2018 Annual Monitoring Report
Area B (PICA-205) Groundwater

Picatinny Arsenal, New Jersey

Prepared for

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
Contract No. W91ZLK-13-D-0004-0009

October 2018

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U.S. Army

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24 October 2018

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LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	Micrograms per Liter
amsl	Above Mean Sea Level
ARCADIS	ARCADIS U.S., Inc.
COC	Contaminant of Concern
CVOC	Chlorinated Volatile Organic Compound
DCE	Dichloroethene
EA	EA Engineering, Science, and Technology, Inc., PBC
ERD	Enhanced Reductive Dechlorination
ft	Feet/foot
IW	Injection Well
mg/L	Milligrams per Liter
MW	Monitoring Well
NJDEP	New Jersey Department of Environmental Protection
PCE	Tetrachloroethene
PDB	Passive Diffusion Bag
PICA	Picatinny Arsenal
RD	Remedial Design
ROD	Record of Decision
SCL	Site Cleanup Level
Sovereign	Sovereign Consulting Inc.
SW	Surface Water
TCE	Trichloroethene
TOC	Total Organic Carbon
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VOC	Volatile Organic Compound

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1. INTRODUCTION

EA Engineering, Science, and Technology, Inc., PBC (EA) has been retained by the U.S. Army Environmental Command to perform Installation Restoration Program activities at Picatinny Arsenal (PICA), located in Morris County, New Jersey (**Figure 1**). This work is being performed under the Environmental Remediation Multiple Award Indefinite Delivery/Indefinite Quantity Contract W91ZLK-13-D-0004 Delivery Order 0009, and will be overseen by the USAEC and the United States Army Corps of Engineers (USACE) for PICA, under approval by the New Jersey Department of Environmental Protection (NJDEP), and United States Environmental Protection Agency (USEPA) Region 2. Field sampling activities associated with this contract are being conducted by EA's subcontractor, Sovereign Consulting Inc. (Sovereign).

In accordance with the Record of Decision (ROD) (U.S. Army 2009) for Area B (PICA-205) (**Figure 2**), the selected Response Action – Expedited *In Situ* Enhanced Bioremediation through injections of molasses has been implemented to address groundwater contaminated with chlorinated volatile organic compounds (CVOCs). The long-term monitoring program summary through 2020 (including sample locations and analytes) is presented in **Table 1**. Land Use Controls are also implemented as part of the selected remedy in accordance with the ROD. However, land use control activities will be discussed under a separate cover as part of the 2018 Annual Review and Certification of Sites with Land Use Controls and Sites with Monitoring of Land Use.

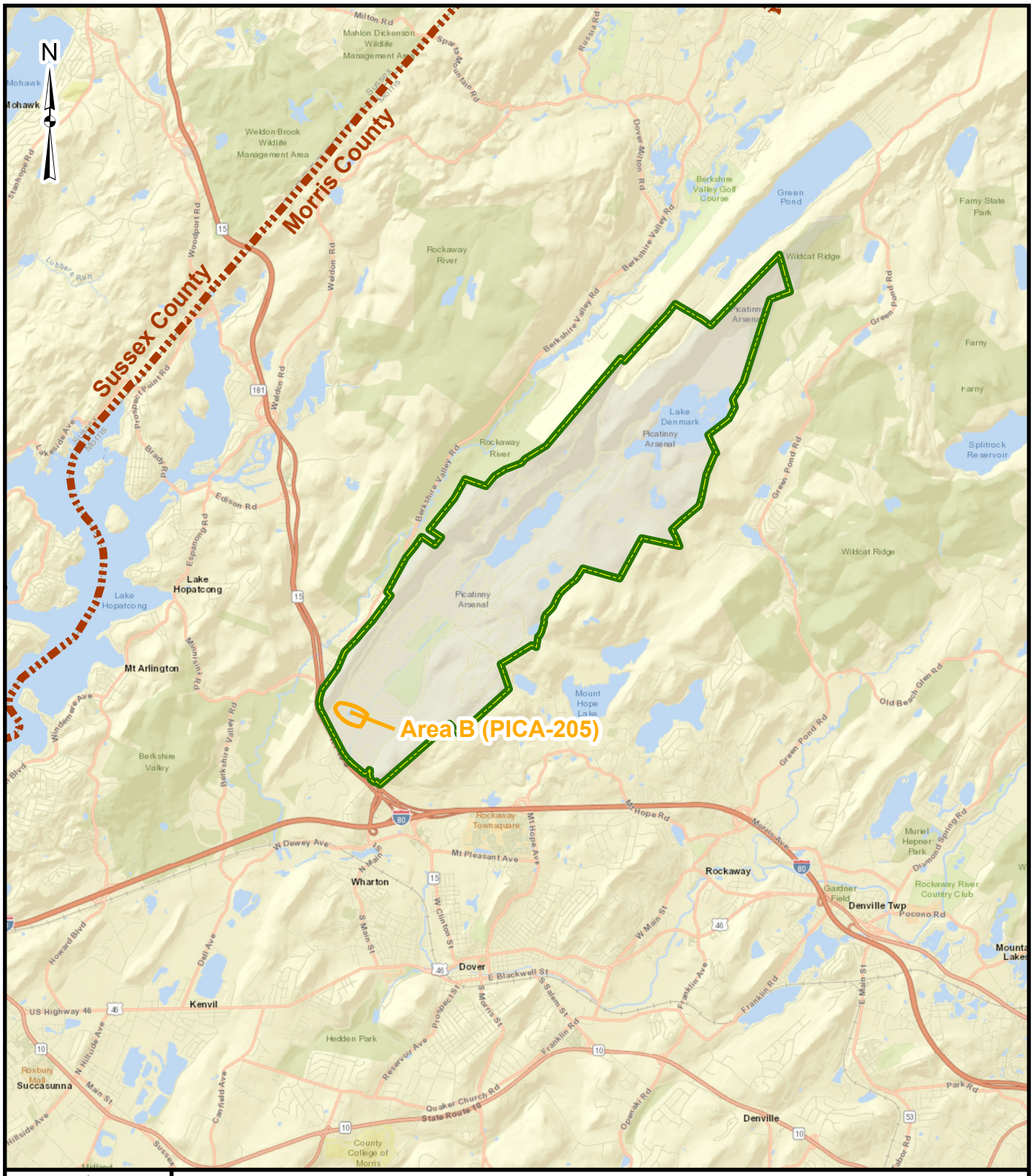
The work presented in this Annual Report was performed in accordance with the Final Remedial Design (RD) (ARCADIS U.S., Inc. [ARCADIS] 2008). This Annual Monitoring Report summarizes all the activities conducted at Area B (PICA-205) during 2018. This report also provides data analysis and interpretation of response action performance since remedy implementation through July 2018. The results of the following activities are presented in this report. Sampling locations are presented in **Figure 3**.

- ***Annual Groundwater Monitoring***: Groundwater monitoring samples were collected from three injection wells (IW) (20/24IW-1B, 20/24IW-3B and 20/24IW-09) on 31 July 2018 and were analyzed for volatile organic compounds (VOCs) by USEPA Method 8260C.

- ***Performance Monitoring***: Groundwater samples were collected from two IWs (20/24IW-3 and 20/24IW-10) and four monitoring wells (MWs) (20/24MW-6, 20/24MW-6B, 20/24MW-8 and 20/24MW-18) on 31 July 2018 and analyzed for VOCs (via USEPA Method 8260C), total organic carbon (TOC) (Method SM 5310B), and dissolved gases (Method RSK-175). Field measurements of pH were also recorded. These additional samples were collected from six wells down gradient of injection lines 2 and 3 to evaluate the effectiveness of enhanced biodegradation and to determine the frequency of future injection events.

- ***Surface Water Monitoring***: Five surface water samples (SW-1, SW-2, SW-3, SW-4 and SW-5) were collected on 31 July 2018 from the landfill pond and adjacent drainage ditch.

Surface water samples were analyzed for VOCs by USEPA Method 8260C, TOC by USEPA Method 5310B and vinyl chloride by USEPA Method 8260C SIM.



Legend

Installation Boundary

0 2

Miles

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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2018 ANNUAL REPORT
AREA B (PICA-205)
PICATINNY ARSENAL

Figure 1
Picatinny Arsenal
General Location

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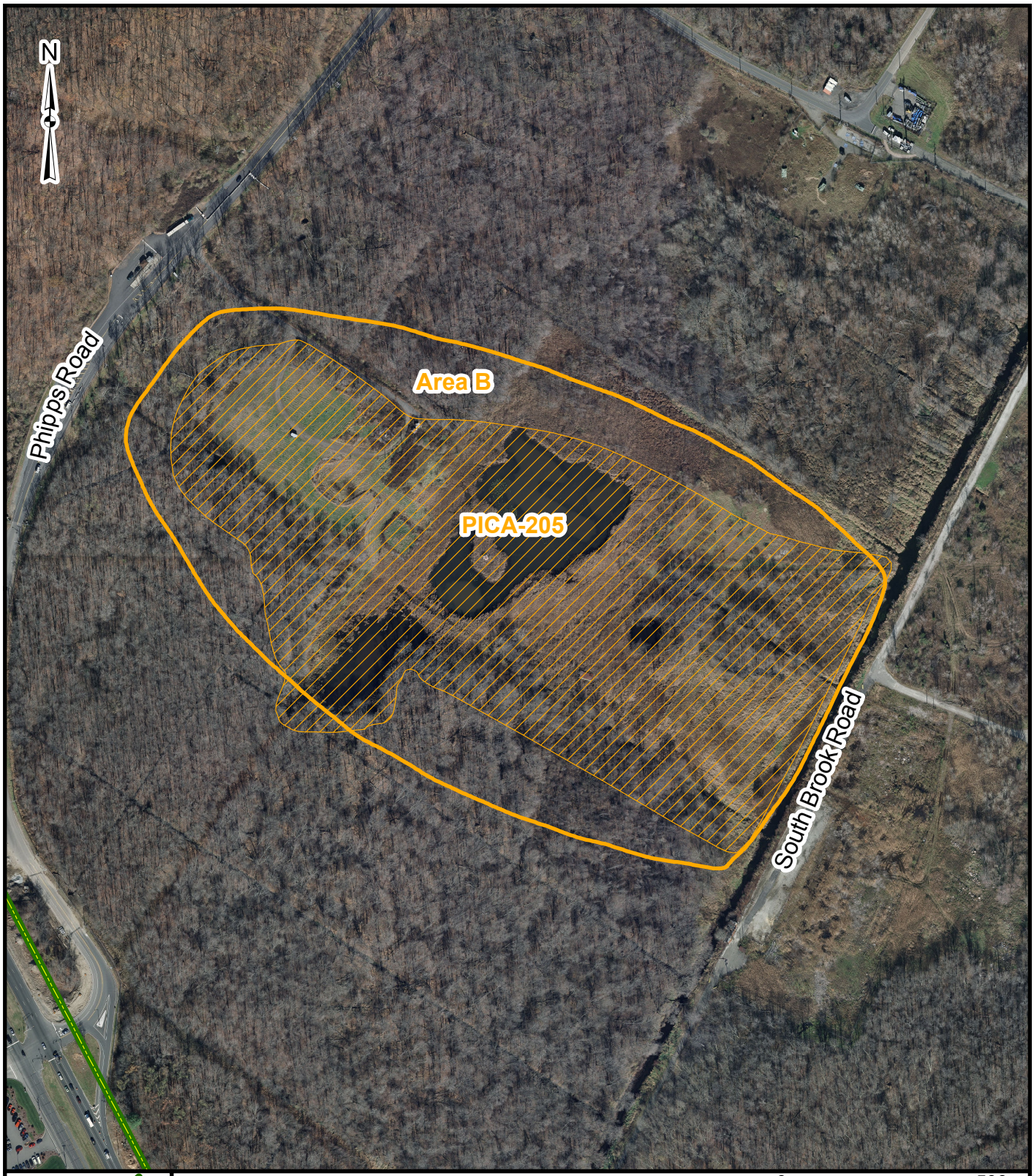

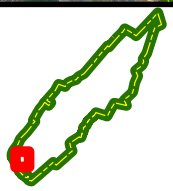

Area B

Installation Boundary

0 500

Feet

EA Engineering, Science, and Technology, Inc., PBC

2018 ANNUAL REPORT
AREA B (PICA-205)
PICATINNY ARSENAL

Figure 2
Area B (PICA-205)
Location Map

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Installation Boundary
Area B
Surface Water Sampling Location
Existing Injection Well
Annual Monitoring Well
Performance Monitoring Well

Notes:
Highlighted locations sampled as part of the 2018 sampling program

0 150
Feet

EA Engineering, Science, and Technology, Inc., PBC

2018 ANNUAL REPORT
AREA B (PICA-205)
PICATINNY ARSENAL

Figure 3
Sample Locations

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Table 1 Monitoring Program Schedule

				Calendar Year	2017				2018				2019				2020			
				Operation Year	Ninth Year		Tenth Year				Eleventh Year				Twelth Year				Thirteenth Year	
					Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Category	Media	Sampling Frequency	Sample Locations	Analyte	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Performance Monitoring	Groundwater	Annual	20/24IW-3 20/24IW-10 20/24MW-6 20/24MW-6B 20/24MW-8 20/24MW-18	Tetrachloroethene Trichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethene Vinyl Chloride Total Organic Carbon Methane Ethane Ethene				Completed			Completed				Planned				Planned	
Surface Water Monitoring	Surface Water	Annual	SW-1 SW-2 SW-3 SW-4 SW-5	Tetrachloroethene Trichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethene Vinyl Chloride Total Organic Carbon				Completed			Completed				Planned				Planned	
Annual Groundwater Monitoring	Groundwater	Annual	20/24IW-1B 20/24IW-3B 20/24IW-09	Tetrachloroethene Trichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethene Vinyl Chloride				Completed			Completed				Planned				Planned	

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2. SITE ACTIVITIES AND ANALYSIS

Site activities conducted in 2018 consisted of annual groundwater monitoring, performance monitoring, and surface water monitoring in accordance with the monitoring program established in the RD (ARCADIS 2008) and revisions to the program documented in subsequent annual reports (most recently the 2017 report [EA 2017]. Groundwater monitoring, performance monitoring and surface water monitoring was completed 31 July 2018. Well inspection and groundwater sampling forms for the groundwater event were completed by Sovereign personnel at the time of sample collection and are included in **Appendix A**. Further, groundwater and surface water sample results are reported in laboratory analytical reports included in **Appendix B**.

2.1 GROUNDWATER ELEVATION MEASUREMENTS

Prior to groundwater sampling activities, water levels in the monitoring network were gauged on 9 July 2018. MW locations are presented in **Figure 3**. Well construction specifications and water level data for the MW network are provided in **Table 2**. A groundwater potentiometric map is provided on **Figure 4**.

2.2 ANNUAL GROUNDWATER MONITORING

Annual groundwater monitoring consisted of sampling the MWs listed below:

- Annual MWs:
  - 20/24IW-01B
  - 20/24IW-03B
  - 20/24IW-09.

- Performance MWs within the Injection Area:
  - 20/24IW-03
  - 20/24MW-06
  - 20/24MW-06B
  - 20/24MW-08
  - 20/24IW-10
  - 20/24MW-18.

Annual MWs and performance MWs were sampled on 31 July 2018. Annual monitoring samples were collected from three MWs (listed above) using passive diffusion bags (PDBs) and analyzed for VOCs by USEPA Method 8260C. Additional quality assurance and control samples (field duplicate, matrix spike/matrix spike duplicate and trip blank) were also collected.

Groundwater performance samples were collected from six MWs located within the injection monitoring areas (listed above). VOC samples were collected using PDBs and analyzed using USEPA Method 8260C. Hydrasleeves were used to collect additional volume for analysis of TOC (Method SM 5310B) and dissolved gases (methane, ethane, and ethane via

Method RSK-175). Field parameters (temperature, oxidation reduction potential, conductivity, pH, dissolved oxygen, and turbidity) were collected from each well and are provided in **Appendix A**.

2.3 SURFACE WATER MONITORING

Surface water monitoring consisted of collection of surface water samples at locations Surface Water (SW)-1, SW-2, SW-3, SW-4, and SW-5 (**Figure 3**) on 31 July 2018. Surface water samples were collected using grab sampling methodology and were analyzed for VOCs by USEPA Method 8260 (with vinyl chloride by USEPA Method 8260C SIM) and TOC by USEPA Method 5310B. Field parameters (temperature, dissolved oxygen, salinity, pH) were collected from each surface water location and are provided in **Appendix A**.

2.4 DATA VALIDATION AND USABILITY

All data collected were third-party validated in accordance with the USEPA National Functional Guidelines for Organic Data Review dated August 2014. The validation criteria for long-term monitoring data include a review of the laboratory report narrative for noted deficiencies and the potential impact to data usability. Therefore, a review of chain-of-custodies, sample preservation, sample receipt logs, and a review of quality control parameters were performed for all data packages. Acetone was detected in five samples. The observed acetone concentrations are orders of magnitude below USEPA Regional Screening Levels. There is no history of acetone at the site, it is not a daughter product of observed contamination and is commonly observed as laboratory contamination. No major deficiencies were identified during the data validation; therefore, no additional review was performed. A copy of the Data Validation Report is included with **Appendix B**.

