2-Dichloroethene	96		5.332					ND	
67 2-Butanone (MEK)	43		5.349					ND	
66 2,2-Dichloropropane	77		5.349					ND	
69 Ethyl acetate	43		5.397					ND	
70 Propionitrile	54		5.432					ND	
71 sec-Butyl Alcohol	45		5.558					ND	
72 Methacrylonitrile	41		5.588					ND	
73 Chlorobromomethane	128		5.628					ND	
74 Tetrahydrofuran	42		5.698					ND	
75 Chloroform	83		5.698					ND	
76 1,1,1-Trichloroethane	97		5.941					ND	
77 Cyclohexane	56		6.011					ND	
78 1,1-Dichloropropene	75		6.133					ND	
79 Carbon tetrachloride	117		6.150					ND	
80 Isobutyl alcohol	41		6.272					ND	
81 Benzene	78		6.394					ND	
82 1,2-Dichloroethane	62		6.412					ND	
83 Tert-amyl methyl ether	73		6.511					ND	
84 n-Heptane	43		6.690					ND	
85 n-Butanol	56		7.138					ND	
86 Trichloroethene	95		7.195					ND	
88 2-Pentanone	43		7.439					ND	
89 Methylcyclohexane	55		7.457					ND	
90 1,2-Dichloropropane	63		7.491					ND	
91 Methyl methacrylate	100		7.643					ND	
92 Dibromomethane	93		7.666					ND	
93 1,4-Dioxane	88		7.683					ND	
94 Dichlorobromomethane	83		7.857					ND	
95 2-Nitropropane	41		8.166					ND	
97 cis-1,3-Dichloropropene	75		8.467					ND	
96 2-Chloroethyl vinyl ether	63		8.467					ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.693					ND	
99 Toluene	91		8.937					ND	
100 trans-1,3-Dichloropropene	75		9.250					ND	
101 Ethyl methacrylate	69		9.372					ND	
102 1,1,2-Trichloroethane	97		9.512					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164		9.721					ND	
104 1,3-Dichloropropane	76		9.755					ND	
105 2-Hexanone	43		9.895					ND	
107 Tetrahydrothiophene	60		10.099					ND	
108 Chlorodibromomethane	129		10.104					ND	
109 Ethylene Dibromide	107		10.295					ND	
110 1-Chlorohexane	91		11.079					ND	
111 Chlorobenzene	112		11.114					ND	
112 1,1,1,2-Tetrachloroethane	131		11.236					ND	
113 Ethylbenzene	106		11.288					ND	
114 m-Xylene & p-Xylene	106		11.462					ND	
115 o-Xylene	106		12.037					ND	
116 Styrene	104		12.054					ND	
117 Bromoform	173		12.316					ND	
118 Isopropylbenzene	105		12.525					ND	
119 cis-1,4-Dichloro-2-butene	53		12.624					ND	
120 Cyclohexanone	55		12.664					ND	
122 Bromobenzene	156		12.908					ND	
121 1,1,2,2-Tetrachloroethane	83		12.925					ND	
123 1,2,3-Trichloropropane	110		12.960					ND	
124 trans-1,4-Dichloro-2-buten	53		12.995					ND	
125 N-Propylbenzene	120		13.047					ND	
126 2-Chlorotoluene	126		13.152					ND	
127 1,3,5-Trimethylbenzene	105		13.256					ND	
128 4-Chlorotoluene	126		13.273					ND	
129 tert-Butylbenzene	119		13.639					ND	
130 1,2,4-Trimethylbenzene	105		13.691					ND	
22 Pentachloroethane	167		13.716					ND	
131 sec-Butylbenzene	134		13.883					ND	
132 1,3-Dichlorobenzene	146		14.005					ND	
133 4-Isopropyltoluene	119		14.040					ND	
134 1,4-Dichlorobenzene	146		14.092					ND	
135 1,2,3-Trimethylbenzene	105		14.157					ND	
137 n-Butylbenzene	91		14.475					ND	
138 1,2-Dichlorobenzene	146		14.493					ND	
139 1,2-Dibromo-3-Chloropropan	157		15.276					ND	
140 1,3,5-Trichlorobenzene	180		15.481					ND	
141 1,2,4-Trichlorobenzene	180		16.043					ND	
142 Hexachlorobutadiene	225		16.199					ND	
143 Naphthalene	128	16.282	16.269	0.013	92	13316		0.2254	
144 1,2,3-Trichlorobenzene	180		16.495					ND	
21 2,4-Dimethylpentane	1		0.000					ND	
162 1-Chlorohexane TIC	1		0.000					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
S 151 1,2-Dichloroethene, Total	96		2.000					ND	
S 148 1,3-Dichloropropene, Total	1		0.000					ND	
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1		0.000					ND	
S 146 Xylenes, Total (URS)	1		0.000					ND	
S 149 1,2-Dichloroethene, Total	1		0.000					ND	
S 150 Xylenes, Total	106		0.000					ND	
S 147 Total BTEX	1		0.000					ND	
T 165 Cyclohexane TIC	56		6.023					ND	
T 163 Methyl cyclohexane TIC	55		7.469					ND	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Reagents:

MV-568718-D_00008

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00086

Amount Added: 0.82

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0664.D

Injection Date: 16-Oct-2017 07:58:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

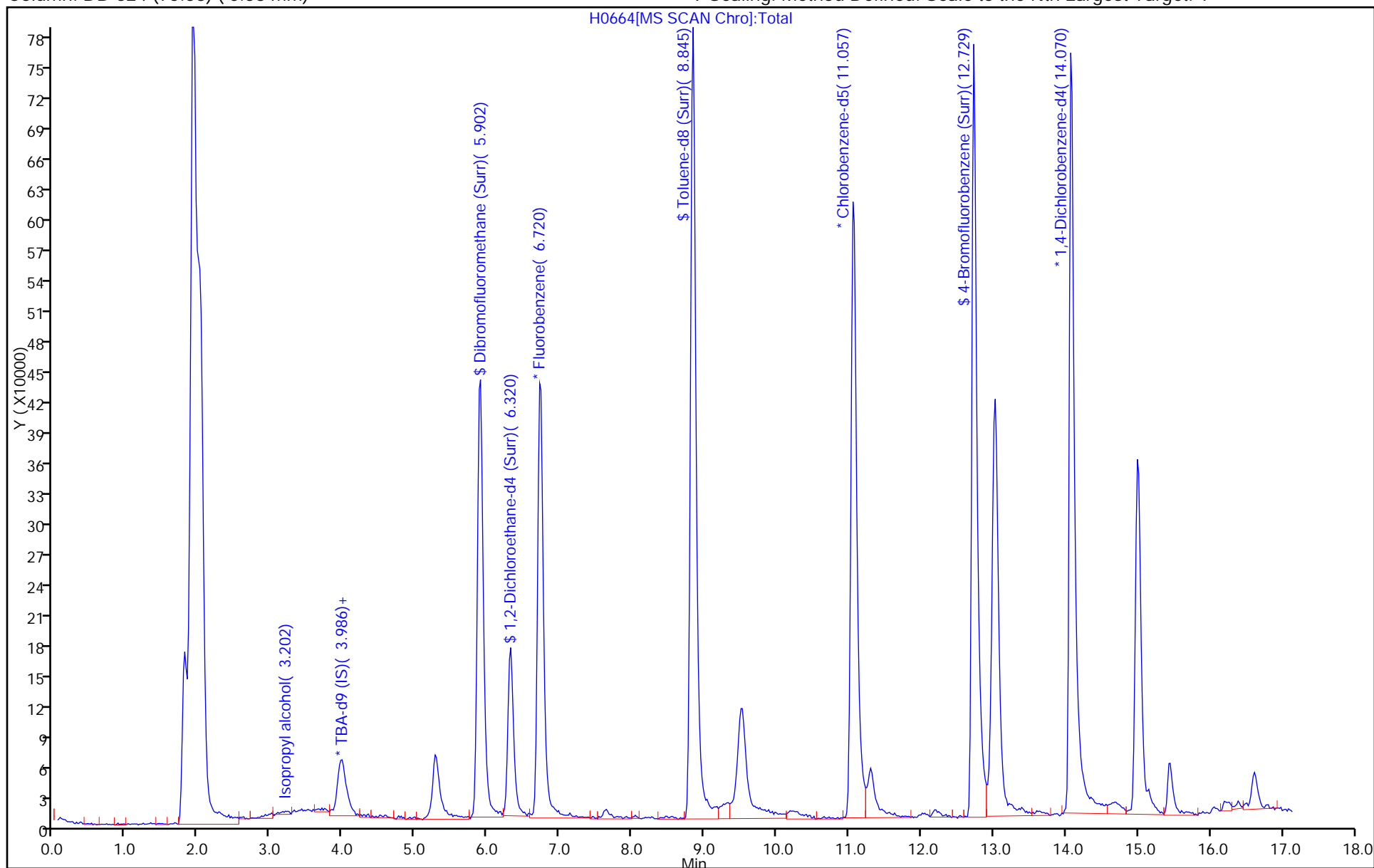
ALS Bottle#: 13

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0664.D

Injection Date: 16-Oct-2017 07:58:30

Instrument ID: VMS_H

Lims ID: MB

Client ID:

Operator ID: moanm

ALS Bottle#: 13

Worklist Smp#: 6

Purge Vol: 20.000 mL

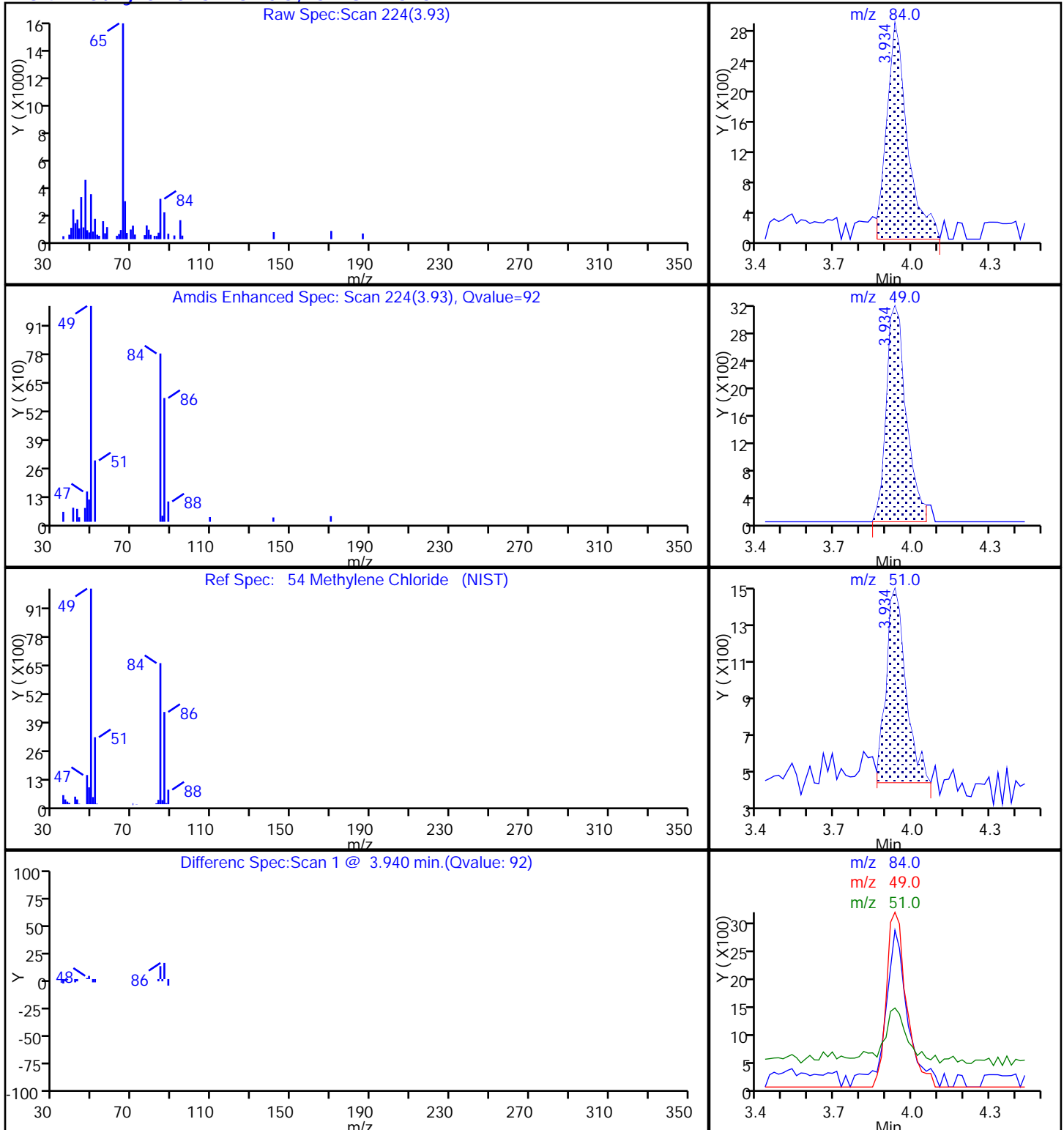
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

54 Methylene Chloride, CAS: 75-09-2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-391324/4

Matrix: Water Lab File ID: H0630.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 10:04

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	22.3		10	6.4	1.9
71-43-2	Benzene	5.52		1.0	0.40	0.16
75-25-2	Bromoform	5.08		1.0	0.40	0.19
74-83-9	Bromomethane	4.92		2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	21.1		6.0	4.0	1.8
75-15-0	Carbon disulfide	5.40		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.35		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.96		1.0	0.40	0.17
74-97-5	Chlorobromomethane	5.44		1.0	0.20	0.10
124-48-1	Chlorodibromomethane	4.86		1.0	0.40	0.17
75-00-3	Chloroethane	4.64		2.0	1.6	0.41
67-66-3	Chloroform	5.21		1.0	0.40	0.16
74-87-3	Chloromethane	4.62		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.41		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.87		1.0	0.40	0.16
110-82-7	Cyclohexane	5.31		2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	4.93	J	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.00		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.86		1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	4.91		1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	4.64		1.0	0.40	0.16
75-27-4	Dichlorobromomethane	5.31		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.47		2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	5.19		1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	4.93		1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	5.24		1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	5.18		1.0	0.40	0.13
123-91-1	1,4-Dioxane	104	J	220	160	71
100-41-4	Ethylbenzene	4.93		1.0	0.40	0.16
591-78-6	2-Hexanone	20.3		5.0	4.0	1.4
98-82-8	Isopropylbenzene	4.73		1.0	0.40	0.19
79-20-9	Methyl acetate	25.2		5.0	4.0	1.6
108-87-2	Methylcyclohexane	5.24		2.0	0.80	0.36
75-09-2	Methylene Chloride	5.17		5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	23.0		5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	5.33		5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-391324/4

Matrix: Water Lab File ID: H0630.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 10:04

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	5.00		2.0	0.80	0.34
95-47-6	o-Xylene	4.98		1.0	0.40	0.19
100-42-5	Styrene	4.88		1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	4.72		1.0	0.80	0.20
127-18-4	Tetrachloroethene	5.07		1.0	0.40	0.20
108-88-3	Toluene	5.29		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.58		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.86		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.61		1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	4.66		1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	5.32		1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	5.19		1.0	0.80	0.32
79-01-6	Trichloroethene	5.34		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.98		2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	5.44		3.0	1.6	0.79
75-01-4	Vinyl chloride	4.81		1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	106		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0630.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 15-Oct-2017 10:04:30 ALS Bottle#: 13 Worklist Smp#: 4
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: lcs
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:11:35 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 16:54:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.971	3.974	-0.003	95	262307	250.0	250.0	
* 2 Fluorobenzene	96	6.723	6.726	-0.003	98	1243171	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.059	11.062	-0.003	90	399241	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.072	14.075	-0.003	97	709072	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.887	5.885	0.002	93	806003	10.3	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.305	6.320	-0.015	99	333749	10.3	10.3	
\$ 10 Toluene-d8 (Surr)	98	8.847	8.845	0.002	92	1716714	10.3	10.3	
\$ 11 4-Bromofluorobenzene (Surr	95	12.731	12.729	0.002	86	935075	10.3	9.72	
28 Dichlorodifluoromethane	85	2.142	2.158	-0.016	98	296723	5.00	4.47	
30 Chloromethane	50	2.264	2.262	0.002	98	145241	5.00	4.62	
32 Vinyl chloride	62	2.386	2.384	0.002	98	184728	5.00	4.81	
35 Bromomethane	94	2.682	2.680	0.002	90	198550	5.00	4.92	
36 Chloroethane	64	2.752	2.750	0.002	99	118923	5.00	4.64	
37 Dichlorofluoromethane	67	2.926	2.924	0.002	97	484215	5.00	5.38	
38 Trichlorofluoromethane	101	2.978	2.976	0.002	99	484531	5.00	4.98	
40 Ethyl ether	59	3.205	3.203	0.002	91	95648	5.00	5.29	
44 Acrolein	56	3.361	3.359	0.002	97	74417	50.0	133.6	
45 1,1-Dichloroethene	96	3.466	3.464	0.002	98	239733	5.00	5.24	
46 1,1,2-Trichloro-1,2,2-trif	151	3.483	3.481	0.002	97	337972	5.00	5.44	
47 Acetone	43	3.501	3.499	0.002	98	55569	20.0	22.3	
48 Iodomethane	142	3.623	3.621	0.002	99	590843	5.00	5.26	
50 Carbon disulfide	76	3.710	3.708	0.002	98	871860	5.00	5.40	
52 3-Chloro-1-propene	41	3.797	3.795	0.002	87	298073	5.00	5.05	
53 Methyl acetate	43	3.814	3.812	0.002	96	231408	25.0	25.2	
54 Methylene Chloride	84	3.936	3.934	0.002	90	216408	5.00	5.17	
55 2-Methyl-2-propanol	59	4.058	4.056	0.002	97	62261	50.0	47.0	
57 Acrylonitrile	53	4.180	4.178	0.002	99	135244	50.0	50.1	
56 Methyl tert-butyl ether	73	4.215	4.213	0.002	87	347890	5.00	5.33	
58 trans-1,2-Dichloroethene	96	4.215	4.213	0.002	100	267157	5.00	5.58	
59 Hexane	57	4.476	4.474	0.002	90	349897	5.00	5.04	
60 1,1-Dichloroethane	63	4.668	4.665	0.003	95	409523	5.00	5.19	
65 cis-1,2-Dichloroethene	96	5.329	5.327	0.002	82	264589	5.00	5.41	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2-Butanone (MEK)	43	5.347	5.345	0.002	43	97847	20.0	21.1	
66 2,2-Dichloropropane	77	5.329	5.345	-0.016	84	475463	5.00	5.44	
71 sec-Butyl Alcohol	45	5.556	5.554	0.002	97	146661	150.0	137.8	
73 Chlorobromomethane	128	5.625	5.623	0.002	93	127178	5.00	5.44	
74 Tetrahydrofuran	42	5.678	5.676	0.002	81	34415	10.0	10.9	
75 Chloroform	83	5.695	5.693	0.002	93	487190	5.00	5.21	
76 1,1,1-Trichloroethane	97	5.939	5.937	0.002	98	480841	5.00	5.32	
77 Cyclohexane	56	6.009	6.007	0.003	86	395637	5.00	5.31	
78 1,1-Dichloropropene	75	6.131	6.128	0.002	97	421780	5.00	5.41	
79 Carbon tetrachloride	117	6.148	6.146	0.002	96	482949	5.00	5.35	
80 Isobutyl alcohol	41	6.270	6.268	0.002	93	44496	125.0	120.4	
81 Benzene	78	6.392	6.390	0.002	96	758142	5.00	5.52	
82 1,2-Dichloroethane	62	6.409	6.407	0.002	96	175075	5.00	4.93	
84 n-Heptane	43	6.688	6.686	0.002	89	428074	5.00	5.30	
86 Trichloroethene	95	7.193	7.191	0.002	98	323290	5.00	5.34	
88 2-Pentanone	43	7.437	7.435	0.002	98	256773	20.0	18.7	
89 Methylcyclohexane	55	7.454	7.452	0.002	91	361066	5.00	5.24	
90 1,2-Dichloropropane	63	7.489	7.487	0.002	95	244852	5.00	5.18	
92 Dibromomethane	93	7.663	7.661	0.002	97	154359	5.00	5.16	
93 1,4-Dioxane	88	7.698	7.678	0.020	30	14990	100.0	104.4	
94 Dichlorobromomethane	83	7.855	7.853	0.002	99	426865	5.00	5.31	
97 cis-1,3-Dichloropropene	75	8.464	8.462	0.002	98	368976	5.00	4.87	
96 2-Chloroethyl vinyl ether	63	8.464	8.462	0.002	35	1575	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.691	8.671	0.020	95	390211	20.0	23.0	
99 Toluene	91	8.934	8.932	0.002	99	873719	5.00	5.29	
100 trans-1,3-Dichloropropene	75	9.248	9.246	0.002	90	255763	5.00	4.86	
101 Ethyl methacrylate	69	9.370	9.368	0.002	86	193320	5.00	4.86	
102 1,1,2-Trichloroethane	97	9.509	9.507	0.002	63	178851	5.00	5.19	
103 Tetrachloroethene	164	9.718	9.716	0.002	96	307755	5.00	5.07	
104 1,3-Dichloropropane	76	9.753	9.751	0.002	86	272466	5.00	4.98	
105 2-Hexanone	43	9.892	9.890	0.002	95	227608	20.0	20.3	
108 Chlorodibromomethane	129	10.101	10.099	0.002	90	320370	5.00	4.86	
109 Ethylene Dibromide	107	10.293	10.291	0.002	98	217092	5.00	5.00	
110 1-Chlorohexane	91	11.077	11.075	0.002	92	448178	5.00	4.89	
111 Chlorobenzene	112	11.111	11.109	0.002	93	613387	5.00	4.96	
112 1,1,1,2-Tetrachloroethane	131	11.233	11.231	0.002	94	333204	5.00	5.14	
113 Ethylbenzene	106	11.286	11.284	0.002	98	304477	5.00	4.93	
114 m-Xylene & p-Xylene	106	11.460	11.458	0.002	98	405689	5.00	5.00	
115 o-Xylene	106	12.035	12.032	0.002	98	359944	5.00	4.98	
116 Styrene	104	12.052	12.050	0.002	93	555928	5.00	4.88	
117 Bromoform	173	12.313	12.311	0.002	95	186003	5.00	5.08	
118 Isopropylbenzene	105	12.522	12.520	0.002	96	1178844	5.00	4.73	
120 Cyclohexanone	55	12.661	12.659	0.002	88	96868	200.0	190.6	
122 Bromobenzene	156	12.905	12.903	0.002	92	289513	5.00	4.77	
121 1,1,2,2-Tetrachloroethane	83	12.923	12.921	0.002	94	233389	5.00	4.72	
123 1,2,3-Trichloropropane	110	12.958	12.955	0.003	79	58833	5.00	4.61	
124 trans-1,4-Dichloro-2-buten	53	12.992	12.990	0.002	66	41716	5.00	4.92	
125 N-Propylbenzene	120	13.045	13.043	0.002	99	303506	5.00	4.66	
126 2-Chlorotoluene	126	13.149	13.147	0.002	98	247475	5.00	4.76	
127 1,3,5-Trimethylbenzene	105	13.254	13.252	0.002	94	902917	5.00	4.80	
128 4-Chlorotoluene	126	13.271	13.269	0.002	99	303096	5.00	5.12	
129 tert-Butylbenzene	119	13.637	13.635	0.002	92	1003430	5.00	4.76	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 1,2,4-Trimethylbenzene	105	13.689	13.687	0.002	96	837226	5.00	4.67	
131 sec-Butylbenzene	134	13.881	13.879	0.003	94	271673	5.00	4.68	
132 1,3-Dichlorobenzene	146	14.003	14.000	0.002	96	452988	5.00	4.91	
133 4-Isopropyltoluene	119	14.037	14.035	0.002	97	1141650	5.00	4.78	
134 1,4-Dichlorobenzene	146	14.090	14.087	0.003	94	630255	5.00	4.64	
137 n-Butylbenzene	91	14.473	14.471	0.002	98	1066603	5.00	4.69	
138 1,2-Dichlorobenzene	146	14.490	14.488	0.002	98	456155	5.00	4.86	
139 1,2-Dibromo-3-Chloropropan	157	15.274	15.272	0.002	89	42332	5.00	4.93	
141 1,2,4-Trichlorobenzene	180	16.040	16.038	0.002	94	292362	5.00	4.66	
142 Hexachlorobutadiene	225	16.197	16.195	0.002	98	317244	5.00	4.78	
143 Naphthalene	128	16.267	16.264	0.003	96	278653	5.00	4.37	
144 1,2,3-Trichlorobenzene	180	16.493	16.491	0.002	96	213896	5.00	4.61	
S 151 1,2-Dichloroethene, Total	96				0		10.0	11.0	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.73	
S 145 Trihalomethanes, Total	1				0		20.0	20.5	
S 146 Xylenes, Total (URS)	1				0		10.0	9.98	
S 149 1,2-Dichloroethene, Total	1				0		5.00	11.0	
S 150 Xylenes, Total	106				0		10.0	9.98	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main B_00019	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00037	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00039	Amount Added: 2.50	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\\Denver\\ChromData\\VMS_H\\20171015-63652.b\\H0630.D

Injection Date: 15-Oct-2017 10:04:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

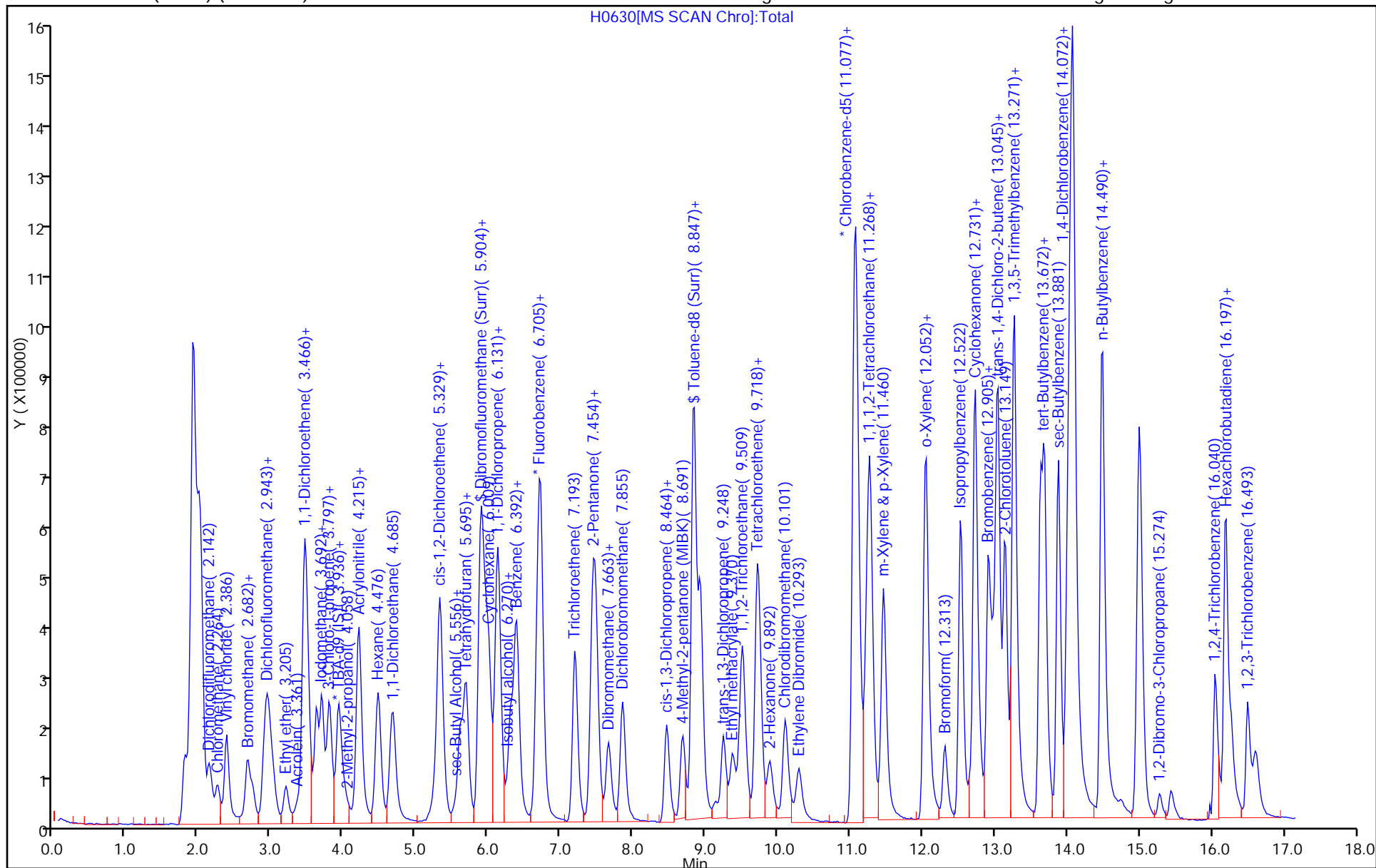
ALS Bottle#: 13

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-391346/4

Matrix: Water Lab File ID: H0663.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 07:36