Table 2 Groundwater Elevation Data

Well ID	Monitored Hydrostratigraphic Unit[1]	Surface/Ground Elevation[2 and 3]	Surface Completion	RPE[2 and 3] (inner casing/ cam height)	5/14/2008		6/25/2008		9/11/2008 (Baseline)		9/15/2008 (Pre injection)		9/15/2008 (Post Injection)		12/15/2008 (Pre injection)		1/27/2009 (Pre injection)	
					Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)
DM20-2	Unconfined	685.4	Stick-Up	686.78	2.34	684.44												
20/24MW-18	Unconfined	688.9	Stick-Up	690.17	4.85	685.32									4.33	685.84		
MW24-2A	Unconfined	690.48	Stick-Up	692.23	3.78	688.45	4.70	687.53							3.72	688.51		
MW24-2B	Upper Semi-Confined	690.24	Stick-Up	691.38	0.40	690.98	2.11	689.27							0.00	691.38		
MW24-3	Unconfined	686.18	Stick-Up	687.41	2.58	684.83	3.25	684.16										
20/24MW-1	Upper Semi-Confined	687.66	Stick-Up	687.06	1.87	685.19	3.25	683.81										
20/24MW-02	Upper Semi-Confined	687.8	Stick-Up	690.01	4.54	685.47	5.19	684.82							3.89	686.12		
20/24MW-2D	Lower Semi-Confined	687.53	Stick-Up	689.13	1.90	687.23									2.40	686.73		
20/24MW-3	Unconfined	688.47	Stick-Up	690.57	5.02	685.55									4.44	686.13		
20/24MW-5	Unconfined	689.85	Stick-Up	692.15	4.45	687.70									3.91	688.24		
20/24MW-6	Unconfined	690.4	Stick-Up	692.29	6.76	685.53	7.42	684.87	6.98	685.98	6.26	686.70	6.64	686.32	6.12	686.17	6.99	685.30
20/24MW-7	Unconfined	689.97	Stick-Up	691.64	6.18	685.46	6.81	684.83							5.50	686.14		
20/24MW-8	Unconfined	689.95	Stick-Up	691.44	5.98	685.46									5.3	686.14	6.18	685.26
20/24MW-9	Unconfined	692.64	Stick-Up	694.19	7.83	686.36									7.39	686.80		
20/24MW-10	Unconfined	692.36	Stick-Up	694.33	8.15	686.18									7.82	686.51		
20/24MW-11	Unconfined	692.08	Stick-Up	693.76	7.56	686.20									6.81	686.95		
20/24MW-12	Unconfined	690	Stick-up	692.13	6.62	685.51					6.19	685.94	6.52	685.61	5.98	686.15		
20/24MW-13	Unconfined	690.5	Stick-up	692.59	7.07	685.52									6.41	686.18		
20/24MW-14	Unconfined	690.5	Stick-up	692.20	6.70	685.50									6.04	686.16		
20/24MW-6B	Upper Semi-Confined	690.4	Stick-up	692.24	6.71	685.53	7.37	684.87	6.92	685.32	6.10	686.14	6.59	685.65	6.08	686.16	6.90	685.34
20/24IW-1	Unconfined	689	Stick-up	691.50	6.40	685.10			6.76	685.86					5.72	685.78		
20/24IW-2	Unconfined	689.67	Stick-Up	691.99	5.80	685.52			6.8	685.19	6.44	685.66	6.1	686	5.91	686.08	6.87	685.12
20/24IW-3	Unconfined	690.18	Stick-up	692.1	6.31	685.79			6.64	685.46	6.57	686.92	5.8	687.69	5.75	686.35	6.6	685.50
20/24IW-4	Unconfined	690.87	Stick-up	693.49	6.73	686.09	7.52	685.97	7.94	685.55					6.8	686.69	7.87	685.62
20/24IW-5	Unconfined	691.25	Stick-up	693.26	6.91	686.35									6.1	687.16		
20/24IW-6	Unconfined	693.5	Stick-up	696.09	8.52	686.9			10.1	685.99	7.1	686.66	7.16	686.6	8.64	687.45		
20/24IW-7	Unconfined	691.92	Stick-up	693.76	6.41	687.35			7.29	686.47					5.79	687.97		
20/24IW-8	Unconfined	687.59	Stick-up	689.55	4.25	685.3	4.8	684.75							3.21	686.34		
20/24IW-9	Unconfined	687.04	Stick-up	688.74	3.90	684.84	4.87	683.87							2.8	685.94		
20/24IW-10	Unconfined	685.85	Stick-up	687.65	2.21	685.44	3.77	683.88							2.22	685.43		
20/24IW-1B	Upper Semi-Confined	687.07	Stick-up	689.46	4.12	685.34	4.57	684.89							3.18	686.28		
20/24IW-2B	Upper Semi-Confined	687.42	Stick-up	689.92	3.91	686.01	4.61	685.31							3.43	686.49		
20/24IW-3B	Upper Semi-Confined	685.96	Stick-up	688.31	2.89	685.42	3.53	684.78							1.99	686.32		
20/24IW-11	Unconfined	689.16	Stick-up	691.57					6.55	685.02					5.51	686.06		
20/24IW-12	Unconfined	691.18	Stick-up	693.65					8.12	685.53					6.41	687.24		
20/24IW-13	Unconfined	688.77	Stick-Up	689.94					4.41	685.53					3.01	686.93		
20/24IW-14	Unconfined	693.4	Stick-up	694.47											7.36	687.11		
20/24IW-15	Unconfined	694.223	Flush mount	693.62					6.77	686.85					7.75	685.87		
20/24IW-16	Unconfined	694.37	Flush mount	693.44					7.32	686.12					6.35	687.09	7.83	685.61
20/24IW-17	Unconfined	693.51	Flush mount	695.23					9.28	685.95					7.72	687.51	8.95	686.28
20/24IW-18	Unconfined	693.33	Stick-up	694.26											7.36	686.90		
20/24IW-19	Unconfined	693.16	Stick-up	694.17					8.1	686.07					7.18	686.99	8.55	685.62
20/24IW-20	Unconfined	692.77	Stick-up	693.77					7.7	686.07					6.77	687.00		
20/24MW-15	Unconfined	690.69	Stick-up	692.27					6.71	685.56	6.56	685.71	5.78	686.49	5.76	686.51	6.58	685.69
20/24MW-16	Unconfined	693.29	Stick-up	694.87					8.97	685.9	8.55	686.32	8.02	686.85	7.68	687.19	8.7	686.17
20/24MW-17	Unconfined	694.06	Flush mount	693.62					7.64	685.98	6.61	687.01	6.49	687.13	6.26	687.36	7.38	686.24

[1] Based upon previously designated lithostratigraphy.
[2] Per Shaw, July 2005 Area B (Site 20/24) HRC or Groundwater Treatment Pilot Study Report.
[3] Per ARCADIS, January 2007, April 2008, or August 2008 Area B (Site 20/24) Survey.

All elevations in feet relative to NAVD 88.
MSL-Mean Sea Level
RPE - Reference Point Elevation for groundwater depth measurement

Table 2 Groundwater Elevation Data

Well ID	Monitored Hydrostratigraphic Unit[1]	Surface/Ground Elevation[2 and 3]	Surface Completion	RPE[2 and 3] (inner casing/ cam height)	6/4/2009		9/1/2009		11/16/2009		3/30/2010		6/8/2010		8/13/2010		9/10/2010	
					Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft below measuring point)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)
DM20-2	Unconfined	685.4	Stick-Up	686.78			2.86	683.92										
20/24MW-18	Unconfined	688.9	Stick-Up	690.17			5.11	685.06									6.7	683.47
MW24-2A	Unconfined	690.48	Stick-Up	692.23			4.31	687.92							6.47			
MW24-2B	Upper Semi-Confined	690.24	Stick-Up	691.38			3.50	687.88							6.78			
MW24-3	Unconfined	686.18	Stick-Up	687.41			3.06	684.35										
20/24MW-1	Upper Semi-Confined	687.66	Stick-Up	687.06			2.13	684.93										
20/24MW-02	Upper Semi-Confined	687.8	Stick-Up	690.01			4.83	685.18										
20/24MW-2D	Lower Semi-Confined	687.53	Stick-Up	689.13			3.47	685.66										
20/24MW-3	Unconfined	688.47	Stick-Up	690.57			5.26	685.31										
20/24MW-5	Unconfined	689.85	Stick-Up	692.15			5.03	687.12							7.05			
20/24MW-6	Unconfined	690.4	Stick-Up	692.29	6.76	685.53	7.07	685.22	6.93	685.36	6.01	686.28	7.50	684.79		692.29	7.59	684.70
20/24MW-7	Unconfined	689.97	Stick-Up	691.64			Abandoned											
20/24MW-8	Unconfined	689.95	Stick-Up	691.44	5.94	685.50	6.27	685.17	6.18	685.26	5.22	686.22	6.71	684.73		691.44	6.8	684.64
20/24MW-9	Unconfined	692.64	Stick-Up	694.19			8.18	686.01										
20/24MW-10	Unconfined	692.36	Stick-Up	694.33			Abandoned											
20/24MW-11	Unconfined	692.08	Stick-Up	693.76			Abandoned											
20/24MW-12	Unconfined	690	Stick-up	692.13			6.92	685.21										
20/24MW-13	Unconfined	690.5	Stick-up	692.59			7.35	685.24										
20/24MW-14	Unconfined	690.5	Stick-up	692.20			6.99	685.21										
20/24MW-6B	Upper Semi-Confined	690.4	Stick-up	692.24	6.78	685.46	7.03	685.21	6.88	685.36	6.42	685.82	7.56	684.68		692.24	7.72	684.52
20/24IW-1	Unconfined	689	Stick-up	691.50			6.86	684.64										
20/24IW-2	Unconfined	689.67	Stick-Up	691.99			6.89	685.10										
20/24IW-3	Unconfined	690.18	Stick-up	692.1	6.44	685.66	6.63	685.47	6.52	685.58	5.36	686.74	7.13	684.97		692.10	5.83	686.27
20/24IW-4	Unconfined	690.87	Stick-up	693.49			7.70	685.79										
20/24IW-5	Unconfined	691.25	Stick-up	693.26			7.40	685.86			5.44	687.82						
20/24IW-6	Unconfined	693.5	Stick-up	696.09			9.50	686.59							11.37			
20/24IW-7	Unconfined	691.92	Stick-up	693.76			7.05	686.71							8.92			
20/24IW-8	Unconfined	687.59	Stick-up	689.55			4.35	685.20									5.65	683.90
20/24IW-9	Unconfined	687.04	Stick-up	688.74			4.76	683.98									5.84	682.90
20/24IW-10	Unconfined	685.85	Stick-up	687.65			3.72	683.93									4.72	682.93
20/24IW-1B	Upper Semi-Confined	687.07	Stick-up	689.46			4.22	685.24									5.58	683.88
20/24IW-2B	Upper Semi-Confined	687.42	Stick-up	689.92			4.33	685.59									5.36	684.56
20/24IW-3B	Upper Semi-Confined	685.96	Stick-up	688.31			3.19	685.12									4.53	683.78
20/24IW-11	Unconfined	689.16	Stick-up	691.57			Bee nest											
20/24IW-12	Unconfined	691.18	Stick-up	693.65			7.64	686.01										
20/24IW-13	Unconfined	688.77	Stick-Up	689.94			4.36	685.58										
20/24IW-14	Unconfined	693.4	Stick-up	694.47			8.38	686.09										
20/24IW-15	Unconfined	694.223	Flush mount	693.62			8.09	685.53										
20/24IW-16	Unconfined	694.37	Flush mount	693.44			7.36	686.08							9.46			
20/24IW-17	Unconfined	693.51	Flush mount	695.23			8.82	686.41							10.62			
20/24IW-18	Unconfined	693.33	Stick-up	694.26			8.59	685.67							10.35			
20/24IW-19	Unconfined	693.16	Stick-up	694.17			8.52	685.65							10.18			
20/24IW-20	Unconfined	692.77	Stick-up	693.77			Bee nest								9.97			
20/24MW-15	Unconfined	690.69	Stick-up	692.27	6.51	685.76	6.64	685.63	6.53	685.74	5.30	686.97	7.42	684.85		692.27	8.68	683.59
20/24MW-16	Unconfined	693.29	Stick-up	694.87	8.66	686.21	8.75	686.12	8.53	686.34	7.05	687.82	9.26	685.61		694.87	10.65	684.22
20/24MW-17	Unconfined	694.06	Flush mount	693.62	7.37	686.25	7.31	686.31	7.13	686.49	5.82	687.80	7.88	685.74		693.62	9.39	684.23

[1] Based upon previously designated lithostratigraphy.
[2] Per Shaw, July 2005 Area B (Site 20/24) HRC or Groundwater Treatment Pilot Study Report.
[3] Per ARCADIS, January 2007, April 2008, or August 2008 Area B (Site 20/24) Survey.

All elevations in feet relative to NAVD 88.
MSL-Mean Sea Level
RPE - Reference Point Elevation for groundwater depth measurement

Table 2 Groundwater Elevation Data

Well ID	Monitored Hydrostratigraphic Unit[1]	Surface/Ground Elevation[2 and 3]	Surface Completion	RPE[2 and 3] (inner casing/ cam height)	3/24/2011		9/2/2011		2/17/2012		3/8/2012		9/6/2012		8/7/2013		6/23/2014	
					Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)
DM20-2	Unconfined	685.4	Stick-Up	686.78														
20/24MW-18	Unconfined	688.9	Stick-Up	690.17					4.83	685.34	4.93	-4.93	5.94	-5.94	5.33	684.84	5.11	685.06
MW24-2A	Unconfined	690.48	Stick-Up	692.23														
MW24-2B	Upper Semi-Confined	690.24	Stick-Up	691.38														
MW24-3	Unconfined	686.18	Stick-Up	687.41														
20/24MW-1	Upper Semi-Confined	687.66	Stick-Up	687.06														
20/24MW-02	Upper Semi-Confined	687.8	Stick-Up	690.01														
20/24MW-2D	Lower Semi-Confined	687.53	Stick-Up	689.13														
20/24MW-3	Unconfined	688.47	Stick-Up	690.57														
20/24MW-5	Unconfined	689.85	Stick-Up	692.15														
20/24MW-6	Unconfined	690.4	Stick-Up	692.29	5.54	686.75	6.35	685.94			6.82	679.93	7.99	678.76	7.22	685.07	6.97	685.32
20/24MW-7	Unconfined	689.97	Stick-Up	691.64														
20/24MW-8	Unconfined	689.95	Stick-Up	691.44	5.76	685.68	5.54	685.90			6.04	679.64	7.18	678.50	6.45	684.99	6.19	685.25
20/24MW-9	Unconfined	692.64	Stick-Up	694.19														
20/24MW-10	Unconfined	692.36	Stick-Up	694.33														
20/24MW-11	Unconfined	692.08	Stick-Up	693.76														
20/24MW-12	Unconfined	690	Stick-up	692.13														
20/24MW-13	Unconfined	690.5	Stick-up	692.59														
20/24MW-14	Unconfined	690.5	Stick-up	692.20														
20/24MW-6B	Upper Semi-Confined	690.4	Stick-up	692.24	6.80	685.44	6.56	685.68			6.88	678.56	8.08	677.36	7.17	685.07	6.89	685.35
20/24IW-1	Unconfined	689	Stick-up	691.50														
20/24IW-2	Unconfined	689.67	Stick-Up	691.99			6.31	685.68										
20/24IW-3	Unconfined	690.18	Stick-up	692.1	6.45	685.65	6.37	685.73			6.42	679.23	7.75	677.90	6.82	685.28	6.57	685.53
20/24IW-4	Unconfined	690.87	Stick-up	693.49			6.98	686.51										
20/24IW-5	Unconfined	691.25	Stick-up	693.26														
20/24IW-6	Unconfined	693.5	Stick-up	696.09														
20/24IW-7	Unconfined	691.92	Stick-up	693.76														
20/24IW-8	Unconfined	687.59	Stick-up	689.55					4.1	685.45			5.34	-5.34	4.68	684.87	4.38	685.17
20/24IW-9	Unconfined	687.04	Stick-up	688.74					4.16	684.58			5.18	-5.18	4.17	684.57	3.87	684.87
20/24IW-10	Unconfined	685.85	Stick-up	687.65					3.21	684.44	3.35	-3.35	3.98	-3.98	3.16	684.49	2.77	684.88
20/24IW-1B	Upper Semi-Confined	687.07	Stick-up	689.46					3.92	685.54			5.26	-5.26	4.55	684.91	4.11	685.35
20/24IW-2B	Upper Semi-Confined	687.42	Stick-up	689.92					8.94	680.98			5.97	-5.97	5.3	684.62	4.16	685.76
20/24IW-3B	Upper Semi-Confined	685.96	Stick-up	688.31					2.88	685.43			4.12	-4.12	3.42	684.89	3.07	685.24
20/24IW-11	Unconfined	689.16	Stick-up	691.57														
20/24IW-12	Unconfined	691.18	Stick-up	693.65														
20/24IW-13	Unconfined	688.77	Stick-Up	689.94														
20/24IW-14	Unconfined	693.4	Stick-up	694.47														
20/24IW-15	Unconfined	694.223	Flush mount	693.62														
20/24IW-16	Unconfined	694.37	Flush mount	693.44			7.91	685.53										
20/24IW-17	Unconfined	693.51	Flush mount	695.23			8.24	686.99										
20/24IW-18	Unconfined	693.33	Stick-up	694.26														
20/24IW-19	Unconfined	693.16	Stick-up	694.17			7.50	686.67										
20/24IW-20	Unconfined	692.77	Stick-up	693.77														
20/24MW-15	Unconfined	690.69	Stick-up	692.27	6.30	685.97	6.3	685.97			6.44	679.53	7.86	678.11	6.91	685.36	6.58	685.69
20/24MW-16	Unconfined	693.29	Stick-up	694.87	7.91	686.96	8.03	686.84			8.39	678.57	11.14	675.82	9.01	685.86	8.61	686.26
20/24MW-17	Unconfined	694.06	Flush mount	693.62	5.25	688.37	6.61	687.01			6.98	681.39	8.91	679.46	7.61	686.01	7.17	686.45

[1] Based upon previously designated lithostratigraphy.
[2] Per Shaw, July 2005 Area B (Site 20/24) HRC or Groundwater Treatment Pilot Study Report.
[3] Per ARCADIS, January 2007, April 2008, or August 2008 Area B (Site 20/24) Survey.

All elevations in feet relative to NAVD 88.
MSL-Mean Sea Level
RPE - Reference Point Elevation for groundwater depth measurement

Table 2 Groundwater Elevation Data

Well ID	Monitored Hydrostratigraphic Unit[1]	Surface/Ground Elevation[2 and 3]	Surface Completion	RPE[2 and 3] (inner casing/ cam height)	9/21/2015		6/20/2016		10/4/2017		7/9/2018	
					Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)	Depth to Water (ft bmp)	Water Level Elevation (ft msl)
DM20-2	Unconfined	685.4	Stick-Up	686.78								
20/24MW-18	Unconfined	688.9	Stick-Up	690.17	6.68	683.49	6.87	683.30	6.25	683.92	6.00	684.17
MW24-2A	Unconfined	690.48	Stick-Up	692.23								
MW24-2B	Upper Semi-Confined	690.24	Stick-Up	691.38								
MW24-3	Unconfined	686.18	Stick-Up	687.41								
20/24MW-1	Upper Semi-Confined	687.66	Stick-Up	687.06								
20/24MW-02	Upper Semi-Confined	687.8	Stick-Up	690.01								
20/24MW-2D	Lower Semi-Confined	687.53	Stick-Up	689.13								
20/24MW-3	Unconfined	688.47	Stick-Up	690.57								
20/24MW-5	Unconfined	689.85	Stick-Up	692.15								
20/24MW-6	Unconfined	690.4	Stick-Up	692.29	8.61	683.68	7.70	684.59	8.17	684.12	7.91	684.38
20/24MW-7	Unconfined	689.97	Stick-Up	691.64								
20/24MW-8	Unconfined	689.95	Stick-Up	691.44	7.86	683.58	6.95	684.49	7.38	684.06	7.12	684.32
20/24MW-9	Unconfined	692.64	Stick-Up	694.19								
20/24MW-10	Unconfined	692.36	Stick-Up	694.33								
20/24MW-11	Unconfined	692.08	Stick-Up	693.76								
20/24MW-12	Unconfined	690	Stick-up	692.13								
20/24MW-13	Unconfined	690.5	Stick-up	692.59								
20/24MW-14	Unconfined	690.5	Stick-up	692.20								
20/24MW-6B	Upper Semi-Confined	690.4	Stick-up	692.24	8.72	683.52	7.76	684.48	8.11	684.13	7.85	684.39
20/24IW-1	Unconfined	689	Stick-up	691.50								
20/24IW-2	Unconfined	689.67	Stick-Up	691.99								
20/24IW-3	Unconfined	690.18	Stick-up	692.1	8.30	683.8	7.40	684.70	7.82	684.28	7.91	684.19
20/24IW-4	Unconfined	690.87	Stick-up	693.49								
20/24IW-5	Unconfined	691.25	Stick-up	693.26								
20/24IW-6	Unconfined	693.5	Stick-up	696.09								
20/24IW-7	Unconfined	691.92	Stick-up	693.76								
20/24IW-8	Unconfined	687.59	Stick-up	689.55	5.92	683.63	5.03	684.52	5.46	684.09	5.19	684.36
20/24IW-9	Unconfined	687.04	Stick-up	688.74	5.42	683.32	4.66	684.08	4.87	683.87	4.61	684.13
20/24IW-10	Unconfined	685.85	Stick-up	687.65	4.22	683.43	3.53	684.12	3.77	683.88	3.57	684.08
20/24IW-1B	Upper Semi-Confined	687.07	Stick-up	689.46	5.80	683.66	4.92	684.54	5.34	684.12	5.03	684.43
20/24IW-2B	Upper Semi-Confined	687.42	Stick-up	689.92	6.17	683.75	5.44	684.48	5.67	684.25	5.16	684.76
20/24IW-3B	Upper Semi-Confined	685.96	Stick-up	688.31	4.20	684.11	3.88	684.43	4.28	684.03	3.97	684.34
20/24IW-11	Unconfined	689.16	Stick-up	691.57								
20/24IW-12	Unconfined	691.18	Stick-up	693.65								
20/24IW-13	Unconfined	688.77	Stick-Up	689.94								
20/24IW-14	Unconfined	693.4	Stick-up	694.47								
20/24IW-15	Unconfined	694.223	Flush mount	693.62								
20/24IW-16	Unconfined	694.37	Flush mount	693.44								
20/24IW-17	Unconfined	693.51	Flush mount	695.23								
20/24IW-18	Unconfined	693.33	Stick-up	694.26								
20/24IW-19	Unconfined	693.16	Stick-up	694.17								
20/24IW-20	Unconfined	692.77	Stick-up	693.77								
20/24MW-15	Unconfined	690.69	Stick-up	692.27	8.45	683.82	7.42	684.85	7.83	684.44	7.61	684.66
20/24MW-16	Unconfined	693.29	Stick-up	694.87	10.80	684.07	9.46	685.41	9.94	684.93	9.96	684.91
20/24MW-17	Unconfined	694.06	Flush mount	693.62	9.38	684.24	8.10	685.52	8.58	685.04	8.42	685.20

[1] Based upon previously designated lithostratigraphy.
[2] Per Shaw, July 2005 Area B (Site 20/24) HRC or Groundwater Treatment Pilot Study Report.
[3] Per ARCADIS, January 2007, April 2008, or August 2008 Area B (Site 20/24) Survey.

All elevations in feet relative to NAVD 88.
MSL-Mean Sea Level
RPE - Reference Point Elevation for groundwater depth measurement

3. 2018 ANNUAL RESULTS

This section presents the results of annual site activities conducted in 2018. Results from the groundwater and surface water sampling events are provided in **Tables 3 and 4**, respectively. Sampling logs are provided in **Appendix A**. Laboratory analytical reports are included in **Appendix B**.

3.1 GROUNDWATER ELEVATIONS

Groundwater elevations measured in July 2018 ranged from a minimum of 684.08 feet (ft) above mean sea level (amsl) at 20/24IW-10 to a maximum of 685.20 ft amsl at 20/24MW-17. General groundwater flow direction is to the southeast, towards the landfill pond, although some groundwater also flows southwest (once south of 20/24MW-06) toward 20/24MW-18. Depth to groundwater measurements, including historical measurements, and corresponding groundwater elevations are provided in **Table 2**. A groundwater potentiometric map is provided on **Figure 4**.

3.2 2018 GROUNDWATER RESULTS

The following five contaminants of concern (COCs) were identified in the ROD (U.S. Army 2009) for Area B Groundwater (PICA-205):

- 1,1- Dichloroethene (DCE)
- Cis-1,2- DCE
- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- Vinyl chloride (VC).

Analytical results were compared against site cleanup levels (SCLs) established for each of the above listed COCs in accordance with the ROD (U.S. Army 2009). The detections of each of the COCs during the 2018 sampling event are summarized below:

- PCE, TCE, and 1,1-DCE were not detected at any groundwater sampling location.

- Cis-1,2-DCE was detected below the SCL (70 micrograms per liter [µg/L]) at one of the nine wells sampled during the annual and performance monitoring events. The detection occurred at 20/24MW-06B (0.35 J µg/L).

- VC was detected above the SCL (1.0 µg/L) in two of the nine wells sampled during the annual and performance monitoring events. VC detections were observed above the SCL at 20/24IW-03B (2.7 µg/L) and 20/24MW-18 (4.3 µg/L), and below the SCL at 20/24MW-06B (0.54 J µg/L).

In addition to the collection and analysis of VOCs, dissolved gases (methane, ethane, and ethene) were evaluated at performance MWs. The evaluation of these gases yielded the following observations:

- MW 20/24MW-6B (downgradient of injection line 3) had an ethene detection of 22.3 µg/L, an increase from 14.8 µg/L observed in 2017. Ethene was detected within 20/24MW-08 (0.47 J µg/L) (the farthest down gradient portion of the plume) but was not detected at 20/24MW-18. Ethene concentrations within the remaining three wells were not detected above the reporting limit (0.5 µg/L).

- Ethane was detected in all six MWs sampled for ethane. Concentrations of ethane ranged from 0.35 J µg/L at 20/24IW-03, to 102 µg/L at MW 20/24MW-6B.

- An increase in methane concentrations was observed in four of the six wells tested for methane during the July 2018 sampling event. Monitoring wells downgradient of injection line 3 showed the highest concentrations (17,700 µg/L at 20/24MW-06 and 13,200 µg/L at 20/24IW-10). Monitoring wells 20/24MW-08 and 20/24MW-18 showed increases in methane concentrations (5,610 µg/L and 394 µg/L respectively). Monitoring well 20/24MW-6B and injection well 20/24IW-03 displayed decreases in methane concentrations from the 2017 sampling event.

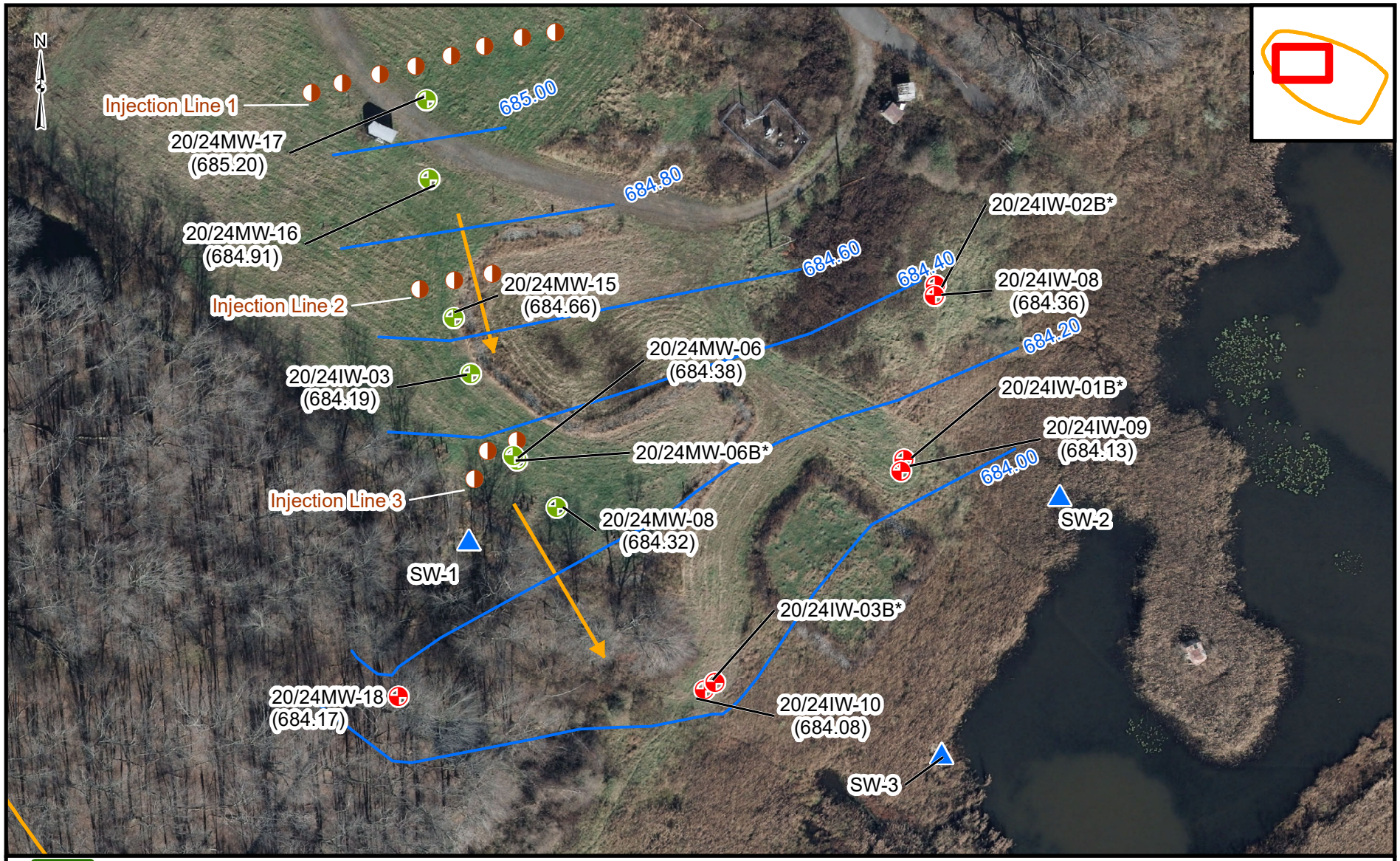
Table 3 presents the July 2018 performance monitoring analytical results for each monitoring well. A summary of COC analytical results is provided on **Figure 5**. VOC concentration charts for groundwater samples are included in **Appendix C**. Data trend plots are included in **Appendix D**.

3.3 TOTAL ORGANIC CARBON AND PH MONITORING

In addition to the annual performance monitoring, monitoring of TOC and pH was conducted to evaluate the effectiveness of enhanced biodegradation and to determine the frequency of future injection events. During the July 2018 sampling event, the highest TOC concentration (49.2 milligrams per liter [mg/L]) was observed at 20/24MW-06 (located adjacent to and slightly downgradient of injection line 3 [**Figure 3]**) and the lowest TOC concentration (6.0 mg/L) was observed at 20/24MW-18 (located on the plume periphery and downgradient from injection line 3). This is consistent with 2017 TOC results. The TOC concentrations and pH levels obtained during the 2018 event are reported in **Table 3**. Data trend plots are provided in **Appendix D**.

3.4 SURFACE WATER MONITORING

Table 4 presents the 2018 analytical results for surface water. A summary of COC analytical results is provided on **Figure 5**. No COCs were detected in any of the surface water samples. Chloroform was detected in SW-2 (0.16 µg/L).



Installation Boundary
Area B
Surface Water Sampling Location
Existing Injection Well
Annual Monitoring Well
Performance Monitoring Well
Groundwater Flow Direction

Note: Groundwater elevations reported in feet above mean sea level and were measured on 9 July 2018

* Upper-semi-confined aquifer wells excluded from groundwater interpretation

0 100
Feet

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Figure 4
Groundwater Elevations

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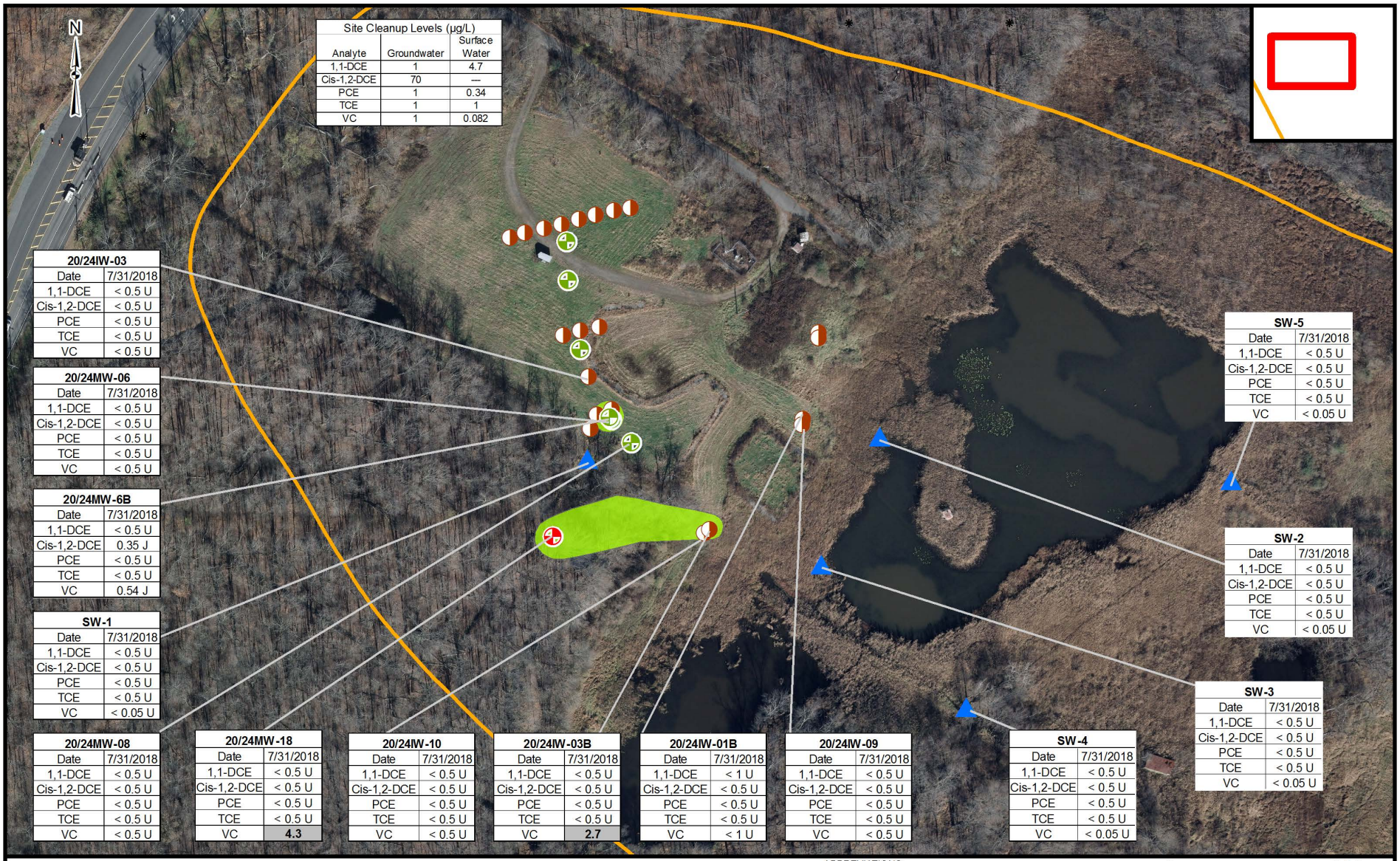

Site Cleanup Levels (µg/L)		
Analyte	Groundwater	Surface Water
1,1-DCE	1	4.7
Cis-1,2-DCE	70	—
PCE	1	0.34
TCE	1	1
VC	1	0.082

ABBREVIATIONS:
µg/L – micrograms per liter
1,1-DCE – 1,1-Dichloroethene
cis-1,2-DCE – Cis-1, 2-dichlorothene
PCE – Tetrachloroethene
TCE – Trichloroethene
VC – Vinyl chloride
U – Indicates that the analyte was analyzed for but not detected.
J – Indicates an estimated value

NOTES:
1. All values reported in µg/L
2. Bolded and shaded values indicate concentrations above the site cleanup level.

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Figure 5
Groundwater and Surface Water Monitoring Analytical Results

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Table 3 Groundwater Monitoring Results

Groundwater Results		Location ID	20/24MW-06	20/24MW-6B	20/24MW-08	20/24MW-18	20/24IW-01B	20/24IW-03	20/24IW-03B	20/24IW-09	20/24IW-10
		Sample Date	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018
	Units	Groundwater SCL									
COCs											
1,1-Dichloroethene	µg/L	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U (<0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	µg/L	70	< 0.5 U	0.35 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U (<0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	µg/L	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U (<0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U
Trichloroethene	µg/L	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U (<0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl chloride	µg/L	1	< 0.5 U	0.54 J	< 0.5 U	**4.3**	< 0.5 U	< 0.5 U (<0.5 U)	**2.7**	< 0.5 U	< 0.5 U
Wet Chemistry											
Total Organic Carbon	mg/L	--	49.2	29.1	43.1	6.0	NA	7.7 (6.6)	NA	NA	6.3
Dissolved Gases											
Methane	µg/L	--	17,700	4,360	5,610 J	394	NA	350 (365)	NA	NA	13,200
Ethane	µg/L	--	59.8	102	28.7 J	1.4	NA	0.35 J (<0.5 U)	NA	NA	0.79 J
Ethene	µg/L	--	< 0.5 U	22.3	0.47 J	< 0.5 U	NA	< 0.5 U (<0.5 U)	NA	NA	< 0.5 U
Field Collected Parameters											
pH	--	--	6.55	8.39	6.77	7.08	8.57	6.33	8.85	6.88	7.10

1. Duplicate sample results are provided in parenthesis adjacent to results presented for the parent sample location.
2. Values exceeding the applicable screening criterion are boldfaced and shaded.
"---" - Not Applicable
NA - Not Analyzed
SCL - Site Cleanup Level
µg/L - Microgram per Liter
mg/L - Milligram per Liter
U - Indicates the analyte was analyzed but not detected above the detection limit (provide in table).
J - Indicates an estimated value

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Table 4 Surface Water Monitoring Results

Surface Water Results		Location ID	SW-1	SW-2	SW-3	SW-4	SW-5
		Sample Date	7/31/2018	7/31/2018	7/31/2018	7/31/2018	7/31/2018
	Units	Surface Water SCL					
COCs							
1,1-Dichloroethene	µg/L	4.7	< 0.5 UJ (< 0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	µg/L	---	< 0.5 U (< 0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	µg/L	0.34	< 0.5 U (< 0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Trichloroethene	µg/L	1	< 0.5 U (< 0.5 U)	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl chloride	µg/L	0.082	< 0.05 U (< 0.05 U)	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Wet Chemistry							
TOC	mg/L	NA	16.8 (17.5)	11.8	12.3	13.2	37.5

µg/L - Micrograms per Liter
mg/L - Milligrams per Liter
COC - Contaminant of Concern
NA - Not Analyzed
ID - Identification
SCL - Site Cleanup Level
U - Indicates that the analyte was analyzed but not detected. Non-detects are presented less than the method detection limit.