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	21.7		10	6.4	1.9
71-43-2	Benzene	5.81		1.0	0.40	0.16
75-25-2	Bromoform	5.53		1.0	0.40	0.19
74-83-9	Bromomethane	5.18		2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	23.1		6.0	4.0	1.8
75-15-0	Carbon disulfide	5.83		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.82		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.39		1.0	0.40	0.17
74-97-5	Chlorobromomethane	5.80		1.0	0.20	0.10
124-48-1	Chlorodibromomethane	5.17		1.0	0.40	0.17
75-00-3	Chloroethane	4.78		2.0	1.6	0.41
67-66-3	Chloroform	5.64		1.0	0.40	0.16
74-87-3	Chloromethane	4.72		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.77		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.23		1.0	0.40	0.16
110-82-7	Cyclohexane	5.66		2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	5.31		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.40		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	5.02		1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	5.07		1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	4.94		1.0	0.40	0.16
75-27-4	Dichlorobromomethane	5.86		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.70		2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	5.57		1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	5.42		1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	5.67		1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	5.54		1.0	0.40	0.13
123-91-1	1,4-Dioxane	104	J	220	160	71
100-41-4	Ethylbenzene	5.40		1.0	0.40	0.16
591-78-6	2-Hexanone	22.4		5.0	4.0	1.4
98-82-8	Isopropylbenzene	4.96		1.0	0.40	0.19
79-20-9	Methyl acetate	27.6		5.0	4.0	1.6
108-87-2	Methylcyclohexane	5.64		2.0	0.80	0.36
75-09-2	Methylene Chloride	5.47		5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	23.4		5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	5.84		5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-391346/4

Matrix: Water Lab File ID: H0663.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 07:36

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	5.28		2.0	0.80	0.34
95-47-6	o-Xylene	5.22		1.0	0.40	0.19
100-42-5	Styrene	5.32		1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	4.90		1.0	0.80	0.20
127-18-4	Tetrachloroethene	5.43		1.0	0.40	0.20
108-88-3	Toluene	5.74		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.78		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.25		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.95		1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	4.85		1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	5.77		1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	5.42		1.0	0.80	0.32
79-01-6	Trichloroethene	5.86		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	5.24		2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	5.96		3.0	1.6	0.79
75-01-4	Vinyl chloride	4.90		1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	111		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		81-118
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0663.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 16-Oct-2017 07:36:30 ALS Bottle#: 12 Worklist Smp#: 4
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: lcs
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:10:54 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 08:05:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.969	3.969	0.000	95	236412	250.0	250.0	
* 2 Fluorobenzene	96	6.721	6.738	-0.017	99	1210775	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.057	11.057	0.000	89	392741	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.070	14.070	0.000	96	710169	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.885	5.907	-0.022	93	823639	10.3	11.4	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.320	6.325	-0.005	100	342006	10.3	10.8	
\$ 10 Toluene-d8 (Surr)	98	8.845	8.850	-0.005	92	1743696	10.3	10.6	
\$ 11 4-Bromofluorobenzene (Surr	95	12.729	12.734	-0.005	86	968913	10.3	10.1	
28 Dichlorodifluoromethane	85	2.158	2.162	-0.004	99	303599	5.00	4.70	
30 Chloromethane	50	2.262	2.267	-0.005	98	144681	5.00	4.72	
32 Vinyl chloride	62	2.384	2.406	-0.022	98	183094	5.00	4.90	
35 Bromomethane	94	2.680	2.685	-0.005	91	203698	5.00	5.18	
36 Chloroethane	64	2.750	2.754	-0.004	98	119276	5.00	4.78	
37 Dichlorofluoromethane	67	2.924	2.928	-0.004	97	498006	5.00	5.68	
38 Trichlorofluoromethane	101	2.976	2.981	-0.005	99	496532	5.00	5.24	
40 Ethyl ether	59	3.203	3.225	-0.021	90	100877	5.00	5.73	
44 Acrolein	56	3.359	3.359	0.000	98	77909	50.0	143.6	
45 1,1-Dichloroethene	96	3.464	3.468	-0.004	98	252973	5.00	5.67	
46 1,1,2-Trichloro-1,2,2-trif	151	3.481	3.486	-0.005	97	360735	5.00	5.96	
47 Acetone	43	3.499	3.503	-0.004	100	52916	20.0	21.7	
48 Iodomethane	142	3.638	3.642	-0.004	99	617758	5.00	5.65	
50 Carbon disulfide	76	3.708	3.712	-0.004	98	915774	5.00	5.83	
52 3-Chloro-1-propene	41	3.795	3.817	-0.022	93	313208	5.00	5.45	
53 Methyl acetate	43	3.812	3.817	-0.005	96	247165	25.0	27.6	
54 Methylene Chloride	84	3.934	3.939	-0.005	90	222893	5.00	5.47	
55 2-Methyl-2-propanol	59	4.056	4.060	-0.004	94	57088	50.0	47.8	
57 Acrylonitrile	53	4.195	4.200	-0.005	98	141080	50.0	53.7	
56 Methyl tert-butyl ether	73	4.213	4.217	-0.004	87	371392	5.00	5.84	
58 trans-1,2-Dichloroethene	96	4.213	4.217	-0.004	100	269073	5.00	5.78	
59 Hexane	57	4.474	4.496	-0.022	90	364269	5.00	5.34	
60 1,1-Dichloroethane	63	4.666	4.670	-0.004	95	428100	5.00	5.57	
65 cis-1,2-Dichloroethene	96	5.327	5.332	-0.005	82	274813	5.00	5.77	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2-Butanone (MEK)	43	5.345	5.349	-0.004	41	104420	20.0	23.1	
66 2,2-Dichloropropane	77	5.345	5.349	-0.004	82	492249	5.00	5.83	
71 sec-Butyl Alcohol	45	5.554	5.558	-0.004	97	137786	150.0	143.6	
73 Chlorobromomethane	128	5.624	5.628	-0.004	90	132134	5.00	5.80	
74 Tetrahydrofuran	42	5.676	5.698	-0.022	38	36443	10.0	11.9	
75 Chloroform	83	5.693	5.698	-0.005	93	512898	5.00	5.64	
76 1,1,1-Trichloroethane	97	5.937	5.941	-0.004	98	508184	5.00	5.77	
77 Cyclohexane	56	6.007	6.011	-0.004	86	410149	5.00	5.66	
78 1,1-Dichloropropene	75	6.129	6.133	-0.004	97	440774	5.00	5.80	
79 Carbon tetrachloride	117	6.146	6.150	-0.004	97	511813	5.00	5.82	
80 Isobutyl alcohol	41	6.285	6.272	0.013	94	41264	125.0	123.9	
81 Benzene	78	6.390	6.394	-0.004	96	776536	5.00	5.81	
82 1,2-Dichloroethane	62	6.407	6.412	-0.005	96	187437	5.00	5.42	
84 n-Heptane	43	6.686	6.690	-0.004	90	451207	5.00	5.74	
86 Trichloroethene	95	7.191	7.195	-0.004	98	345312	5.00	5.86	
88 2-Pentanone	43	7.435	7.439	-0.004	98	287985	20.0	21.5	
89 Methylcyclohexane	55	7.452	7.457	-0.005	90	379002	5.00	5.64	
90 1,2-Dichloropropane	63	7.487	7.491	-0.004	96	254931	5.00	5.54	
92 Dibromomethane	93	7.661	7.666	-0.005	96	162274	5.00	5.57	
93 1,4-Dioxane	88	7.679	7.683	-0.004	34	14524	100.0	103.9	
94 Dichlorobromomethane	83	7.853	7.857	-0.004	99	458120	5.00	5.86	
97 cis-1,3-Dichloropropene	75	8.462	8.467	-0.005	98	389216	5.00	5.23	
96 2-Chloroethyl vinyl ether	63	8.480	8.467	0.013	35	3642	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.689	8.693	-0.004	95	387323	20.0	23.4	
99 Toluene	91	8.933	8.937	-0.004	99	922134	5.00	5.74	
100 trans-1,3-Dichloropropene	75	9.246	9.250	-0.004	89	269216	5.00	5.25	
101 Ethyl methacrylate	69	9.385	9.372	0.013	86	210256	5.00	5.38	
102 1,1,2-Trichloroethane	97	9.507	9.512	-0.005	90	181218	5.00	5.42	
103 Tetrachloroethene	164	9.716	9.721	-0.005	97	324478	5.00	5.43	
104 1,3-Dichloropropane	76	9.751	9.755	-0.004	84	293086	5.00	5.45	
105 2-Hexanone	43	9.890	9.895	-0.005	94	247427	20.0	22.4	
108 Chlorodibromomethane	129	10.099	10.104	-0.005	90	335398	5.00	5.17	
109 Ethylene Dibromide	107	10.291	10.295	-0.004	99	230736	5.00	5.40	
110 1-Chlorohexane	91	11.075	11.079	-0.004	91	469965	5.00	5.21	
111 Chlorobenzene	112	11.110	11.114	-0.004	93	655101	5.00	5.39	
112 1,1,1,2-Tetrachloroethane	131	11.231	11.236	-0.005	94	345868	5.00	5.42	
113 Ethylbenzene	106	11.284	11.288	-0.004	98	327973	5.00	5.40	
114 m-Xylene & p-Xylene	106	11.458	11.462	-0.004	98	421430	5.00	5.28	
115 o-Xylene	106	12.033	12.037	-0.004	98	371058	5.00	5.22	
116 Styrene	104	12.050	12.054	-0.004	93	595642	5.00	5.32	
117 Bromoform	173	12.311	12.316	-0.005	95	199116	5.00	5.53	
118 Isopropylbenzene	105	12.520	12.525	-0.005	96	1238547	5.00	4.96	
120 Cyclohexanone	55	12.660	12.664	-0.004	86	89016	200.0	178.0	
122 Bromobenzene	156	12.921	12.908	0.013	92	306587	5.00	5.04	
121 1,1,2,2-Tetrachloroethane	83	12.921	12.925	-0.004	93	242793	5.00	4.90	
123 1,2,3-Trichloropropane	110	12.973	12.960	0.013	79	60837	5.00	4.79	
124 trans-1,4-Dichloro-2-buten	53	12.990	12.995	-0.005	66	42343	5.00	4.99	
125 N-Propylbenzene	120	13.043	13.047	-0.004	99	318279	5.00	4.88	
126 2-Chlorotoluene	126	13.147	13.152	-0.005	97	252041	5.00	4.84	
127 1,3,5-Trimethylbenzene	105	13.252	13.256	-0.004	95	950766	5.00	5.05	
128 4-Chlorotoluene	126	13.269	13.273	-0.004	98	304195	5.00	5.13	
129 tert-Butylbenzene	119	13.635	13.639	-0.004	92	1057155	5.00	5.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 1,2,4-Trimethylbenzene	105	13.687	13.691	-0.004	96	887688	5.00	4.95	
131 sec-Butylbenzene	134	13.879	13.883	-0.004	94	287080	5.00	4.94	
132 1,3-Dichlorobenzene	146	14.001	14.005	-0.004	96	468835	5.00	5.07	
133 4-Isopropyltoluene	119	14.035	14.040	-0.005	97	1194749	5.00	4.99	
134 1,4-Dichlorobenzene	146	14.105	14.092	0.013	94	671541	5.00	4.94	
137 n-Butylbenzene	91	14.471	14.475	-0.004	97	1145811	5.00	5.03	
138 1,2-Dichlorobenzene	146	14.506	14.493	0.013	98	471973	5.00	5.02	
139 1,2-Dibromo-3-Chloropropan	157	15.272	15.276	-0.004	88	45692	5.00	5.31	
141 1,2,4-Trichlorobenzene	180	16.038	16.043	-0.005	94	305015	5.00	4.85	
142 Hexachlorobutadiene	225	16.195	16.199	-0.004	97	328077	5.00	4.93	
143 Naphthalene	128	16.282	16.269	0.013	97	296496	5.00	4.64	
144 1,2,3-Trichlorobenzene	180	16.491	16.495	-0.004	96	229727	5.00	4.95	
S 151 1,2-Dichloroethene, Total	96				0		10.0	11.5	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.5	
S 145 Trihalomethanes, Total	1				0		20.0	22.2	
S 146 Xylenes, Total (URS)	1				0		10.0	10.5	
S 149 1,2-Dichloroethene, Total	1				0		5.00	11.5	
S 150 Xylenes, Total	106				0		10.0	10.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Main B_00019	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00037	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00039	Amount Added: 2.50	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0663.D

Injection Date: 16-Oct-2017 07:36:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

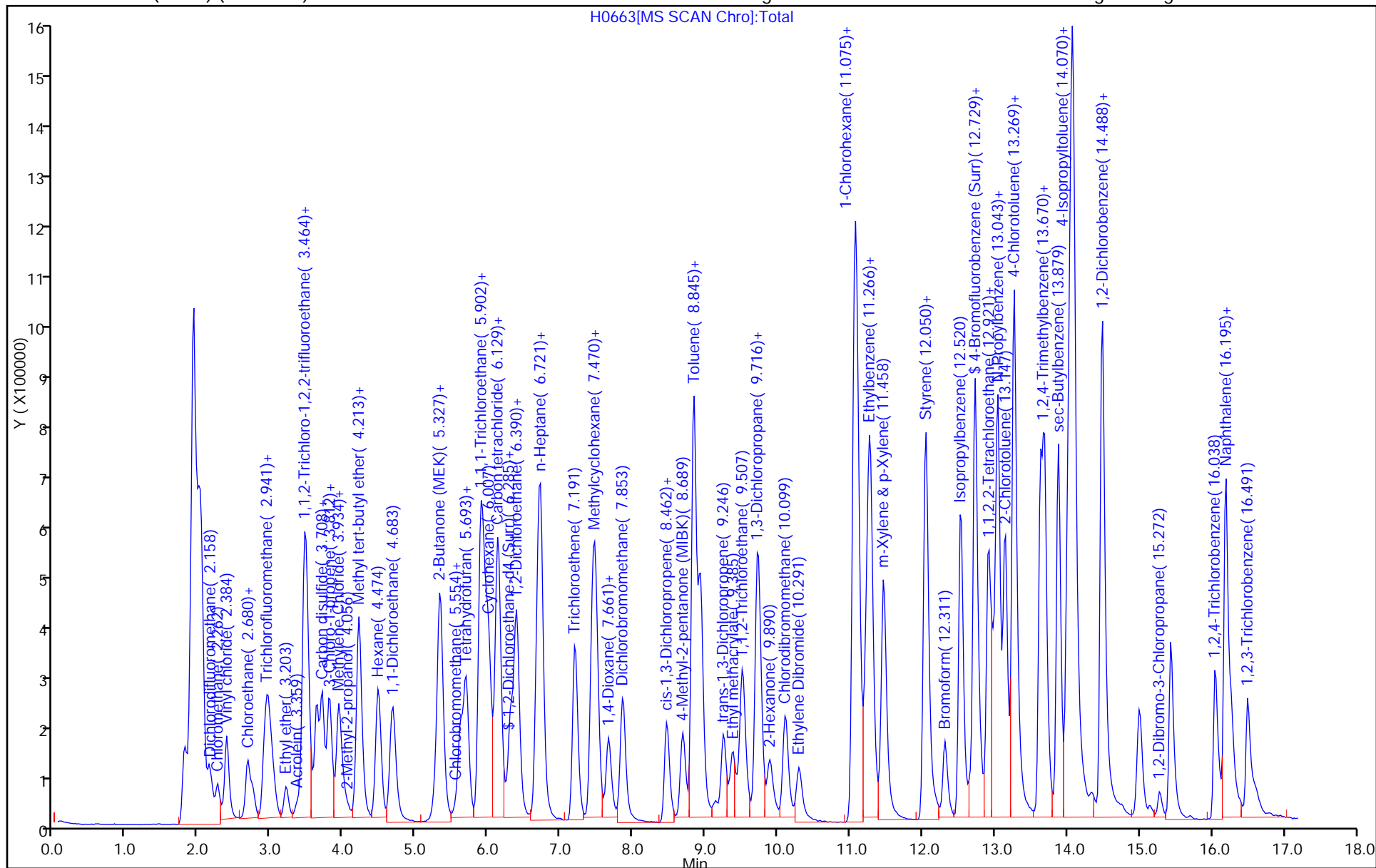
ALS Bottle#: 12

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-VG#1-INF-MS MS</u>	Lab Sample ID: <u>280-102119-9 MS</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0644.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/06/2017 15:47</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/15/2017 15:15</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391324</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	23.2		10	6.4	1.9
71-43-2	Benzene	5.46		1.0	0.40	0.16
75-25-2	Bromoform	5.17		1.0	0.40	0.19
74-83-9	Bromomethane	4.89		2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	22.9		6.0	4.0	1.8
75-15-0	Carbon disulfide	5.29		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.25		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.08		1.0	0.40	0.17
74-97-5	Chlorobromomethane	5.56		1.0	0.20	0.10
124-48-1	Chlorodibromomethane	4.98		1.0	0.40	0.17
75-00-3	Chloroethane	4.57		2.0	1.6	0.41
67-66-3	Chloroform	5.32		1.0	0.40	0.16
74-87-3	Chloromethane	4.64		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.34		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.92		1.0	0.40	0.16
110-82-7	Cyclohexane	5.14		2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	4.97	J	5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.01		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.91		1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	4.94		1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	4.65		1.0	0.40	0.16
75-27-4	Dichlorobromomethane	5.49		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.39		2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	5.26		1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	5.10		1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	5.30		1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	5.32		1.0	0.40	0.13
123-91-1	1,4-Dioxane	102	J	220	160	71
100-41-4	Ethylbenzene	5.07		1.0	0.40	0.16
591-78-6	2-Hexanone	20.1		5.0	4.0	1.4
98-82-8	Isopropylbenzene	4.64		1.0	0.40	0.19
79-20-9	Methyl acetate	23.8		5.0	4.0	1.6
108-87-2	Methylcyclohexane	5.06		2.0	0.80	0.36
75-09-2	Methylene Chloride	4.98	J	5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	24.2		5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	5.33		5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-VG#1-INF-MS MS Lab Sample ID: 280-102119-9 MS

Matrix: Water Lab File ID: H0644.D

Analysis Method: 8260B Date Collected: 10/06/2017 15:47

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 15:15

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	5.00		2.0	0.80	0.34
95-47-6	o-Xylene	5.15		1.0	0.40	0.19
100-42-5	Styrene	5.03		1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	4.52		1.0	0.80	0.20
127-18-4	Tetrachloroethene	5.07		1.0	0.40	0.20
108-88-3	Toluene	5.45		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.44		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	4.93		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.87		1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	4.77		1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	5.31		1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	5.61		1.0	0.80	0.32
79-01-6	Trichloroethene	10.2		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.90		2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	5.43		3.0	1.6	0.79
75-01-4	Vinyl chloride	4.66		1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		85-114
1868-53-7	Dibromofluoromethane (Surr)	108		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0644.D
 Lims ID: 280-102119-C-9 MS
 Client ID: FEW4-VG#1-INF-MS
 Sample Type: MS
 Inject. Date: 15-Oct-2017 15:15:30 ALS Bottle#: 27 Worklist Smp#: 22
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-9 ph<2 MS
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 16:34:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.986	3.986	0.000	95	253400	250.0	250.0	
* 2 Fluorobenzene	96	6.738	6.738	0.000	98	1227883	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.074	11.092	-0.018	87	397145	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.088	-0.001	97	725469	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.902	5.902	0.000	93	816778	10.3	11.1	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.337	6.338	-0.001	99	324345	10.3	10.1	
\$ 10 Toluene-d8 (Surr)	98	8.862	8.863	-0.001	92	1733771	10.3	10.4	
\$ 11 4-Bromofluorobenzene (Surr	95	12.746	12.747	-0.001	86	945005	10.3	9.60	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95	1.792	2.455	-0.663	0	1362		NR	7
28 Dichlorodifluoromethane	85	2.157	2.158	-0.001	98	287636	5.00	4.39	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50	2.297	2.280	0.017	98	144068	5.00	4.64	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62	2.419	2.419	-0.001	98	176558	5.00	4.66	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.633					ND	
35 Bromomethane	94	2.697	2.698	-0.001	90	195067	5.00	4.89	
36 Chloroethane	64	2.767	2.767	0.000	99	115721	5.00	4.57	
37 Dichlorofluoromethane	67	2.941	2.941	0.000	97	481747	5.00	5.42	
38 Trichlorofluoromethane	101	2.976	2.994	-0.018	99	471510	5.00	4.90	
49 Isopropyl alcohol	45	3.220	3.155	0.065	70	68874		NC	
39 Ethanol	45		3.155					ND	
40 Ethyl ether	59	3.220	3.220	0.000	89	95000	5.00	5.32	
43 Propene oxide	58	3.220	3.295	-0.075	1	445		61.2	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56	3.376	3.359	0.017	98	71919	50.0	130.7	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96	3.463	3.481	-0.018	98	239661	5.00	5.30	
46 1,1,2-Trichloro-1,2,2-trif	151	3.498	3.499	-0.001	97	333479	5.00	5.43	
47 Acetone	43	3.516	3.516	0.000	32	56843	20.0	23.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142	3.638	3.638	0.000	99	593872	5.00	5.36	
50 Carbon disulfide	76	3.725	3.725	0.000	98	843001	5.00	5.29	
51 Acetonitrile	41	3.812	3.800	0.012	75	291457		NC	
52 3-Chloro-1-propene	41	3.812	3.812	0.000	88	291457	5.00	5.00	
53 Methyl acetate	43	3.829	3.830	-0.001	95	216080	25.0	23.8	
54 Methylene Chloride	84	3.951	3.952	-0.001	89	205858	5.00	4.98	
55 2-Methyl-2-propanol	59	4.056	4.074	-0.018	97	67732	50.0	52.9	
57 Acrylonitrile	53	4.195	4.213	-0.018	98	129790	50.0	48.7	
56 Methyl tert-butyl ether	73	4.230	4.230	0.000	86	344178	5.00	5.33	
58 trans-1,2-Dichloroethene	96	4.230	4.230	0.000	100	257142	5.00	5.44	
59 Hexane	57	4.491	4.492	-0.001	90	331886	5.00	4.81	
60 1,1-Dichloroethane	63	4.683	4.683	0.000	95	410099	5.00	5.26	
61 Vinyl acetate	43	4.717	4.718	-0.001	96	322671		9.54	
62 Isopropyl ether	87		4.723					ND	
63 2-Chloro-1,3-butadiene	53		4.775					ND	
64 Tert-butyl ethyl ether	59		5.141					ND	
65 cis-1,2-Dichloroethene	96	5.344	5.345	-0.001	82	257779	5.00	5.34	
67 2-Butanone (MEK)	43	5.362	5.362	0.000	41	104937	20.0	22.9	
66 2,2-Dichloropropane	77	5.362	5.362	0.000	82	449076	5.00	5.16	
69 Ethyl acetate	43		5.402					ND	
70 Propionitrile	54		5.437					ND	
71 sec-Butyl Alcohol	45	5.571	5.571	0.000	97	143676	150.0	139.7	
72 Methacrylonitrile	41		5.594					ND	
73 Chlorobromomethane	128	5.640	5.641	-0.001	90	128367	5.00	5.56	
74 Tetrahydrofuran	42	5.693	5.693	0.000	37	36269	10.0	11.6	
75 Chloroform	83	5.710	5.711	-0.001	93	491282	5.00	5.32	
76 1,1,1-Trichloroethane	97	5.954	5.954	0.000	98	474529	5.00	5.31	
77 Cyclohexane	56	6.024	6.024	0.000	86	378135	5.00	5.14	
78 1,1-Dichloropropene	75	6.146	6.146	0.000	99	408242	5.00	5.30	
79 Carbon tetrachloride	117	6.163	6.163	0.000	97	468815	5.00	5.25	
80 Isobutyl alcohol	41	6.285	6.285	0.000	93	46189	125.0	129.4	
81 Benzene	78	6.407	6.407	0.000	95	740378	5.00	5.46	
82 1,2-Dichloroethane	62	6.424	6.425	-0.001	97	178836	5.00	5.10	
83 Tert-amyl methyl ether	73		6.517					ND	
84 n-Heptane	43	6.703	6.703	0.000	93	407428	5.00	5.11	
85 n-Butanol	56		7.144					ND	
86 Trichloroethene	95	7.208	7.208	0.000	98	610608	5.00	10.2	
88 2-Pentanone	43	7.452	7.452	0.000	98	228033	20.0	16.8	
89 Methylcyclohexane	55	7.469	7.470	-0.001	90	344733	5.00	5.06	
90 1,2-Dichloropropane	63	7.504	7.504	0.000	96	248208	5.00	5.32	
91 Methyl methacrylate	100		7.631					ND	
92 Dibromomethane	93	7.678	7.679	-0.001	97	153971	5.00	5.21	
93 1,4-Dioxane	88	7.713	7.713	0.000	29	14493	100.0	102.3	
94 Dichlorobromomethane	83	7.870	7.870	0.000	99	435386	5.00	5.49	
95 2-Nitropropane	41		8.171					ND	
97 cis-1,3-Dichloropropene	75	8.479	8.480	-0.001	98	370690	5.00	4.92	
96 2-Chloroethyl vinyl ether	63	8.497	8.497	0.000	35	1870	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.706	8.706	0.000	95	406459	20.0	24.2	
99 Toluene	91	8.949	8.950	-0.001	99	888836	5.00	5.45	
100 trans-1,3-Dichloropropene	75	9.263	9.263	0.000	89	256425	5.00	4.93	
101 Ethyl methacrylate	69	9.402	9.385	0.017	85	192791	5.00	4.88	
102 1,1,2-Trichloroethane	97	9.524	9.525	-0.001	92	189571	5.00	5.61	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164	9.733	9.734	-0.001	97	306213	5.00	5.07	
104 1,3-Dichloropropane	76	9.768	9.769	-0.001	84	271048	5.00	4.98	
105 2-Hexanone	43	9.907	9.908	-0.001	94	224033	20.0	20.1	
107 Tetrahydrothiophene	60		10.104					ND	
108 Chlorodibromomethane	129	10.116	10.117	-0.001	90	326475	5.00	4.98	
109 Ethylene Dibromide	107	10.308	10.308	0.000	99	216660	5.00	5.01	
110 1-Chlorohexane	91	11.092	11.092	0.000	89	435025	5.00	4.77	
111 Chlorobenzene	112	11.126	11.127	-0.001	94	625123	5.00	5.08	
112 1,1,1,2-Tetrachloroethane	131	11.248	11.266	-0.018	94	338815	5.00	5.25	
113 Ethylbenzene	106	11.301	11.301	0.000	99	311479	5.00	5.07	
114 m-Xylene & p-Xylene	106	11.475	11.475	0.000	98	403501	5.00	5.00	
115 o-Xylene	106	12.050	12.050	0.000	98	369846	5.00	5.15	
116 Styrene	104	12.067	12.067	0.000	93	569618	5.00	5.03	
117 Bromoform	173	12.328	12.329	-0.001	95	188331	5.00	5.17	
118 Isopropylbenzene	105	12.537	12.538	-0.001	96	1183246	5.00	4.64	
119 cis-1,4-Dichloro-2-butene	53		12.630					ND	
120 Cyclohexanone	55	12.676	12.677	-0.001	87	97517	200.0	192.9	
122 Bromobenzene	156	12.920	12.921	-0.001	93	299119	5.00	4.81	
121 1,1,2,2-Tetrachloroethane	83	12.938	12.938	0.000	94	228747	5.00	4.52	
123 1,2,3-Trichloropropane	110	12.990	12.973	0.017	79	60747	5.00	4.66	
124 trans-1,4-Dichloro-2-buten	53	13.007	13.008	-0.001	64	36891	5.00	4.25	
125 N-Propylbenzene	120	13.060	13.060	0.000	99	306920	5.00	4.61	
126 2-Chlorotoluene	126	13.164	13.165	-0.001	98	254450	5.00	4.78	
127 1,3,5-Trimethylbenzene	105	13.269	13.269	0.000	95	912968	5.00	4.75	
128 4-Chlorotoluene	126	13.286	13.287	-0.001	98	297238	5.00	4.91	
129 tert-Butylbenzene	119	13.652	13.652	0.000	93	1020486	5.00	4.73	
130 1,2,4-Trimethylbenzene	105	13.704	13.705	-0.001	96	853226	5.00	4.65	
22 Pentachloroethane	167	13.687	13.716	-0.029	0	1262		NC	
131 sec-Butylbenzene	134	13.896	13.896	0.000	94	272312	5.00	4.59	
132 1,3-Dichlorobenzene	146	14.018	14.018	0.000	96	466392	5.00	4.94	
133 4-Isopropyltoluene	119	14.052	14.053	-0.001	97	1154059	5.00	4.72	
134 1,4-Dichlorobenzene	146	14.105	14.105	0.000	95	646532	5.00	4.65	
135 1,2,3-Trimethylbenzene	105		14.145					ND	
137 n-Butylbenzene	91	14.488	14.488	0.000	97	1088343	5.00	4.68	
138 1,2-Dichlorobenzene	146	14.505	14.506	-0.001	97	471670	5.00	4.91	
139 1,2-Dibromo-3-Chloropropan	157	15.289	15.289	0.000	90	43671	5.00	4.97	
140 1,3,5-Trichlorobenzene	180		15.468					ND	
141 1,2,4-Trichlorobenzene	180	16.055	16.056	-0.001	95	306156	5.00	4.77	
142 Hexachlorobutadiene	225	16.212	16.212	0.000	98	329906	5.00	4.86	
143 Naphthalene	128	16.282	16.282	0.000	97	290636	5.00	4.45	
144 1,2,3-Trichlorobenzene	180	16.508	16.509	0.000	95	231066	5.00	4.87	
21 2,4-Dimethylpentane	1		0.000					ND	
162 1-Chlorohexane TIC	1		0.000					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
S 151 1,2-Dichloroethene, Total	96				0		10.0	10.8	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.85	
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1				0		20.0	21.0	
S 146 Xylenes, Total (URS)	1				0		10.0	10.1	
S 149 1,2-Dichloroethene, Total	1				0		5.00	10.8	
S 150 Xylenes, Total	106				0		10.0	10.1	
S 147 Total BTEX	1				0			26.1	
T 165 Cyclohexane TIC	56	6.024	6.023	0.001	91	378135		11.9	
T 163 Methyl cyclohexane TIC	55	7.469	7.469	0.000	97	459408		14.5	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Reagents:

MV-Main B_00019	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00037	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00039	Amount Added: 2.50	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\\Denver\\ChromData\\VMS_H\\20171015-63652.b\\H0644.D

Injection Date: 15-Oct-2017 15:15:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-9 MS

Worklist Smp#: 22

Client ID: FEW4-VG#1-INF-MS

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

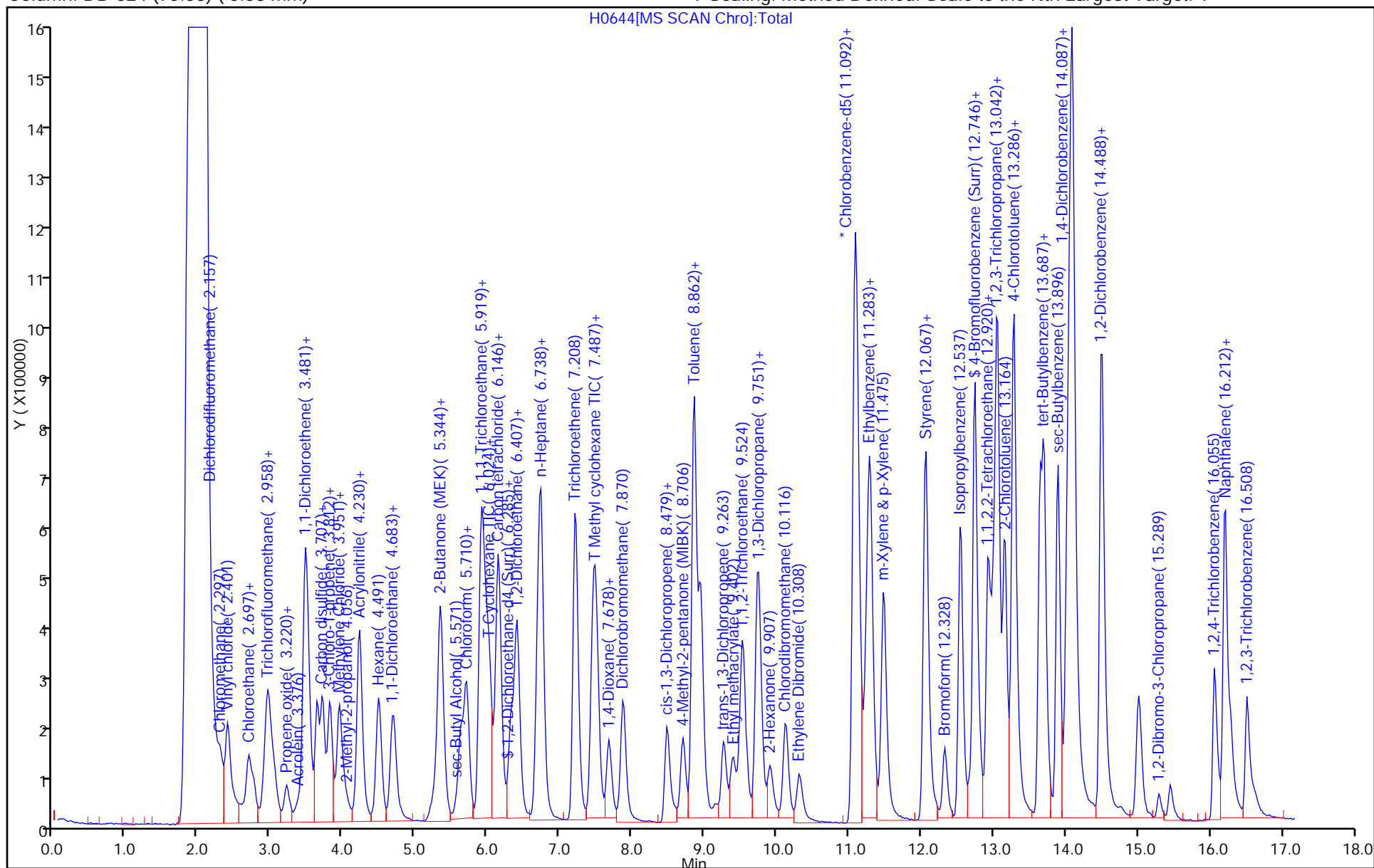
ALS Bottle#: 27

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-BOYD-3-MS MS Lab Sample ID: 280-102119-22 MS

Matrix: Water Lab File ID: H0680.D

Analysis Method: 8260B Date Collected: 10/07/2017 11:30

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 13:47

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	31.8		10	6.4	1.9
71-43-2	Benzene	5.43		1.0	0.40	0.16
75-25-2	Bromoform	5.42		1.0	0.40	0.19
74-83-9	Bromomethane	4.58		2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	21.6		6.0	4.0	1.8
75-15-0	Carbon disulfide	5.09		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.05		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.87		1.0	0.40	0.17
74-97-5	Chlorobromomethane	5.60		1.0	0.20	0.10
124-48-1	Chlorodibromomethane	5.05		1.0	0.40	0.17
75-00-3	Chloroethane	4.38		2.0	1.6	0.41
67-66-3	Chloroform	5.33		1.0	0.40	0.16
74-87-3	Chloromethane	4.25		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.37		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	4.92		1.0	0.40	0.16
110-82-7	Cyclohexane	4.86		2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	5.06		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.16		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.68		1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	4.51		1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	4.53		1.0	0.40	0.16
75-27-4	Dichlorobromomethane	5.61		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.12		2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	5.18		1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	5.34		1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	5.01		1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	5.28		1.0	0.40	0.13
123-91-1	1,4-Dioxane	127	J	220	160	71
100-41-4	Ethylbenzene	4.74		1.0	0.40	0.16
591-78-6	2-Hexanone	22.6		5.0	4.0	1.4
98-82-8	Isopropylbenzene	4.29		1.0	0.40	0.19
79-20-9	Methyl acetate	27.5		5.0	4.0	1.6
108-87-2	Methylcyclohexane	4.80		2.0	0.80	0.36
75-09-2	Methylene Chloride	5.12		5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	25.1		5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	5.82		5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-BOYD-3-MS MS Lab Sample ID: 280-102119-22 MS

Matrix: Water Lab File ID: H0680.D

Analysis Method: 8260B Date Collected: 10/07/2017 11:30

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 13:47

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	4.67		2.0	0.80	0.34
95-47-6	o-Xylene	4.82		1.0	0.40	0.19
100-42-5	Styrene	4.77		1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	4.88		1.0	0.80	0.20
127-18-4	Tetrachloroethene	4.67		1.0	0.40	0.20
108-88-3	Toluene	5.33		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.30		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.06		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.81		1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	4.50		1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	5.03		1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	5.48		1.0	0.80	0.32
79-01-6	Trichloroethene	6.29		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.54		2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	5.12		3.0	1.6	0.79
75-01-4	Vinyl chloride	4.28		1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	115		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		81-118
2037-26-5	Toluene-d8 (Surr)	104		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0680.D
 Lims ID: 280-102119-C-22 MS
 Client ID: FEW4-BOYD-3-MS
 Sample Type: MS
 Inject. Date: 16-Oct-2017 13:47:30 ALS Bottle#: 29 Worklist Smp#: 24
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-22 ph<2 MS
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 14:15:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.972	0.000	95	313587	250.0	250.0	
* 2 Fluorobenzene	96	6.723	6.741	-0.018	98	1242865	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.060	11.078	-0.018	89	413689	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.073	0.000	97	761928	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.887	5.905	-0.018	93	879184	10.3	11.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.305	6.323	-0.018	100	367977	10.3	11.3	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.848	0.000	92	1843636	10.3	10.6	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.732	0.000	86	1044062	10.3	10.1	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95	2.683	2.454	0.229	0	25910		NR	7
28 Dichlorodifluoromethane	85	2.160	2.161	-0.001	98	273320	5.00	4.12	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50	2.282	2.265	0.017	97	133661	5.00	4.25	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62	2.404	2.405	-0.001	97	164287	5.00	4.28	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.628					ND	
35 Bromomethane	94	2.683	2.683	0.000	91	184952	5.00	4.58	
36 Chloroethane	64	2.753	2.753	0.000	99	112072	5.00	4.38	
37 Dichlorofluoromethane	67	2.927	2.927	0.000	97	470908	5.00	5.23	
38 Trichlorofluoromethane	101	2.979	2.979	0.000	99	442147	5.00	4.54	
49 Isopropyl alcohol	45	3.205	3.150	0.055	71	77121		NC	
39 Ethanol	45		3.150					ND	
40 Ethyl ether	59	3.205	3.206	-0.001	91	103654	5.00	5.74	
43 Propene oxide	58		3.289					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56	3.362	3.359	0.003	98	78736	50.0	141.4	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96	3.467	3.467	0.000	99	229372	5.00	5.01	
46 1,1,2-Trichloro-1,2,2-trif	151	3.484	3.484	0.000	97	318447	5.00	5.12	
47 Acetone	43	3.501	3.502	-0.001	100	76241	20.0	31.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142	3.623	3.641	-0.018	99	591868	5.00	5.27	
50 Carbon disulfide	76	3.710	3.711	-0.001	98	820349	5.00	5.09	
51 Acetonitrile	41	3.798	3.794	0.004	73	282481		NC	
52 3-Chloro-1-propene	41	3.798	3.815	-0.017	86	285971	5.00	4.85	
53 Methyl acetate	43	3.815	3.815	0.000	95	252431	25.0	27.5	
54 Methylene Chloride	84	3.937	3.937	0.000	90	214157	5.00	5.12	
55 2-Methyl-2-propanol	59	4.041	4.059	-0.018	97	87048	50.0	55.0	
57 Acrylonitrile	53	4.198	4.198	0.000	99	147720	50.0	54.8	
56 Methyl tert-butyl ether	73	4.216	4.216	0.000	92	380228	5.00	5.82	
58 trans-1,2-Dichloroethene	96	4.216	4.216	0.000	100	253343	5.00	5.30	
59 Hexane	57	4.477	4.477	0.000	90	314924	5.00	4.38	
60 1,1-Dichloroethane	63	4.668	4.669	-0.001	95	408669	5.00	5.18	
61 Vinyl acetate	43	4.703	4.703	0.000	96	362240		10.6	
62 Isopropyl ether	87		4.717					ND	
63 2-Chloro-1,3-butadiene	53		4.770					ND	
64 Tert-butyl ethyl ether	59		5.135					ND	
65 cis-1,2-Dichloroethene	96	5.330	5.330	0.000	82	262615	5.00	5.37	
67 2-Butanone (MEK)	43	5.348	5.348	0.000	47	100242	20.0	21.6	
66 2,2-Dichloropropane	77	5.330	5.348	-0.018	83	451756	5.00	5.12	
69 Ethyl acetate	43		5.397					ND	
70 Propionitrile	54		5.432					ND	
71 sec-Butyl Alcohol	45	5.557	5.557	0.000	97	182338	150.0	143.3	
72 Methacrylonitrile	41		5.588					ND	
73 Chlorobromomethane	128	5.626	5.626	0.000	90	131016	5.00	5.60	
74 Tetrahydrofuran	42	5.678	5.679	-0.001	38	40475	10.0	12.8	
75 Chloroform	83	5.696	5.696	0.000	93	497914	5.00	5.33	
76 1,1,1-Trichloroethane	97	5.940	5.940	0.000	98	454989	5.00	5.03	
77 Cyclohexane	56	6.009	6.010	-0.001	86	362020	5.00	4.86	
78 1,1-Dichloropropene	75	6.131	6.132	-0.001	97	393909	5.00	5.05	
79 Carbon tetrachloride	117	6.149	6.149	0.000	96	455970	5.00	5.05	
80 Isobutyl alcohol	41	6.271	6.271	0.000	90	51172	125.0	115.8	
81 Benzene	78	6.392	6.393	-0.001	96	745454	5.00	5.43	
82 1,2-Dichloroethane	62	6.410	6.410	0.000	96	189617	5.00	5.34	
83 Tert-amyl methyl ether	73		6.511					ND	
84 n-Heptane	43	6.689	6.689	0.000	90	384602	5.00	4.76	
85 n-Butanol	56		7.138					ND	
86 Trichloroethene	95	7.194	7.194	0.000	98	380607	5.00	6.29	
88 2-Pentanone	43	7.437	7.438	-0.001	97	252044	20.0	18.4	
89 Methylcyclohexane	55	7.455	7.455	0.000	91	330504	5.00	4.80	
90 1,2-Dichloropropane	63	7.490	7.507	-0.017	95	249288	5.00	5.28	
91 Methyl methacrylate	100		7.643					ND	
92 Dibromomethane	93	7.664	7.664	0.000	97	164259	5.00	5.49	
93 1,4-Dioxane	88	7.699	7.699	0.000	88	18549	100.0	127.5	
94 Dichlorobromomethane	83	7.855	7.856	-0.001	99	450310	5.00	5.61	
95 2-Nitropropane	41		8.166					ND	
97 cis-1,3-Dichloropropene	75	8.465	8.465	0.000	99	386029	5.00	4.92	
96 2-Chloroethyl vinyl ether	63		8.465				ND	ND	
98 4-Methyl-2-pentanone (MIBK)	43	8.691	8.692	-0.001	95	426659	20.0	25.1	
99 Toluene	91	8.935	8.936	-0.001	99	879387	5.00	5.33	
100 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	89	266175	5.00	5.06	
101 Ethyl methacrylate	69	9.388	9.388	0.000	84	208788	5.00	5.07	
102 1,1,2-Trichloroethane	97	9.510	9.510	0.000	79	187811	5.00	5.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164	9.719	9.719	0.000	97	293769	5.00	4.67	
104 1,3-Dichloropropane	76	9.754	9.754	0.000	85	286129	5.00	5.05	
105 2-Hexanone	43	9.893	9.893	0.000	95	262822	20.0	22.6	
107 Tetrahydrothiophene	60		10.099					ND	
108 Chlorodibromomethane	129	10.102	10.120	-0.018	90	345461	5.00	5.05	
109 Ethylene Dibromide	107	10.294	10.294	0.000	100	232378	5.00	5.16	
110 1-Chlorohexane	91	11.077	11.078	-0.001	92	416453	5.00	4.38	
111 Chlorobenzene	112	11.112	11.112	0.000	94	624366	5.00	4.87	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.252	0.000	94	349037	5.00	5.19	
113 Ethylbenzene	106	11.286	11.287	-0.001	98	302976	5.00	4.74	
114 m-Xylene & p-Xylene	106	11.461	11.478	-0.017	98	393329	5.00	4.67	
115 o-Xylene	106	12.035	12.036	-0.001	98	360551	5.00	4.82	
116 Styrene	104	12.070	12.070	0.000	93	562413	5.00	4.77	
117 Bromoform	173	12.314	12.314	0.000	96	205905	5.00	5.42	
118 Isopropylbenzene	105	12.540	12.541	-0.001	96	1149002	5.00	4.29	
119 cis-1,4-Dichloro-2-butene	53		12.624					ND	
120 Cyclohexanone	55	12.662	12.663	0.000	88	115601	200.0	219.5	
122 Bromobenzene	156	12.923	12.924	-0.001	93	305454	5.00	4.68	
121 1,1,2,2-Tetrachloroethane	83	12.923	12.924	-0.001	93	259135	5.00	4.88	
123 1,2,3-Trichloropropane	110	12.976	12.976	0.000	79	69951	5.00	5.18	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.993	0.000	59	44243	5.00	4.86	
125 N-Propylbenzene	120	13.045	13.046	-0.001	99	295310	5.00	4.22	
126 2-Chlorotoluene	126	13.150	13.150	0.000	98	241092	5.00	4.31	
127 1,3,5-Trimethylbenzene	105	13.272	13.272	0.000	95	879935	5.00	4.36	
128 4-Chlorotoluene	126	13.289	13.289	0.000	98	291998	5.00	4.59	
129 tert-Butylbenzene	119	13.638	13.638	0.000	92	986711	5.00	4.36	
130 1,2,4-Trimethylbenzene	105	13.690	13.690	0.000	96	836389	5.00	4.34	
22 Pentachloroethane	167	13.655	13.716	-0.061	0	1410		NC	
131 sec-Butylbenzene	134	13.881	13.882	-0.001	94	266384	5.00	4.27	
132 1,3-Dichlorobenzene	146	14.003	14.004	-0.001	96	447766	5.00	4.51	
133 4-Isopropyltoluene	119	14.038	14.038	0.000	97	1094934	5.00	4.26	
134 1,4-Dichlorobenzene	146	14.108	14.108	0.000	94	660304	5.00	4.53	
135 1,2,3-Trimethylbenzene	105		14.157					ND	
137 n-Butylbenzene	91	14.473	14.474	-0.001	97	1027400	5.00	4.20	
138 1,2-Dichlorobenzene	146	14.508	14.509	-0.001	98	472060	5.00	4.68	
139 1,2-Dibromo-3-Chloropropan	157	15.275	15.292	-0.017	88	46659	5.00	5.06	
140 1,3,5-Trichlorobenzene	180		15.481					ND	
141 1,2,4-Trichlorobenzene	180	16.058	16.059	-0.001	95	303241	5.00	4.50	
142 Hexachlorobutadiene	225	16.198	16.198	0.000	98	308406	5.00	4.32	
143 Naphthalene	128	16.285	16.285	0.000	97	314919	5.00	4.59	
144 1,2,3-Trichlorobenzene	180	16.511	16.511	0.000	95	239805	5.00	4.81	
162 1-Chlorohexane TIC	1		0.000					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
21 2,4-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
S 151 1,2-Dichloroethene, Total	96				0		10.0	10.7	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.98	
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1				0		20.0	21.4	
S 146 Xylenes, Total (URS)	1				0		10.0	9.49	
S 149 1,2-Dichloroethene, Total	1				0		5.00	10.7	
S 150 Xylenes, Total	106				0		10.0	9.49	
S 147 Total BTEX	1				0			25.0	
T 165 Cyclohexane TIC	56	6.009	6.023	-0.014	91	362020		10.9	
T 163 Methyl cyclohexane TIC	55	7.455	7.469	-0.014	96	437803		13.2	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Reagents:

MV-Main B_00019	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00037	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00039	Amount Added: 2.50	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\\Denver\\ChromData\\VMS_H\\20171016-63664.b\\H0680.D

Injection Date: 16-Oct-2017 13:47:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-C-22 MS

Worklist Smp#: 24

Client ID: FEW4-BOYD-3-MS

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

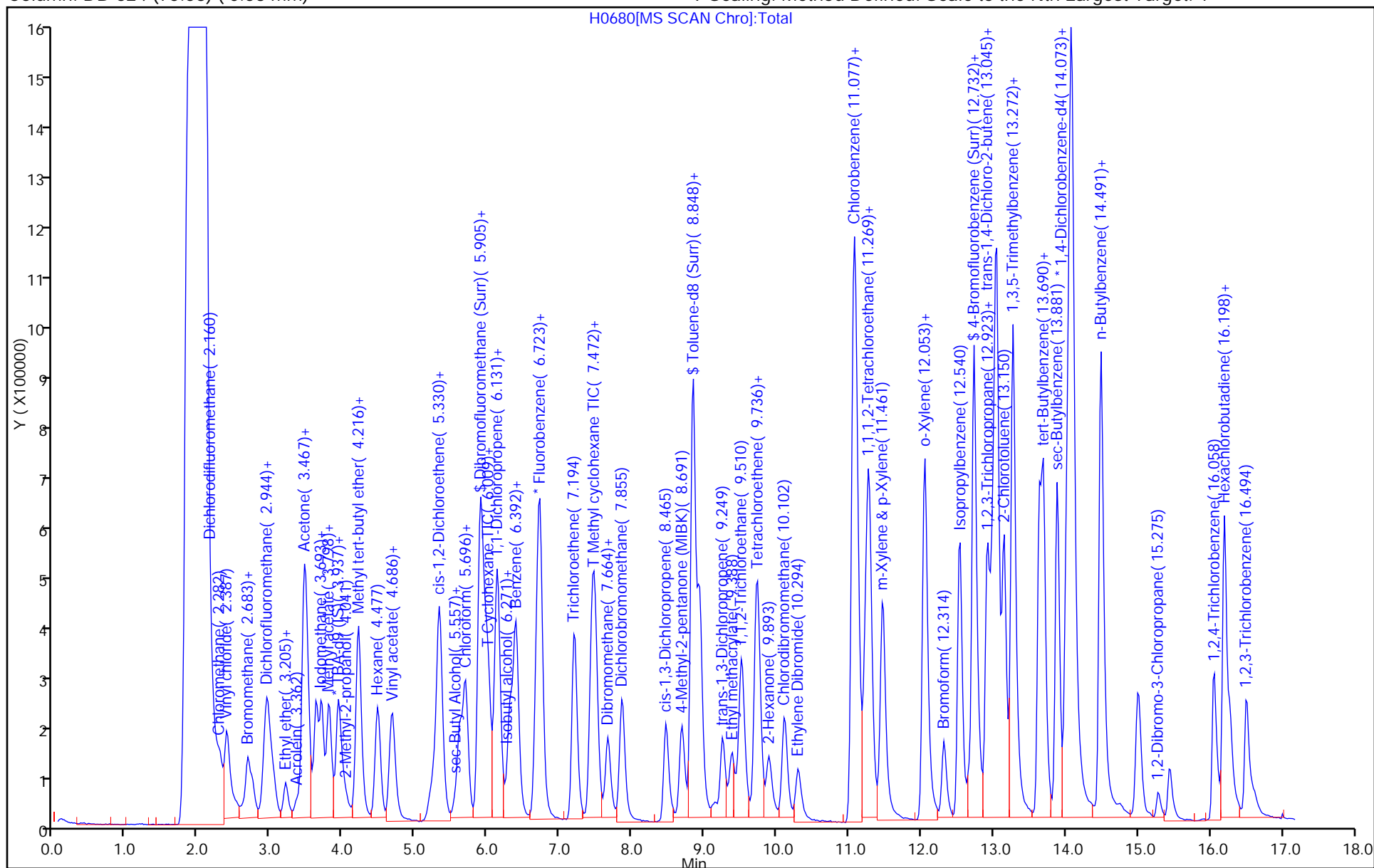
ALS Bottle#: 29

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-VG#1-INF-MSD MSD Lab Sample ID: 280-102119-9 MSD

Matrix: Water Lab File ID: H0645.D

Analysis Method: 8260B Date Collected: 10/06/2017 15:47

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 15:37

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	26.0		10	6.4	1.9
71-43-2	Benzene	5.58		1.0	0.40	0.16
75-25-2	Bromoform	5.50		1.0	0.40	0.19
74-83-9	Bromomethane	4.88		2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	22.4		6.0	4.0	1.8
75-15-0	Carbon disulfide	5.37		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.39		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.13		1.0	0.40	0.17
74-97-5	Chlorobromomethane	5.80		1.0	0.20	0.10
124-48-1	Chlorodibromomethane	5.22		1.0	0.40	0.17
75-00-3	Chloroethane	4.55		2.0	1.6	0.41
67-66-3	Chloroform	5.49		1.0	0.40	0.16
74-87-3	Chloromethane	4.49		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.58		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.07		1.0	0.40	0.16
110-82-7	Cyclohexane	5.16		2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	5.40		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.28		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	5.01		1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	4.98		1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	4.77		1.0	0.40	0.16
75-27-4	Dichlorobromomethane	5.80		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.16		2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	5.34		1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	5.44		1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	5.28		1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	5.46		1.0	0.40	0.13
123-91-1	1,4-Dioxane	114	J	220	160	71
100-41-4	Ethylbenzene	5.07		1.0	0.40	0.16
591-78-6	2-Hexanone	21.0		5.0	4.0	1.4
98-82-8	Isopropylbenzene	4.53		1.0	0.40	0.19
79-20-9	Methyl acetate	25.8		5.0	4.0	1.6
108-87-2	Methylcyclohexane	5.09		2.0	0.80	0.36
75-09-2	Methylene Chloride	5.17		5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	24.3		5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	5.70		5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-VG#1-INF-MSD MSD Lab Sample ID: 280-102119-9 MSD

Matrix: Water Lab File ID: H0645.D

Analysis Method: 8260B Date Collected: 10/06/2017 15:47

Sample wt/vol: 20 (mL) Date Analyzed: 10/15/2017 15:37

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	5.12		2.0	0.80	0.34
95-47-6	o-Xylene	5.13		1.0	0.40	0.19
100-42-5	Styrene	5.14		1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	4.90		1.0	0.80	0.20
127-18-4	Tetrachloroethene	5.05		1.0	0.40	0.20
108-88-3	Toluene	5.47		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.68		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.17		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.97		1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	4.88		1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	5.31		1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	5.71		1.0	0.80	0.32
79-01-6	Trichloroethene	9.92		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.88		2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	5.48		3.0	1.6	0.79
75-01-4	Vinyl chloride	4.61		1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		81-118
2037-26-5	Toluene-d8 (Surr)	101		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0645.D
 Lims ID: 280-102119-C-9 MSD
 Client ID: FEW4-VG#1-INF-MSD
 Sample Type: MSD
 Inject. Date: 15-Oct-2017 15:37:30 ALS Bottle#: 28 Worklist Smp#: 23
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-9 ph<2 MSD
 Operator ID: MOANM Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 15-Oct-2017 17:10:50 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

First Level Reviewer: moanm

Date: 15-Oct-2017 17:08:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.985	3.986	-0.001	95	281474	250.0	250.0	
* 2 Fluorobenzene	96	6.737	6.738	-0.001	99	1230227	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.091	11.092	-0.001	88	402013	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.087	14.088	-0.001	97	737374	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.918	5.902	0.016	93	832819	10.3	11.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.336	6.338	-0.002	99	343608	10.3	10.7	
\$ 10 Toluene-d8 (Surr)	98	8.862	8.863	-0.001	92	1749767	10.3	10.4	
\$ 11 4-Bromofluorobenzene (Surr	95	12.746	12.747	-0.001	86	931355	10.3	9.31	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95	2.470	2.455	0.015	0	1463		NR	7
28 Dichlorodifluoromethane	85	2.157	2.158	-0.001	98	272786	5.00	4.16	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50	2.296	2.280	0.016	97	139720	5.00	4.49	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62	2.418	2.419	-0.001	98	175103	5.00	4.61	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.633					ND	
35 Bromomethane	94	2.697	2.698	-0.001	90	194972	5.00	4.88	
36 Chloroethane	64	2.766	2.767	-0.001	99	115396	5.00	4.55	
37 Dichlorofluoromethane	67	2.940	2.941	-0.001	97	478010	5.00	5.37	
38 Trichlorofluoromethane	101	2.993	2.994	-0.001	100	470137	5.00	4.88	
49 Isopropyl alcohol	45	3.219	3.155	0.064	73	75830		NC	
39 Ethanol	45		3.155					ND	
40 Ethyl ether	59	3.219	3.220	-0.001	90	102981	5.00	5.76	
43 Propene oxide	58		3.295					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56	3.376	3.359	0.017	99	78851	50.0	143.0	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96	3.480	3.481	-0.001	99	239065	5.00	5.28	
46 1,1,2-Trichloro-1,2,2-trif	151	3.498	3.499	-0.001	97	336988	5.00	5.48	
47 Acetone	43	3.515	3.516	-0.001	100	62974	20.0	26.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142	3.637	3.638	-0.001	99	605665	5.00	5.45	
50 Carbon disulfide	76	3.724	3.725	-0.001	98	857339	5.00	5.37	
51 Acetonitrile	41	3.811	3.800	0.011	73	294837		NC	
52 3-Chloro-1-propene	41	3.811	3.812	-0.001	87	294837	5.00	5.05	
53 Methyl acetate	43	3.829	3.830	-0.001	95	234134	25.0	25.8	
54 Methylene Chloride	84	3.950	3.952	-0.002	89	214117	5.00	5.17	
55 2-Methyl-2-propanol	59	4.072	4.074	-0.002	99	70219	50.0	49.4	
57 Acrylonitrile	53	4.212	4.213	-0.001	97	145828	50.0	54.6	
56 Methyl tert-butyl ether	73	4.229	4.230	-0.001	89	368425	5.00	5.70	
58 trans-1,2-Dichloroethene	96	4.229	4.230	-0.001	99	268759	5.00	5.68	
59 Hexane	57	4.490	4.492	-0.002	90	338807	5.00	4.85	
60 1,1-Dichloroethane	63	4.682	4.683	-0.001	95	417071	5.00	5.34	
61 Vinyl acetate	43	4.717	4.718	-0.001	96	339640		10.0	
62 Isopropyl ether	87		4.723					ND	
63 2-Chloro-1,3-butadiene	53		4.775					ND	
64 Tert-butyl ethyl ether	59		5.141					ND	
65 cis-1,2-Dichloroethene	96	5.344	5.345	-0.001	81	270143	5.00	5.58	
67 2-Butanone (MEK)	43	5.361	5.362	-0.001	44	102582	20.0	22.4	
66 2,2-Dichloropropane	77	5.361	5.362	-0.001	83	453804	5.00	5.21	
69 Ethyl acetate	43		5.402					ND	
70 Propionitrile	54		5.437					ND	
71 sec-Butyl Alcohol	45	5.570	5.571	-0.001	97	168387	150.0	147.4	
72 Methacrylonitrile	41		5.594					ND	
73 Chlorobromomethane	128	5.640	5.641	-0.001	90	134313	5.00	5.80	
74 Tetrahydrofuran	42	5.709	5.693	0.016	38	38037	10.0	12.2	
75 Chloroform	83	5.709	5.711	-0.002	93	507974	5.00	5.49	
76 1,1,1-Trichloroethane	97	5.953	5.954	-0.001	97	475493	5.00	5.31	
77 Cyclohexane	56	6.023	6.024	-0.001	86	380494	5.00	5.16	
78 1,1-Dichloropropene	75	6.145	6.146	-0.001	98	412912	5.00	5.35	
79 Carbon tetrachloride	117	6.162	6.163	-0.001	97	481875	5.00	5.39	
80 Isobutyl alcohol	41	6.284	6.285	-0.001	92	50859	125.0	128.3	
81 Benzene	78	6.406	6.407	-0.001	96	758546	5.00	5.58	
82 1,2-Dichloroethane	62	6.424	6.425	-0.001	96	190997	5.00	5.44	
83 Tert-amyl methyl ether	73		6.517					ND	
84 n-Heptane	43	6.702	6.703	-0.001	90	409207	5.00	5.12	
85 n-Butanol	56		7.144					ND	
86 Trichloroethene	95	7.207	7.208	-0.001	98	593855	5.00	9.92	
88 2-Pentanone	43	7.451	7.452	-0.001	97	252994	20.0	18.6	
89 Methylcyclohexane	55	7.469	7.470	-0.002	90	346983	5.00	5.09	
90 1,2-Dichloropropane	63	7.503	7.504	-0.001	96	255266	5.00	5.46	
91 Methyl methacrylate	100		7.631					ND	
92 Dibromomethane	93	7.677	7.679	-0.002	97	163148	5.00	5.51	
93 1,4-Dioxane	88	7.712	7.713	-0.001	29	16298	100.0	114.0	
94 Dichlorobromomethane	83	7.869	7.870	-0.001	99	461279	5.00	5.80	
95 2-Nitropropane	41		8.171					ND	
97 cis-1,3-Dichloropropene	75	8.479	8.480	-0.001	98	386321	5.00	5.07	
96 2-Chloroethyl vinyl ether	63	8.496	8.497	-0.001	35	1685	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.705	8.706	-0.001	94	408324	20.0	24.3	
99 Toluene	91	8.949	8.950	-0.001	99	893455	5.00	5.47	
100 trans-1,3-Dichloropropene	75	9.262	9.263	-0.001	89	269522	5.00	5.17	
101 Ethyl methacrylate	69	9.402	9.385	0.017	85	210105	5.00	5.25	
102 1,1,2-Trichloroethane	97	9.524	9.525	-0.001	66	193070	5.00	5.71	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164	9.733	9.734	-0.001	97	309015	5.00	5.05	
104 1,3-Dichloropropane	76	9.785	9.769	0.016	84	288456	5.00	5.24	
105 2-Hexanone	43	9.907	9.908	-0.001	94	236974	20.0	21.0	
107 Tetrahydrothiophene	60		10.104					ND	
108 Chlorodibromomethane	129	10.133	10.117	0.016	90	346628	5.00	5.22	
109 Ethylene Dibromide	107	10.307	10.308	-0.001	99	230940	5.00	5.28	
110 1-Chlorohexane	91	11.091	11.092	-0.001	94	434120	5.00	4.70	
111 Chlorobenzene	112	11.126	11.127	-0.001	94	639138	5.00	5.13	
112 1,1,1,2-Tetrachloroethane	131	11.265	11.266	-0.001	95	345068	5.00	5.28	
113 Ethylbenzene	106	11.300	11.301	-0.001	99	315421	5.00	5.07	
114 m-Xylene & p-Xylene	106	11.492	11.475	0.017	98	418416	5.00	5.12	
115 o-Xylene	106	12.049	12.050	-0.001	98	372846	5.00	5.13	
116 Styrene	104	12.084	12.067	0.017	92	589803	5.00	5.14	
117 Bromoform	173	12.328	12.329	-0.001	97	202752	5.00	5.50	
118 Isopropylbenzene	105	12.537	12.538	-0.001	96	1175151	5.00	4.53	
119 cis-1,4-Dichloro-2-butene	53	12.554	12.630	-0.076	37	14229		1.74	
120 Cyclohexanone	55	12.711	12.677	0.034	78	110973	200.0	216.8	
122 Bromobenzene	156	12.920	12.921	-0.001	93	313130	5.00	4.96	
121 1,1,2,2-Tetrachloroethane	83	12.937	12.938	-0.001	93	251873	5.00	4.90	
123 1,2,3-Trichloropropane	110	12.989	12.973	0.016	80	67966	5.00	5.21	
124 trans-1,4-Dichloro-2-buten	53	13.007	13.008	-0.001	73	39621	5.00	4.49	
125 N-Propylbenzene	120	13.059	13.060	-0.001	99	310882	5.00	4.59	
126 2-Chlorotoluene	126	13.164	13.165	-0.001	98	252640	5.00	4.67	
127 1,3,5-Trimethylbenzene	105	13.268	13.269	-0.001	95	926696	5.00	4.74	
128 4-Chlorotoluene	126	13.285	13.287	-0.002	99	305655	5.00	4.97	
129 tert-Butylbenzene	119	13.651	13.652	-0.001	92	1036272	5.00	4.73	
130 1,2,4-Trimethylbenzene	105	13.703	13.705	-0.002	96	878746	5.00	4.72	
22 Pentachloroethane	167	13.686	13.716	-0.030	0	1583		NC	
131 sec-Butylbenzene	134	13.895	13.896	-0.001	94	275186	5.00	4.56	
132 1,3-Dichlorobenzene	146	14.017	14.018	-0.001	97	477799	5.00	4.98	
133 4-Isopropyltoluene	119	14.052	14.053	-0.001	97	1169031	5.00	4.70	
134 1,4-Dichlorobenzene	146	14.121	14.105	0.016	94	672889	5.00	4.77	
135 1,2,3-Trimethylbenzene	105		14.145					ND	
137 n-Butylbenzene	91	14.487	14.488	-0.001	97	1103067	5.00	4.66	
138 1,2-Dichlorobenzene	146	14.505	14.506	-0.001	97	488987	5.00	5.01	
139 1,2-Dibromo-3-Chloropropan	157	15.288	15.289	-0.001	90	48214	5.00	5.40	
140 1,3,5-Trichlorobenzene	180		15.468					ND	
141 1,2,4-Trichlorobenzene	180	16.055	16.056	-0.001	94	318759	5.00	4.88	
142 Hexachlorobutadiene	225	16.211	16.212	-0.001	98	331636	5.00	4.80	
143 Naphthalene	128	16.281	16.282	-0.001	97	337864	5.00	5.09	
144 1,2,3-Trichlorobenzene	180	16.507	16.509	-0.001	95	239661	5.00	4.97	
21 2,4-Dimethylpentane	1		0.000					ND	
162 1-Chlorohexane TIC	1		0.000					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
S 151 1,2-Dichloroethene, Total	96				0		10.0	11.3	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.2	
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1				0		20.0	22.0	
S 146 Xylenes, Total (URS)	1				0		10.0	10.2	
S 149 1,2-Dichloroethene, Total	1				0		5.00	11.3	
S 150 Xylenes, Total	106				0		10.0	10.2	
S 147 Total BTEX	1				0			26.4	
T 165 Cyclohexane TIC	56	6.023	6.023	0.000	91	380494		11.8	
T 163 Methyl cyclohexane TIC	55	7.469	7.469	-0.001	94	464511		14.4	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Reagents:

MV-Main B_00019	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00037	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00039	Amount Added: 2.50	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171015-63652.b\H0645.D

Injection Date: 15-Oct-2017 15:37:30

Instrument ID: VMS_H

Operator ID: MOANM

Lims ID: 280-102119-C-9 MSD

Worklist Smp#: 23

Client ID: FEW4-VG#1-INF-MSD

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

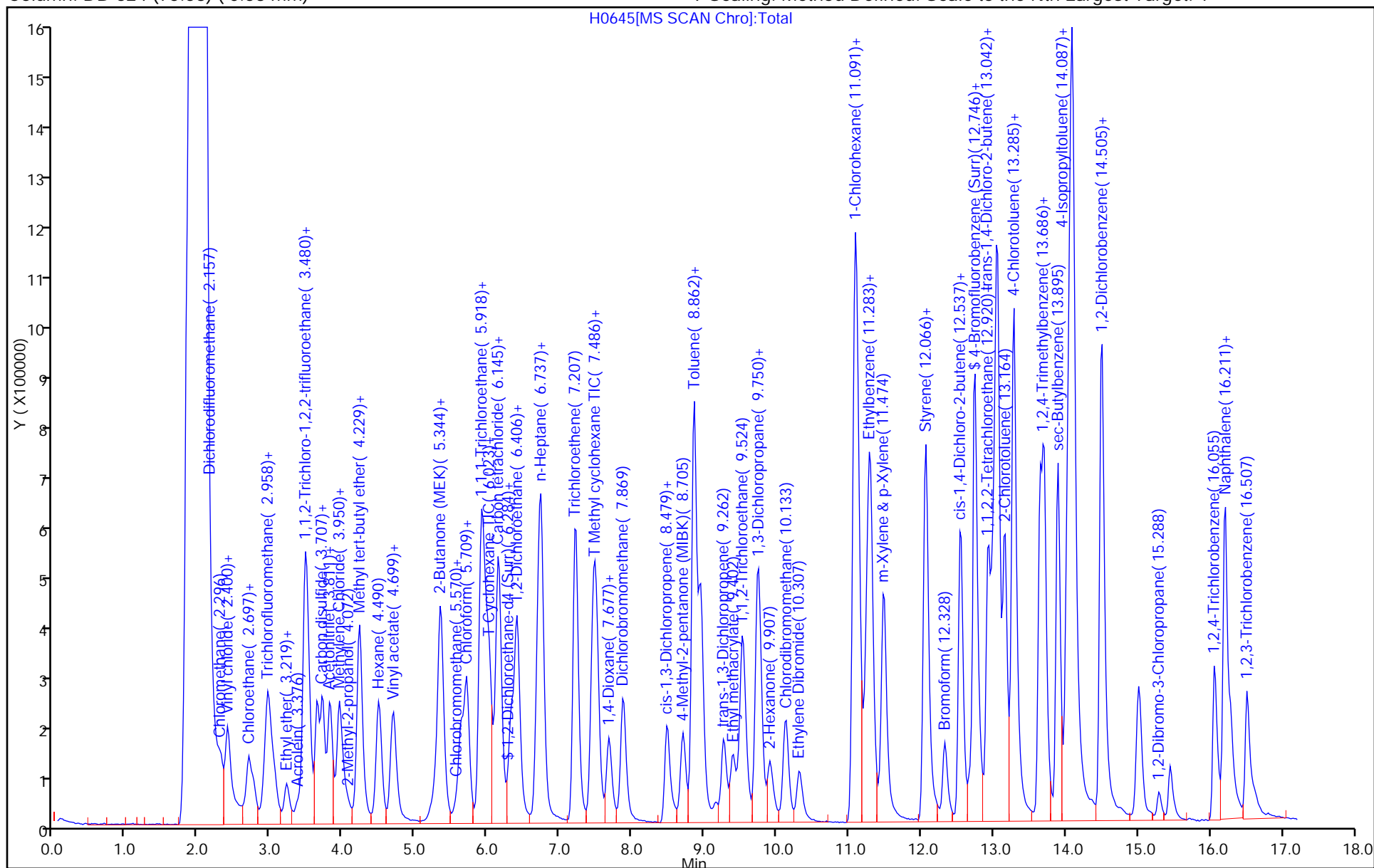
ALS Bottle#: 28

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-102119-1</u>
SDG No.: _____	
Client Sample ID: <u>FEW4-BOYD-3-MSD MSD</u>	Lab Sample ID: <u>280-102119-22 MSD</u>
Matrix: <u>Water</u>	Lab File ID: <u>H0681.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/07/2017 11:30</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>10/16/2017 14:09</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>391346</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
67-64-1	Acetone	29.3		10	6.4	1.9
71-43-2	Benzene	5.57		1.0	0.40	0.16
75-25-2	Bromoform	5.48		1.0	0.40	0.19
74-83-9	Bromomethane	4.73		2.0	0.80	0.21
78-93-3	2-Butanone (MEK)	21.9		6.0	4.0	1.8
75-15-0	Carbon disulfide	5.25		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.20		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.17		1.0	0.40	0.17
74-97-5	Chlorobromomethane	5.88		1.0	0.20	0.10
124-48-1	Chlorodibromomethane	5.26		1.0	0.40	0.17
75-00-3	Chloroethane	4.38		2.0	1.6	0.41
67-66-3	Chloroform	5.55		1.0	0.40	0.16
74-87-3	Chloromethane	4.48		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	5.69		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	5.07		1.0	0.40	0.16
110-82-7	Cyclohexane	5.08		2.0	0.80	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	5.25		5.0	1.6	0.81
106-93-4	1,2-Dibromoethane	5.46		1.0	0.40	0.18
95-50-1	1,2-Dichlorobenzene	4.73		1.0	0.40	0.13
541-73-1	1,3-Dichlorobenzene	4.66		1.0	0.40	0.16
106-46-7	1,4-Dichlorobenzene	4.68		1.0	0.40	0.16
75-27-4	Dichlorobromomethane	5.85		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	4.27		2.0	0.80	0.31
75-34-3	1,1-Dichloroethane	5.34		1.0	0.80	0.16
107-06-2	1,2-Dichloroethane	5.41		1.0	0.40	0.13
75-35-4	1,1-Dichloroethene	5.12		1.0	0.80	0.14
78-87-5	1,2-Dichloropropane	5.50		1.0	0.40	0.13
123-91-1	1,4-Dioxane	114	J	220	160	71
100-41-4	Ethylbenzene	5.02		1.0	0.40	0.16
591-78-6	2-Hexanone	23.2		5.0	4.0	1.4
98-82-8	Isopropylbenzene	4.43		1.0	0.40	0.19
79-20-9	Methyl acetate	26.3		5.0	4.0	1.6
108-87-2	Methylcyclohexane	5.04		2.0	0.80	0.36
75-09-2	Methylene Chloride	5.22		5.0	0.80	0.32
108-10-1	4-Methyl-2-pentanone (MIBK)	25.3		5.0	3.2	1.0
1634-04-4	Methyl tert-butyl ether	5.95		5.0	0.80	0.25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Client Sample ID: FEW4-BOYD-3-MSD MSD Lab Sample ID: 280-102119-22 MSD

Matrix: Water Lab File ID: H0681.D

Analysis Method: 8260B Date Collected: 10/07/2017 11:30

Sample wt/vol: 20 (mL) Date Analyzed: 10/16/2017 14:09

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

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

Analysis Batch No.: 391346 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
179601-23-1	m-Xylene & p-Xylene	5.03		2.0	0.80	0.34
95-47-6	o-Xylene	5.12		1.0	0.40	0.19
100-42-5	Styrene	5.15		1.0	0.40	0.17
79-34-5	1,1,2,2-Tetrachloroethane	4.90		1.0	0.80	0.20
127-18-4	Tetrachloroethene	4.94		1.0	0.40	0.20
108-88-3	Toluene	5.49		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	5.57		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	5.57		1.0	0.40	0.19
87-61-6	1,2,3-Trichlorobenzene	4.90		1.0	0.80	0.18
120-82-1	1,2,4-Trichlorobenzene	4.74		1.0	0.80	0.32
71-55-6	1,1,1-Trichloroethane	5.24		1.0	0.40	0.16
79-00-5	1,1,2-Trichloroethane	5.48		1.0	0.80	0.32
79-01-6	Trichloroethene	6.38		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	4.75		2.0	0.80	0.29
76-13-1	1,1,2-Trichlorotrifluoroethane	5.31		3.0	1.6	0.79
75-01-4	Vinyl chloride	4.45		1.5	0.20	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	92		85-114
1868-53-7	Dibromofluoromethane (Surr)	111		80-119
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		81-118
2037-26-5	Toluene-d8 (Surr)	101		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\H0681.D
 Lims ID: 280-102119-C-22 MSD
 Client ID: FEW4-BOYD-3-MSD
 Sample Type: MSD
 Inject. Date: 16-Oct-2017 14:09:30 ALS Bottle#: 30 Worklist Smp#: 25
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-102119-C-22 ph<2 MSD
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20171016-63664.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 16-Oct-2017 16:07:32 Calib Date: 09-Oct-2017 11:12:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20171009-63411.b\H0344.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK019

First Level Reviewer: moanm

Date: 16-Oct-2017 14:34:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.972	3.972	0.000	95	313593	250.0	250.0	
* 2 Fluorobenzene	96	6.723	6.741	-0.018	98	1231683	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.077	11.078	-0.001	89	403437	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.073	14.073	0.000	97	759807	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.905	5.905	0.000	93	838790	10.3	11.4	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.323	6.323	0.000	99	346069	10.3	10.7	
\$ 10 Toluene-d8 (Surr)	98	8.848	8.848	0.000	92	1754200	10.3	10.4	
\$ 11 4-Bromofluorobenzene (Surr	95	12.732	12.732	0.000	86	974240	10.3	9.45	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95	1.934	2.454	-0.520	0	1195		NR	7
28 Dichlorodifluoromethane	85	2.161	2.161	0.000	98	280640	5.00	4.27	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50	2.300	2.265	0.035	98	139666	5.00	4.48	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62	2.422	2.405	0.017	98	169400	5.00	4.45	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.628					ND	
35 Bromomethane	94	2.683	2.683	0.000	90	189387	5.00	4.73	
36 Chloroethane	64	2.753	2.753	0.000	99	111228	5.00	4.38	
37 Dichlorofluoromethane	67	2.927	2.927	0.000	97	485401	5.00	5.44	
38 Trichlorofluoromethane	101	2.979	2.979	0.000	99	458143	5.00	4.75	
49 Isopropyl alcohol	45	3.205	3.150	0.055	72	78359		NC	
39 Ethanol	45		3.150					ND	
40 Ethyl ether	59	3.205	3.206	-0.001	91	104191	5.00	5.82	
43 Propene oxide	58		3.289					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56	3.362	3.359	0.003	98	80910	50.0	146.6	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96	3.467	3.467	0.000	98	232220	5.00	5.12	
46 1,1,2-Trichloro-1,2,2-trif	151	3.502	3.484	0.018	97	326909	5.00	5.31	
47 Acetone	43	3.502	3.502	0.000	49	70244	20.0	29.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142	3.641	3.641	0.000	99	610564	5.00	5.49	
50 Carbon disulfide	76	3.711	3.711	0.000	98	838553	5.00	5.25	
51 Acetonitrile	41	3.815	3.794	0.021	73	289128		NC	
52 3-Chloro-1-propene	41	3.815	3.815	0.000	86	289128	5.00	4.94	
53 Methyl acetate	43	3.815	3.815	0.000	95	239432	25.0	26.3	
54 Methylene Chloride	84	3.937	3.937	0.000	90	216457	5.00	5.22	
55 2-Methyl-2-propanol	59	4.059	4.059	0.000	98	76663	50.0	48.4	
57 Acrylonitrile	53	4.198	4.198	0.000	100	150277	50.0	56.2	
56 Methyl tert-butyl ether	73	4.216	4.216	0.000	91	385240	5.00	5.95	
58 trans-1,2-Dichloroethene	96	4.216	4.216	0.000	100	263966	5.00	5.57	
59 Hexane	57	4.477	4.477	0.000	90	326873	5.00	4.66	
60 1,1-Dichloroethane	63	4.668	4.669	-0.001	95	418170	5.00	5.34	
61 Vinyl acetate	43	4.703	4.703	0.000	96	361912		10.7	
62 Isopropyl ether	87		4.717					ND	
63 2-Chloro-1,3-butadiene	53		4.770					ND	
64 Tert-butyl ethyl ether	59		5.135					ND	
65 cis-1,2-Dichloroethene	96	5.330	5.330	0.000	82	275478	5.00	5.69	
67 2-Butanone (MEK)	43	5.348	5.348	0.000	46	100801	20.0	21.9	
66 2,2-Dichloropropane	77	5.348	5.348	0.000	83	453804	5.00	5.21	
69 Ethyl acetate	43		5.397					ND	
70 Propionitrile	54		5.432					ND	
71 sec-Butyl Alcohol	45	5.574	5.557	0.017	97	178971	150.0	140.6	
72 Methacrylonitrile	41		5.588					ND	
73 Chlorobromomethane	128	5.626	5.626	0.000	91	136252	5.00	5.88	
74 Tetrahydrofuran	42	5.696	5.679	0.017	38	36302	10.0	11.6	
75 Chloroform	83	5.696	5.696	0.000	93	513932	5.00	5.55	
76 1,1,1-Trichloroethane	97	5.940	5.940	0.000	98	469349	5.00	5.24	
77 Cyclohexane	56	6.009	6.010	-0.001	86	374743	5.00	5.08	
78 1,1-Dichloropropene	75	6.131	6.132	-0.001	98	403858	5.00	5.23	
79 Carbon tetrachloride	117	6.149	6.149	0.000	97	465398	5.00	5.20	
80 Isobutyl alcohol	41	6.271	6.271	0.000	92	49324	125.0	111.7	
81 Benzene	78	6.393	6.393	0.000	96	756832	5.00	5.57	
82 1,2-Dichloroethane	62	6.410	6.410	0.000	97	190261	5.00	5.41	
83 Tert-amyl methyl ether	73		6.511					ND	
84 n-Heptane	43	6.689	6.689	0.000	90	402712	5.00	5.03	
85 n-Butanol	56		7.138					ND	
86 Trichloroethene	95	7.194	7.194	0.000	98	382141	5.00	6.38	
88 2-Pentanone	43	7.438	7.438	0.000	98	260427	20.0	19.2	
89 Methylcyclohexane	55	7.455	7.455	0.000	90	344256	5.00	5.04	
90 1,2-Dichloropropane	63	7.507	7.507	0.000	96	257453	5.00	5.50	
91 Methyl methacrylate	100		7.643					ND	
92 Dibromomethane	93	7.664	7.664	0.000	97	163899	5.00	5.53	
93 1,4-Dioxane	88	7.681	7.699	-0.018	30	16274	100.0	113.7	
94 Dichlorobromomethane	83	7.856	7.856	0.000	99	465563	5.00	5.85	
95 2-Nitropropane	41		8.166					ND	
97 cis-1,3-Dichloropropene	75	8.465	8.465	0.000	98	387785	5.00	5.07	
96 2-Chloroethyl vinyl ether	63	8.500	8.465	0.035	35	2276	NC	NC	
98 4-Methyl-2-pentanone (MIBK)	43	8.691	8.692	-0.001	95	425714	20.0	25.3	
99 Toluene	91	8.935	8.936	-0.001	99	898199	5.00	5.49	
100 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	87	290335	5.00	5.57	
101 Ethyl methacrylate	69	9.388	9.388	0.000	85	216271	5.00	5.38	
102 1,1,2-Trichloroethane	97	9.510	9.510	0.000	90	186247	5.00	5.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164	9.719	9.719	0.000	96	303019	5.00	4.94	
104 1,3-Dichloropropane	76	9.754	9.754	0.000	85	288516	5.00	5.22	
105 2-Hexanone	43	9.893	9.893	0.000	94	262799	20.0	23.2	
107 Tetrahydrothiophene	60		10.099					ND	
108 Chlorodibromomethane	129	10.120	10.120	0.000	89	350664	5.00	5.26	
109 Ethylene Dibromide	107	10.294	10.294	0.000	99	239606	5.00	5.46	
110 1-Chlorohexane	91	11.077	11.078	-0.001	90	431371	5.00	4.66	
111 Chlorobenzene	112	11.112	11.112	0.000	94	645793	5.00	5.17	
112 1,1,1,2-Tetrachloroethane	131	11.252	11.252	0.000	95	348983	5.00	5.32	
113 Ethylbenzene	106	11.286	11.287	-0.001	99	313218	5.00	5.02	
114 m-Xylene & p-Xylene	106	11.478	11.478	0.000	98	412390	5.00	5.03	
115 o-Xylene	106	12.035	12.036	-0.001	98	373334	5.00	5.12	
116 Styrene	104	12.070	12.070	0.000	93	592917	5.00	5.15	
117 Bromoform	173	12.314	12.314	0.000	95	202783	5.00	5.48	
118 Isopropylbenzene	105	12.540	12.541	-0.001	96	1184441	5.00	4.43	
119 cis-1,4-Dichloro-2-butene	53		12.624					ND	
120 Cyclohexanone	55	12.680	12.663	0.018	88	114764	200.0	223.5	
122 Bromobenzene	156	12.924	12.924	0.000	92	310433	5.00	4.77	
121 1,1,2,2-Tetrachloroethane	83	12.924	12.924	0.000	93	259484	5.00	4.90	
123 1,2,3-Trichloropropane	110	12.976	12.976	0.000	79	74703	5.00	5.60	
124 trans-1,4-Dichloro-2-buten	53	12.993	12.993	0.000	65	42806	5.00	4.71	
125 N-Propylbenzene	120	13.045	13.046	-0.001	99	309584	5.00	4.44	
126 2-Chlorotoluene	126	13.150	13.150	0.000	97	254269	5.00	4.56	
127 1,3,5-Trimethylbenzene	105	13.272	13.272	0.000	94	921789	5.00	4.58	
128 4-Chlorotoluene	126	13.289	13.289	0.000	99	311482	5.00	4.91	
129 tert-Butylbenzene	119	13.638	13.638	0.000	93	1022778	5.00	4.53	
130 1,2,4-Trimethylbenzene	105	13.690	13.690	0.000	96	873991	5.00	4.55	
22 Pentachloroethane	167	13.655	13.716	-0.061	0	1509		NC	
131 sec-Butylbenzene	134	13.881	13.882	-0.001	94	276252	5.00	4.44	
132 1,3-Dichlorobenzene	146	14.003	14.004	-0.001	96	461455	5.00	4.66	
133 4-Isopropyltoluene	119	14.038	14.038	0.000	97	1149074	5.00	4.49	
134 1,4-Dichlorobenzene	146	14.108	14.108	0.000	94	681612	5.00	4.68	
135 1,2,3-Trimethylbenzene	105		14.157					ND	
137 n-Butylbenzene	91	14.474	14.474	0.000	98	1086948	5.00	4.46	
138 1,2-Dichlorobenzene	146	14.508	14.509	-0.001	97	475442	5.00	4.73	
139 1,2-Dibromo-3-Chloropropan	157	15.292	15.292	0.000	89	48314	5.00	5.25	
140 1,3,5-Trichlorobenzene	180		15.481					ND	
141 1,2,4-Trichlorobenzene	180	16.058	16.059	-0.001	95	319109	5.00	4.74	
142 Hexachlorobutadiene	225	16.198	16.198	0.000	98	327799	5.00	4.61	
143 Naphthalene	128	16.285	16.285	0.000	96	324873	5.00	4.75	
144 1,2,3-Trichlorobenzene	180	16.511	16.511	0.000	95	243391	5.00	4.90	
162 1-Chlorohexane TIC	1		0.000					ND	
164 1-Chloro-1-fluoroethane TI	1		0.000					ND	
21 2,4-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
17 2,2,3-Trimethylbutane	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
S 151 1,2-Dichloroethene, Total	96				0		10.0	11.3	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.6	
S 160 TAH	1				0			0	
S 145 Trihalomethanes, Total	1				0		20.0	22.1	
S 146 Xylenes, Total (URS)	1				0		10.0	10.1	
S 149 1,2-Dichloroethene, Total	1				0		5.00	11.3	
S 150 Xylenes, Total	106				0		10.0	10.1	
S 147 Total BTEX	1				0			26.2	
T 165 Cyclohexane TIC	56	6.009	6.023	-0.014	91	374320		11.6	
T 163 Methyl cyclohexane TIC	55	7.455	7.469	-0.014	96	455814		14.1	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