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4. DATA TREND ANALYSIS

The following data trend analysis is based on the data collected from September 2008 to July 2018 at Area B (PICA-205). Trend charts for TOC, and dissolved gases (ethene, ethane, and methane), were constructed to assess the favorability of subsurface conditions for reductive dechlorination reactions (**Appendix D**). Data trends for the five COCs are presented to document the effectiveness of enhanced bioremediation. Trends are discussed for each set of performance MWs downgradient of the respective injection lines. The COC concentration trend charts for groundwater and surface water are provided in units of µg/L in **Appendix C**. The COC charts in molar units are presented in **Appendix D**.

4.1 INJECTION LINE 1

SCLs were achieved in this area of the plume and monitoring of wells downgradient of this injection line ceased in 2016 (EA 2016).

4.2 INJECTION LINE 2

The performance MW downgradient of injection line 2 is 20/24IW-03 which currently serves as an upgradient sample location for the monitoring wells downgradient of injection line 3. The following trends were observed:

- TOC at 20/24IW-03 is 7.7 mg/L, which is lower than baseline conditions (25 mg/L) and outside the optimal TOC range (>20-50mg/L [ITRC 2008]). At 20/24IW-03 (6.33) the pH levels are within the optimal range for reductive dechlorination (6–8.5).

- PCE has not been detected at 20/24IW-03 during the period of remedy implementation (September 2008 through the current sampling event).

- TCE was not detected during the July 2018 sampling event. TCE concentrations at 20/24IW-03 have been below the SCL during the period of remedy implementation (September 2008 through the current sampling event).

- 1,1-DCE was not detected during the July 2018 sampling event. 1,1-DCE concentrations have been below the SCL during the period of remedy implementation (September 2008 through the current sampling event) at 20/24IW-03.

- Cis-1,2-DCE was not detected during the July 2018 sampling event. No concentrations above the SCL have been detected throughout the period of remedy implementation (September 2008 through the current sampling event) at 20/24IW-03.

- VC was not detected at 20/24IW-03 during the July 2018 sampling event. VC has not been detected at 20/24IW-03 above the SCL during the period of remedy implementation (September 2008 through the current sampling event), except for an SCL exceedance during September 2010 (2.74 µg/L).

- Ethane was detected (0.35 µg/L) and ethene was not detected at well 20/24IW-03 Methane was detected at a concentration of 350 µg/L, lower than the concentration seen in the 2017 sampling event (852 µg/L).

The continued lack of detected COCs down gradient of injection line 2 show that the enhanced reductive dechlorination (ERD) remedy was effective within and downgradient of the injection line.

4.3 INJECTION LINE 3

The performance MWs downgradient of injection line 3 consist of 20/24MW-06, 20/24MW-06B, and 20/24MW-08. Performance MWs 20/24/MW-06 and 20/24MW-08 are screened in the unconfined aquifer; 20/24MW-6B is screened in the upper semi-confined aquifer. The data from the 2018 sampling event is discussed below.

- TOC concentrations at 20/24MW-06 (49.2 mg/L), 20/24MW-6B (29.1 mg/L) and 20/24MW-08 (43.1 mg/L) remain elevated above baseline concentrations and within the optimal TOC range (>20-50 mg/L [ITRC 2008]); pH values are within the optimal range for reductive dechlorination (6–8.5) at all three MWs. Furthermore, spikes in methane detections following the injection event in August 2017 indicate methanogenic redox conditions, which are favorable for reductive dechlorination. The current TOC, pH, and methane concentrations demonstrate that conditions continue to be favorable for reductive dechlorination within and downgradient of injection line 3.

- PCE has not been detected during the period of remedy implementation (September 2008 through the current sampling event) at 20/24MW-06, 20/24MW-6B, and 20/24MW-8.

- TCE concentrations have declined over the period of remedy implementation (September 2008 through the current sampling event) and were not detected at any locations during the July 2018 sampling event. Concentrations of TCE have been below the SCL since March 2010 at 20/24MW-6B, below the SCL since September 2010 at 20/24MW-8, and below the SCL since June 2009 at 20/24MW-06.

- 1,1-DCE was not detected at any locations during the July 2018 sampling event. Concentrations of 1,1-DCE have been below the SCL since September 2009 at 20/24MW-6B, below the SCL since September 2010 at 20/24MW-8, and have been not detected during the period of remedy implementation (September 2008 through the current sampling event) at 20/24MW-06.

- Cis-1,2-DCE was not detected at 20/24MW-06 or 20/24MW-08 in July 2018 and was detected at concentrations below the SCL at 20/24MW-6B (0.35 J µg/L). Cis-1,2-DCE has historically been detected at concentrations above the SCL at 20/24MW-6B and 20/24MW-8, and below the SCL at 20/24MW-06 during the period of remedy implementation. However, concentrations have declined and have been below the SCL at 20/24MW-06B since November 2009 and at 20/24-MW-8 since September 2011.

- Concentrations of VC have been below the SCL since November 2009 at 20/24MW-06. Concentrations of VC at 20/24MW-06B have declined significantly during the period of remedy implementation from a peak concentration of 354 µg/L (December 2008) and were below the SCL from November 2011 through September 2015. VC concentrations during November 2017 were greater than the SCL (1 µg/L) and increased from the 2016 sampling event (4.5 µg/L to 8.8 µg/L) at this well. In 2018, VC at 20/24MW-06B was 0.54 µg/L. At 20/24MW-08, VC concentrations have exhibited a strong declining trend; the September 2008 concentration of 414 µg/L decreased to below the SCL by March 2012. Since March 2012, VC rebounded to above the SCL at 35.4 µg/L in 2016. VC declined from the observed 2016 concentration to 15.3 µg/L in November 2017, and to non-detect in 2018.

- Ethane concentrations at wells 20/24MW-06 and 20/24MW-6B, immediately downgradient of injection line 3, increased from the 2016 sampling event and continue to be above baseline. Ethane concentrations at 20/24MW-8, further downgradient, were low (0.81 µg/L) during the November 2017 sampling event, but are increased following the August 2017 injection to 28.7 µg/L (July 2018).

Based on current data, following the most recent injection event in August 2017, it appears that the ERD remedy is continuing its ability to be effective downgradient of injection line 3. No exceedances of SCLs, increases in ethane as well as TOC and pH levels remaining within optimal ranges shows that the ERD remedy is continuing to be effective. Additionally, spikes in methane detections indicate methanogenic redox conditions, which are also favorable for reductive dichlorination.

4.4 GROUNDWATER PLUME PERIPHERY WELLS

The five downgradient MWs (20/24IW-01B, 20/24IW-03B, 20/24IW-09, 20/24IW-10, and 20/24MW-18) are sampled annually to quantify COC concentrations at the plume periphery. The July 2018 sampling results indicated no detections of PCE, TCE, cis-1,2-DCE, and 1,1-DCE. About a year after the August 2017 injection, only VC was detected above the SCL at 20/24MW-18 (4.3 µg/L) and 20/24IW-03B (2.7 µg/L).

4.5 SURFACE WATER DATA TRENDS

There were no detections of COCs during the July 2018 sampling event. SW-2, and SW-5 have had no SCL exceedances during the period of remedy implementation (September 2008 through the current sampling event). SW-4, which had exceedance of SCLs (VC only) since 2008 has had no SCL exceedances since January 2013. SW-1 and SW-3 had exceedances of VC during the 2017 sampling event. Although occasional detections of VC exceed an SCL, surface water quality has improved since implementation of the ERD remedy in 2008. Continued improvement in surface water quality is expected as the clean water front generated by ERD continues to propagate downgradient.

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5. REMEDY PERFORMANCE AND FUTURE ACTIONS

A review of the data trends discussed in Chapter 4 indicate that the VC groundwater plume has been decreasing at Area B (PICA-205). COC concentrations immediately downgradient of injection line 3 have obtained SCLs. As indicated by the July 2018 sampling results, only low-levels of VC remain in the downgradient plume periphery. Concentrations of VC are expected to further decrease following the injection in August 2017.

The 2009 ROD stipulates expected compliance with remedial action objectives within seven years (September 2015). Only VC in two wells remain above SCLs downgradient in the plume periphery. Based on concentrations of TOC, methane and biodegradation end products (ethene and ethane) at these wells the ERD is continuing to be effective following the injection in August 2017. Therefore, remedial action objectives will be achieved in a longer timeframe than projected in the ROD and continued monitoring is recommended until objectives are met.

Future monitoring in 2019 will continue in accordance with the Monitoring Program Schedule presented in **Table 1** of this report. The next annual sampling event is anticipated to be conducted in the third quarter of 2019.

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6. REFERENCES

ARCADIS U.S., Inc. (ARCADIS). 2007. *Final Quality Assurance Project Plan*. August.

———. 2008. *Final Remedial Design Area B (PICA-205) Groundwater*. October.

EA Engineering, Science, and Technology, Inc., PBC. 2017. *2017 Annual Monitoring Report Area B (PICA-205) Groundwater*. October.

Interstate Technology and Regulatory Council. 2007 (ITRC). *Protocol for use of Five Passive Samplers to Sample for a variety of Contaminants in Groundwater*. February.

———. 2008. *In Situ Bioremediation of Chlorinated Ethene: DNAPL Source Zones.* Interstate Technology and Regulatory Council. June.

Shaw Environmental, Inc. (Shaw). 2005. *Area B (Site 20/24) HRC and ORC Groundwater Pilot Study Report, Picatinny, New Jersey*. Prepared for U.S. Army Corps of Engineers-Baltimore District. Contract No. DACA-31-D-95-0083. July 2005. Draft Final Document.

U.S. Army. 2009. *Record of Decision, Area B Groundwater – Picatinny Arsenal, New Jersey*. April.

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Appendix A

Field Forms

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EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-3

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	2500070214
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* **Stick up** *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	15.00
Well depth (as measured):	16.02
Well Stick Up Height (as measured):	1.4
Screen interval:	--
Open hole interval:	--
Depth to water:	7.91

Date: 7/9/2018 *Time:* 0826

1 Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

2 If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-10

Facility Information

Site Name:	Picatinny Arsenal ***Area:*** B ***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	--
Well depth (as measured):	19.34
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	3.57

Date: 7/9/2018 ***Time:*** 0940

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW-6

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2 pvc
Well depth (as installed):	--
Well depth (as measured):	15.08
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	7.91

Date: 7/9/2018 *Time:* 0836

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW-6B

Facility Information

Site Name:	Picatinny Arsenal *Area:* B *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	2500068031
Well Tag ID and Condition:	--
Well Installation Date:	12/21/2006

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* **Stick up** *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	24.00
Well depth (as measured):	27.05
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	7.85

Date: 7/9/2018 *Time:* 0848

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW-8

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	2500062208
Well Tag ID and Condition:	--
Well Installation Date:	9/22/2003

	From Log	From GPS [1]
Ground Surface Elevation	692.02	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	762105	N/A
Easting (State Plane)	468495	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	695.02
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2 pvc
Well depth (as installed):	12.00
Well depth (as measured):	15.06
Well Stick Up Height (as measured):	--
Screen interval:	5 ft
Open hole interval:	--
Depth to water:	7.12

Date: 7/9/2018 *Time:* 0905

1 Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

2 If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW-15

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	1/1/1981

	From Log	From GPS [1]
Ground Surface Elevation	688.77	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	761675.566	N/A
Easting (State Plane)	469110.733	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	688.77
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2 pvc
Well depth (as installed):	18.00
Well depth (as measured):	17.86
Well Stick Up Height (as measured):	--
Screen interval:	6 - 12
Open hole interval:	--
Depth to water:	7.61

Date: 7/9/2018 *Time:* 910

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW-16

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	2200044629
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	762287	N/A
Easting (State Plane)	468423	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2 pvc
Well depth (as installed):	--
Well depth (as measured):	18.14
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	9.96

Date: 7/9/2018 *Time:* 915

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW 17

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	2200044630
Well Tag ID and Condition:	--
Well Installation Date:	8/25/2008

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	762331	N/A
Easting (State Plane)	468422	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** *Stick up* *Multilevel Well* [2]

Well lock / Security type:	steel manway
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	2 pvc
Well depth (as installed):	16.00
Well depth (as measured):	16.10
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	8.42

Date: 7/9/2018 *Time:* 920

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 MW-18

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* **Stick up** *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	4 pvc
Well depth (as installed):	--
Well depth (as measured):	18.45
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	6.00

Date: 7/9/2018 *Time:* 0915

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-1B

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	--
Well depth (as measured):	40.40
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	5.03

Date: 7/9/2018 *Time:* 0930

1 Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

2 If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-2B

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* **Stick up** *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	--
Well depth (as measured):	51.15
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	5.16

Date: 7/9/2018 *Time:* 0935

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-3B

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	--
Well depth (as measured):	46.35
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	3.97

Date: 7/9/2018 *Time:* 0945

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-8

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* **Stick up** *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	--
Well depth (as measured):	18.15
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	5.19

Date: 7/9/2018 *Time:* 0950

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 20/24 IW-09

Facility Information

Site Name:	Picatinny Arsenal *Area: B* *Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806
Site County:	Morris
Site State:	New Jersey
EPA Site ID Number:	NJ3210020704
Site Owner:	US Department of Army Picatinny Arsenal
EPA Project Manager:	Sharon Hartzell, USEPA Region II

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	--	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	N/A
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* *Stick up* *Multilevel Well* [2]

Well lock / Security type:	locked
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	16
Well diameter (in) and Casing material:	2 stainless steel
Well depth (as installed):	--
Well depth (as measured):	16.95
Well Stick Up Height (as measured):	--
Screen interval:	--
Open hole interval:	--
Depth to water:	4.61

Date: 7/9/2018 *Time:* 0925

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: D. Thompson

Date Inspected: 7/9/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 IW-3			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	16.02		Screened Interval:	
Well Casing:	Diameter:	2	Material:	SS
Well Screen:	Diameter:	2		

Deployment

Date and Time of Deployment:	Date:	7/9/2018	Time:	0826
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	7.60			
Deploy Depth (Top of sampler)(ft bgs):	12			
Dimensions of HydraSleeve	Length (in.)	30	Diameter (in.)	2
Dimensions of PDB:	Length (in.)	18	Diameter (in.)	1.75

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	Date:	7/31/2018	Time:	0755
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	6.43			

Retrieval Method: [X] Continuous Pull (preferred)

[ ] Short Strokes

Downhole Field Parameters Upon Retrieval:

Temp (C):	12.47	ORP (mV):	4.7	Turb (NTU):	25.34
pH:	6.33	Cond (mS/cm):	0.511	DO (mg/L):	0.30

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	47.4	Meter Type:	YSI EXO	Serial #:	14E102344

Notes/Observations: MS/MSD (DG + TOC) 5 vials for VOC
FD-B-GW

Field Sampling Tech: DT Company: Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 IW-10			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	19.34	Screened Interval:		
Well Casing:	Diameter: 2	Material:	SS	
Well Screen:	Diameter: 2			

Deployment

Date and Time of Deployment:	Date: 7/9/2018		Time: 0940	
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	3.57			
Deploy Depth (Top of sampler)(ft bgs):	15			
Dimensions of HydraSleeve	Length (in.) 30	Diameter (in.) 2		
Dimensions of PDB:	Length (in.) 18	Diameter (in.) 1.75		

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	Date: 7/31/2018		Time: 1045	
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	2.83			

Retrieval Method: [X] Continuous Pull (preferred)

[ ] Short Strokes

Downhole Field Parameters Upon Retrieval:

Temp (C):	17.64	ORP (mV):	-157	Turb (NTU):	104
pH:	7.10	Cond (mS/cm):	0.544	DO (mg/L):	0.49

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:		Meter Type:	YSI EXO	Serial #:	14E102344

Notes/Observations:

Field Sampling Tech: DT Company: Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 MW-6			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	15.08	Screened Interval:		
Well Casing:	Diameter: 2	Material:	SS	
Well Screen:	Diameter: 2			

Deployment

Date and Time of Deployment:	Date: 7/9/2018		Time: 0836	
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	7.91			
Deploy Depth (Top of sampler)(ft bgs):	10			
Dimensions of HydraSleeve	Length (in.) 30	Diameter (in.) 2		
Dimensions of PDB:	Length (in.) 18	Diameter (in.) 1.75		

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	Date: 7/31/2018		Time: 0830	
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	6.87			
Retrieval Method:	[X] Continuous Pull (preferred)			
	[ ] Short Strokes			

Downhole Field Parameters Upon Retrieval:

Temp (C):	12.97	ORP (mV):	-77.7	Turb (NTU):	118.7
pH:	6.55	Cond (mS/cm):	0.973	DO (mg/L):	0.58

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	132	Meter Type:	YSI EXO	Serial #:	14E102344

Notes/Observations:

Field Sampling Tech: DT Company: Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 MW-6B			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	27.05		**Screened Interval:**	
Well Casing:	**Diameter:**	2	**Material:**	pvc
Well Screen:	**Diameter:**	2		

Deployment

Date and Time of Deployment:	**Date:**	7/9/2018	**Time:**	0848
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	7.85			
Deploy Depth (Top of sampler)(ft bgs):	22			
Dimensions of HydraSleeve	Length (in.)	30	Diameter (in.)	2
Dimensions of PDB:	Length (in.)	18	Diameter (in.)	1.75