7 - Failed Limit of Detection

Reagents:

MV-Main B_00019	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00037	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00039	Amount Added: 2.50	Units: uL	
MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00086	Amount Added: 0.82	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\\Denver\\ChromData\\VMS_H\\20171016-63664.b\\H0681.D

Injection Date: 16-Oct-2017 14:09:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-102119-C-22 MSD

Worklist Smp#: 25

Client ID: FEW4-BOYD-3-MSD

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

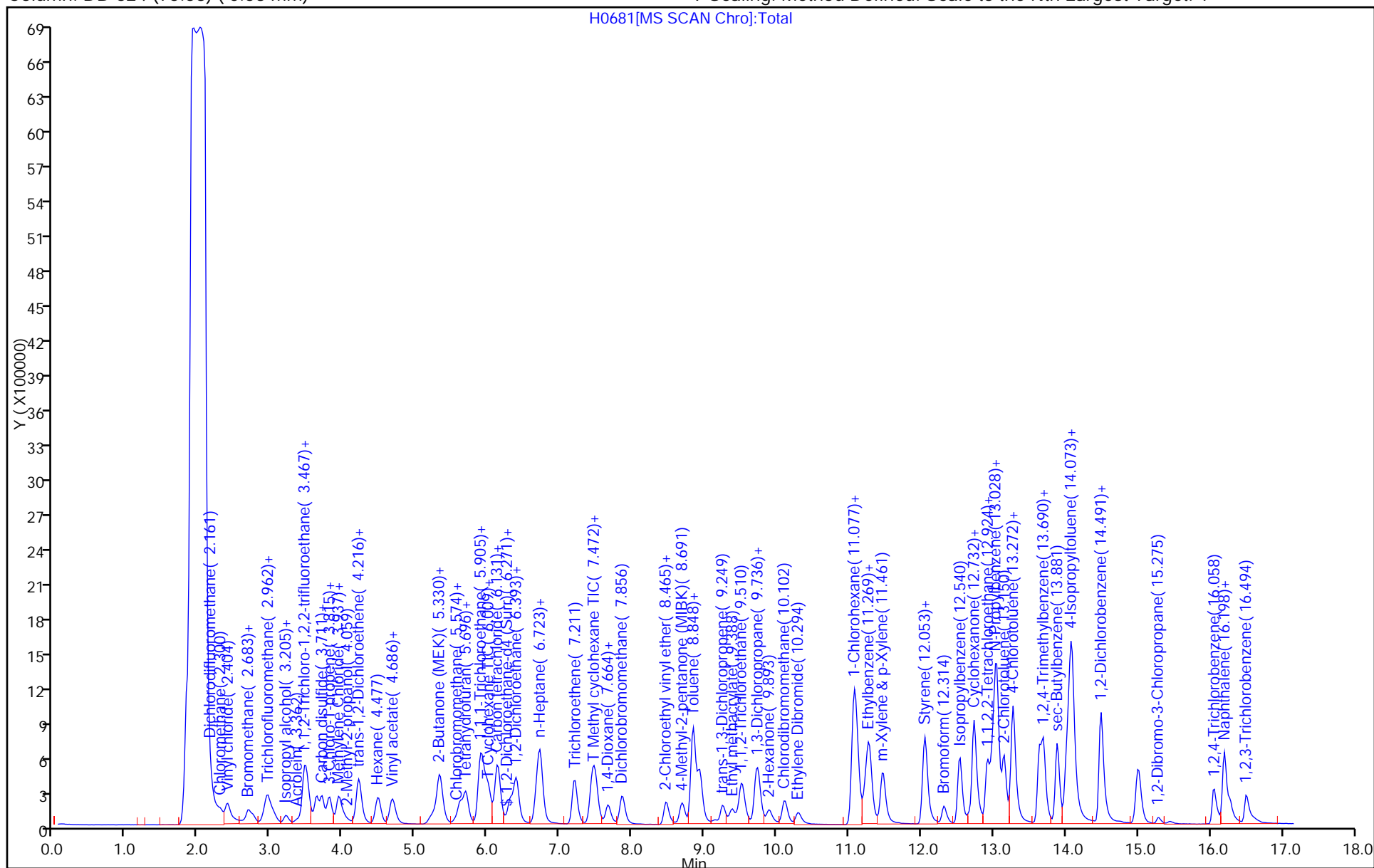
ALS Bottle#: 30

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-102119-1

SDG No.: _____

Instrument ID: VMS_H Start Date: 06/29/2017 09:07Analysis Batch Number: 379245 End Date: 06/29/2017 16:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-379245/1		06/29/2017 09:07	1	H7375.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/10		06/29/2017 10:14	1	H7379.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/11		06/29/2017 10:36	1	H7380.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/12		06/29/2017 10:58	1	H7381.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/13		06/29/2017 11:20	1	H7382.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/14		06/29/2017 11:41	1	H7383.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/15		06/29/2017 12:03	1	H7384.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/16		06/29/2017 12:25	1	H7385.D	DB-624 (75.53) 0.53 (mm)
ICV 280-379245/17		06/29/2017 13:09	1	H7387.D	DB-624 (75.53) 0.53 (mm)
IC 280-379245/18		06/29/2017 13:31	1		DB-624 (75.53) 0.53 (mm)
IC 280-379245/19		06/29/2017 13:53	1		DB-624 (75.53) 0.53 (mm)
IC 280-379245/20		06/29/2017 14:15	1		DB-624 (75.53) 0.53 (mm)
ICIS 280-379245/21		06/29/2017 14:37	1		DB-624 (75.53) 0.53 (mm)
IC 280-379245/22		06/29/2017 15:01	1		DB-624 (75.53) 0.53 (mm)
IC 280-379245/23		06/29/2017 15:22	1		DB-624 (75.53) 0.53 (mm)
ICV 280-379245/24		06/29/2017 15:44	1		DB-624 (75.53) 0.53 (mm)
ICV 280-379245/25		06/29/2017 16:06	1		DB-624 (75.53) 0.53 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-102119-1

SDG No.: _____

Instrument ID: VMS_HStart Date: 10/09/2017 07:54Analysis Batch Number: 390481End Date: 10/09/2017 19:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-390481/1		10/09/2017 07:54	1	H0335.D	DB-624 (75.53) 0.53 (mm)
CCV 280-390481/3		10/09/2017 08:27	1		DB-624 (75.53) 0.53 (mm)
IC 280-390481/10		10/09/2017 09:00	1	H0338.D	DB-624 (75.53) 0.53 (mm)
IC 280-390481/11		10/09/2017 09:22	1	H0339.D	DB-624 (75.53) 0.53 (mm)
IC 280-390481/12		10/09/2017 09:44	1	H0340.D	DB-624 (75.53) 0.53 (mm)
IC 280-390481/13		10/09/2017 10:06	1	H0341.D	DB-624 (75.53) 0.53 (mm)
ICIS 280-390481/14		10/09/2017 10:28	1	H0342.D	DB-624 (75.53) 0.53 (mm)
IC 280-390481/15		10/09/2017 10:50	1	H0343.D	DB-624 (75.53) 0.53 (mm)
IC 280-390481/16		10/09/2017 11:12	1	H0344.D	DB-624 (75.53) 0.53 (mm)
ICV 280-390481/17		10/09/2017 11:56	1	H0346.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 13:02	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 13:24	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 13:45	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 14:07	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 14:29	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 14:51	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 15:13	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 15:35	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 15:57	1		DB-624 (75.53) 0.53 (mm)
CCVC 280-390481/27		10/09/2017 16:18	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 16:40	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 17:01	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 17:23	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 17:45	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 18:06	200		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 18:28	2000		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 18:50	100		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 19:12	1000		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/09/2017 19:34	1		DB-624 (75.53) 0.53 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-102119-1

SDG No.: _____

Instrument ID: VMS_HStart Date: 10/15/2017 08:41Analysis Batch Number: 391324End Date: 10/15/2017 19:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-391324/1		10/15/2017 08:41	1	H0626.D	DB-624 (75.53) 0.53 (mm)
CCV 280-391324/2		10/15/2017 09:20	1	H0628.D	DB-624 (75.53) 0.53 (mm)
CCV 280-391324/3		10/15/2017 09:42	1	H0629.D	DB-624 (75.53) 0.53 (mm)
LCS 280-391324/4		10/15/2017 10:04	1	H0630.D	DB-624 (75.53) 0.53 (mm)
MB 280-391324/6		10/15/2017 10:26	1	H0631.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/15/2017 10:48	4		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/15/2017 11:14	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/15/2017 11:36	4		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/15/2017 11:58	1		DB-624 (75.53) 0.53 (mm)
280-102119-9		10/15/2017 12:21	1	H0636.D	DB-624 (75.53) 0.53 (mm)
280-102119-1		10/15/2017 12:42	1	H0637.D	DB-624 (75.53) 0.53 (mm)
280-102119-2		10/15/2017 13:04	1	H0638.D	DB-624 (75.53) 0.53 (mm)
280-102119-3		10/15/2017 13:26	1	H0639.D	DB-624 (75.53) 0.53 (mm)
280-102119-4		10/15/2017 13:48	1	H0640.D	DB-624 (75.53) 0.53 (mm)
280-102119-5		10/15/2017 14:10	1	H0641.D	DB-624 (75.53) 0.53 (mm)
280-102119-25		10/15/2017 14:31	1	H0642.D	DB-624 (75.53) 0.53 (mm)
280-102119-26		10/15/2017 14:53	1	H0643.D	DB-624 (75.53) 0.53 (mm)
280-102119-9 MS		10/15/2017 15:15	1	H0644.D	DB-624 (75.53) 0.53 (mm)
280-102119-9 MSD		10/15/2017 15:37	1	H0645.D	DB-624 (75.53) 0.53 (mm)
CCVC 280-391324/24		10/15/2017 15:59	1		DB-624 (75.53) 0.53 (mm)
280-102119-6		10/15/2017 16:43	1	H0648.D	DB-624 (75.53) 0.53 (mm)
280-102119-7		10/15/2017 17:04	1	H0649.D	DB-624 (75.53) 0.53 (mm)
280-102119-8		10/15/2017 17:26	1	H0650.D	DB-624 (75.53) 0.53 (mm)
280-102119-10		10/15/2017 17:48	1	H0651.D	DB-624 (75.53) 0.53 (mm)
280-102119-11		10/15/2017 18:11	1	H0652.D	DB-624 (75.53) 0.53 (mm)
280-102119-12		10/15/2017 18:33	1	H0653.D	DB-624 (75.53) 0.53 (mm)
280-102119-13		10/15/2017 18:54	1	H0654.D	DB-624 (75.53) 0.53 (mm)
280-102119-14		10/15/2017 19:16	1	H0655.D	DB-624 (75.53) 0.53 (mm)
CCVC 280-391324/33		10/15/2017 19:37	1	H0656.D	DB-624 (75.53) 0.53 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-102119-1


SDG No.: _____

Instrument ID: VMS_HStart Date: 10/16/2017 06:40Analysis Batch Number: 391346End Date: 10/16/2017 15:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-391346/1		10/16/2017 06:40	1	H0660.D	DB-624 (75.53) 0.53 (mm)
CCV 280-391346/2		10/16/2017 06:52	1	H0661.D	DB-624 (75.53) 0.53 (mm)
CCV 280-391346/3		10/16/2017 07:14	1	H0662.D	DB-624 (75.53) 0.53 (mm)
LCS 280-391346/4		10/16/2017 07:36	1	H0663.D	DB-624 (75.53) 0.53 (mm)
MB 280-391346/6		10/16/2017 07:58	1	H0664.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/16/2017 08:42	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/16/2017 09:03	1		DB-624 (75.53) 0.53 (mm)
280-102119-15		10/16/2017 09:25	1	H0668.D	DB-624 (75.53) 0.53 (mm)
280-102119-16		10/16/2017 09:48	1	H0669.D	DB-624 (75.53) 0.53 (mm)
280-102119-17		10/16/2017 10:10	1	H0670.D	DB-624 (75.53) 0.53 (mm)
280-102119-18		10/16/2017 10:32	1	H0671.D	DB-624 (75.53) 0.53 (mm)
280-102119-19		10/16/2017 10:53	1	H0672.D	DB-624 (75.53) 0.53 (mm)
280-102119-20		10/16/2017 11:15	1	H0673.D	DB-624 (75.53) 0.53 (mm)
280-102119-21		10/16/2017 11:36	1	H0674.D	DB-624 (75.53) 0.53 (mm)
280-102119-22		10/16/2017 11:58	1	H0675.D	DB-624 (75.53) 0.53 (mm)
280-102119-23		10/16/2017 12:20	1	H0676.D	DB-624 (75.53) 0.53 (mm)
280-102119-24		10/16/2017 12:41	1	H0677.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/16/2017 13:03	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/16/2017 13:25	1		DB-624 (75.53) 0.53 (mm)
280-102119-22 MS		10/16/2017 13:47	1	H0680.D	DB-624 (75.53) 0.53 (mm)
280-102119-22 MSD		10/16/2017 14:09	1	H0681.D	DB-624 (75.53) 0.53 (mm)
CCVC 280-391346/26		10/16/2017 14:30	1	H0682.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		10/16/2017 15:13	1		DB-624 (75.53) 0.53 (mm)

Shipping and Receiving Documents

THE LEADER IN ENVIRONMENTAL TESTING

Client Information						Sampler: BLN, JWM		Lab PM: Rydberg, Donna R		Carrier Tracking No(s): Hand Delivered		COC No: 280-68241-17540.1																							
Client Contact: Mr. Ben Noller						Phone: 303-217-0082		E-Mail: donna.rydberg@testamericainc.com				Page 1 of 3																							
Company: Espinoza Consulting Services+duplicate						Analysis Requested						Job #: 2015-146																							
Address: 2362 Coors Drive						Due Date Requested: 10/31/2017		<div style="text-align: center;">Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8250B_DOD5 - 8250B Routine Analyte List</div> <div style="text-align: center;"> 280-102119 Chain of Custody</div>						Preservation Codes:																					
City: Golden						TAT Requested (days): Std. - 2 weeks								A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)																					
State, Zip: CO, 80401						PO #: 2015-146								Other:																					
Phone: 303-217-0082(Tel)						WO #:																													
Email: noller@ecs-arch.com						Project #:		Special Instructions/Note:																											
Project Name: ECS - Atlas D Missile Site 4						28014069																													
Site:						SSOW#:																													
Sample Identification						Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8250B_DOD5 - 8250B Routine Analyte List		Total Number of containers		Special Instructions/Note:													
FEW4-BAR 13 RANCH						10/6/17		1045		G		Water		NNX																					
FEW4-FRITZ LEY#1								1125				Water		NNX																					
FEW4-BERT MCGEE#8								1233				Water		NNX																					
FEW4-CANDES#888								1338				Water		NNX																					
FEW4-FARRELL#1-INF								1435				Water		NNX																					
FEW4-HARDY#1-INF								1437				Water		NNX																					
FEW4-FARRELL#1-INT								1440				Water		NNX																					
FEW4-FARRELL#1-EFF								1445				Water		NNX																					
FEW4-VG#1-INF								1547				Water		NNX																					
FEW4-GUNCLUB#1-INF								1548				Water		NNX																					
FEW4-VG#1-INF-MS						✓		1549		✓		Water		NYX								This is MS for —													
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																													
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																													
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:																													
Empty Kit Relinquished by:						Date:						Time:						Method of Shipment:																	
Relinquished by: Ben Noller						Date/Time: 10-9-17/1128						Company: ECS						Received by: Alyssa Gonzales						Date/Time: 10-9-17/1128						Company: TAD					
Relinquished by:						Date/Time:						Company:						Received by:						Date/Time:						Company:					
Relinquished by:						Date/Time:						Company:						Received by:						Date/Time:						Company:					
Custody Seals Intact: Δ Yes Δ No						Custody Seal No.:						Cooler Temperature(s) °C and Other Remarks: 3.9.4.4.4.6.10.1, FR9, by AL 10-9-																							

Chain of Custody Record

Client Information		Sampler: <u>BLN, JWM</u>		Lab PM: <u>Rydborg, Donna R</u>		Carrier Tracking No(s): <u>Hand Delivered</u>		COC No: <u>280-68241-17540.1</u>		
Client Contact: <u>Mr. Ben Noller</u>		Phone: <u>303-217-0082</u>		E-Mail: <u>donna.rydborg@testamericainc.com</u>				Page: <u>2</u> of <u>3</u>		
Company: <u>Espinoza Consulting Services+duplicate</u>								Job #:		
Address: <u>2362 Coors Drive</u>		Due Date Requested: <u>10/31/2017</u>		Analysis Requested		Preservation Codes:		Other:		
City: <u>Golden</u>		TAT Requested (days): <u>Std. - 2 weeks</u>								
State, Zip: <u>CO, 80401</u>		PO #: <u>2015-146</u>								
Phone: <u>303-217-0082(Tel)</u>		WO #:								
Email: <u>noller@ecs-arch.com</u>		Project #: <u>28014069</u>								
Project Name: <u>ECS - Atlas D Missile Site 4</u>		SSOW#:								
Site:										
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_D0B5 - 8260B Routine Analyte List	Total Number of containers	Special Instructions/Note:
				Preservation Code:						
<u>FEW4-VG#1-INF-MSD</u>		<u>10/6/17</u>	<u>1551</u>	<u>G</u>	<u>Water</u>	<u>N</u>	<u>Y</u>	<u>X</u>		<u>This is MSD for VG #1 - INF</u>
<u>FEW4-VG#1-INT</u>			<u>1553</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-VG#1-EFF</u>			<u>1556</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-FINNERTY#1-INF</u>			<u>1733</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-FINNERTY#1-INT</u>			<u>1737</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-FINNERTY#1-EFF</u>			<u>1740</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-DYSON#1-INF</u>		<u>✓</u>	<u>1833</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-HOUSER#1</u>		<u>10/7/17</u>	<u>0835</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-BROWN#1</u>			<u>0920</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-WELTY#2</u>			<u>0950</u>		<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
<u>FEW4-1774 OTTO</u>		<u>✓</u>	<u>1025</u>	<u>✓</u>	<u>Water</u>	<u>N</u>	<u>N</u>	<u>X</u>		
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, <u>IV</u> Other (specify)					Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:				
Relinquished by: <u>B. Noller</u>		Date/Time: <u>10-9-17/1128</u>		Company: <u>ECS</u>		Received by: <u>Olyssa Gonz</u>		Date/Time: <u>10.9.17 1128</u>		
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		
Custody Seals Intact: <u>Λ Yes Λ No</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:						

TestAmerica

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[illegible]

Login Sample Receipt Checklist

Client: Espinoza Consulting Services

Job Number: 280-102119-1

Login Number: 102119
List Number: 1
Creator: Gomez, Alyssa I

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	Refer to Job Narrative for details.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



APPENDIX C

Analytical Data Quality Review Report and Data Usability Summary
(See electronic files on CD)



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PROJECT NAME: Atlas D Missile Site 4 Interim Monitoring – Fall 2017
CLIENT NAME: U.S. Army Corps of Engineers – Omaha District
LABORATORY NAME: TestAmerica-Denver
DATA REVIEWER: Gary Torf

INTRODUCTION

Data review is the process by which data are examined and evaluated to ensure that data: 1) are of known and documented quality, and 2) meet measurement and project-specific quality objectives. The process involves three related assessments to ensure that project data quality needs are met:

- **Verification** – Confirming data completeness and ensuring that specific data sets conform and comply with procedural, documentation, and contract requirements
- **Validation** – Substantiating that method-specific requirements have been met and that data qualifiers have been applied appropriately and consistently
- **Usability** – Evaluating the adequacy of the project-specific data for the decisions being made, based on the results of the verification and validation review steps

This data review was performed in accordance with the *Final UFP-QAPP Interim Monitoring of Residential Wells and Operation and Maintenance of Residential Well GAC Systems Atlas "D" Missile Site 4-Larmie County Wyoming*. Volatile organic analysis (VOA) sample results were provided by Test America Laboratories (Arvada, Colorado) for field samples collected October 6 and 7, 2017 in Sample Delivery Group (SDG) 280-102119:

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Matrix</u>	<u>Field Sample Type</u>
FEW4-BAR 13 RANCH	280-102119-1	Water	Normal
FEW4-FRITZ LEY#1	280-102119-2	Water	Normal
FEW4-BERT MCGEE#8	280-102119-3	Water	Normal
FEW4-CANDES#888	280-102119-4	Water	Normal
FEW4-FARRELL#1-INF	280-102119-5	Water	Blind Field Duplicate (FEW4-HARDY#1-INF)
FEW4-HARDY#1-INF	280-102119-6	Water	Normal
FEW4-FARRELL#1-INT	280-102119-7	Water	Normal
FEW4-FARRELL#1-EFF	280-102119-8	Water	Normal
FEW4-VG#1-INF	280-102119-9	Water	Blind Field Duplicate (FEW4-GUNCLUB#1-INF)
FEW4-VG#1-INF	280-102119-9 MS	Water	Matrix Spike
FEW4-VG#1-INF	280-102119-9 MSD	Water	Matrix Spike Duplicate
FEW4-GUNCLUB#1-INF	280-102119-10	Water	Normal
FEW4-VG#1-INT	280-102119-11	Water	Normal
FEW4-VG#1-EFF	280-102119-12	Water	Normal
FEW4-FINNERTY#1-INF	280-102119-13	Water	Blind Field Duplicate (FEW4-DYSON#1-INF)

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LABORATORY NAME: TestAmerica-Denver
DATA REVIEWER: Gary Torf

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Matrix</u>	<u>Field Sample Type</u>
FEW4-FINNERTY#1-INT	280-102119-14	Water	Normal
FEW4-FINNERTY#1-EFF	280-102119-15	Water	Normal
FEW4-DYSON#1-INF	280-102119-16	Water	Normal
FEW4-HOUSER#1	280-102119-17	Water	Normal
FEW4-BROWN#1	280-102119-18	Water	Normal
FEW4-WELTY#2	280-102119-19	Water	Normal
FEW4-1774 OTTO	280-102119-20	Water	Normal
FEW4-BOYD-1	280-102119-21	Water	Normal
FEW4-BOYD-3	280-102119-22	Water	Normal
FEW4-BOYD-3	280-102119-22 MS	Water	Matrix Spike
FEW4-BOYD-3	280-102119-22 MSD	Water	Matrix Spike Duplicate
FEW4-BOYD-J	280-102119-23	Water	Normal
FEW4-HILL#1	280-102119-24	Water	Normal
FEW4-TB-20171006	280-102119-25	Water	Trip Blank
FEW4-TB-20171007	280-102119-26	Water	Trip Blank

DATA VERIFICATION

Data verification is a sample-specific assessment performed to evaluate sample data completeness, correctness, consistency, and compliance with the quality objectives of the project plan and contract requirements.

Sample-specific data verification was performed on 100% of the field samples collected and analyzed for 52 specific volatile organic analytes using the automated data review (ADR) software developed by Laboratory Data Consultants, Inc. (LDC). The level of automated data review was consistent with USEPA Stage 2A Data Verification and Validation checks, labeled S2AVE [Stage 2A Validation_Electronic] (USEPA, 2009). The automated review procedures, logic, and QC criteria used were project-specific, and based on the analytical method and applicable Department of Defense (DoD) Quality Systems Manual (QSM) Version 5.0 requirements (DoD, 2013). Project data verification has been documented in Attachment 1 using standard reporting outputs generated by the LDC ADR software application.

DATA VALIDATION

Data validation is a sample and analyte-specific assessment that substantiates whether analytical requirements have been met, and whether data qualifiers have been applied appropriately and consistently.

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LABORATORY NAME: TestAmerica-Denver
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Manual data validation was performed on each sample analyzed by the analytical laboratory for 52 specific volatile organic analytes. Validation was performed on 100% of the data in accordance with the project UFP-QAPP Worksheet #36. The level of data validation for the volatile organic analyses was consistent with USEPA Stage 4 Verification and Validation Checks, labeled S4VEM [Stage 4_Verification_Electronic_and_Manual] (USEPA, 2009). Data were validated according to requirements and criteria listed in the DoD QSM V5.0 Appendix B Table 4, Method 8260B of *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846), and technical judgment. Project data validation has been documented in Attachment 1.

DATA QUALIFIER DEFINITION

The following definitions provide a brief explanation of the data qualifier flags used during the data validation process:

- U The analyte was not detected and is reported as less than the Limit of Detection.
- UJ The analyte was not detected and is reported as an estimated value less than the Limit of Detection.
- J The result is an estimated value (e.g., QC criteria failure, possible matrix interferences, or the analyte was detected at a concentration outside the quantitation range).
- B The result is associated with a contaminated blank.
- R The result is rejected due to analytical deficiencies, matrix interferences, and/or other circumstances and may not be used to support critical decisions.

DATA USABILITY SUMMARY

Sample results that have not been qualified indicate the data meet all acceptance criteria, and all results are considered usable unless specifically qualified “R”.

The data quality indicators of precision, accuracy, representativeness, comparability, completeness, and sensitivity were used to determine the overall acceptability and usability of the analytical results. The analytical data met all usability acceptance criteria for definitive data. The data qualifiers listed in the analytical tables presented in this Data Review Report are considered the final determination of data quality and usability for the project sample results.

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Precision

Total data precision was evaluated by measuring the variability associated with the entire sampling and analysis process as determined by the collection and analysis of field duplicate samples and duplicate matrix spike samples. Three blind field duplicate samples were associated with field samples collected from wells FEW4-HARDY#1-INF, FEW4-GUNCLUB#1-INF, and FEW4-DYSON#1-INF. Two matrix spike/matrix spike duplicate (MS/MSD) sample pairs were associated with the field samples collected from wells FEW4-VG#1-INF and FEW4-BOYD-3.