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	**Date:**	7/31/2018	**Time:**	0855
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	6.86			

Retrieval Method: [X] Continuous Pull (preferred)

[ ] Short Strokes

Downhole Field Parameters Upon Retrieval:

Temp (C):	12.84	**ORP (mV):**	-270.4	**Turb (NTU):**	14.95
pH:	8.39	**Cond (mS/cm):**	2.24	**DO (mg/L):**	0.76

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	79.4	**Meter Type:**	YSI EXO	**Serial #:**	14E102344

Notes/Observations:

Field Sampling Tech: DT **Company:** Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 MW-8			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	15.06		**Screened Interval:**	—
Well Casing:	**Diameter:**	2	**Material:**	PVC
Well Screen:	**Diameter:**	2		

Deployment

Date and Time of Deployment:	**Date:**	7/9/2018	**Time:**	0905
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	7.12			
Deploy Depth (Top of sampler)(ft bgs):	10			
Dimensions of HydraSleeve	Length (in.)	30	Diameter (in.)	2
Dimensions of PDB:	Length (in.)	18	Diameter (in.)	1.75

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	**Date:**	7/31/2018	**Time:**	0905
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	6.16			

Retrieval Method: [X] Continuous Pull (preferred)

[ ] Short Strokes

Downhole Field Parameters Upon Retrieval:

Temp (C):	12.54	**ORP (mV):**	-63.3	**Turb (NTU):**	68.51
pH:	6.77	**Cond (mS/cm):**	0.911	**DO (mg/L):**	1.98

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	84.2	**Meter Type:**	YSI EXO	**Serial #:**	14E102344

Notes/Observations:

Field Sampling Tech: DT **Company:** Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24MW-18			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	18.45	**Screened Interval:**	—	
Well Casing:	**Diameter:** 4	**Material:**	SS	
Well Screen:	**Diameter:** 4			

Deployment

Date and Time of Deployment:	**Date:** 7/9/2018		**Time:** 0915	
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	6.00			
Deploy Depth (Top of sampler)(ft bgs):	13			
Dimensions of HydraSleeve	Length (in.) 36	Diameter (in.) 4		
Dimensions of PDB:	Length (in.) 18	Diameter (in.) 1.75		

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	**Date:** 7/31/2018		**Time:** 0935	
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	5.02			
Retrieval Method:	[X] Continuous Pull (preferred)			
	[ ] Short Strokes			

Downhole Field Parameters Upon Retrieval:

Temp (C):	18.13	**ORP (mV):**	80.5	**Turb (NTU):**	12.77
pH:	7.08	**Cond (mS/cm):**	0.544	**DO (mg/L):**	0.83

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	19.2	**Meter Type:**	YSI EXO	**Serial #:**	14E102344

Notes/Observations:

Field Sampling Tech: DT **Company:** Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24IW-1B			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	40.40	**Screened Interval:**		
Well Casing:	**Diameter:** 2	**Material:**		
Well Screen:	**Diameter:** 2			

Deployment

Date and Time of Deployment:	**Date:** 7/9/2018		**Time:** 0930	
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	5.03			
Deploy Depth (Top of sampler)(ft bgs):	35			
Dimensions of HydraSleeve	Length (in.) 30	Diameter (in.) 2		
Dimensions of PDB:	Length (in.) 18	Diameter (in.) 1.75		

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	**Date:** 7/31/2018		**Time:** 1145	
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	3.99			
Retrieval Method:	[X] Continuous Pull (preferred)			
	[ ] Short Strokes			

Downhole Field Parameters Upon Retrieval:

Temp (C):	11.03	**ORP (mV):**	-366	**Turb (NTU):**	17.25
pH:	8.57	**Cond (mS/cm):**	0.221	**DO (mg/L):**	0.46

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	25.21	**Meter Type:**	YSI EXO	**Serial #:**	14E102344

Notes/Observations:

Field Sampling Tech: DT **Company:** Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 IW-3B			
Well Type:	[X] Monitoring		[ ] Other:	
Well Finish:	[X] Stick-up		[ ] Flush Mount	
Measuring Pt:	[X] Top of Casing		[ ] Other:	
Total Depth (ft bgs):	46.35	Screened Interval:	—	
Well Casing:	Diameter: 2	Material:	SS	
Well Screen:	Diameter: 2			

Deployment

Date and Time of Deployment:	Date: 7/9/2018		Time: 0945	
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	3.97			
Deploy Depth (Top of sampler)(ft bgs):	41			
Dimensions of HydraSleeve	Length (in.) 30	Diameter (in.) 2		
Dimensions of PDB:	Length (in.) 18	Diameter (in.) 1.75		

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	Date: 7/31/2018		Time: 1040	
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	3.00			
Retrieval Method:	[X] Continuous Pull (preferred)			
	[ ] Short Strokes			

Downhole Field Parameters Upon Retrieval:

Temp (C):	16.30	ORP (mV):	-107	Turb (NTU):	36.0
pH:	8.85	Cond (mS/cm):	0.450	DO (mg/L):	0.97

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	47.11	Meter Type:	YSI EXO	Serial #:	14E102344

Notes/Observations:

Field Sampling Tech: DT Company: Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve and PDB Form

Site:	Picatinny Arsenal			
Location:	Area B			
Well ID:	20/24 IW-09			
Well Type:	[X] Monitoring		[ ]	**Other:**
Well Finish:	[X] Stick-up		[ ]	**Flush Mount**
Measuring Pt:	[X] Top of Casing		[ ]	Other:
Total Depth (ft bgs):	16.95	**Screened Interval:**		
Well Casing:	**Diameter:** 2	**Material:**	SS	
Well Screen:	**Diameter:** 2			

Deployment

Date and Time of Deployment:	**Date:** 7/9/2018		**Time:** 0925	
Weather Conditions	80s Sunny			
Depth to GW @ Time of Deployment	4.61			
Deploy Depth (Top of sampler)(ft bgs):	11			
Dimensions of HydraSleeve	Length (in.) 30	Diameter (in.) 2		
Dimensions of PDB:	Length (in.) 18	Diameter (in.) 1.75		

Type of PDB Used: [X] Lab Filled (Modified Trip Blank must be taken at time of deployment)

Position of Weight: [X] Attached to bottom of deployment line and resting on bottom of well (preferred)

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval:	**Date:** 7/31/2018		**Time:** 1155	
Total # of Days Deployed:	22			
Weather Conditions:	80s Sunny			
Depth to GW at Time of Retrieval:	3.79			
Retrieval Method:	[X] Continuous Pull (preferred)			
	[ ] Short Strokes			

Downhole Field Parameters Upon Retrieval:

Temp (C):	15.58	**ORP (mV):**	-160	**Turb (NTU):**	10.62
pH:	6.88	**Cond (mS/cm):**	0.746	**DO (mg/L):**	0.56

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity:	37.16	**Meter Type:**	YSI EXO	**Serial #:**	14E102344

Notes/Observations:

Field Sampling Tech: DT **Company:** Sovereign Consulting Inc.

Sovereign Consulting Inc

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID: SW-1
Project Name & No.: RB577
Date: 7/31/18
Sampling Personnel: DT
Time: 1000
Weather: 80s sunny

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body: stream
Depth of Water: 8"
Velocity: none
Other Comments: —
Substrate Description: sandy silt
Sample Location and Depth (ft): middle of stream 4" deep

Description of Nearby Vegetation: Shrubs, trees, grasses

FIELD PARAMETERS:

Sample Method: Bailer
Sample Description: light brown

Temp. (°F)	24.15	Cond	0.759
pH	7.42	Turb	178
ORP	283	DO	3.07
		Salinity	0.05

CONTAINER DESCRIPTION:

Bottle Type	*Analysis*	*Preservative*
40 mL vial	VOC	HCl
"	VOC SIM	↓
4 mL AG vial	TOC	↓

TOTAL: 24

MS/MSD

FD-B-SW

Sovereign Consulting Inc

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID: SW - 2
Date: 7/31/18
Time: 1200
Weather: 80s sunny

Project Name & No.: RB577
Sampling Personnel: DT

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body: Landfill Pond - Area B
Depth of Water: 1ft
Velocity: none
Other Comments: —
Substrate Description: sandy silt
Sample Location and Depth (ft): 6" deep

Description of Nearby Vegetation: phragms, grasses, trees, shrubs

FIELD PARAMETERS:

Sample Method: Bailer
Sample Description: light brown

Temp. (°F)	25.39	Cond	0.397
pH	6.90	Turb	75.1
ORP	151	DO	4.36
		Salinity	0.02

CONTAINER DESCRIPTION:

Bottle Type	*Analysis*	*Preservative*
40mL vial	VOC/SIM/TOC	HCl

TOTAL: 9

Sovereign Consulting Inc

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID: SW-3
Project Name & No.: RB577
Date: 7/31/18
Sampling Personnel: DT
Time: 1100
Weather: 80s sunny

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body: tained GW pond
Depth of Water: 1 ft
Velocity: none
Other Comments: —
Substrate Description: sandy silt
Sample Location and Depth (ft): 6"

Description of Nearby Vegetation: phragm, grasses, trees

FIELD PARAMETERS:

Sample Method: Bailer
Sample Description: light brown

Temp. (°F)	24.91	Cond	0.369
pH	8.77	Turb	190
ORP	233	DO	4.10
		Salinity	0.02

CONTAINER DESCRIPTION:

Bottle Type	*Analysis*	*Preservative*
40mL vial	VOC/SIM/TOC	HCl

TOTAL: 9

Sovereign Consulting Inc

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID: SW-4
Date: 7/31/18
Time: 1130
Weather: 80s sunny

Project Name & No.: 23577
Sampling Personnel: DT

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body: Landfill Pond - Area B
Depth of Water: 1 ft
Velocity: none
Other Comments: —
Substrate Description: sandy silt
Sample Location and Depth (ft): 6"

Description of Nearby Vegetation: phragmites, grasses, trees

FIELD PARAMETERS:

Sample Method: Bailer
Sample Description: light brown

Temp. (°F)	25.37	Cond	0.351
pH	7.18	Turb	58.4
ORP	325	DO	2.02
		Salinity	0.02

CONTAINER DESCRIPTION:

Bottle Type	*Analysis*	*Preservative*
40mL	VOC/TOC/SIM	HCL

TOTAL: 9

Sovereign Consulting Inc

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID: SW-5
Project Name & No.: RB577
Date: 7/31/18
Sampling Personnel: DT/AR
Time: 1230
Weather: 80s sunny

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body: Landfill Pond - Area B
Depth of Water: 1 ft
Velocity: none
Other Comments: —
Substrate Description: sandy silt
Sample Location and Depth (ft): 0.5 ft

Description of Nearby Vegetation: Forbs, shrubs, trees

FIELD PARAMETERS:

Sample Method: Bailer
Sample Description: light brown

Temp. (°F)	26.70	Cond	0.316
pH	6.88	Turb	67.7
ORP	371	DO	3.21
		Salinity	0.01

CONTAINER DESCRIPTION:

Bottle Type	*Analysis*	*Preservative*
40mL vial	VOC/SIM/TOC	HCl

TOTAL: 9

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

YSI EXO Daily Calibration Log

Sampler/Calibrator: A. Roppoli

Date: 7/31/18

Office: Ruille

YSI EXO Serial #: 14E102344

Site Name: Rica

Site Address:

Morning Calibration

Start Time: 0700

End Time: 0725

Turbidity					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0	0	24.74	17502171	1/19/19
124	124	0	24.74	18643501	1/17/19

Conductivity (mS/cm)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0		24.74	DIW -	
1.413	1.41	(+/- 0.014)/	24.74	7G400	12/31/18

pH (standard units)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
10	10.00	(+/- 0.05)/ 0	24.74	7GL670	12/31/19
4	4.00	(+/- 0.05)/ 0	24.74	7G1837	9/30/19
Cal chk 7	7.04	(+/- 0.10)/ 0.04	24.74	8GB386	2/29/2020

ORP (millivolts - mV)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
240	240		24.74	2062	10/31/18

Dissolved Oxygen ~~(mg/L)~~ %					
Standard Value	Cal'd Reading[1]	Pressure	Temperature (C)		
Air	100.3	760.1	24.74		

Field QC Checks (Use standard from different Lot # than that used for calibration)

pH Field Checks(standard units)					
	Initial	3 hr	6 hr	9 hr	12 hr
pH 7.0 to be checked @ start of job ("Initial") & every 3 hours. Record time of day.	Time: 0700	Time: 0940	Time:	Time:	Time:
	Value: 7.04	Value: 7.09	Value:	Value:	Value:
	Acc. (+/-0.1): 0.04	Acc. (+/-0.2): 0.09	Acc. (+/-0.2):	Acc. (+/-0.2):	Acc. (+/-0.2):

[1]Record the calibrated reading.

[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.

Acc. = Accuracy. Initial field chk must be within +/-0.1 unit of std value; 3-hr rdings must be within +/-0.2 units.

% Difference = [(reading - std value)/std value]x100.

Signature: [signature]

Date: 7/31/18

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Appendix B

Laboratory and Data Validation Reports

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

RB577

SGS Job Number: FA56349

Sampling Date: 07/31/18

Report to:

EA Engineering

asmith@eaest.com
hwilliams@eaest.com; tlamond@eaest.com; fdesantis@eaest.com
ATTN: Amanda Smith

Total number of pages in report: **666**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Ariel Hartney 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

October 18, 2018

Mr. Frank DeSantis
EA Science & Technology
6712 Brooklawn Pkwy
Suite 104
Syracuse, NY 13211

RE: SGS North America Inc. - Orlando job FA56349 Reissue

Dear Mr. DeSantis,

The final report for job number FA56349 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

Vinyl Chloride has been reported.

SGS North America Inc. - Orlando apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

SGS North America Inc. - Orlando

Florida ♦ 4405 Vineland Road ♦ Suite C-15 ♦ Orlando, FL 32811 ♦ tel: 407 425-6700 ♦ fax: 407 425-0707

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: FA56349

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Project No: RB577

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA56349-1	07/31/18	07:55	DT	08/01/18	AQ	Ground Water	20/241W-3
FA56349-1D	07/31/18	07:55	DT	08/01/18	AQ	Water Dup/MSD	20/241W-3
FA56349-1S	07/31/18	07:55	DT	08/01/18	AQ	Water Matrix Spike	20/241W-3
FA56349-2	07/31/18	10:45	DT	08/01/18	AQ	Ground Water	20/241W-10
FA56349-3	07/31/18	08:30	DT	08/01/18	AQ	Ground Water	20/24MW-6
FA56349-4	07/31/18	08:55	DT	08/01/18	AQ	Ground Water	20/24MW-6B
FA56349-5	07/31/18	09:05	DT	08/01/18	AQ	Ground Water	20/24MW-8
FA56349-6	07/31/18	09:35	DT	08/01/18	AQ	Ground Water	20/24MW-18
FA56349-7	07/31/18	11:45	DT	08/01/18	AQ	Ground Water	20/241W-1B
FA56349-8	07/31/18	10:40	DT	08/01/18	AQ	Ground Water	20/241W-3B
FA56349-9	07/31/18	11:55	DT	08/01/18	AQ	Ground Water	20/241W-09
FA56349-10	07/31/18	06:00	DT	08/01/18	AQ	Trip Blank Water	TB
FA56349-11	07/31/18	00:00	DT	08/01/18	AQ	Ground Water	FD-B-GW

SGS North America Inc.

Sample Summary
(continued)

EA Engineering

Job No: FA56349

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Project No: RB577

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA56349-12	07/31/18	12:45 DT	08/01/18	AQ	Field Blank Water	FB-GW
FA56349-13	07/31/18	10:00 DT	08/01/18	AQ	Surface Water	SW-1
FA56349-13D	07/31/18	10:00 DT	08/01/18	AQ	Water Dup/MSD	SW-1
FA56349-13S	07/31/18	10:00 DT	08/01/18	AQ	Water Matrix Spike	SW-1
FA56349-14	07/31/18	12:00 DT	08/01/18	AQ	Surface Water	SW-2
FA56349-15	07/31/18	11:00 DT	08/01/18	AQ	Surface Water	SW-3
FA56349-16	07/31/18	11:30 DT	08/01/18	AQ	Surface Water	SW-4
FA56349-17	07/31/18	12:30 DT	08/01/18	AQ	Surface Water	SW-5
FA56349-18	07/31/18	00:00 DT	08/01/18	AQ	Surface Water	FD-B-SW
FA56349-19	07/31/18	12:45 DT	08/01/18	AQ	Field Blank Water	FB-B-SW

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EA Engineering **Job No:** FA56349

Site: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ **Report Date:** 8/15/2018 10:52:24

16 Sample(s), 1 Trip Blank(s) and 2 Field Blank(s) were collected on 07/31/2018 and were received at SGS North America Inc - Orlando on 08/01/2018 properly preserved, at 4 Deg. C and intact. These Samples received an SGS Orlando job number of FA56349. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Please refer to the QC Evaluation: DOD QSM5 Limits Summary Section for recoveries or RPDs exceeding control limits.

MS Volatiles By Method SW846 8260B BY SIM

Matrix: AQ **Batch ID:** VZ2006

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56349-13MS, FA56349-13MSD were used as the QC samples indicated.

Sample(s) FA56349-17, FA56349-18 have surrogates outside control limits.

FA56349-13 for 1,2-Dichloroethane-D4: Outside DOD QSM control limits.

FA56349-15 for 1,2-Dichloroethane-D4: Outside DOD QSM control limits.

FA56349-16 for 1,2-Dichloroethane-D4: Outside DOD QSM control limits.

FA56349-17 for 1,2-Dichloroethane-D4: Outside DOD QSM control limits; however, sample is ND.

FA56349-18 for 1,2-Dichloroethane-D4: Outside DOD QSM control limits; however, sample is ND.

Matrix: AQ **Batch ID:** VZ2011

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56505-3MS, FA56505-3MSD were used as the QC samples indicated.

Sample(s) VZ2011-MB, FA56349-14, FA56349-17, FA56349-18 have surrogates outside control limits.

VZ2011-MB for Toluene-D8: Outside control limits.

FA56349-14: Confirmation run for internal standard areas.

Matrix: AQ **Batch ID:** VZ2012

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56394-12MS, FA56394-12MSD were used as the QC samples indicated.

Sample(s) FA56349-14 have surrogates outside control limits.

FA56349-14 for 1,2-Dichloroethane-D4: Outside DOD QSM control limits.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VI1694

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56349-1MS, FA56349-1MSD were used as the QC samples indicated.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Acetone are outside control limits. Probable cause is due to matrix interference.

FA56349-1 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-2 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-2: Sample vial(s) contained bubbles greater than 6mm; reported results are considered minimum values.