All analytes with detected values greater than the associated limit of quantitation (LOQ) met the precision measurement performance criteria for the field duplicate pairs.

All spiked analytes met the precision measurement performance criteria for each MS/MSD pair.

Based on the overall field duplicate and MS/MSD sample precision, the associated field sample data were determined to be usable.

Accuracy/Bias

Analytical data accuracy was evaluated by measuring the percent recovery of specific analytes added to laboratory control samples (LCS) for the test method. A LCS was analyzed within each of the three analytical batches containing the field samples. All analytes in each of the individual LCS were within the measurement accuracy control limits.

Surrogate standards added to field and laboratory QC samples were also used to assess accuracy, as well as to assess the method performance for each field sample analyzed. Four surrogate analytes were used. All surrogate standard analytes were within the measurement accuracy limits for each of the field and laboratory QC samples.

Based on the LCS and surrogate standard accuracy results, the associated field sample data were determined to be usable.

Sample matrix bias was evaluated by measuring the percent recovery of a target analyte(s) added to a field sample (known as a matrix spike) and taking into account the concentration of analytes(s) determined to be present in a non-spiked aliquot of the field sample. As noted above, two MS duplicate pairs were associated with the project samples. The percent recovery results for all spiked analytes were within the applicable control limits for the duplicate spike samples.

Laboratory method blanks and trip blanks were also used to assess bias. One method blank was analyzed in each of the two analytical batches containing the field samples. No target analytes

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were detected in any of the method blanks at a concentration greater than the associated limit of quantitation (LOQ). Two trip blanks were submitted for analysis, one associated with each set of field samples collected on a specific day. No analytes were detected in either trip blank.

Based on the MS/MSD, laboratory method blank, and field trip blank bias results, the associated field sample data were determined to be usable.

Representativeness

The analytical data associated with the field samples are considered representative of the site condition for the following reasons specified in the QAPP: the work plan was followed; proper sampling techniques and sample handling procedures were used; the samples were prepared and analyzed in the same respective SDG; and appropriate documentation was prepared establishing sample identification and integrity.

Comparability

The analytical data associated with the field samples are considered comparable to previous site data because they were generated using the same analytical method and associated with similar detection limits that had been used for previous site monitoring events.

Completeness

Data completeness was evaluated based on the total number of field samples expected to be collected and analyzed, and calculated as a percentage of the number of valid (i.e., not rejected to quality considerations) results divided by the total number of expected results. 21 normal field samples, 3 field duplicate samples, 2 matrix spike/matrix spike duplicate sample pairs, and two trip blanks were collected and analyzed for 52 specific volatile organic analytes. 100% of the expected normal (i.e., non-QC) field samples were collected, 100% of the expected field QC samples (including field duplicates, matrix spikes, and trip blanks) were collected, and all samples were analyzed for the 52 volatile organic analytes specified in the project UFP-QAPP. The completeness goal of less than 10% rejected data was met since no sample data were rejected.

Sensitivity

Analytical sensitivity, the ability to detect all 52 project analytes at specified concentrations, was evaluated and considered acceptable. All sample analyte LOD values were less than the associated sample LOQ values, and all sample analytes detected between the detection limit and the LOQ were reported and qualified as estimated values. No samples required analytical

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dilutions due to analyte concentrations or matrix interferences.

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CLIENT NAME: U.S. Army Corps of Engineers – Omaha District
LABORATORY NAME: TestAmerica-Denver
DATA REVIEWER: Gary Torf

REFERENCES

Espinoza Consulting Services. 2015. *Final UFP-QAPP Interim Monitoring of Residential Wells and Operation and Maintenance of Residential Well GAC Systems Atlas "D" Missile Site 4-Larmie County Wyoming*. September.

U.S. Department of Defense (DoD). 2013. *Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.0*. July.

U.S. Environmental Protection Agency (EPA). 2009. *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use*. EPA-540-R-08-1. January.

U.S. Environmental Protection Agency (EPA). *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*. Third Edition as updated.

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LABORATORY NAME: TestAmerica-Denver
DATA REVIEWER: Gary Torf

ATTACHMENT 1

DATA REVIEW SUMMARY REPORTS (includes Data Verification and Data Validation reports)

Project Target Analyte Reporting Limit, Blank Contamination, and Lab & Field Duplicate RPD Criteria

eQapp Name: Atlas D Missile Site 4 RI Addendum

Description: RMC E15-019-201

Target Analyte Name	Analyte Label (CAS)	Quantitation Limit	Detection Limit	Units	Blank Contamination Rule	LabDup RPD	FieldDup RPD
Method: 1020A Matrix: Soil							
FLASH POINT	FLASH			Degrees F			
Method: 6010C Matrix: Water							
CALCIUM	7440-70-2	1000	34.5	ug/L	1.00	20.00	20.00
IRON	7439-89-6	100	22	ug/L	1.00	20.00	20.00
MAGNESIUM	7439-95-4	500	10.7	ug/L	1.00	20.00	20.00
MANGANESE	7439-96-5	10	0.253	ug/L	1.00	20.00	20.00
POTASSIUM	7440-09-7	3000	237	ug/L	1.00	20.00	20.00
SODIUM	7440-23-5	5000	91.6	ug/L	1.00	20.00	20.00
Method: 8260B Matrix: Soil							
1,1,1,2-TETRACHLOROETHANE	630-20-6	5	0.56	ug/Kg	1.00	20.00	20.00
1,1,1-TRICHLOROETHANE	71-55-6	5	0.52	ug/Kg	1.00	20.00	20.00
1,1,2,2-TETRACHLOROETHANE	79-34-5	5	0.61	ug/Kg	1.00	20.00	20.00
1,1,2-TRICHLOROETHANE	79-00-5	5	0.88	ug/Kg	1.00	20.00	20.00
1,1-DICHLOROETHANE	75-34-3	5	0.21	ug/Kg	1.00	20.00	20.00
1,1-DICHLOROETHENE	75-35-4	5	0.59	ug/Kg	1.00	20.00	20.00
1,1-DICHLOROPROPENE	563-58-6	5	0.54	ug/Kg	1.00	20.00	20.00
1,2,3-TRICHLOROBENZENE	87-61-6	5	0.75	ug/Kg	1.00	20.00	20.00
1,2,3-TRICHLOROPROPANE	96-18-4	5	0.81	ug/Kg	1.00	20.00	20.00
1,2,4-TRICHLOROBENZENE	120-82-1	5	0.73	ug/Kg	1.00	20.00	20.00
1,2,4-TRIMETHYLBENZENE	95-63-6	5	0.58	ug/Kg	1.00	20.00	20.00
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	10	0.6	ug/Kg	1.00	20.00	20.00
1,2-DIBROMOETHANE	106-93-4	5	0.52	ug/Kg	1.00	20.00	20.00
1,2-DICHLOROBENZENE	95-50-1	5	0.45	ug/Kg	1.00	20.00	20.00
1,2-DICHLOROETHANE	107-06-2	5	0.7	ug/Kg	1.00	20.00	20.00
1,2-Dichloroethene	540-59-0	5	0.39	ug/Kg	1.00	20.00	20.00
1,2-DICHLOROPROPANE	78-87-5	5	0.55	ug/Kg	1.00	20.00	20.00
1,3,5-TRIMETHYLBENZENE	108-67-8	5	0.57	ug/Kg	1.00	20.00	20.00

Target Analyte Name	Analyte Label (CAS)	Quantitation Limit	Detection Limit	Units	Blank Contamination Rule	LabDup RPD	FieldDup RPD
Method: 8260B Matrix: Soil							
1,3-DICHLOROBENZENE	541-73-1	5	0.48	ug/Kg	1.00	20.00	20.00
1,3-DICHLOROPROPANE	142-28-9	5	0.51	ug/Kg	1.00	20.00	20.00
1,4-DICHLOROBENZENE	106-46-7	5	0.78	ug/Kg	1.00	20.00	20.00
2,2-DICHLOROPROPANE	594-20-7	5	0.44	ug/Kg	1.00	20.00	20.00
2-Butanone [MEK]	78-93-3	20	1.83	ug/Kg	1.00	20.00	20.00
2-CHLOROTOLUENE	95-49-8	5	0.51	ug/Kg	1.00	20.00	20.00
2-HEXANONE	591-78-6	20	4.89	ug/Kg	1.00	20.00	20.00
4-CHLOROTOLUENE	106-43-4	5	0.78	ug/Kg	1.00	20.00	20.00
4-Methyl-2-pentanone [MIBK]	108-10-1	20	4.36	ug/Kg	1.00	20.00	20.00
ACETONE	67-64-1	20	5.38	ug/Kg	1.00	20.00	20.00
BENZENE	71-43-2	5	0.47	ug/Kg	1.00	20.00	20.00
BROMOBENZENE	108-86-1	5	0.49	ug/Kg	1.00	20.00	20.00
BROMOCHLOROMETHANE	74-97-5	5	0.3	ug/Kg	1.00	20.00	20.00
BROMODICHLOROMETHANE	75-27-4	5	0.22	ug/Kg	1.00	20.00	20.00
BROMOFORM	75-25-2	5	0.23	ug/Kg	1.00	20.00	20.00
BROMOMETHANE	74-83-9	10	0.5	ug/Kg	1.00	20.00	20.00
CARBON DISULFIDE	75-15-0	5	0.42	ug/Kg	1.00	20.00	20.00
CARBON TETRACHLORIDE	56-23-5	5	0.63	ug/Kg	1.00	20.00	20.00
CHLOROBENZENE	108-90-7	5	0.54	ug/Kg	1.00	20.00	20.00
CHLORODIBROMOMETHANE	124-48-1	5	0.57	ug/Kg	1.00	20.00	20.00
CHLOROETHANE	75-00-3	10	0.89	ug/Kg	1.00	20.00	20.00
CHLOROFORM	67-66-3	10	0.29	ug/Kg	1.00	20.00	20.00
CHLOROMETHANE	74-87-3	10	0.77	ug/Kg	1.00	20.00	20.00
CIS-1,2-DICHLOROETHENE	156-59-2	5	0.56	ug/Kg	1.00	20.00	20.00
CIS-1,3-DICHLOROPROPENE	10061-01-5	5	1.29	ug/Kg	1.00	20.00	20.00
DIBROMOMETHANE	74-95-3	5	0.84	ug/Kg	1.00	20.00	20.00
Dichlorodifluoromethane [Freon-12]	75-71-8	10	0.52	ug/Kg	1.00	20.00	20.00
ETHYLBENZENE	100-41-4	5	0.67	ug/Kg	1.00	20.00	20.00
HEXACHLOROBUTADIENE	87-68-3	5	0.55	ug/Kg	1.00	20.00	20.00
ISOPROPYLBENZENE	98-82-8	5	0.59	ug/Kg	1.00	20.00	20.00
m/p-Xylene [3/4-Xylene]	179601-23-1	3.2	1.04	ug/Kg	1.00	20.00	20.00
Methyl tert-butyl ether [MTBE]	1634-04-4	20	0.34	ug/Kg	1.00	20.00	20.00
METHYLENE CHLORIDE	75-09-2	5	1.6	ug/Kg	1.00	20.00	20.00

Target Analyte Name	Analyte Label (CAS)	Quantitation Limit	Detection Limit	Units	Blank Contamination Rule	LabDup RPD	FieldDup RPD
Method: 8260B Matrix: Soil							
NAPHTHALENE	91-20-3	5	0.63	ug/Kg	1.00	20.00	20.00
N-BUTYLBENZENE	104-51-8	5	0.56	ug/Kg	1.00	20.00	20.00
N-PROPYLBENZENE	103-65-1	5	0.58	ug/Kg	1.00	20.00	20.00
O-XYLENE	95-47-6	5	0.61	ug/Kg	1.00	20.00	20.00
p-Isopropyltoluene [p-Cymene]	99-87-6	5	0.49	ug/Kg	1.00	20.00	20.00
SEC-BUTYLBENZENE	135-98-8	5	0.77	ug/Kg	1.00	20.00	20.00
STYRENE	100-42-5	5	0.63	ug/Kg	1.00	20.00	20.00
TERT-BUTYLBENZENE	98-06-6	5	0.5	ug/Kg	1.00	20.00	20.00
TETRACHLOROETHENE	127-18-4	5	0.59	ug/Kg	1.00	20.00	20.00
TOLUENE	108-88-3	5	0.69	ug/Kg	1.00	20.00	20.00
TRANS-1,2-DICHLOROETHENE	156-60-5	5	0.39	ug/Kg	1.00	20.00	20.00
TRANS-1,3-DICHLOROPROPENE	10061-02-6	5	0.67	ug/Kg	1.00	20.00	20.00
TRICHLOROETHENE	79-01-6	5	0.23	ug/Kg	1.00	20.00	20.00
Trichlorofluoromethane [Freon-11]	75-69-4	10	1.04	ug/Kg	1.00	20.00	20.00
VINYL CHLORIDE	75-01-4	5	1.34	ug/Kg	1.00	20.00	20.00
Method: 8260B Matrix: Water							
1,1,1-TRICHLOROETHANE	71-55-6	1.0	0.16	ug/L	1.00	20.00	20.00
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.0	0.2	ug/L	1.00	20.00	20.00
1,1,2-TRICHLOROETHANE	79-00-5	1.0	0.32	ug/L	1.00	20.00	20.00
1,1,2-Trifluoro-1,2,2-trichloroethane [Freon-113]	76-13-1	3.0	0.79	ug/L	1.00	20.00	20.00
1,1-DICHLOROETHANE	75-34-3	1.0	0.16	ug/L	1.00	20.00	20.00
1,1-DICHLOROETHENE	75-35-4	1.0	0.14	ug/L	1.00	20.00	20.00
1,2,3-TRICHLOROBENZENE	87-61-6	1.0	0.18	ug/L	1.00	20.00	20.00
1,2,4-TRICHLOROBENZENE	120-82-1	1.0	0.32	ug/L	1.00	20.00	20.00
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.0	0.81	ug/L	1.00	20.00	20.00
1,2-DIBROMOETHANE	106-93-4	1.0	0.18	ug/L	1.00	20.00	20.00
1,2-DICHLOROBENZENE	95-50-1	1.0	0.13	ug/L	1.00	20.00	20.00
1,2-DICHLOROETHANE	107-06-2	1.0	0.13	ug/L	1.00	20.00	20.00
1,2-DICHLOROPROPANE	78-87-5	1.0	0.13	ug/L	1.00	20.00	20.00
1,3-DICHLOROBENZENE	541-73-1	1.0	0.16	ug/L	1.00	20.00	20.00
1,4-DICHLOROBENZENE	106-46-7	1.0	0.16	ug/L	1.00	20.00	20.00
1,4-DIOXANE	123-91-1	30.00	30.00	ug/L	1.00	20.00	20.00

Target Analyte Name	Analyte Label (CAS)	Quantitation Limit	Detection Limit	Units	Blank Contamination Rule	LabDup RPD	FieldDup RPD
Method: 8260B Matrix: Water							
2-Butanone [MEK]	78-93-3	6.0	1.8	ug/L	1.00	20.00	20.00
2-HEXANONE	591-78-6	5.0	1.4	ug/L	1.00	20.00	20.00
4-Methyl-2-pentanone [MIBK]	108-10-1	5.0	1.0	ug/L	1.00	20.00	20.00
ACETONE	67-64-1	10	1.9	ug/L	1.00	20.00	20.00
BENZENE	71-43-2	1.0	0.16	ug/L	1.00	20.00	20.00
BROMOCHLOROMETHANE	74-97-5	1.0	0.1	ug/L	1.00	20.00	20.00
BROMODICHLOROMETHANE	75-27-4	1.0	0.17	ug/L	1.00	20.00	20.00
BROMOFORM	75-25-2	1.0	0.19	ug/L	1.00	20.00	20.00
BROMOMETHANE	74-83-9	2.0	0.21	ug/L	1.00	20.00	20.00
CARBON DISULFIDE	75-15-0	2.0	0.45	ug/L	1.00	20.00	20.00
CARBON TETRACHLORIDE	56-23-5	1.0	0.19	ug/L	1.00	20.00	20.00
CHLOROBENZENE	108-90-7	1.0	0.17	ug/L	1.00	20.00	20.00
CHLORODIBROMOMETHANE	124-48-1	1.0	0.17	ug/L	1.00	20.00	20.00
CHLOROETHANE	75-00-3	2.0	0.41	ug/L	1.00	20.00	20.00
CHLOROFORM	67-66-3	1.0	0.16	ug/L	1.00	20.00	20.00
CHLOROMETHANE	74-87-3	2.0	0.30	ug/L	1.00	20.00	20.00
CIS-1,2-DICHLOROETHENE	156-59-2	1.0	0.15	ug/L	1.00	20.00	20.00
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.0	0.16	ug/L	1.00	20.00	20.00
CYCLOHEXANE	110-82-7	2.0	0.28	ug/L	1.00	20.00	20.00
Dichlorodifluoromethane [Freon-12]	75-71-8	2.0	0.31	ug/L	1.00	20.00	20.00
ETHYLBENZENE	100-41-4	1.0	0.16	ug/L	1.00	20.00	20.00
ISOPROPYLBENZENE	98-82-8	1.0	0.19	ug/L	1.00	20.00	20.00
m/p-Xylene [3/4-Xylene]	179601-23-1	2.0	0.34	ug/L	1.00	20.00	20.00
METHYL ACETATE	79-20-9	5.0	1.6	ug/L	1.00	20.00	20.00
Methyl tert-butyl ether [MTBE]	1634-04-4	5.0	0.25	ug/L	1.00	20.00	20.00
Methylcyclohexane	108-87-2	1.0	0.36	ug/L	1.00	20.00	20.00
METHYLENE CHLORIDE	75-09-2	2.0	0.32	ug/L	1.00	20.00	20.00
O-XYLENE	95-47-6	1.0	0.19	ug/L	1.00	20.00	20.00
STYRENE	100-42-5	1.0	0.17	ug/L	1.00	20.00	20.00
TETRACHLOROETHENE	127-18-4	1.0	0.20	ug/L	1.00	20.00	20.00
TOLUENE	108-88-3	1.0	0.17	ug/L	1.00	20.00	20.00
TRANS-1,2-DICHLOROETHENE	156-60-5	1.0	0.15	ug/L	1.00	20.00	20.00
TRANS-1,3-DICHLOROPROPENE	10061-02-6	3.0	0.19	ug/L	1.00	20.00	20.00

Target Analyte Name	Analyte Label (CAS)	Quantitation Limit	Detection Limit	Units	Blank Contamination Rule	LabDup RPD	FieldDup RPD
Method: 8260B Matrix: Water							
TRICHLOROETHENE	79-01-6	1.0	0.16	ug/L	1.00	20.00	20.00
Trichlorofluoromethane [Freon-11]	75-69-4	2.0	0.29	ug/L	1.00	20.00	20.00
VINYL CHLORIDE	75-01-4	1.0	0.40	ug/L	1.00	20.00	20.00
Method: 9045D Matrix: Soil							
PH	PH			pH			
Method: 9056A Matrix: Water							
BROMIDE	24959-67-9	500	113	ug/L	1.00	20.00	20.00
CHLORIDE	16887-00-6	3000	254	ug/L	1.00	20.00	20.00
FLUORIDE	16984-48-8	1000	60	ug/L	1.00	20.00	20.00
NITRATE	14797-55-8	500	42	ug/L	1.00	20.00	20.00
NITRITE	14797-65-0	500	49	ug/L	1.00	20.00	20.00
SULFATE	14808-79-8	5000	232	ug/L	1.00	20.00	20.00

Project Accuracy and Precision Report

eQapp Name: Atlas D Missile Site 4 RI Addendum

Description: RMC E15-019-201

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 6010C						Matrix: Water
QC Type: Laboratory_Control_Sample						
CALCIUM	7440-70-2	87.00	87.00	113.00	113.00	20.00
IRON	7439-89-6	87.00	87.00	115.00	115.00	20.00
MAGNESIUM	7439-95-4	85.00	85.00	113.00	113.00	20.00
MANGANESE	7439-96-5	90.00	90.00	114.00	114.00	20.00
POTASSIUM	7440-09-7	86.00	86.00	114.00	114.00	20.00
SODIUM	7440-23-5	87.00	87.00	115.00	115.00	20.00
QC Type: Matrix_Spike						
CALCIUM	7440-70-2	87.00	87.00	113.00	113.00	20.00
IRON	7439-89-6	87.00	87.00	115.00	115.00	20.00
MAGNESIUM	7439-95-4	85.00	85.00	113.00	113.00	20.00
MANGANESE	7439-96-5	90.00	90.00	114.00	114.00	20.00
POTASSIUM	7440-09-7	86.00	86.00	114.00	114.00	20.00
SODIUM	7440-23-5	87.00	87.00	115.00	115.00	20.00
Method: 8260B						Matrix: Soil
QC Type: Laboratory_Control_Sample						
1,1,1,2-TETRACHLOROETHANE	630-20-6	78.00	78.00	125.00	125.00	20.00
1,1,1-TRICHLOROETHANE	71-55-6	73.00	73.00	130.00	130.00	20.00
1,1,2,2-TETRACHLOROETHANE	79-34-5	70.00	70.00	124.00	124.00	20.00
1,1,2-TRICHLOROETHANE	79-00-5	78.00	78.00	121.00	121.00	20.00
1,1-DICHLOROETHANE	75-34-3	76.00	76.00	125.00	125.00	20.00
1,1-DICHLOROETHENE	75-35-4	70.00	70.00	131.00	131.00	20.00
1,1-DICHLOROPROPENE	563-58-6	76.00	76.00	125.00	125.00	20.00
1,2,3-TRICHLOROBENZENE	87-61-6	66.00	66.00	130.00	130.00	20.00
1,2,3-TRICHLOROPROPANE	96-18-4	73.00	73.00	125.00	125.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B Matrix: Soil						
QC Type: Laboratory_Control_Sample						
1,2,4-TRICHLOROBENZENE	120-82-1	67.00	67.00	129.00	129.00	20.00
1,2,4-TRIMETHYLBENZENE	95-63-6	75.00	75.00	123.00	123.00	20.00
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	61.00	61.00	132.00	132.00	20.00
1,2-DIBROMOETHANE	106-93-4	78.00	78.00	122.00	122.00	20.00
1,2-DICHLOROBENZENE	95-50-1	78.00	78.00	121.00	121.00	20.00
1,2-DICHLOROETHANE	107-06-2	73.00	73.00	128.00	128.00	20.00
1,2-Dichloroethene	540-59-0	78.00	78.00	122.00	122.00	20.00
1,2-DICHLOROPROPANE	78-87-5	76.00	76.00	123.00	123.00	20.00
1,3,5-TRIMETHYLBENZENE	108-67-8	73.00	73.00	124.00	124.00	20.00
1,3-DICHLOROBENZENE	541-73-1	77.00	77.00	121.00	121.00	20.00
1,3-DICHLOROPROPANE	142-28-9	77.00	77.00	121.00	121.00	20.00
1,4-DICHLOROBENZENE	106-46-7	75.00	75.00	120.00	120.00	20.00
2,2-DICHLOROPROPANE	594-20-7	67.00	67.00	133.00	133.00	20.00
2-Butanone [MEK]	78-93-3	51.00	51.00	148.00	148.00	20.00
2-CHLOROTOLUENE	95-49-8	75.00	75.00	122.00	122.00	20.00
2-HEXANONE	591-78-6	53.00	53.00	145.00	145.00	20.00
4-CHLOROTOLUENE	106-43-4	72.00	72.00	124.00	124.00	20.00
4-Methyl-2-pentanone [MIBK]	108-10-1	65.00	65.00	135.00	135.00	20.00
ACETONE	67-64-1	36.00	36.00	164.00	164.00	20.00
BENZENE	71-43-2	77.00	77.00	121.00	121.00	20.00
BROMOBENZENE	108-86-1	78.00	78.00	121.00	121.00	20.00
BROMOCHLOROMETHANE	74-97-5	78.00	78.00	125.00	125.00	20.00
BROMODICHLOROMETHANE	75-27-4	75.00	75.00	127.00	127.00	20.00
BROMOFORM	75-25-2	67.00	67.00	132.00	132.00	20.00
BROMOMETHANE	74-83-9	53.00	53.00	143.00	143.00	20.00
CARBON DISULFIDE	75-15-0	63.00	63.00	132.00	132.00	20.00
CARBON TETRACHLORIDE	56-23-5	70.00	70.00	135.00	135.00	20.00
CHLOROBENZENE	108-90-7	79.00	79.00	120.00	120.00	20.00
CHLORODIBROMOMETHANE	124-48-1	74.00	74.00	126.00	126.00	20.00
CHLOROETHANE	75-00-3	59.00	59.00	139.00	139.00	20.00
CHLOROFORM	67-66-3	78.00	78.00	123.00	123.00	20.00
CHLOROMETHANE	74-87-3	50.00	50.00	136.00	136.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B					Matrix: Soil	
QC Type: Laboratory_Control_Sample						
CIS-1,2-DICHLOROETHENE	156-59-2	77.00	77.00	123.00	123.00	20.00
CIS-1,3-DICHLOROPROPENE	10061-01-5	74.00	74.00	126.00	126.00	20.00
DIBROMOMETHANE	74-95-3	78.00	78.00	125.00	125.00	20.00
Dichlorodifluoromethane [Freon-12]	75-71-8	29.00	29.00	149.00	149.00	20.00
ETHYLBENZENE	100-41-4	76.00	76.00	122.00	122.00	20.00
HEXACHLOROBUTADIENE	87-68-3	61.00	61.00	135.00	135.00	20.00
ISOPROPYLBENZENE	98-82-8	68.00	68.00	134.00	134.00	20.00
m/p-Xylene [3/4-Xylene]	179601-23-1	77.00	77.00	124.00	124.00	20.00
Methyl tert-butyl ether [MTBE]	1634-04-4	73.00	73.00	125.00	125.00	20.00
METHYLENE CHLORIDE	75-09-2	70.00	70.00	128.00	128.00	20.00
NAPHTHALENE	91-20-3	62.00	62.00	129.00	129.00	20.00
N-BUTYLBENZENE	104-51-8	70.00	70.00	128.00	128.00	20.00
N-PROPYLBENZENE	103-65-1	73.00	73.00	125.00	125.00	20.00
O-XYLENE	95-47-6	77.00	77.00	123.00	123.00	20.00
p-Isopropyltoluene [p-Cymene]	99-87-6	73.00	73.00	127.00	127.00	20.00
SEC-BUTYLBENZENE	135-98-8	73.00	73.00	126.00	126.00	20.00
STYRENE	100-42-5	76.00	76.00	124.00	124.00	20.00
TERT-BUTYLBENZENE	98-06-6	73.00	73.00	125.00	125.00	20.00
TETRACHLOROETHENE	127-18-4	73.00	73.00	128.00	128.00	20.00
TOLUENE	108-88-3	77.00	77.00	121.00	121.00	20.00
TRANS-1,2-DICHLOROETHENE	156-60-5	74.00	74.00	125.00	125.00	20.00
TRANS-1,3-DICHLOROPROPENE	10061-02-6	71.00	71.00	130.00	130.00	20.00
TRICHLOROETHENE	79-01-6	77.00	77.00	123.00	123.00	20.00
Trichlorofluoromethane [Freon-11]	75-69-4	62.00	62.00	140.00	140.00	20.00
VINYL CHLORIDE	75-01-4	56.00	56.00	135.00	135.00	20.00
QC Type: Matrix_Spike						
1,1,1,2-TETRACHLOROETHANE	630-20-6	78.00	78.00	125.00	125.00	20.00
1,1,1-TRICHLOROETHANE	71-55-6	73.00	73.00	130.00	130.00	20.00
1,1,2,2-TETRACHLOROETHANE	79-34-5	70.00	70.00	124.00	124.00	20.00
1,1,2-TRICHLOROETHANE	79-00-5	78.00	78.00	124.00	124.00	20.00
1,1-DICHLOROETHANE	75-34-3	76.00	76.00	125.00	125.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B Matrix: Soil						
QC Type: Matrix_Spike						
1,1-DICHLOROETHENE	75-35-4	70.00	70.00	131.00	131.00	20.00
1,1-DICHLOROPROPENE	563-58-6	76.00	76.00	125.00	125.00	20.00
1,2,3-TRICHLOROBENZENE	87-61-6	66.00	66.00	130.00	130.00	20.00
1,2,3-TRICHLOROPROPANE	96-18-4	73.00	73.00	125.00	125.00	20.00
1,2,4-TRICHLOROBENZENE	120-82-1	67.00	67.00	129.00	129.00	20.00
1,2,4-TRIMETHYLBENZENE	95-63-6	75.00	75.00	123.00	123.00	20.00
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	61.00	61.00	132.00	132.00	20.00
1,2-DIBROMOETHANE	106-93-4	78.00	78.00	122.00	122.00	20.00
1,2-DICHLOROBENZENE	95-50-1	78.00	78.00	121.00	121.00	20.00
1,2-DICHLOROETHANE	107-06-2	73.00	73.00	128.00	128.00	20.00
1,2-Dichloroethene	540-59-0	78.00	78.00	122.00	122.00	20.00
1,2-DICHLOROPROPANE	78-87-5	76.00	76.00	123.00	123.00	20.00
1,3,5-TRIMETHYLBENZENE	108-67-8	73.00	73.00	124.00	124.00	20.00
1,3-DICHLOROBENZENE	541-73-1	77.00	77.00	121.00	121.00	20.00
1,3-DICHLOROPROPANE	142-28-9	77.00	77.00	121.00	121.00	20.00
1,4-DICHLOROBENZENE	106-46-7	75.00	75.00	120.00	120.00	20.00
2,2-DICHLOROPROPANE	594-20-7	67.00	67.00	133.00	133.00	20.00
2-Butanone [MEK]	78-93-3	51.00	51.00	148.00	148.00	20.00
2-CHLOROTOLUENE	95-49-8	75.00	75.00	122.00	122.00	20.00
2-HEXANONE	591-78-6	53.00	53.00	145.00	145.00	20.00
4-CHLOROTOLUENE	106-43-4	72.00	72.00	124.00	124.00	20.00
4-Methyl-2-pentanone [MIBK]	108-10-1	65.00	65.00	135.00	135.00	20.00
ACETONE	67-64-1	36.00	36.00	164.00	164.00	20.00
BENZENE	71-43-2	77.00	77.00	121.00	121.00	20.00
BROMOBENZENE	108-86-1	78.00	78.00	121.00	121.00	20.00
BROMOCHLOROMETHANE	74-97-5	78.00	78.00	125.00	125.00	20.00
BROMODICHLOROMETHANE	75-27-4	75.00	75.00	127.00	127.00	20.00
BROMOFORM	75-25-2	67.00	67.00	132.00	132.00	20.00
BROMOMETHANE	74-83-9	53.00	53.00	143.00	143.00	20.00
CARBON DISULFIDE	75-15-0	63.00	63.00	132.00	132.00	20.00
CARBON TETRACHLORIDE	56-23-5	70.00	70.00	135.00	135.00	20.00
CHLOROBENZENE	108-90-7	79.00	79.00	120.00	120.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B Matrix: Soil						
QC Type: Matrix_Spike						
CHLORODIBROMOMETHANE	124-48-1	74.00	74.00	126.00	126.00	20.00
CHLOROETHANE	75-00-3	59.00	59.00	139.00	139.00	20.00
CHLOROFORM	67-66-3	78.00	78.00	123.00	123.00	20.00
CHLOROMETHANE	74-87-3	50.00	50.00	136.00	136.00	20.00
CIS-1,2-DICHLOROETHENE	156-59-2	77.00	77.00	123.00	123.00	20.00
CIS-1,3-DICHLOROPROPENE	10061-01-5	74.00	74.00	126.00	126.00	20.00
DIBROMOMETHANE	74-95-3	78.00	78.00	125.00	125.00	20.00
Dichlorodifluoromethane [Freon-12]	75-71-8	29.00	29.00	149.00	149.00	20.00
ETHYLBENZENE	100-41-4	76.00	76.00	122.00	122.00	20.00
HEXACHLOROBUTADIENE	87-68-3	61.00	61.00	135.00	135.00	20.00
ISOPROPYLBENZENE	98-82-8	68.00	68.00	134.00	134.00	20.00
m/p-Xylene [3/4-Xylene]	179601-23-1	77.00	77.00	124.00	124.00	20.00
Methyl tert-butyl ether [MTBE]	1634-04-4	73.00	73.00	125.00	125.00	20.00
METHYLENE CHLORIDE	75-09-2	70.00	70.00	128.00	128.00	20.00
NAPHTHALENE	91-20-3	62.00	62.00	129.00	129.00	20.00
N-BUTYLBENZENE	104-51-8	70.00	70.00	128.00	128.00	20.00
N-PROPYLBENZENE	103-65-1	73.00	73.00	125.00	125.00	20.00
O-XYLENE	95-47-6	77.00	77.00	123.00	123.00	20.00
p-Isopropyltoluene [p-Cymene]	99-87-6	73.00	73.00	127.00	127.00	20.00
SEC-BUTYLBENZENE	135-98-8	73.00	73.00	126.00	126.00	20.00
STYRENE	100-42-5	76.00	76.00	124.00	124.00	20.00
TERT-BUTYLBENZENE	98-06-6	73.00	73.00	125.00	125.00	20.00
TETRACHLOROETHENE	127-18-4	73.00	73.00	128.00	128.00	20.00
TOLUENE	108-88-3	77.00	77.00	121.00	121.00	20.00
TRANS-1,2-DICHLOROETHENE	156-60-5	74.00	74.00	125.00	125.00	20.00
TRANS-1,3-DICHLOROPROPENE	10061-02-6	71.00	71.00	130.00	130.00	20.00
TRICHLOROETHENE	79-01-6	77.00	77.00	123.00	123.00	20.00
Trichlorofluoromethane [Freon-11]	75-69-4	62.00	62.00	140.00	140.00	20.00
VINYL CHLORIDE	75-01-4	56.00	56.00	135.00	135.00	20.00
QC Type: Surrogate						
1,2-DICHLOROETHANE-D4	17060-07-0	71.00	71.00	136.00	136.00	

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)	
Method: 8260B							
Matrix: Soil							
QC Type: Surrogate							
4-Bromofluorobenzene	460-00-4	79.00	79.00	119.00	119.00		
DIBROMOFLUOROMETHANE	1868-53-7	78.00	78.00	119.00	119.00		
TOLUENE-D8	2037-26-5	85.00	85.00	116.00	116.00		
Method: 8260B							
Matrix: Water							
QC Type: Laboratory_Control_Sample							
1,1,1-TRICHLOROETHANE	71-55-6	74.00	74.00	131.00	131.00		20.00
1,1,2,2-TETRACHLOROETHANE	79-34-5	71.00	71.00	121.00	121.00		20.00
1,1,2-TRICHLOROETHANE	79-00-5	80.00	80.00	119.00	119.00		20.00
1,1,2-Trifluoro-1,2,2-trichloroethane [Freon-113]	76-13-1	70.00	70.00	136.00	136.00		20.00
1,1-DICHLOROETHANE	75-34-3	77.00	77.00	125.00	125.00		20.00
1,1-DICHLOROETHENE	75-35-4	71.00	71.00	131.00	131.00		20.00
1,2,3-TRICHLOROBENZENE	87-61-6	69.00	69.00	129.00	129.00		20.00
1,2,4-TRICHLOROBENZENE	120-82-1	69.00	69.00	130.00	130.00		20.00
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	62.00	62.00	128.00	128.00		20.00
1,2-DIBROMOETHANE	106-93-4	77.00	77.00	121.00	121.00		20.00
1,2-DICHLOROBENZENE	95-50-1	80.00	80.00	119.00	119.00		20.00
1,2-DICHLOROETHANE	107-06-2	73.00	73.00	128.00	128.00		20.00
1,2-DICHLOROPROPANE	78-87-5	78.00	78.00	122.00	122.00		20.00
1,3-DICHLOROBENZENE	541-73-1	80.00	80.00	119.00	119.00		20.00
1,4-DICHLOROBENZENE	106-46-7	79.00	79.00	118.00	118.00		20.00
1,4-DIOXANE	123-91-1	59.00	59.00	139.00	139.00		20.00
2-Butanone [MEK]	78-93-3	56.00	56.00	143.00	143.00		20.00
2-HEXANONE	591-78-6	57.00	57.00	139.00	139.00		20.00
4-Methyl-2-pentanone [MIBK]	108-10-1	67.00	67.00	130.00	130.00		20.00
ACETONE	67-64-1	39.00	39.00	160.00	160.00		20.00
BENZENE	71-43-2	79.00	79.00	120.00	120.00		20.00
BROMOCHLOROMETHANE	74-97-5	78.00	78.00	123.00	123.00		20.00
BROMODICHLOROMETHANE	75-27-4	79.00	79.00	125.00	125.00		20.00
BROMOFORM	75-25-2	66.00	66.00	130.00	130.00		20.00
BROMOMETHANE	74-83-9	53.00	53.00	141.00	141.00		20.00
CARBON DISULFIDE	75-15-0	64.00	64.00	133.00	133.00		20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B					Matrix: Water	
QC Type: Laboratory_Control_Sample						
CARBON TETRACHLORIDE	56-23-5	72.00	72.00	136.00	136.00	20.00
CHLOROBENZENE	108-90-7	82.00	82.00	118.00	118.00	20.00
CHLORODIBROMOMETHANE	124-48-1	74.00	74.00	126.00	126.00	20.00
CHLOROETHANE	75-00-3	60.00	60.00	138.00	138.00	20.00
CHLOROFORM	67-66-3	79.00	79.00	124.00	124.00	20.00
CHLOROMETHANE	74-87-3	50.00	50.00	139.00	139.00	20.00
CIS-1,2-DICHLOROETHENE	156-59-2	78.00	78.00	123.00	123.00	20.00
CIS-1,3-DICHLOROPROPENE	10061-01-5	75.00	75.00	124.00	124.00	20.00
CYCLOHEXANE	110-82-7	71.00	71.00	130.00	130.00	20.00
Dichlorodifluoromethane [Freon-12]	75-71-8	32.00	32.00	152.00	152.00	20.00
ETHYLBENZENE	100-41-4	79.00	79.00	121.00	121.00	20.00
ISOPROPYLBENZENE	98-82-8	72.00	72.00	131.00	131.00	20.00
m/p-Xylene [3/4-Xylene]	179601-23-1	80.00	80.00	121.00	121.00	20.00
METHYL ACETATE	79-20-9	56.00	56.00	136.00	136.00	20.00
Methyl tert-butyl ether [MTBE]	1634-04-4	71.00	71.00	124.00	124.00	20.00
Methylcyclohexane	108-87-2	72.00	72.00	132.00	132.00	20.00
METHYLENE CHLORIDE	75-09-2	74.00	74.00	124.00	124.00	20.00
O-XYLENE	95-47-6	78.00	78.00	122.00	122.00	20.00
STYRENE	100-42-5	78.00	78.00	123.00	123.00	20.00
TETRACHLOROETHENE	127-18-4	74.00	74.00	129.00	129.00	20.00
TOLUENE	108-88-3	80.00	80.00	121.00	121.00	20.00
TRANS-1,2-DICHLOROETHENE	156-60-5	75.00	75.00	124.00	124.00	20.00
TRANS-1,3-DICHLOROPROPENE	10061-02-6	73.00	73.00	127.00	127.00	20.00
TRICHLOROETHENE	79-01-6	79.00	79.00	123.00	123.00	20.00
Trichlorofluoromethane [Freon-11]	75-69-4	65.00	65.00	141.00	141.00	20.00
VINYL CHLORIDE	75-01-4	58.00	58.00	137.00	137.00	20.00
QC Type: Matrix_Spike						
1,1,1-TRICHLOROETHANE	71-55-6	74.00	74.00	131.00	131.00	20.00
1,1,2,2-TETRACHLOROETHANE	79-34-5	71.00	71.00	121.00	121.00	20.00
1,1,2-TRICHLOROETHANE	79-00-5	80.00	80.00	119.00	119.00	20.00
1,1,2-Trifluoro-1,2,2-trichloroethane [Freon-113]	76-13-1	70.00	70.00	136.00	136.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B Matrix: Water						
QC Type: Matrix_Spike						
1,1-DICHLOROETHANE	75-34-3	77.00	77.00	125.00	125.00	20.00
1,1-DICHLOROETHENE	75-35-4	71.00	71.00	131.00	131.00	20.00
1,2,3-TRICHLOROBENZENE	87-61-6	69.00	69.00	129.00	129.00	20.00
1,2,4-TRICHLOROBENZENE	120-82-1	69.00	69.00	130.00	130.00	20.00
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	62.00	62.00	128.00	128.00	20.00
1,2-DIBROMOETHANE	106-93-4	77.00	77.00	121.00	121.00	20.00
1,2-DICHLOROBENZENE	95-50-1	80.00	80.00	119.00	119.00	20.00
1,2-DICHLOROETHANE	107-06-2	73.00	73.00	128.00	128.00	20.00
1,2-DICHLOROPROPANE	78-87-5	78.00	78.00	122.00	122.00	20.00
1,3-DICHLOROBENZENE	541-73-1	80.00	80.00	119.00	119.00	20.00
1,4-DICHLOROBENZENE	106-46-7	79.00	79.00	118.00	118.00	20.00
1,4-DIOXANE	123-91-1	59.00	59.00	139.00	139.00	20.00
2-Butanone [MEK]	78-93-3	56.00	56.00	143.00	143.00	20.00
2-HEXANONE	591-78-6	57.00	57.00	139.00	139.00	20.00
4-Methyl-2-pentanone [MIBK]	108-10-1	67.00	67.00	130.00	130.00	20.00
ACETONE	67-64-1	39.00	39.00	160.00	160.00	20.00
BENZENE	71-43-2	79.00	79.00	120.00	120.00	20.00
BROMOCHLOROMETHANE	74-97-5	78.00	78.00	123.00	123.00	20.00
BROMODICHLOROMETHANE	75-27-4	79.00	79.00	125.00	125.00	20.00
BROMOFORM	75-25-2	66.00	66.00	130.00	130.00	20.00
BROMOMETHANE	74-83-9	53.00	53.00	141.00	141.00	20.00
CARBON DISULFIDE	75-15-0	64.00	64.00	133.00	133.00	20.00
CARBON TETRACHLORIDE	56-23-5	72.00	72.00	136.00	136.00	20.00
CHLOROBENZENE	108-90-7	82.00	82.00	118.00	118.00	20.00
CHLORODIBROMOMETHANE	124-48-1	74.00	74.00	126.00	126.00	20.00
CHLOROETHANE	75-00-3	60.00	60.00	138.00	138.00	20.00
CHLOROFORM	67-66-3	79.00	79.00	124.00	124.00	20.00
CHLOROMETHANE	74-87-3	50.00	50.00	139.00	139.00	20.00
CIS-1,2-DICHLOROETHENE	156-59-2	78.00	78.00	123.00	123.00	20.00
CIS-1,3-DICHLOROPROPENE	10061-01-5	75.00	75.00	124.00	124.00	20.00
CYCLOHEXANE	110-82-7	71.00	71.00	130.00	130.00	20.00
Dichlorodifluoromethane [Freon-12]	75-71-8	32.00	32.00	152.00	152.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 8260B Matrix: Water						
QC Type: Matrix_Spike						
ETHYLBENZENE	100-41-4	79.00	79.00	121.00	121.00	20.00
ISOPROPYLBENZENE	98-82-8	72.00	72.00	131.00	131.00	20.00
m/p-Xylene [3/4-Xylene]	179601-23-1	80.00	80.00	121.00	121.00	20.00
METHYL ACETATE	79-20-9	56.00	56.00	136.00	136.00	20.00
Methyl tert-butyl ether [MTBE]	1634-04-4	71.00	71.00	124.00	124.00	20.00
Methylcyclohexane	108-87-2	72.00	72.00	132.00	132.00	20.00
METHYLENE CHLORIDE	75-09-2	74.00	74.00	124.00	124.00	20.00
O-XYLENE	95-47-6	78.00	78.00	122.00	122.00	20.00
STYRENE	100-42-5	78.00	78.00	123.00	123.00	20.00
TETRACHLOROETHENE	127-18-4	74.00	74.00	129.00	129.00	20.00
TOLUENE	108-88-3	80.00	80.00	121.00	121.00	20.00
TRANS-1,2-DICHLOROETHENE	156-60-5	75.00	75.00	124.00	124.00	20.00
TRANS-1,3-DICHLOROPROPENE	10061-02-6	73.00	73.00	127.00	127.00	20.00
TRICHLOROETHENE	79-01-6	79.00	79.00	123.00	123.00	20.00
Trichlorofluoromethane [Freon-11]	75-69-4	65.00	65.00	141.00	141.00	20.00
VINYL CHLORIDE	75-01-4	58.00	58.00	137.00	137.00	20.00
QC Type: Surrogate						
1,2-DICHLOROETHANE-D4	17060-07-0	81.00	81.00	118.00	118.00	
4-Bromofluorobenzene	460-00-4	85.00	85.00	114.00	114.00	
DIBROMOFLUOROMETHANE	1868-53-7	80.00	80.00	119.00	119.00	
TOLUENE-D8	2037-26-5	89.00	89.00	112.00	112.00	
Method: 9056A Matrix: Water						
QC Type: Laboratory_Control_Sample						
BROMIDE	24959-67-9	91.00	91.00	110.00	110.00	20.00
CHLORIDE	16887-00-6	87.00	87.00	111.00	111.00	20.00
FLUORIDE	16984-48-8	88.00	88.00	112.00	112.00	20.00
NITRATE	14797-55-8	88.00	88.00	111.00	111.00	20.00
NITRITE	14797-65-0	87.00	87.00	111.00	111.00	20.00
SULFATE	14808-79-8	87.00	87.00	112.00	112.00	20.00

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 9056A Matrix: Water						
QC Type: Matrix_Spike						
BROMIDE	24959-67-9	91.00	91.00	110.00	110.00	20.00
CHLORIDE	16887-00-6	87.00	87.00	111.00	111.00	20.00
FLUORIDE	16984-48-8	88.00	88.00	112.00	112.00	20.00
NITRATE	14797-55-8	88.00	88.00	111.00	111.00	20.00
NITRITE	14797-65-0	87.00	87.00	111.00	111.00	20.00
SULFATE	14808-79-8	87.00	87.00	112.00	112.00	20.00

U.S. Army Corps of Engineers - Omaha District

Saturday, November 11, 2017

ATTN: Doug Simpleman

SUBJECT: Atlas "D" Missile Site 4 Interim Monitoring of Residential Wells

Dear Doug Simpleman

Enclosed are all pertinent ADR reports for the laboratory electronic data deliverables (EDDs) and test categories listed below.

SDG

280-102119-1

Fraction

Volatiles (8260B)

The following deliverables are submitted under this report.

SDG Sample Summary
ADR Qualifier Summary
ADR Outlier Reports

Data review was performed in accordance with the following documents:

Final UFP-QAPP Atlas "D" Missile Site 4 Residential Wells Interim Monitoring and O&M
DoD Quality Systems Manual, Version 5.0

Please feel free to contact us if you have any questions.

Sincerely,

Gary Torf



EDD Summary Report by Analysis Method

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

Client Sample ID	Lab Sample ID	Analysis Type	Preparation Method	Matrix	Collection Date	Preparation Date	Analysis Date
Method: 8260B							
FEW4-1774 OTTO	280-102119-20	Initial(Total)	8260B	Water	10/7/2017 10:25:00 AM	10/16/2017 11:15:00 AM	10/16/2017 11:15:00 AM
FEW4-BAR 13 RANCH	280-102119-1	Initial(Total)	8260B	Water	10/6/2017 10:45:00 AM	10/15/2017 12:42:00 PM	10/15/2017 12:42:00 PM
FEW4-BERT MCGEE#8	280-102119-3	Initial(Total)	8260B	Water	10/6/2017 12:33:00 PM	10/15/2017 1:26:00 PM	10/15/2017 1:26:00 PM
FEW4-BOYD-1	280-102119-21	Initial(Total)	8260B	Water	10/7/2017 10:55:00 AM	10/16/2017 11:36:00 AM	10/16/2017 11:36:00 AM
FEW4-BOYD-3	280-102119-22	Initial(Total)	8260B	Water	10/7/2017 11:30:00 AM	10/16/2017 11:58:00 AM	10/16/2017 11:58:00 AM
FEW4-BOYD-J	280-102119-23	Initial(Total)	8260B	Water	10/7/2017 12:24:00 PM	10/16/2017 12:20:00 PM	10/16/2017 12:20:00 PM
FEW4-BROWN#1	280-102119-18	Initial(Total)	8260B	Water	10/7/2017 9:20:00 AM	10/16/2017 10:32:00 AM	10/16/2017 10:32:00 AM
FEW4-CANDES#888	280-102119-4	Initial(Total)	8260B	Water	10/6/2017 1:38:00 PM	10/15/2017 1:48:00 PM	10/15/2017 1:48:00 PM
FEW4-DYSON#1-INF	280-102119-16	Initial(Total)	8260B	Water	10/6/2017 6:33:00 PM	10/16/2017 9:48:00 AM	10/16/2017 9:48:00 AM
FEW4-FARRELL#1-EFF	280-102119-8	Initial(Total)	8260B	Water	10/6/2017 2:45:00 PM	10/15/2017 5:26:00 PM	10/15/2017 5:26:00 PM
FEW4-FARRELL#1-INF	280-102119-5	Initial(Total)	8260B	Water	10/6/2017 2:35:00 PM	10/15/2017 2:10:00 PM	10/15/2017 2:10:00 PM
FEW4-FARRELL#1-INT	280-102119-7	Initial(Total)	8260B	Water	10/6/2017 2:40:00 PM	10/15/2017 5:04:00 PM	10/15/2017 5:04:00 PM
FEW4-FINNERTY#1-EFF	280-102119-15	Initial(Total)	8260B	Water	10/6/2017 5:40:00 PM	10/16/2017 9:25:00 AM	10/16/2017 9:25:00 AM
FEW4-FINNERTY#1-INF	280-102119-13	Initial(Total)	8260B	Water	10/6/2017 5:33:00 PM	10/15/2017 6:54:00 PM	10/15/2017 6:54:00 PM
FEW4-FINNERTY#1-INT	280-102119-14	Initial(Total)	8260B	Water	10/6/2017 5:37:00 PM	10/15/2017 7:16:00 PM	10/15/2017 7:16:00 PM
FEW4-FRITZ LEY#1	280-102119-2	Initial(Total)	8260B	Water	10/6/2017 11:25:00 AM	10/15/2017 1:04:00 PM	10/15/2017 1:04:00 PM
FEW4-GUNCLUB#1-INF	280-102119-10	Initial(Total)	8260B	Water	10/6/2017 3:48:00 PM	10/15/2017 5:48:00 PM	10/15/2017 5:48:00 PM
FEW4-HARDY#1-INF	280-102119-6	Initial(Total)	8260B	Water	10/6/2017 2:37:00 PM	10/15/2017 4:43:00 PM	10/15/2017 4:43:00 PM
FEW4-HILL#1	280-102119-24	Initial(Total)	8260B	Water	10/7/2017 1:12:00 PM	10/16/2017 12:41:00 PM	10/16/2017 12:41:00 PM
FEW4-HOUSER#1	280-102119-17	Initial(Total)	8260B	Water	10/7/2017 8:35:00 AM	10/16/2017 10:10:00 AM	10/16/2017 10:10:00 AM
FEW4-TB-20171006	280-102119-25	Initial(Total)	8260B	Water	10/2/2017 12:00:00 AM	10/15/2017 2:31:00 PM	10/15/2017 2:31:00 PM
FEW4-TB-20171007	280-102119-26	Initial(Total)	8260B	Water	10/2/2017 12:00:00 AM	10/15/2017 2:53:00 PM	10/15/2017 2:53:00 PM



EDD Summary Report by Analysis Method

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

<i>Client Sample ID</i>	<i>Lab Sample ID</i>	<i>Analysis Type</i>	<i>Preparation Method</i>	<i>Matrix</i>	<i>Collection Date</i>	<i>Preparation Date</i>	<i>Analysis Date</i>
Method: 8260B							
FEW4-VG#1-EFF	280-102119-12	Initial(Total)	8260B	Water	10/6/2017 3:56:00 PM	10/15/2017 6:33:00 PM	10/15/2017 6:33:00 PM
FEW4-VG#1-INF	280-102119-9	Initial(Total)	8260B	Water	10/6/2017 3:47:00 PM	10/15/2017 12:21:00 PM	10/15/2017 12:21:00 PM
FEW4-VG#1-INT	280-102119-11	Initial(Total)	8260B	Water	10/6/2017 3:53:00 PM	10/15/2017 6:11:00 PM	10/15/2017 6:11:00 PM
FEW4-WELTY#2	280-102119-19	Initial(Total)	8260B	Water	10/7/2017 9:50:00 AM	10/16/2017 10:53:00 AM	10/16/2017 10:53:00 AM



Data Review Sample Summary Report by Analysis Method

Reviewed By:

Approved By:

Laboratory: TAL DEN

<i>Client Sample ID</i>	<i>Lab Sample ID</i>	<i>Matrix</i>	<i>Sample Type</i>	<i>Preparation Method</i>	<i>Collection Date</i>	<i>Validation Code</i>
Lab Reporting Batch: 280-102119-1						
Method: 8260B						
FEW4-FINNERTY#1-EFF	280-102119-15	Water	Field_Sample	8260B	10/6/2017 5:40:00 PM	S2AVE
FEW4-TB-20171006	280-102119-25	Water	Trip_Blank	8260B	10/2/2017	S2AVE
FEW4-BAR 13 RANCH	280-102119-1	Water	Field_Sample	8260B	10/6/2017 10:45:00 AM	S2AVE
FEW4-VG#1-INFMS	280-102119-9MS	Water	Matrix_Spike	8260B	10/6/2017 3:47:00 PM	S2AVE
FEW4-CANDES#888	280-102119-4	Water	Field_Sample	8260B	10/6/2017 1:38:00 PM	S2AVE
FEW4-BOYD-1	280-102119-21	Water	Field_Sample	8260B	10/7/2017 10:55:00 AM	S2AVE
FEW4-FARRELL#1-EFF	280-102119-8	Water	Field_Sample	8260B	10/6/2017 2:45:00 PM	S2AVE
FEW4-VG#1-EFF	280-102119-12	Water	Field_Sample	8260B	10/6/2017 3:56:00 PM	S2AVE
FEW4-BOYD-3MS	280-102119-22MS	Water	Matrix_Spike	8260B	10/7/2017 11:30:00 AM	S2AVE
FEW4-BOYD-3	280-102119-22	Water	Field_Sample	8260B	10/7/2017 11:30:00 AM	S2AVE
FEW4-HILL#1	280-102119-24	Water	Field_Sample	8260B	10/7/2017 1:12:00 PM	S2AVE
FEW4-FINNERTY#1-INF	280-102119-13	Water	Field_Sample	8260B	10/6/2017 5:33:00 PM	S2AVE
FEW4-TB-20171007	280-102119-26	Water	Trip_Blank	8260B	10/2/2017	S2AVE
FEW4-FINNERTY#1-INT	280-102119-14	Water	Field_Sample	8260B	10/6/2017 5:37:00 PM	S2AVE
FEW4-BERT MCGEE#8	280-102119-3	Water	Field_Sample	8260B	10/6/2017 12:33:00 PM	S2AVE
FEW4-BOYD-J	280-102119-23	Water	Field_Sample	8260B	10/7/2017 12:24:00 PM	S2AVE
FEW4-BOYD-3MSD	280-102119-22MSD	Water	Matrix_Spike_Duplicate	8260B	10/7/2017 11:30:00 AM	S2AVE
FEW4-DYSON#1-INF	280-102119-16	Water	Field_Duplicate	8260B	10/6/2017 6:33:00 PM	S2AVE
FEW4-FARRELL#1-INF	280-102119-5	Water	Field_Sample	8260B	10/6/2017 2:35:00 PM	S2AVE
FEW4-WELTY#2	280-102119-19	Water	Field_Sample	8260B	10/7/2017 9:50:00 AM	S2AVE
FEW4-VG#1-INFMSD	280-102119-9MSD	Water	Matrix_Spike_Duplicate	8260B	10/6/2017 3:47:00 PM	S2AVE
FEW4-FARRELL#1-INT	280-102119-7	Water	Field_Sample	8260B	10/6/2017 2:40:00 PM	S2AVE



Data Review Sample Summary Report by Analysis Method

Reviewed By:

Approved By:

Laboratory: TAL DEN

<i>Client Sample ID</i>	<i>Lab Sample ID</i>	<i>Matrix</i>	<i>Sample Type</i>	<i>Preparation Method</i>	<i>Collection Date</i>	<i>Validation Code</i>
Method: 8260B						
FEW4-GUNCLUB#1-INF	280-102119-10	Water	Field_Duplicate	8260B	10/6/2017 3:48:00 PM	S2AVE
FEW4-BROWN#1	280-102119-18	Water	Field_Sample	8260B	10/7/2017 9:20:00 AM	S2AVE
FEW4-VG#1-INT	280-102119-11	Water	Field_Sample	8260B	10/6/2017 3:53:00 PM	S2AVE
FEW4-VG#1-INF	280-102119-9	Water	Field_Sample	8260B	10/6/2017 3:47:00 PM	S2AVE
FEW4-1774 OTTO	280-102119-20	Water	Field_Sample	8260B	10/7/2017 10:25:00 AM	S2AVE
FEW4-FRITZ LEY#1	280-102119-2	Water	Field_Sample	8260B	10/6/2017 11:25:00 AM	S2AVE
FEW4-HARDY#1-INF	280-102119-6	Water	Field_Duplicate	8260B	10/6/2017 2:37:00 PM	S2AVE
FEW4-HOUSER#1	280-102119-17	Water	Field_Sample	8260B	10/7/2017 8:35:00 AM	S2AVE



Data Review Sample Summary Report by Analysis Method

Reviewed By:

Approved By:

Laboratory: TAL DEN

<i>Client Sample ID</i>	<i>Lab Sample ID</i>	<i>Matrix</i>	<i>Sample Type</i>	<i>Preparation Method</i>	<i>Collection Date</i>	<i>Validation Code</i>
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Validation Label Legend

<i>Label Code</i>	<i>Label Description</i>	<i>EPA Level</i>
S1VE	Stage_1_Validation_Electronic	N/A
S1VM	Stage_1_Validation_Manual	N/A
S1VEM	Stage_1_Validation_Electronic_and_Manual	N/A
S2AVE	Stage_2A_Validation_Electronic	Level 3 w/o calibration
S2AVM	Stage_2A_Validation_Manual	Level 3 w/o calibration
S2AVEM	Stage_2A_Validation_Electronic_and_Manual	Level 3 w/o calibration
S2BVE	Stage_2B_Validation_Electronic	Level 3 with calibration
S2BVM	Stage_2B_Validation_Manual	Level 3 with calibration
S2BVEM	Stage_2B_Validation_Electronic_and_Manual	Level 3 with calibration
S3VE	Stage_3_Validation_Electronic	Level 4
S3VM	Stage_3_Validation_Manual	Level 4
S3VEM	Stage_3_Validation_Electronic_and_Manual	Level 4
S4VE	Stage_4_Validation_Electronic	Level 4
S4VM	Stage_4_Validation_Manual	Level 4
S4VEM	Stage_4_Validation_Electronic_and_Manual	Level 4
NV	Not_Validated	N/A



Data Review Summary

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

EDD Filename: 280-102119-1_52_2a_AtlasMissileSite4

eQAPP Name: Atlas D Missile Site 4 RI Addendum

Validation Area

Note

Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



Field QC Assignments and Associated Samples

EDD File Name: 280-102119-1

eQapp Name: Atlas D Missile Site 4 RI Addendum

	Associated Samples	Sample Collection Date
Field QC FEW4-DYSON#1-INF QC Type: Field_Duplicate	FEW4-FINNERTY#1-INF	10/6/2017 5:33:00 PM
Field QC FEW4-GUNCLUB#1-INF QC Type: Field_Duplicate	FEW4-VG#1-INF	10/6/2017 3:47:00 PM
Field QC FEW4-HARDY#1-INF QC Type: Field_Duplicate	FEW4-FARRELL#1-INF	10/6/2017 2:35:00 PM
Field QC FEW4-TB-20171006 QC Type: Trip_Blank	FEW4-FINNERTY#1-EFF	10/6/2017 5:40:00 PM
	FEW4-BAR 13 RANCH	10/6/2017 10:45:00 AM
	FEW4-CANDES#888	10/6/2017 1:38:00 PM
	FEW4-FARRELL#1-EFF	10/6/2017 2:45:00 PM
	FEW4-VG#1-EFF	10/6/2017 3:56:00 PM
	FEW4-FINNERTY#1-INF	10/6/2017 5:33:00 PM
	FEW4-FINNERTY#1-INT	10/6/2017 5:37:00 PM
	FEW4-BERT MCGEE#8	10/6/2017 12:33:00 PM
	FEW4-DYSON#1-INF	10/6/2017 6:33:00 PM
	FEW4-FARRELL#1-INF	10/6/2017 2:35:00 PM
	FEW4-FARRELL#1-INT	10/6/2017 2:40:00 PM
	FEW4-GUNCLUB#1-INF	10/6/2017 3:48:00 PM
	FEW4-VG#1-INT	10/6/2017 3:53:00 PM
	FEW4-VG#1-INF	10/6/2017 3:47:00 PM
	FEW4-FRITZ LEY#1	10/6/2017 11:25:00 AM
	FEW4-HARDY#1-INF	10/6/2017 2:37:00 PM
Field QC FEW4-TB-20171007 QC Type: Trip_Blank		

	Associated Samples	Sample Collection Date
	FEW4-BOYD-1	10/7/2017 10:55:00 AM
	FEW4-BOYD-3	10/7/2017 11:30:00 AM
	FEW4-HILL#1	10/7/2017 1:12:00 PM
	FEW4-BOYD-J	10/7/2017 12:24:00 PM
	FEW4-WELTY#2	10/7/2017 9:50:00 AM
	FEW4-BROWN#1	10/7/2017 9:20:00 AM
	FEW4-1774 OTTO	10/7/2017 10:25:00 AM
	FEW4-HOUSER#1	10/7/2017 8:35:00 AM



Data Qualifier Summary

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

EDD Filename: 280-102119-1_52_2a_AtlasMissileSite4

eQAPP Name: Atlas D Missile Site 4 RI Addendum

Method Category: VOA	
Method: 8260B	Matrix: Water

Sample ID: FEW4-BERT MCGEE#8		Collected: 10/6/2017 12:33:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	2.1	J	6.4	LOD	10	LOQ	ug/L	J	RI

Sample ID: FEW4-BOYD-3		Collected: 10/7/2017 11:30:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	3.0	J	6.4	LOD	10	LOQ	ug/L	J	RI

Sample ID: FEW4-CANDES#888		Collected: 10/6/2017 1:38:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	1.9	J	6.4	LOD	10	LOQ	ug/L	J	RI

Sample ID: FEW4-FARRELL#1-INF		Collected: 10/6/2017 2:35:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	0.62	J	0.40	LOD	1.0	LOQ	ug/L	J	RI

Sample ID: FEW4-HARDY#1-INF		Collected: 10/6/2017 2:37:00 PM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	0.64	J	0.40	LOD	1.0	LOQ	ug/L	J	RI

Sample ID: FEW4-WELTY#2		Collected: 10/7/2017 9:50:00 AM		Analysis Type: Initial/TOT				Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	0.37	J	0.40	LOD	1.0	LOQ	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: ECS_2015-146 - Atlas "D" Missile Site 4 Residential LTM

11/11/2017 2:36:37 PM

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Data Qualifier Summary

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

EDD Filename: 280-102119-1_52_2a_AtlasMissileSite4

eQAPP Name: Atlas D Missile Site 4 RI Addendum

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: ECS_2015-146 - Atlas "D" Missile Site 4 Residential LTM

11/11/2017 2:36:37 PM

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Reporting Limit Outliers

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

EDD Filename: 280-102119-1_52_2a_AtlasMissileSite4

eQAPP Name: Atlas D Missile Site 4 RI Addendum

Method: 8260B

Matrix: Water

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FEW4-BERT MCGEE#8	ACETONE	J	2.1	10	LOQ	ug/L	J (all detects)
FEW4-BOYD-3	ACETONE	J	3.0	10	LOQ	ug/L	J (all detects)
FEW4-CANDES#888	ACETONE	J	1.9	10	LOQ	ug/L	J (all detects)
FEW4-FARRELL#1-INF	TRICHLOROETHENE	J	0.62	1.0	LOQ	ug/L	J (all detects)
FEW4-HARDY#1-INF	TRICHLOROETHENE	J	0.64	1.0	LOQ	ug/L	J (all detects)
FEW4-WELTY#2	TRICHLOROETHENE	J	0.37	1.0	LOQ	ug/L	J (all detects)

Method Blank Outlier Report

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

EDD Filename: 280-102119-1_52_2a_AtlasMissileSite4

eQAPP Name: Atlas D Missile Site 4 RI Addendum

Method: 8260B		Matrix: Water		
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-391324/6	10/15/2017 10:26:00 AM	METHYLENE CHLORIDE	0.372 ug/L	FEW4-BAR 13 RANCH FEW4-BERT MCGEE#8 FEW4-CANDES#888 FEW4-FARRELL#1-EFF FEW4-FARRELL#1-INF FEW4-FARRELL#1-INT FEW4-FINNERTY#1-INF FEW4-FINNERTY#1-INT FEW4-FRITZ LEY#1 FEW4-GUNCLUB#1-INF FEW4-HARDY#1-INF FEW4-TB-20171006 FEW4-TB-20171007 FEW4-VG#1-EFF FEW4-VG#1-INF FEW4-VG#1-INT
MB 280-391346/6	10/16/2017 7:58:00 AM	METHYLENE CHLORIDE	0.392 ug/L	FEW4-1774 OTTO FEW4-BOYD-1 FEW4-BOYD-3 FEW4-BOYD-J FEW4-BROWN#1 FEW4-DYSON#1-INF FEW4-FINNERTY#1-EFF FEW4-HILL#1 FEW4-HOUSER#1 FEW4-WELTY#2

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-102119-1

Laboratory: TAL DEN

EDD Filename: 280-102119-1_52_2a_AtlasMissileSite4

eQAPP Name: Atlas D Missile Site 4 RI Addendum

Method: 8260B

Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	FEW4-FINNERTY#1-INF	FEW4-DYSON#1-INF			
TRICHLOROETHENE	1.4	1.6	13	20.00	No Qualifiers Applied
Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	FEW4-VG#1-INF	FEW4-GUNCLUB#1-INF			
TRICHLOROETHENE	4.9	4.5	9	20.00	No Qualifiers Applied
Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	FEW4-FARRELL#1-INF	FEW4-HARDY#1-INF			
TRICHLOROETHENE	0.62	0.64	3	20.00	No Qualifiers Applied

DATA VALIDATION REPORT – DoD QSM v5.0
Method 8260B Volatile Organic Compounds by GC/MS
Laboratory Report: 280-102119

I. RAW DATA

All sample raw data were present.
YES

II. SAMPLE PRESERVATION

The samples were appropriately preserved upon collection. Water sample containers were filled completely without headspace; the water samples were preserved with acid.
YES

Comments: The temperatures of the two coolers received at the lab containing the samples were 4.0°C, 4.5°C, and 4.7°C.

III. HOLDING TIMES

The sample was analyzed within prescribed holding times of 14 days for preserved water samples.
YES

IV. INSTRUMENT TUNE PERFORMANCE CHECK

All bromofluorobenzene (BFB) performance results were within the specified acceptance criteria prior to initial instrument calibration and at the beginning of each 12-hour analytical sequence.
YES

V. INSTRUMENT CALIBRATIONS

Initial instrument calibrations (ICAL) met the specified criteria. Average response factors (RFs) for system performance check compounds (SPCCs) were greater than or equal to 0.30 or 0.10 for applicable compounds. Percent relative standard deviations (RSDs) for calibration check compounds (CCCs) were equal to or less than 30%. If the average response factor was used for quantitation, the analyte RSD was equal to or less than 15%; if a linear least squares regression was used for quantitation, the analyte correlation coefficient (r) was equal to or greater than 0.995 when RSD>15%; if a non-linear regression was used for quantitation, the coefficient of determination (COD) was equal to or greater than 0.990.

YES

A second source calibration verification standard (ICV) was analyzed after each initial instrument calibration, and the analytes were within 20% of the expected value.

YES

Continuing instrument calibration verification (CCV) was performed daily after every 12 hours of analysis, and at the end of the analytical sequence. RFs for the SPCCs were equal to or greater than 0.30 or 0.10 for applicable compounds. Percent difference or percent drift for all analytes was equal to or less than 20% for each 12-hour CCV, and

DATA VALIDATION REPORT – DoD QSM v5.0
Method 8260B Volatile Organic Compounds by GC/MS
Laboratory Report: 280-102119

equal to or less than 50% for the end-of-sequence CCV.

YES

VI. RETENTION TIME WINDOW ESTABLISHMENT AND EVALUATION

A retention time (RT) window was established for each analyte and surrogate either using the midpoint standard of the initial calibration for analytical sequences that include the initial instrument calibration, or using the initial continuing instrument calibration verification for analytical sequences that do not include an initial instrument calibration.

YES

For the sample, the relative retention time (RRT) was within 0.06 RRT units for each analyte and surrogate.

YES

VII. INTERNAL STANDARD VERIFICATION

Internal standard retention times of the sample and associated standards were within 10 seconds from the RT of the midpoint standard of the initial calibration.

YES

The internal standard EICP (extracted ion current profile) areas of the sample and standard was within -50% to +100% of the initial calibration midpoint standard.

YES

VIII. METHOD BLANK ANALYSIS RESULTS

Target analytes, other than common lab contaminants, were not detected in the associated method blank at a concentration greater than ½ the limit of quantitation (LOQ) or greater than 1/10 the concentration in any sample. No common lab contaminants were detected at concentrations greater than the LOQ.

YES

Comments: Methylene chloride was detected in the two laboratory method blanks between the detection limit (DL) and LOQ.

IX. OTHER BLANK ANALYSIS RESULTS

No target analytes were detected in other associated blanks above the LOQ.

YES

X. LABORATORY CONTROL SAMPLE (LCS) RESULTS

Recoveries of all analytes in the associated LCS met the specified control limits.

YES

XI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) RESULTS

All MS/MSD results met specified recovery and precision limits.

DATA VALIDATION REPORT – DoD QSM v5.0
Method 8260B Volatile Organic Compounds by GC/MS
Laboratory Report: 280-102119

YES

Comments: MS/MSD analyses were performed on field samples FEW4-VG#1-INF and FEW4-BOYD-3. All project analytes were spiked and within control limits.

XII. FIELD SAMPLE DUPLICATE RESULTS

Field sample duplicate results met specified precision limits.

YES

Comments: A field sample duplicate labeled 'FEW4-HARDY#1-INF' was collected for field sample FEW4-FARRELL#1-INF, a field sample duplicate labeled 'FEW4-GUNCLUB#1-INF' was collected for field sample FEW4-VG#1-INF, and a field sample duplicate labeled 'FEW4-DYSON#1-INF' was collected for field sample FEW4-FINNERTY#1-INF. All analytes with detected values greater than the associated limit of quantitation were within precision limits.

XIII. SURROGATE COMPOUND RECOVERY RESULTS

Recovery of all surrogate compounds met the specified control limits.

YES

XIV. DETECTION LIMITS

All results were associated with a DL, a limit of detection (LOD), and a LOQ. Concentration values were qualified as estimated when analytes were detected between the DL and the LOQ.

YES

XV. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable.

YES

Manual chromatographic integrations were documented.

YES



APPENDIX D

Daily Quality Control Reports
(See electronic files on CD)



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DAILY QUALITY CONTROL REPORT

PROJECT NAME: Atlas D Missile Site 4 Residential LTMP

Location: Cheyenne, Wyoming

Date: 10/6/2017

Weather: Sunny, 50 - 61 °F, 8 - 35 mph winds

PERSONNEL:

Name	Company
Joseph Mastromarchi	RMC Consultants, Inc.
Ben Noller	Espinoza Consulting

EQUIPMENT:

Description	License No.
Hach 2100Q Turbidity Meter	
YSI 556 Multi-Parameter	
Water Quality Meter	
with Flow-Through Cell	

FIELD INSTALLATIONS:

ID Nos.	Drilled From:	Drilled To:

ENVIRONMENTAL SAMPLES COLLECTED:

Sample ID Nos.	Analytes
FEW4-Bar 13 Ranch	8260B (chlorinated cmpds.)
FEW4-Fritz Ley #1	8260B (chlorinated cmpds.)
FEW4-Bert McGee #8	8260B (chlorinated cmpds.)
FEW4-Candes #888	8260B (chlorinated cmpds.)
FEW4-Farrell #1-INF	8260B (chlorinated cmpds.)
FEW4-Hardy #1-INF	8260B (chlorinated cmpds.)
FEW4-Farrell #1-INT	8260B (chlorinated cmpds.)
FEW4-Farrell #1-EFF	8260B (chlorinated cmpds.)
FEW4-VG #1-INF	8260B (chlorinated cmpds.)
FEW4-GunClub #1-INF	8260B (chlorinated cmpds.)
FEW4-VG #1-INF-MS	8260B (chlorinated cmpds.)
FEW4-VG #1-INF-MSD	8260B (chlorinated cmpds.)
FEW4-VG #1-INT	8260B (chlorinated cmpds.)
FEW4-VG #1-EFF	8260B (chlorinated cmpds.)
FEW4-Finnerty #1-INF	8260B (chlorinated cmpds.)
FEW4-Finnerty #1-INT	8260B (chlorinated cmpds.)
FEW4-Finnerty #1-EFF	8260B (chlorinated cmpds.)
FEW4-Dyson #1-INF	8260B (chlorinated cmpds.)

Brief Description of Work Performed:

Begin collecting groundwater samples from residential wells located along Otto Road.
Duplicate collected with Van Goethen #1 influent sample and identified as FEW4-GunClub #1-INF.
Duplicate collected with Farrell #1 influent sample and identified as FEW4-Hardy #1-INF.
Duplicate collected with Finnerty #1 influent sample and identified as FEW4-Dyson #1-INF.

Health and Safety Levels:

Level D

Problems Encountered:

None

Variances from Workplan:

From approximately 0845 to 0935 hours, we attempted without success to obtain a sample from the McCall #1 well. All of the valves inside the well house were open as was the nearby sampling spigot. The pressure tank was empty. We observed that the wellhead appeared to be fine (undamaged and not tampered with) and confirmed that there was electrical power to the controls in the well house. We hypothesized that the issue may be that the pump or a capacitor has failed. At approximately 1245 hours, we returned to the property because Mr. Kelly McCall was now present. We performed troubleshooting with Mr. McCall until approximately 1310 hours, all without success - no sample collected.

Remarks:

Signature: Ben Noller, PG

DAILY QUALITY CONTROL REPORT

PROJECT NAME: Atlas D Missile Site 4 Residential LTMP

Location: Cheyenne, Wyoming

Date: 10/7/2017

Weather: Sunny, 50 - 66 °F, 16 - 36 mph winds

PERSONNEL:

Name	Company
Joseph Mastromarchi	RMC Consultants, Inc.
Ben Noller	Espinoza Consulting

FIELD INSTALLATIONS:

ID Nos.	Drilled From:	Drilled To:

EQUIPMENT:

Description	License No.
Hach 2100Q Turbidity Meter	
YSI 556 Multi-Parameter	
Water Quality Meter	
with Flow-Through Cell	

ENVIRONMENTAL SAMPLES COLLECTED:

Sample ID Nos.	Analytes
FEW4-Houser #1	8260B (chlorinated cmpds.)
FEW4-Brown #1	8260B (chlorinated cmpds.)
FEW4-Welty #2	8260B (chlorinated cmpds.)
FEW4-1774 Otto	8260B (chlorinated cmpds.)
FEW4-Boyd-1	8260B (chlorinated cmpds.)
FEW4-Boyd-3	8260B (chlorinated cmpds.)
FEW4-Boyd-3-MS	8260B (chlorinated cmpds.)
FEW4-Boyd-3-MSD	8260B (chlorinated cmpds.)
FEW4-Boyd-J	8260B (chlorinated cmpds.)
FEW4-Hill #1	8260B (chlorinated cmpds.)

Brief Description of Work Performed:

Continued collecting groundwater samples from residential wells located along Otto Road.
Samples collected yesterday (10/6/17) and today (10/7/17) were hand-delivered to TestAmerica laboratory on 10/9/17.

Health and Safety Levels:

Level D

Problems Encountered:

None

Variances from Workplan:

NA

Remarks:

Signature: Ben Noller, PG

DAILY QUALITY CONTROL REPORT

PROJECT NAME: Atlas D Missile Site 4 LTMP

Location: Cheyenne, Wyoming

Date: 12/28/2017

Weather: Mostly cloudy, 42°F, windy -
10 to 20 mph west winds.

PERSONNEL:

Name	Company
Keith Schoeman	RMC Consultants, Inc.
Ben Noller	Espinoza Consulting Services

FIELD INSTALLATIONS:

ID Nos.	Drilled From:	Drilled To:

EQUIPMENT:

Description	License No.

ENVIRONMENTAL SAMPLES COLLECTED:

Sample ID Nos.	Analytes

Brief Description of Work Performed:

Began GAC replacement at Van Goethen property:

- Emptied and refilled the primary vessel.
- Flushed carbon dust from primary vessel.
- Emptied secondary vessel.

Health and Safety Levels:

Level D

Problems Encountered:

While flushing the carbon dust from the primary vessel, the Van Goethen's noticed a lack of water pressure in the kitchen faucet.

After some troubleshooting assistance from Keith Schoeman, carbon was found in the faucet fixture.

Note that the treatment system does not have a shut-off valve to the residences that can be closed while the system is flushed.

While emptying the secondary vessel, the base (stand) came loose from the cylinder.

Changes from Workplan:

NA

Remarks:

Added approximately 312 pounds of new GAC to primary vessel.

Flushed approximately 286 gallons of water through primary vessel after GAC placement.

Spent GAC was containerized into approximately 3 drums.

Signature: Ben Noller

DAILY QUALITY CONTROL REPORT

PROJECT NAME: Atlas D Missile Site 4 LTMP

Date: 12/29/2017

Location: Cheyenne, Wyoming

Weather: Mostly cloudy, 46°F, very windy -
30 to 50 mph gusts from the NW.

PERSONNEL:

Name	Company
Keith Schoeman	RMC Consultants, Inc.
Ben Noller	Espinoza Consulting Services

FIELD INSTALLATIONS:

ID Nos.	Drilled From:	Drilled To:

EQUIPMENT:

Description	License No.

ENVIRONMENTAL SAMPLES COLLECTED:

Sample ID Nos.	Analytes

Brief Description of Work Performed:

Continued GAC replacement at Van Goethen property:

- Added approximately 238 pounds of new GAC to secondary vessel.
- Flushed approximately 339 gallons of water through secondary vessel after GAC placement.
- Flushed approximately another 230 gallons of water through secondary vessel after attempting to repair the broken drain pipe.

Health and Safety Levels:

Level D

Problems Encountered:

After flushing the secondary vessel, a slow leak from underneath the vessel was discovered. The vessel was drained and lowered onto its side in order to tighten the fittings on the base. After tightening the fittings, the drain pipe broke off inside the vessel bottom plug due to moving the vessel around on a loose base ring. Worked the broken pipe threads out and inserted a plug; however, the vessel still appeared to have a slow leak.

Changes from Workplan:

NA

Remarks:

Added approximately 238 pounds of new GAC to Van Goethen secondary vessel.
Flushed a total of approximately 569 gallons of water through Van Goethen secondary vessel over two episodes.

Signature: Ben Noller

DAILY QUALITY CONTROL REPORT

PROJECT NAME: Atlas D Missile Site 4 LTMP

Date: 12/30/2017

Location: Cheyenne, Wyoming

Weather: Clear, 42°F, windy

PERSONNEL:

Name	Company
Keith Schoeman	RMC Consultants, Inc.
Ben Noller	Espinoza Consulting Services

FIELD INSTALLATIONS:

ID Nos.	Drilled From:	Drilled To:

EQUIPMENT:

Description	License No.

ENVIRONMENTAL SAMPLES COLLECTED:

Sample ID Nos.	Analytes

Brief Description of Work Performed:

Checked in at Van Goethen property. Talked with several of the homeowners.

Performed GAC replacement at Hardy property:

- Added approximately 83 pounds each of new GAC to primary and secondary vessels.
- Flushed approximately 565 gallons of water through the vessels after GAC placement.
- Worked with the property owner, Mr. Chris Hardy, to flush and troubleshoot the system. During this time, GAC entered his water lines.

Staged spent GAC drums adjacent to Building 2.

Health and Safety Levels:

Level D

Problems Encountered:

The secondary vessel at the Van Goethen system was confirmed to still be leaking. We took the secondary vessel offline and installed a filter in its place. Several of the homes connected to the Van Goethen system continued to experience minor water pressure loss.

In addition to the piping of the Hardy system clogging, Mr. Hardy related that he removed carbon from his water lines in the kitchen and was planning to address the lines in the bathroom as well.

Changes from Workplan:

Took the secondary vessel at the Van Goethen system offline.

Remarks:

Added approximately 83 pounds each of new GAC to primary and secondary vessels.

Flushed approximately 565 gallons of water through the vessels after GAC placement.

Spent GAC from Hardy property was containerized into approximately 1.25 drums.

Signature: Ben Noller



APPENDIX E

Electric Use Reimbursement Letters
(See electronic files on CD)



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March 28, 2018

Mr. Chris Hardy
1521 Otto Road
Cheyenne, WY 82001

Subject: Reimbursement of Electrical Power Cost October 1, 2016 through April 30, 2017 for 1521 Otto Road, Laramie County, Wyoming

Dear Mr. Hardy:

On behalf of the US Army Corps of Engineers (USACE), Espinoza Consulting Services (ECS) is pleased to provide you with reimbursement of electrical power cost for the USACE installed groundwater treatment system located at your house. Because data from the kilo watt meter that the space heater is plugged into is unreliable, we propose to use the same estimated kilowatt hours (Kwh) as during the 2012/2013 through 2015/2016 winters (October 1 through April 30 of each year) to reimburse you for the electrical use during the 2016/2017 winter (206 Kwh per month for 7 months each, or 1,442 kwh per winter). We consulted the website of your power provider, Black Hills Energy, on February 12, 2018 and determined the rate per Kwh to be \$0.10824. We have therefore enclosed a check for \$186.06 to cover the winter electrical use during the 2016/2017 winter months.

Winter Months	Est. Kwh Used (monthly)	Months	Cost per Kwh	Reimbursement
Oct. 2016 – Apr. 2017	206	7	\$0.10824	\$156.08

If you have any questions regarding this electrical use reimbursement, please do not hesitate to contact me at 800-511-8685 x 910.

Sincerely,

Ben L. Noller, PG
Senior Geologist

Enclosure: Reimbursement Check

cc: Douglas P. Simpleman (USACE Project Manager); David Groy (RMC Program Manager)

Espinoza Consulting Services

403 Main Street / PO Box 571, La Jara, CO 81140

www.ecs-arch.com

800-511-8685 / fax: 866-381-6973



March 28, 2018

Mr. Hank Van Goethen
1531 Otto Road
Cheyenne, WY 82001

Subject: Reimbursement of Electrical Power Cost October 1, 2016 through April 30, 2017 for 1531 Otto Road, Laramie County, Wyoming

Dear Mr. Van Goethen:

On behalf of the US Army Corps of Engineers (USACE), Espinoza Consulting Services (ECS) is pleased to provide you with reimbursement of electrical power cost for the USACE installed groundwater treatment system located at your house. Because data from the kilowatt meter that the space heater is plugged into is unreliable, we propose to use the same estimated kilowatt hours (Kwh) as during the 2012/2013 through 2015/2016 winters (October 1 through April 30 of each year) to reimburse you for the electrical use during the 2016/2017 winter (162 Kwh per month for 7 months each, or 1,134 kwh per winter). From the website of your power provider, High West Energy, we utilized a rate per Kwh of \$0.12811. We have therefore enclosed a check for \$145.28 to cover the winter electrical use during the 2016/2017 winter months.

Winter Months	Est. Kwh Used (monthly)	Months	Cost per Kwh	Reimbursement
Oct. 2016 – Apr. 2017	162	7	\$0.12811	\$145.28

If you have any questions regarding this electrical use reimbursement, please do not hesitate to contact me at 800-511-8685 x 910.

Sincerely,

Ben L. Noller, PG
Senior Geologist

Enclosure: Reimbursement Check

cc: Douglas P. Simpleman (USACE Project Manager); David Groy (RMC Program Manager)

Espinoza Consulting Services

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800-511-8685 / fax: 866-381-6973