FA56349-3 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-4 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-5 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-6 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-7 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VI1694

FA56349-8 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-9 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-10 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56349-11 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ **Batch ID:** VI1696

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56349-13MS, FA56349-13MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,2-Dichloropropane are outside control limits.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, Methyl Iodide are outside control limits. Probable cause is due to matrix interference.

FA56349-12 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-13 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-14 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-15 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-16 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-17 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-18 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

FA56349-19 for 2,2-Dichloropropane: Associated CCV and BS outside of control limits high, sample was ND.

GC Volatiles By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GFF1693

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56349-1DUP, FA56349-1MS were used as the QC samples indicated.

RPD(s) for Duplicate for Ethane are outside control limits for sample FA56349-1DUP. Probable cause is due to sample non-homogeneity.

FA56349-5: Sample was not preserved to a pH < 2.

General Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP31863

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56349-13MS, FA56349-13MSD, FA56349-1MS, FA56349-1MSD were used as the QC samples for Total Organic Carbon.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA56349-1	**20/241W-3**					
Methane		350	0.50	0.25	ug/l	RSKSOP-147/175
Ethane		0.35 J	1.0	0.50	ug/l	RSKSOP-147/175
Total Organic Carbon		7.7	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-2	**20/241W-10**					
Methane		13200	10	5.0	ug/l	RSKSOP-147/175
Ethane		0.79 J	1.0	0.50	ug/l	RSKSOP-147/175
Total Organic Carbon		6.3	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-3	**20/24MW-6**					
Benzene		1.3	1.0	0.50	ug/l	SW846 8260C
Methane		17700	10	5.0	ug/l	RSKSOP-147/175
Ethane		59.8	1.0	0.50	ug/l	RSKSOP-147/175
Total Organic Carbon		49.2	2.0	1.0	mg/l	SM5310 B-11/SW9060A
FA56349-4	**20/24MW-6B**					
Acetone		75.9	25	20	ug/l	SW846 8260C
cis-1,2-Dichloroethylene		0.35 J	1.0	0.50	ug/l	SW846 8260C
Vinyl Chloride		0.54 J	1.0	0.50	ug/l	SW846 8260C
Methane		4360	5.0	2.5	ug/l	RSKSOP-147/175
Ethane		102	1.0	0.50	ug/l	RSKSOP-147/175
Ethene		22.3	1.0	0.50	ug/l	RSKSOP-147/175
Total Organic Carbon		29.1	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-5	**20/24MW-8**					
Acetone		64.2	25	20	ug/l	SW846 8260C
Benzene		0.36 J	1.0	0.50	ug/l	SW846 8260C
Methane		5610	5.0	2.5	ug/l	RSKSOP-147/175
Ethane [a]		28.7	1.0	0.50	ug/l	RSKSOP-147/175
Ethene [a]		0.47 J	1.0	0.50	ug/l	RSKSOP-147/175
Total Organic Carbon		43.1	1.7	0.86	mg/l	SM5310 B-11/SW9060A
FA56349-6	**20/24MW-18**					
Vinyl Chloride		4.3	1.0	0.50	ug/l	SW846 8260C
Methane		394	0.50	0.25	ug/l	RSKSOP-147/175
Ethane		1.4	1.0	0.50	ug/l	RSKSOP-147/175
Total Organic Carbon		6.0	1.0	0.50	mg/l	SM5310 B-11/SW9060A

Summary of Hits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA56349-7	**20/241W-1B**					
Acetone		59.5	25	20	ug/l	SW846 8260C
FA56349-8	**20/241W-3B**					
Acetone		68.1	25	20	ug/l	SW846 8260C
Vinyl Chloride		2.7	1.0	0.50	ug/l	SW846 8260C
FA56349-9	**20/241W-09**					
Acetone		58.7	25	20	ug/l	SW846 8260C
FA56349-10	**TB**					
No hits reported in this sample.						
FA56349-11	**FD-B-GW**					
Acetone		109	25	20	ug/l	SW846 8260C
Methane		365	0.50	0.25	ug/l	RSKSOP-147/175
Total Organic Carbon		6.6	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-12	**FB-GW**					
Total Organic Carbon		0.49 J	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-13	**SW-1**					
Total Organic Carbon		16.8	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-14	**SW-2**					
Chloroform		0.16 J	0.50	0.25	ug/l	SW846 8260B BY SIM
Total Organic Carbon		11.8	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-15	**SW-3**					
Total Organic Carbon		12.3	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-16	**SW-4**					
Total Organic Carbon		13.2	1.0	0.50	mg/l	SM5310 B-11/SW9060A

Summary of Hits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA56349-17	**SW-5**					
Total Organic Carbon		37.5	2.0	1.0	mg/l	SM5310 B-11/SW9060A
FA56349-18	**FD-B-SW**					
Total Organic Carbon		17.5	1.0	0.50	mg/l	SM5310 B-11/SW9060A
FA56349-19	**FB-B-SW**					
Chloroform		0.52	0.50	0.25	ug/l	SW846 8260B BY SIM
Total Organic Carbon		0.28 J	1.0	0.50	mg/l	SM5310 B-11/SW9060A

(a) Sample was not preserved to a pH < 2.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-3		
Lab Sample ID:	FA56349-1	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56608.D	1	08/08/18 13:45	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-3		
Lab Sample ID:	FA56349-1	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-3		
Lab Sample ID:	FA56349-1	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-3		
Lab Sample ID:	FA56349-1	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43897.D	1	08/03/18 12:28	EG	n/a	n/a	GFF1693
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	350	0.50	0.25	0.16	ug/l	
74-84-0	Ethane	0.35	1.0	0.50	0.32	ug/l	J
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-3		
Lab Sample ID:	FA56349-1	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	7.7	1.0	0.50	0.23	mg/l	1	08/09/18 16:25	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-10		
Lab Sample ID:	FA56349-2	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I56609.D	1	08/08/18 14:31	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [b]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-10		
Lab Sample ID:	FA56349-2	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-10		
Lab Sample ID:	FA56349-2	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Sample vial(s) contained bubbles greater than 6mm; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-10		
Lab Sample ID:	FA56349-2	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43898.D	1	08/03/18 12:48	EG	n/a	n/a	GFF1693
Run #2	FF43909.D	20	08/03/18 16:21	EG	n/a	n/a	GFF1693

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	20 Deg. C

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	13200 [a]	10	5.0	3.2	ug/l	
74-84-0	Ethane	0.79	1.0	0.50	0.32	ug/l	J
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-10		
Lab Sample ID:	FA56349-2	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	6.3	1.0	0.50	0.23	mg/l	1	08/09/18 17:29	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-6		
Lab Sample ID:	FA56349-3	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56610.D	1	08/08/18 14:55	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	1.3	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-6		
Lab Sample ID:	FA56349-3	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-6		
Lab Sample ID:	FA56349-3	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-6		
Lab Sample ID:	FA56349-3	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43899.D	1	08/03/18 13:24	EG	n/a	n/a	GFF1693
Run #2	FF43910.D	20	08/03/18 16:33	EG	n/a	n/a	GFF1693

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	20 Deg. C

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	17700 [a]	10	5.0	3.2	ug/l	
74-84-0	Ethane	59.8	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-6		
Lab Sample ID:	FA56349-3	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	49.2	2.0	1.0	0.46	mg/l	2	08/09/18 17:48	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-6B		
Lab Sample ID:	FA56349-4	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56614.D	1	08/08/18 16:30	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	75.9	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.35	1.0	0.50	0.28	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-6B		
Lab Sample ID:	FA56349-4	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.54	1.0	0.50	0.41	ug/l	J
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-6B		
Lab Sample ID:	FA56349-4	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-6B		
Lab Sample ID:	FA56349-4	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43900.D	1	08/03/18 13:36	EG	n/a	n/a	GFF1693
Run #2	FF43911.D	10	08/03/18 16:45	EG	n/a	n/a	GFF1693

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	20 Deg. C

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	4360 [a]	5.0	2.5	1.6	ug/l	
74-84-0	Ethane	102	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	22.3	1.0	0.50	0.43	ug/l	

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-6B		
Lab Sample ID:	FA56349-4	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	29.1	1.0	0.50	0.23	mg/l	1	08/09/18 18:21	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-8		
Lab Sample ID:	FA56349-5	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56615.D	1	08/08/18 16:54	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	64.2	25	20	10	ug/l	
71-43-2	Benzene	0.36	1.0	0.50	0.31	ug/l	J
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-8		
Lab Sample ID:	FA56349-5	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-8		
Lab Sample ID:	FA56349-5	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-8		
Lab Sample ID:	FA56349-5	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	FF43905.D	1	08/03/18 15:20	EG	n/a	n/a	GFF1693
Run #2	FF43912.D	10	08/03/18 16:57	EG	n/a	n/a	GFF1693

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	20 Deg. C

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	5610 [b]	5.0	2.5	1.6	ug/l	
74-84-0	Ethane	28.7	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	0.47	1.0	0.50	0.43	ug/l	J

(a) Sample was not preserved to a pH < 2.
(b) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-8		
Lab Sample ID:	FA56349-5	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	43.1	1.7	0.86	0.40	mg/l	1.72	08/09/18 18:42	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-18		
Lab Sample ID:	FA56349-6	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56616.D	1	08/08/18 17:18	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-18		
Lab Sample ID:	FA56349-6	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	4.3	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/24MW-18		
Lab Sample ID:	FA56349-6	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-18		
Lab Sample ID:	FA56349-6	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43906.D	1	08/03/18 15:32	EG	n/a	n/a	GFF1693
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	394	0.50	0.25	0.16	ug/l	
74-84-0	Ethane	1.4	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/24MW-18		
Lab Sample ID:	FA56349-6	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	6.0	1.0	0.50	0.23	mg/l	1	08/09/18 19:06	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-1B		
Lab Sample ID:	FA56349-7	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56617.D	1	08/08/18 17:42	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	59.5	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-1B		
Lab Sample ID:	FA56349-7	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-1B		
Lab Sample ID:	FA56349-7	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-3B		
Lab Sample ID:	FA56349-8	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56618.D	1	08/08/18 18:06	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	68.1	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-3B		
Lab Sample ID:	FA56349-8	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	2.7	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-3B		
Lab Sample ID:	FA56349-8	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	20/241W-09		
Lab Sample ID:	FA56349-9	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56619.D	1	08/08/18 18:29	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	58.7	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-09		
Lab Sample ID:	FA56349-9	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	20/241W-09		
Lab Sample ID:	FA56349-9	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA56349-10	**Date Sampled:**	07/31/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56620.D	1	08/08/18 18:53	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA56349-10	**Date Sampled:**	07/31/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA56349-10	**Date Sampled:**	07/31/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD-B-GW		
Lab Sample ID:	FA56349-11	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56621.D	1	08/08/18 19:17	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	109	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FD-B-GW		
Lab Sample ID:	FA56349-11	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FD-B-GW		
Lab Sample ID:	FA56349-11	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD-B-GW		
Lab Sample ID:	FA56349-11	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43907.D	1	08/03/18 15:43	EG	n/a	n/a	GFF1693
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	365	0.50	0.25	0.16	ug/l	
74-84-0	Ethane	0.50 U	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD-B-GW		
Lab Sample ID:	FA56349-11	**Date Sampled:**	07/31/18
Matrix:	AQ - Ground Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	6.6	1.0	0.50	0.23	mg/l	1	08/09/18 20:09	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB-GW		
Lab Sample ID:	FA56349-12	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56654.D	1	08/10/18 10:22	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB-GW		
Lab Sample ID:	FA56349-12	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB-GW		
Lab Sample ID:	FA56349-12	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB-GW		
Lab Sample ID:	FA56349-12	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF43908.D	1	08/03/18 16:00	EG	n/a	n/a	GFF1693
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	20 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	0.25 U	0.50	0.25	0.16	ug/l	
74-84-0	Ethane	0.50 U	1.0	0.50	0.32	ug/l	
74-85-1	Ethene	0.50 U	1.0	0.50	0.43	ug/l	

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LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB-GW		
Lab Sample ID:	FA56349-12	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	0.49 J	1.0	0.50	0.23	mg/l	1	08/09/18 20:31	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA56349-13	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56655.D	1	08/10/18 10:47	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA56349-13	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA56349-13	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA56349-13	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53236.D	1	08/02/18 19:34	MM	n/a	n/a	VZ2006
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	0.10	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	122% [a]		74-125%
2037-26-5	Toluene-D8	101%		88-111%

(a) Outside DOD QSM control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA56349-13	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	16.8	1.0	0.50	0.23	mg/l	1	08/09/18 20:50	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA56349-14	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56656.D	1	08/10/18 11:10	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA56349-14	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA56349-14	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA56349-14	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53385.D	1	08/10/18 16:17	MM	n/a	n/a	VZ2012
Run #2 [a]	Z53356.D	1	08/09/18 16:05	MM	n/a	n/a	VZ2011

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.16	0.50	0.25	0.10	ug/l	J
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	130% [b]	108%	74-125%
2037-26-5	Toluene-D8	107%	107%	88-111%

(a) Confirmation run for internal standard areas.
(b) Outside DOD QSM control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA56349-14	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	11.8	1.0	0.50	0.23	mg/l	1	08/09/18 21:54	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA56349-15	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56657.D	1	08/10/18 11:33	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA56349-15	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA56349-15	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA56349-15	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53238.D	1	08/02/18 20:24	MM	n/a	n/a	VZ2006
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	0.10	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	123% [a]		74-125%
2037-26-5	Toluene-D8	102%		88-111%

(a) Outside DOD QSM control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA56349-15	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	12.3	1.0	0.50	0.23	mg/l	1	08/09/18 22:15	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	FA56349-16	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56658.D	1	08/10/18 11:57	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	FA56349-16	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	FA56349-16	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	FA56349-16	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53239.D	1	08/02/18 20:49	MM	n/a	n/a	VZ2006
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	0.10	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	125% [a]		74-125%
2037-26-5	Toluene-D8	103%		88-111%

(a) Outside DOD QSM control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	FA56349-16	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	13.2	1.0	0.50	0.23	mg/l	1	08/09/18 22:35	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-5		
Lab Sample ID:	FA56349-17	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56659.D	1	08/10/18 12:21	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-5		
Lab Sample ID:	FA56349-17	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-5		
Lab Sample ID:	FA56349-17	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-5		
Lab Sample ID:	FA56349-17	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53240.D	1	08/02/18 21:13	MM	n/a	n/a	VZ2006
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	0.10	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	128% [a]		74-125%
2037-26-5	Toluene-D8	101%		88-111%

(a) Outside DOD QSM control limits; however, sample is ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SW-5		
Lab Sample ID:	FA56349-17	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	37.5	2.0	1.0	0.46	mg/l	2	08/10/18 10:49	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD-B-SW		
Lab Sample ID:	FA56349-18	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56660.D	1	08/10/18 13:43	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FD-B-SW		
Lab Sample ID:	FA56349-18	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FD-B-SW		
Lab Sample ID:	FA56349-18	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD-B-SW		
Lab Sample ID:	FA56349-18	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53241.D	1	08/02/18 21:38	MM	n/a	n/a	VZ2006
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	0.10	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	128% [a]		74-125%
2037-26-5	Toluene-D8	100%		88-111%

(a) Outside DOD QSM control limits; however, sample is ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD-B-SW		
Lab Sample ID:	FA56349-18	**Date Sampled:**	07/31/18
Matrix:	AQ - Surface Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	17.5	1.0	0.50	0.23	mg/l	1	08/09/18 23:16	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB-B-SW		
Lab Sample ID:	FA56349-19	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56661.D	1	08/10/18 14:06	AJ	n/a	n/a	VI1696
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB-B-SW		
Lab Sample ID:	FA56349-19	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB-B-SW		
Lab Sample ID:	FA56349-19	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV and BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB-B-SW		
Lab Sample ID:	FA56349-19	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z53357.D	1	08/09/18 16:30	MM	n/a	n/a	VZ2011
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	0.25 U	0.50	0.25	0.10	ug/l	
56-23-5	Carbon Tetrachloride	0.25 U	0.50	0.25	0.10	ug/l	
67-66-3	Chloroform	0.52	0.50	0.25	0.10	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	0.25 U	0.50	0.25	0.10	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	0.25 U	0.50	0.25	0.10	ug/l	
74-87-3	Methyl Chloride	0.25 U	0.50	0.25	0.10	ug/l	
75-09-2	Methylene Chloride	0.50 U	2.0	0.50	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	0.10	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	0.10	ug/l	
75-01-4	Vinyl Chloride	0.050 U	0.10	0.050	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	114%		74-125%
2037-26-5	Toluene-D8	110%		88-111%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB-B-SW		
Lab Sample ID:	FA56349-19	**Date Sampled:**	07/31/18
Matrix:	AQ - Field Blank Water	**Date Received:**	08/01/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By	Method
Total Organic Carbon	0.28 J	1.0	0.50	0.23	mg/l	1	08/10/18 00:16	FN	SM5310 B-11/SW9060A

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

ACCUTEST LABORATORIES

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CHAIN OF CUSTODY

FA56349 PAGE 1 OF 2

FED-EX Tracking #

Bottle Order Control #

Accutest Quote #

Accutest Job # NJ4-07118-76

Client / Reporting Information

Company Name: EA. Science & Technology

Street Address: 6712 Brooklawn Prkway Suite 104

City State Zip: Syracuse, NY 13211

Project Contact: Frank DeSantis Jr

E-mail:

Phone #: 315 - 565 - 6554

Fax #:

Sampler(s) Name(s): Doug Thompson and Aaron Roppoli

Phone #:

Project Information

Project Name: Picatinny Arsenal

Street: Rte. 15, Picatinny Arsenal

City State:

Project #: RB577

Client Purchase Order #:

Project Manager:

Billing Information (if different from Report to)

Company Name:

Street Address:

City State Zip:

Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	H3PO4	VOCs by EPA 8260	TOC by method 5310B	DOC by method 5310B	Alkalinity by SM2320B	Nitrate/Nitrite by 300.0	Dissolved Gases by RSK-175	Dissolved Iron by EPA 6020	Total Metals by EPA 6020	Dissolved Metals by EPA 6020	Total Iron by 6020	LAB USE ONLY
1	20/24IW-3 (MS/MSD)		7/31/18	0755	DT	GW	15	15								X	X				X					
2	20/24IW-10			1045			3	3																		
3	20/24MW-6			0830																						
4	20/24MW-6B			0855																						
5	20/24MW-8			0905																						
6	20/24MW-18			0935																						
7	20/24IW-1B			1145			3	3																		
8	20/24IW-3B			1040			3	3																		
9	20/24IW-09			1155			3	3																		
10	TB			0600		TB	2	2																		
11	FD-B-GW			0000		GW	8	8									X				X					
12	FB-GW	1245		1245		FB	8	8									X				X					

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Waste Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SHIP ALL SAMPLES TO ORLANDO, FL LAB.

INITIAL ASESSMENT

LABEL VERIFICATION

collected by: (SCI - Sovereign Consulting)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	7-31-18 1605	1	2 7-31-18 1630		2 Fed Ex
Relinquished by Sampler: Fed Ex	Date Time:	Received By: 3 08/01/18 910	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by:	Date Time:	Received By: 5	Custody Seal # 013386	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 03.5 Sol

4.0

FA56349: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

FA56349 PAGE 2 OF 2

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FED-EX Tracking #:

Bottle Order Control #: A

Accutest Quote #:

Accutest Job #:

Client / Reporting Information

Company Name: EA. Science & Technology

Street Address: 6712 Brooklawn Prkway Suite 104

City State Zip: Syracuse, NY 13211

Project Contact: Frank DeSantis Jr

E-mail:

Phone #: 315 - 565 - 6554

Fax #:

Sampler(s) Name(s): Doug Thompson and Aaron Roppoli

Phone #:

Project Information

Project Name: Picatinny Arsenal

Street: Rte. 15, Picatinny Arsenal

City State:

Project #: RB577

Client Purchase Order #:

Project Manager:

Billing Information (if different from Report to)

Company Name:

Street Address:

City State Zip:

Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	H3PO4	VOCs by 8260 SIM	VOCs by EPA 8260B	TOC by method 5310B	DOC by method 5310B	Alkalinity by SM2320B	Nitrate/Nitrite by 300.0	Dissolved Gases by RSK-175	Dissolved Iron by EPA 6020	Total Metals by EPA 6020	Dissolved Metals by EPA 6020	Total Iron by 6020	LAB USE ONLY
13	SW-1 (MS/MSD)		7/31/18	1000	DT	GW	16	16								X	X	X									
14	SW-2		↓	1200	↓	↓	8	8								↓	↓	↓									
15	SW-3			1100																							
16	SW-4			1130																							
17	SW-5			1230																							
18	FD-B-SW			0800		FB																					
19	FB-SW		↓	1245	↓		↓	↓								↓	↓	↓									

VOCs by 8260 SIM

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Waste Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other _____

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SHIP ALL SAMPLES TO ORLANDO, FL LAB.

collected by: (SCI - Sovereign Consulting)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 7-31-18 1605	Received By: 1	Relinquished By: 2	Date Time: 7-31-18 1670	Received By: 2	Fed Ex	
Relinquished by Sampler: Fed Ex 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4		
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 013556	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp 03.5 SP

08/01/18 915

FA56349: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: FA56349 **Client:** EA. SCIENCE & TECH **Project:** PICATINNY ARSENAL

Date / Time Received: 8/1/2018 9:15:00 AM **Delivery Method:** FED EX **Airbill #'s:** 1001891734660003281100563393520797

Therm ID: IR 1; **Therm CF:** 0.1; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.9);

Cooler Temps (Corrected) °C: Cooler 1: (4.0);

Cooler Information	Y	N
1. Custody Seals Present	☑	☐
2. Custody Seals Intact	☑	☐
3. Temp criteria achieved	☑	☐
4. Cooler temp verification	IR Gun	
5. Cooler media	Ice (Bag)	

Trip Blank Information	Y	N	N/A
1. Trip Blank present / cooler	☑	☐	☐
2. Trip Blank listed on COC	☑	☐	☐
	W	**S**	**N/A**
3. Type Of TB Received	☑	☐	☐

Sample Information	Y	N	N/A
1. Sample labels present on bottles	☑	☐	
2. Samples preserved properly	☑	☐	
3. Sufficient volume/containers recvd for analysis:	☐	☑	
4. Condition of sample	Intact		
5. Sample recvd within HT	☑	☐	
6. Dates/Times/IDs on COC match Sample Label	☑	☐	
7. VOCs have headspace	☐	☑	☐
8. Bottles received for unspecified tests	☐	☑	
9. Compositing instructions clear	☐	☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐	☐	☑
11. % Solids Jar received?	☐	☐	☑
12. Residual Chlorine Present?	☐	☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments SAMPLE #1 REC'D TWO VIALS FOR MEE.

SM001
Rev. Date 05/24/17

Technician: SHAYLAP Date: 8/1/2018 9:15:00 AM Reviewer: _____ Date: _____

FA56349: Chain of Custody
Page 3 of 3

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1694	SW846 8260C						
VI1694-BS	67-64-1	Acetone	BSP	REC	99	%	39-160
VI1694-BS	71-43-2	Benzene	BSP	REC	98	%	79-120
VI1694-BS	108-86-1	Bromobenzene	BSP	REC	102	%	80-120
VI1694-BS	74-97-5	Bromochloromethane	BSP	REC	99	%	78-123
VI1694-BS	75-27-4	Bromodichloromethane	BSP	REC	109	%	79-125
VI1694-BS	75-25-2	Bromoform	BSP	REC	106	%	66-130
VI1694-BS	78-93-3	2-Butanone (MEK)	BSP	REC	98	%	56-143
VI1694-BS	104-51-8	n-Butylbenzene	BSP	REC	116	%	75-128
VI1694-BS	135-98-8	sec-Butylbenzene	BSP	REC	109	%	77-126
VI1694-BS	98-06-6	tert-Butylbenzene	BSP	REC	105	%	78-124
VI1694-BS	75-15-0	Carbon Disulfide	BSP	REC	98	%	64-133
VI1694-BS	56-23-5	Carbon Tetrachloride	BSP	REC	116	%	72-136
VI1694-BS	108-90-7	Chlorobenzene	BSP	REC	100	%	82-118
VI1694-BS	75-00-3	Chloroethane	BSP	REC	109	%	60-138
VI1694-BS	67-66-3	Chloroform	BSP	REC	102	%	79-124
VI1694-BS	95-49-8	o-Chlorotoluene	BSP	REC	104	%	79-122
VI1694-BS	106-43-4	p-Chlorotoluene	BSP	REC	104	%	78-122
VI1694-BS	124-48-1	Dibromochloromethane	BSP	REC	110	%	74-126
VI1694-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	104	%	62-128
VI1694-BS	106-93-4	1,2-Dibromoethane	BSP	REC	102	%	77-121
VI1694-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	134	%	32-152
VI1694-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	102	%	80-119
VI1694-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	105	%	80-119
VI1694-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	100	%	79-118
VI1694-BS	75-34-3	1,1-Dichloroethane	BSP	REC	104	%	77-125
VI1694-BS	107-06-2	1,2-Dichloroethane	BSP	REC	98	%	73-128
VI1694-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	98	%	71-131
VI1694-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	98	%	78-123
VI1694-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	99	%	75-124
VI1694-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	78-122
VI1694-BS	142-28-9	1,3-Dichloropropane	BSP	REC	97	%	80-119
VI1694-BS	594-20-7	2,2-Dichloropropane	BSP	REC	131	%	60-139
VI1694-BS	563-58-6	1,1-Dichloropropene	BSP	REC	102	%	79-125
VI1694-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	105	%	75-124
VI1694-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	107	%	73-127
VI1694-BS	100-41-4	Ethylbenzene	BSP	REC	102	%	79-121
VI1694-BS	87-68-3	Hexachlorobutadiene	BSP	REC	111	%	66-134
VI1694-BS	591-78-6	2-Hexanone	BSP	REC	102	%	57-139
VI1694-BS	98-82-8	Isopropylbenzene	BSP	REC	111	%	72-131
VI1694-BS	99-87-6	p-Isopropyltoluene	BSP	REC	110	%	77-127
VI1694-BS	74-83-9	Methyl Bromide	BSP	REC	109	%	53-141
VI1694-BS	74-87-3	Methyl Chloride	BSP	REC	110	%	50-139

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1694-BS	74-88-4	Methyl Iodide	BSP	REC	88	%	69-131
VI1694-BS	74-95-3	Methylene Bromide	BSP	REC	100	%	79-123
VI1694-BS	75-09-2	Methylene Chloride	BSP	REC	102	%	74-124
VI1694-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	101	%	67-130
VI1694-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	96	%	71-124
VI1694-BS	91-20-3	Naphthalene	BSP	REC	97	%	61-128
VI1694-BS	103-65-1	n-Propylbenzene	BSP	REC	106	%	76-126
VI1694-BS	100-42-5	Styrene	BSP	REC	106	%	78-123
VI1694-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	111	%	78-124
VI1694-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	106	%	71-121
VI1694-BS	127-18-4	Tetrachloroethylene	BSP	REC	104	%	74-129
VI1694-BS	108-88-3	Toluene	BSP	REC	99	%	80-121
VI1694-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	105	%	69-129
VI1694-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	105	%	69-130
VI1694-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	104	%	74-131
VI1694-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	105	%	80-119
VI1694-BS	79-01-6	Trichloroethylene	BSP	REC	102	%	79-123
VI1694-BS	75-69-4	Trichlorofluoromethane	BSP	REC	116	%	65-141
VI1694-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	100	%	73-122
VI1694-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	104	%	76-124
VI1694-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	107	%	75-124
VI1694-BS	108-05-4	Vinyl Acetate	BSP	REC	93	%	54-146
VI1694-BS	75-01-4	Vinyl Chloride	BSP	REC	114	%	58-137
VI1694-BS		m,p-Xylene	BSP	REC	105	%	80-121
VI1694-BS	95-47-6	o-Xylene	BSP	REC	103	%	78-122
VI1694-BS	1330-20-7	Xylene (total)	BSP	REC	104	%	79-121
VI1694-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	102	%	80-119
VI1694-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	102	%	81-118
VI1694-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	89-112
VI1694-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	98	%	85-114
FA56349-1MS	67-64-1	Acetone	MS	REC	171	%	39-160
FA56349-1MS	71-43-2	Benzene	MS	REC	92	%	79-120
FA56349-1MS	108-86-1	Bromobenzene	MS	REC	97	%	80-120
FA56349-1MS	74-97-5	Bromochloromethane	MS	REC	92	%	78-123
FA56349-1MS	75-27-4	Bromodichloromethane	MS	REC	101	%	79-125
FA56349-1MS	75-25-2	Bromoform	MS	REC	97	%	66-130
FA56349-1MS	78-93-3	2-Butanone (MEK)	MS	REC	102	%	56-143
FA56349-1MS	104-51-8	n-Butylbenzene	MS	REC	107	%	75-128
FA56349-1MS	135-98-8	sec-Butylbenzene	MS	REC	102	%	77-126
FA56349-1MS	98-06-6	tert-Butylbenzene	MS	REC	98	%	78-124
FA56349-1MS	75-15-0	Carbon Disulfide	MS	REC	75	%	64-133
FA56349-1MS	56-23-5	Carbon Tetrachloride	MS	REC	105	%	72-136
FA56349-1MS	108-90-7	Chlorobenzene	MS	REC	94	%	82-118
FA56349-1MS	75-00-3	Chloroethane	MS	REC	103	%	60-138
FA56349-1MS	67-66-3	Chloroform	MS	REC	93	%	79-124

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MS	95-49-8	o-Chlorotoluene	MS	REC	98	%	79-122
FA56349-1MS	106-43-4	p-Chlorotoluene	MS	REC	98	%	78-122
FA56349-1MS	124-48-1	Dibromochloromethane	MS	REC	100	%	74-126
FA56349-1MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	104	%	62-128
FA56349-1MS	106-93-4	1,2-Dibromoethane	MS	REC	96	%	77-121
FA56349-1MS	75-71-8	Dichlorodifluoromethane	MS	REC	127	%	32-152
FA56349-1MS	95-50-1	1,2-Dichlorobenzene	MS	REC	96	%	80-119
FA56349-1MS	541-73-1	1,3-Dichlorobenzene	MS	REC	99	%	80-119
FA56349-1MS	106-46-7	1,4-Dichlorobenzene	MS	REC	96	%	79-118
FA56349-1MS	75-34-3	1,1-Dichloroethane	MS	REC	97	%	77-125
FA56349-1MS	107-06-2	1,2-Dichloroethane	MS	REC	94	%	73-128
FA56349-1MS	75-35-4	1,1-Dichloroethylene	MS	REC	86	%	71-131
FA56349-1MS	156-59-2	cis-1,2-Dichloroethylene	MS	REC	89	%	78-123
FA56349-1MS	156-60-5	trans-1,2-Dichloroethylene	MS	REC	91	%	75-124
FA56349-1MS	78-87-5	1,2-Dichloropropane	MS	REC	98	%	78-122
FA56349-1MS	142-28-9	1,3-Dichloropropane	MS	REC	92	%	80-119
FA56349-1MS	594-20-7	2,2-Dichloropropane	MS	REC	114	%	60-139
FA56349-1MS	563-58-6	1,1-Dichloropropene	MS	REC	93	%	79-125
FA56349-1MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	85	%	75-124
FA56349-1MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	103	%	73-127
FA56349-1MS	100-41-4	Ethylbenzene	MS	REC	97	%	79-121
FA56349-1MS	87-68-3	Hexachlorobutadiene	MS	REC	100	%	66-134
FA56349-1MS	591-78-6	2-Hexanone	MS	REC	106	%	57-139
FA56349-1MS	98-82-8	Isopropylbenzene	MS	REC	104	%	72-131
FA56349-1MS	99-87-6	p-Isopropyltoluene	MS	REC	102	%	77-127
FA56349-1MS	74-83-9	Methyl Bromide	MS	REC	98	%	53-141
FA56349-1MS	74-87-3	Methyl Chloride	MS	REC	101	%	50-139
FA56349-1MS	74-88-4	Methyl Iodide	MS	REC	76	%	69-131
FA56349-1MS	74-95-3	Methylene Bromide	MS	REC	97	%	79-123
FA56349-1MS	75-09-2	Methylene Chloride	MS	REC	98	%	74-124
FA56349-1MS	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	104	%	67-130
FA56349-1MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	86	%	71-124
FA56349-1MS	91-20-3	Naphthalene	MS	REC	91	%	61-128
FA56349-1MS	103-65-1	n-Propylbenzene	MS	REC	99	%	76-126
FA56349-1MS	100-42-5	Styrene	MS	REC	99	%	78-123
FA56349-1MS	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	105	%	78-124
FA56349-1MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	106	%	71-121
FA56349-1MS	127-18-4	Tetrachloroethylene	MS	REC	90	%	74-129
FA56349-1MS	108-88-3	Toluene	MS	REC	92	%	80-121
FA56349-1MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	98	%	69-129
FA56349-1MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	96	%	69-130
FA56349-1MS	71-55-6	1,1,1-Trichloroethane	MS	REC	96	%	74-131
FA56349-1MS	79-00-5	1,1,2-Trichloroethane	MS	REC	100	%	80-119
FA56349-1MS	79-01-6	Trichloroethylene	MS	REC	98	%	79-123
FA56349-1MS	75-69-4	Trichlorofluoromethane	MS	REC	115	%	65-141

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MS	96-18-4	1,2,3-Trichloropropane	MS	REC	101	%	73-122
FA56349-1MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	98	%	76-124
FA56349-1MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	100	%	75-124
FA56349-1MS	108-05-4	Vinyl Acetate	MS	REC	86	%	54-146
FA56349-1MS	75-01-4	Vinyl Chloride	MS	REC	100	%	58-137
FA56349-1MS		m,p-Xylene	MS	REC	97	%	80-121
FA56349-1MS	95-47-6	o-Xylene	MS	REC	96	%	78-122
FA56349-1MS	1330-20-7	Xylene (total)	MS	REC	97	%	79-121
FA56349-1MS	1868-53-7	Dibromofluoromethane	MS	SURR	103	%	80-119
FA56349-1MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	105	%	81-118
FA56349-1MS	2037-26-5	Toluene-D8	MS	SURR	97	%	89-112
FA56349-1MS	460-00-4	4-Bromofluorobenzene	MS	SURR	96	%	85-114
FA56349-1MSD	67-64-1	Acetone	MSD	REC	179	%	39-160
FA56349-1MSD	67-64-1	Acetone	MSD	RPD	5	%	20
FA56349-1MSD	71-43-2	Benzene	MSD	REC	95	%	79-120
FA56349-1MSD	71-43-2	Benzene	MSD	RPD	3	%	20
FA56349-1MSD	108-86-1	Bromobenzene	MSD	REC	99	%	80-120
FA56349-1MSD	108-86-1	Bromobenzene	MSD	RPD	2	%	20
FA56349-1MSD	74-97-5	Bromochloromethane	MSD	REC	95	%	78-123
FA56349-1MSD	74-97-5	Bromochloromethane	MSD	RPD	3	%	20
FA56349-1MSD	75-27-4	Bromodichloromethane	MSD	REC	105	%	79-125
FA56349-1MSD	75-27-4	Bromodichloromethane	MSD	RPD	3	%	20
FA56349-1MSD	75-25-2	Bromoform	MSD	REC	100	%	66-130
FA56349-1MSD	75-25-2	Bromoform	MSD	RPD	3	%	20
FA56349-1MSD	78-93-3	2-Butanone (MEK)	MSD	REC	107	%	56-143
FA56349-1MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	5	%	20
FA56349-1MSD	104-51-8	n-Butylbenzene	MSD	REC	110	%	75-128
FA56349-1MSD	104-51-8	n-Butylbenzene	MSD	RPD	3	%	20
FA56349-1MSD	135-98-8	sec-Butylbenzene	MSD	REC	105	%	77-126
FA56349-1MSD	135-98-8	sec-Butylbenzene	MSD	RPD	3	%	20
FA56349-1MSD	98-06-6	tert-Butylbenzene	MSD	REC	102	%	78-124
FA56349-1MSD	98-06-6	tert-Butylbenzene	MSD	RPD	4	%	20
FA56349-1MSD	75-15-0	Carbon Disulfide	MSD	REC	76	%	64-133
FA56349-1MSD	75-15-0	Carbon Disulfide	MSD	RPD	1	%	20
FA56349-1MSD	56-23-5	Carbon Tetrachloride	MSD	REC	108	%	72-136
FA56349-1MSD	56-23-5	Carbon Tetrachloride	MSD	RPD	3	%	20
FA56349-1MSD	108-90-7	Chlorobenzene	MSD	REC	97	%	82-118
FA56349-1MSD	108-90-7	Chlorobenzene	MSD	RPD	3	%	20
FA56349-1MSD	75-00-3	Chloroethane	MSD	REC	100	%	60-138
FA56349-1MSD	75-00-3	Chloroethane	MSD	RPD	3	%	20
FA56349-1MSD	67-66-3	Chloroform	MSD	REC	96	%	79-124
FA56349-1MSD	67-66-3	Chloroform	MSD	RPD	4	%	20
FA56349-1MSD	95-49-8	o-Chlorotoluene	MSD	REC	101	%	79-122
FA56349-1MSD	95-49-8	o-Chlorotoluene	MSD	RPD	3	%	20
FA56349-1MSD	106-43-4	p-Chlorotoluene	MSD	REC	101	%	78-122

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MSD	106-43-4	p-Chlorotoluene	MSD	RPD	3	%	20
FA56349-1MSD	124-48-1	Dibromochloromethane	MSD	REC	103	%	74-126
FA56349-1MSD	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
FA56349-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	108	%	62-128
FA56349-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	3	%	20
FA56349-1MSD	106-93-4	1,2-Dibromoethane	MSD	REC	100	%	77-121
FA56349-1MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	4	%	20
FA56349-1MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	130	%	32-152
FA56349-1MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
FA56349-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	99	%	80-119
FA56349-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	3	%	20
FA56349-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
FA56349-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	2	%	20
FA56349-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	98	%	79-118
FA56349-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
FA56349-1MSD	75-34-3	1,1-Dichloroethane	MSD	REC	101	%	77-125
FA56349-1MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	4	%	20
FA56349-1MSD	107-06-2	1,2-Dichloroethane	MSD	REC	97	%	73-128
FA56349-1MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	3	%	20
FA56349-1MSD	75-35-4	1,1-Dichloroethylene	MSD	REC	90	%	71-131
FA56349-1MSD	75-35-4	1,1-Dichloroethylene	MSD	RPD	5	%	20
FA56349-1MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	93	%	78-123
FA56349-1MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA56349-1MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	95	%	75-124
FA56349-1MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA56349-1MSD	78-87-5	1,2-Dichloropropane	MSD	REC	100	%	78-122
FA56349-1MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
FA56349-1MSD	142-28-9	1,3-Dichloropropane	MSD	REC	96	%	80-119
FA56349-1MSD	142-28-9	1,3-Dichloropropane	MSD	RPD	4	%	20
FA56349-1MSD	594-20-7	2,2-Dichloropropane	MSD	REC	120	%	60-139
FA56349-1MSD	594-20-7	2,2-Dichloropropane	MSD	RPD	4	%	20
FA56349-1MSD	563-58-6	1,1-Dichloropropene	MSD	REC	97	%	79-125
FA56349-1MSD	563-58-6	1,1-Dichloropropene	MSD	RPD	4	%	20
FA56349-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	88	%	75-124
FA56349-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	3	%	20
FA56349-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	110	%	73-127
FA56349-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	6	%	20
FA56349-1MSD	100-41-4	Ethylbenzene	MSD	REC	100	%	79-121
FA56349-1MSD	100-41-4	Ethylbenzene	MSD	RPD	3	%	20
FA56349-1MSD	87-68-3	Hexachlorobutadiene	MSD	REC	103	%	66-134
FA56349-1MSD	87-68-3	Hexachlorobutadiene	MSD	RPD	3	%	20
FA56349-1MSD	591-78-6	2-Hexanone	MSD	REC	111	%	57-139
FA56349-1MSD	591-78-6	2-Hexanone	MSD	RPD	4	%	20
FA56349-1MSD	98-82-8	Isopropylbenzene	MSD	REC	108	%	72-131
FA56349-1MSD	98-82-8	Isopropylbenzene	MSD	RPD	4	%	20

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MSD	99-87-6	p-Isopropyltoluene	MSD	REC	105	%	77-127
FA56349-1MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	3	%	20
FA56349-1MSD	74-83-9	Methyl Bromide	MSD	REC	101	%	53-141
FA56349-1MSD	74-83-9	Methyl Bromide	MSD	RPD	3	%	20
FA56349-1MSD	74-87-3	Methyl Chloride	MSD	REC	106	%	50-139
FA56349-1MSD	74-87-3	Methyl Chloride	MSD	RPD	5	%	20
FA56349-1MSD	74-88-4	Methyl Iodide	MSD	REC	80	%	69-131
FA56349-1MSD	74-88-4	Methyl Iodide	MSD	RPD	4	%	20
FA56349-1MSD	74-95-3	Methylene Bromide	MSD	REC	100	%	79-123
FA56349-1MSD	74-95-3	Methylene Bromide	MSD	RPD	3	%	20
FA56349-1MSD	75-09-2	Methylene Chloride	MSD	REC	99	%	74-124
FA56349-1MSD	75-09-2	Methylene Chloride	MSD	RPD	2	%	20
FA56349-1MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	110	%	67-130
FA56349-1MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	5	%	20
FA56349-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	92	%	71-124
FA56349-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	7	%	20
FA56349-1MSD	91-20-3	Naphthalene	MSD	REC	96	%	61-128
FA56349-1MSD	91-20-3	Naphthalene	MSD	RPD	5	%	20
FA56349-1MSD	103-65-1	n-Propylbenzene	MSD	REC	102	%	76-126
FA56349-1MSD	103-65-1	n-Propylbenzene	MSD	RPD	3	%	20
FA56349-1MSD	100-42-5	Styrene	MSD	REC	103	%	78-123
FA56349-1MSD	100-42-5	Styrene	MSD	RPD	4	%	20
FA56349-1MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	108	%	78-124
FA56349-1MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	3	%	20
FA56349-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	109	%	71-121
FA56349-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	3	%	20
FA56349-1MSD	127-18-4	Tetrachloroethylene	MSD	REC	93	%	74-129
FA56349-1MSD	127-18-4	Tetrachloroethylene	MSD	RPD	3	%	20
FA56349-1MSD	108-88-3	Toluene	MSD	REC	95	%	80-121
FA56349-1MSD	108-88-3	Toluene	MSD	RPD	3	%	20
FA56349-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	101	%	69-129
FA56349-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	4	%	20
FA56349-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	100	%	69-130
FA56349-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	4	%	20
FA56349-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	101	%	74-131
FA56349-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	5	%	20
FA56349-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	104	%	80-119
FA56349-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	4	%	20
FA56349-1MSD	79-01-6	Trichloroethylene	MSD	REC	100	%	79-123
FA56349-1MSD	79-01-6	Trichloroethylene	MSD	RPD	2	%	20
FA56349-1MSD	75-69-4	Trichlorofluoromethane	MSD	REC	118	%	65-141
FA56349-1MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	3	%	20
FA56349-1MSD	96-18-4	1,2,3-Trichloropropane	MSD	REC	102	%	73-122
FA56349-1MSD	96-18-4	1,2,3-Trichloropropane	MSD	RPD	2	%	20
FA56349-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	100	%	76-124

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	3	%	20
FA56349-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	104	%	75-124
FA56349-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	4	%	20
FA56349-1MSD	108-05-4	Vinyl Acetate	MSD	REC	93	%	54-146
FA56349-1MSD	108-05-4	Vinyl Acetate	MSD	RPD	7	%	20
FA56349-1MSD	75-01-4	Vinyl Chloride	MSD	REC	107	%	58-137
FA56349-1MSD	75-01-4	Vinyl Chloride	MSD	RPD	7	%	20
FA56349-1MSD		m,p-Xylene	MSD	REC	102	%	80-121
FA56349-1MSD		m,p-Xylene	MSD	RPD	4	%	20
FA56349-1MSD	95-47-6	o-Xylene	MSD	REC	100	%	78-122
FA56349-1MSD	95-47-6	o-Xylene	MSD	RPD	4	%	20
FA56349-1MSD	1330-20-7	Xylene (total)	MSD	REC	101	%	79-121
FA56349-1MSD	1330-20-7	Xylene (total)	MSD	RPD	4	%	20
FA56349-1MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	104	%	80-119
FA56349-1MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	104	%	81-118
FA56349-1MSD	2037-26-5	Toluene-D8	MSD	SURR	98	%	89-112
FA56349-1MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	97	%	85-114
VI1694-MB	1868-53-7	Dibromofluoromethane	MB	SURR	99	%	80-119
VI1694-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	104	%	81-118
VI1694-MB	2037-26-5	Toluene-D8	MB	SURR	98	%	89-112
VI1694-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	98	%	85-114
FA56349-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56349-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
FA56349-1	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
FA56349-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	85-114
FA56349-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
FA56349-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	110	%	81-118
FA56349-2	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56349-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	85-114
FA56349-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
FA56349-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
FA56349-3	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56349-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56349-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
FA56349-4	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56349-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56349-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
FA56349-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
FA56349-5	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56349-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56349-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
FA56349-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
FA56349-6	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
FA56349-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
FA56349-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
FA56349-7	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56349-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
FA56349-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	109	%	81-118
FA56349-8	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56349-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
FA56349-9	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	109	%	81-118
FA56349-9	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56349-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-10	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
FA56349-10	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	109	%	81-118
FA56349-10	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56349-10	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-11	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56349-11	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
FA56349-11	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56349-11	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
VI1696	SW846 8260C						
VI1696-BS	67-64-1	Acetone	BSP	REC	94	%	39-160
VI1696-BS	71-43-2	Benzene	BSP	REC	102	%	79-120
VI1696-BS	108-86-1	Bromobenzene	BSP	REC	100	%	80-120
VI1696-BS	74-97-5	Bromochloromethane	BSP	REC	102	%	78-123
VI1696-BS	75-27-4	Bromodichloromethane	BSP	REC	108	%	79-125
VI1696-BS	75-25-2	Bromoform	BSP	REC	101	%	66-130
VI1696-BS	78-93-3	2-Butanone (MEK)	BSP	REC	93	%	56-143
VI1696-BS	104-51-8	n-Butylbenzene	BSP	REC	110	%	75-128
VI1696-BS	135-98-8	sec-Butylbenzene	BSP	REC	105	%	77-126
VI1696-BS	98-06-6	tert-Butylbenzene	BSP	REC	102	%	78-124
VI1696-BS	75-15-0	Carbon Disulfide	BSP	REC	107	%	64-133
VI1696-BS	56-23-5	Carbon Tetrachloride	BSP	REC	122	%	72-136
VI1696-BS	108-90-7	Chlorobenzene	BSP	REC	96	%	82-118
VI1696-BS	75-00-3	Chloroethane	BSP	REC	112	%	60-138
VI1696-BS	67-66-3	Chloroform	BSP	REC	102	%	79-124
VI1696-BS	95-49-8	o-Chlorotoluene	BSP	REC	100	%	79-122
VI1696-BS	106-43-4	p-Chlorotoluene	BSP	REC	100	%	78-122
VI1696-BS	124-48-1	Dibromochloromethane	BSP	REC	105	%	74-126
VI1696-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	95	%	62-128
VI1696-BS	106-93-4	1,2-Dibromoethane	BSP	REC	99	%	77-121
VI1696-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	130	%	32-152
VI1696-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	96	%	80-119

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1696-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	100	%	80-119
VI1696-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	96	%	79-118
VI1696-BS	75-34-3	1,1-Dichloroethane	BSP	REC	110	%	77-125
VI1696-BS	107-06-2	1,2-Dichloroethane	BSP	REC	99	%	73-128
VI1696-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	112	%	71-131
VI1696-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	102	%	78-123
VI1696-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	108	%	75-124
VI1696-BS	78-87-5	1,2-Dichloropropane	BSP	REC	106	%	78-122
VI1696-BS	142-28-9	1,3-Dichloropropane	BSP	REC	95	%	80-119
VI1696-BS	594-20-7	2,2-Dichloropropane	BSP	REC	141	%	60-139
VI1696-BS	563-58-6	1,1-Dichloropropene	BSP	REC	107	%	79-125
VI1696-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	105	%	75-124
VI1696-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	103	%	73-127
VI1696-BS	100-41-4	Ethylbenzene	BSP	REC	100	%	79-121
VI1696-BS	87-68-3	Hexachlorobutadiene	BSP	REC	104	%	66-134
VI1696-BS	591-78-6	2-Hexanone	BSP	REC	98	%	57-139
VI1696-BS	98-82-8	Isopropylbenzene	BSP	REC	108	%	72-131
VI1696-BS	99-87-6	p-Isopropyltoluene	BSP	REC	105	%	77-127
VI1696-BS	74-83-9	Methyl Bromide	BSP	REC	109	%	53-141
VI1696-BS	74-87-3	Methyl Chloride	BSP	REC	108	%	50-139
VI1696-BS	74-88-4	Methyl Iodide	BSP	REC	96	%	69-131
VI1696-BS	74-95-3	Methylene Bromide	BSP	REC	102	%	79-123
VI1696-BS	75-09-2	Methylene Chloride	BSP	REC	110	%	74-124
VI1696-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	97	%	67-130
VI1696-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	102	%	71-124
VI1696-BS	91-20-3	Naphthalene	BSP	REC	91	%	61-128
VI1696-BS	103-65-1	n-Propylbenzene	BSP	REC	102	%	76-126
VI1696-BS	100-42-5	Styrene	BSP	REC	103	%	78-123
VI1696-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	106	%	78-124
VI1696-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	100	%	71-121
VI1696-BS	127-18-4	Tetrachloroethylene	BSP	REC	104	%	74-129
VI1696-BS	108-88-3	Toluene	BSP	REC	100	%	80-121
VI1696-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	99	%	69-129
VI1696-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	98	%	69-130
VI1696-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	110	%	74-131
VI1696-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	100	%	80-119
VI1696-BS	79-01-6	Trichloroethylene	BSP	REC	104	%	79-123
VI1696-BS	75-69-4	Trichlorofluoromethane	BSP	REC	112	%	65-141
VI1696-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	96	%	73-122
VI1696-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	100	%	76-124
VI1696-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	103	%	75-124
VI1696-BS	108-05-4	Vinyl Acetate	BSP	REC	86	%	54-146
VI1696-BS	75-01-4	Vinyl Chloride	BSP	REC	112	%	58-137
VI1696-BS		m,p-Xylene	BSP	REC	102	%	80-121
VI1696-BS	95-47-6	o-Xylene	BSP	REC	101	%	78-122

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1696-BS	1330-20-7	Xylene (total)	BSP	REC	102	%	79-121
VI1696-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	80-119
VI1696-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	102	%	81-118
VI1696-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	89-112
VI1696-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	100	%	85-114
FA56349-13MS	67-64-1	Acetone	MS	REC	88	%	39-160
FA56349-13MS	71-43-2	Benzene	MS	REC	84	%	79-120
FA56349-13MS	108-86-1	Bromobenzene	MS	REC	100	%	80-120
FA56349-13MS	74-97-5	Bromochloromethane	MS	REC	85	%	78-123
FA56349-13MS	75-27-4	Bromodichloromethane	MS	REC	101	%	79-125
FA56349-13MS	75-25-2	Bromoform	MS	REC	97	%	66-130
FA56349-13MS	78-93-3	2-Butanone (MEK)	MS	REC	88	%	56-143
FA56349-13MS	104-51-8	n-Butylbenzene	MS	REC	111	%	75-128
FA56349-13MS	135-98-8	sec-Butylbenzene	MS	REC	106	%	77-126
FA56349-13MS	98-06-6	tert-Butylbenzene	MS	REC	103	%	78-124
FA56349-13MS	75-15-0	Carbon Disulfide	MS	REC	66	%	64-133
FA56349-13MS	56-23-5	Carbon Tetrachloride	MS	REC	98	%	72-136
FA56349-13MS	108-90-7	Chlorobenzene	MS	REC	95	%	82-118
FA56349-13MS	75-00-3	Chloroethane	MS	REC	105	%	60-138
FA56349-13MS	67-66-3	Chloroform	MS	REC	89	%	79-124
FA56349-13MS	95-49-8	o-Chlorotoluene	MS	REC	102	%	79-122
FA56349-13MS	106-43-4	p-Chlorotoluene	MS	REC	102	%	78-122
FA56349-13MS	124-48-1	Dibromochloromethane	MS	REC	100	%	74-126
FA56349-13MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	102	%	62-128
FA56349-13MS	106-93-4	1,2-Dibromoethane	MS	REC	92	%	77-121
FA56349-13MS	75-71-8	Dichlorodifluoromethane	MS	REC	124	%	32-152
FA56349-13MS	95-50-1	1,2-Dichlorobenzene	MS	REC	101	%	80-119
FA56349-13MS	541-73-1	1,3-Dichlorobenzene	MS	REC	103	%	80-119
FA56349-13MS	106-46-7	1,4-Dichlorobenzene	MS	REC	100	%	79-118
FA56349-13MS	75-34-3	1,1-Dichloroethane	MS	REC	88	%	77-125
FA56349-13MS	107-06-2	1,2-Dichloroethane	MS	REC	88	%	73-128
FA56349-13MS	75-35-4	1,1-Dichloroethylene	MS	REC	73	%	71-131
FA56349-13MS	156-59-2	cis-1,2-Dichloroethylene	MS	REC	82	%	78-123
FA56349-13MS	156-60-5	trans-1,2-Dichloroethylene	MS	REC	80	%	75-124
FA56349-13MS	78-87-5	1,2-Dichloropropane	MS	REC	94	%	78-122
FA56349-13MS	142-28-9	1,3-Dichloropropane	MS	REC	90	%	80-119
FA56349-13MS	594-20-7	2,2-Dichloropropane	MS	REC	108	%	60-139
FA56349-13MS	563-58-6	1,1-Dichloropropene	MS	REC	84	%	79-125
FA56349-13MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	85	%	75-124
FA56349-13MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	106	%	73-127
FA56349-13MS	100-41-4	Ethylbenzene	MS	REC	97	%	79-121
FA56349-13MS	87-68-3	Hexachlorobutadiene	MS	REC	103	%	66-134
FA56349-13MS	591-78-6	2-Hexanone	MS	REC	97	%	57-139
FA56349-13MS	98-82-8	Isopropylbenzene	MS	REC	107	%	72-131
FA56349-13MS	99-87-6	p-Isopropyltoluene	MS	REC	106	%	77-127

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-13MS	74-83-9	Methyl Bromide	MS	REC	102	%	53-141
FA56349-13MS	74-87-3	Methyl Chloride	MS	REC	105	%	50-139
FA56349-13MS	74-88-4	Methyl Iodide	MS	REC	64	%	69-131
FA56349-13MS	74-95-3	Methylene Bromide	MS	REC	92	%	79-123
FA56349-13MS	75-09-2	Methylene Chloride	MS	REC	86	%	74-124
FA56349-13MS	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	95	%	67-130
FA56349-13MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	74	%	71-124
FA56349-13MS	91-20-3	Naphthalene	MS	REC	91	%	61-128
FA56349-13MS	103-65-1	n-Propylbenzene	MS	REC	102	%	76-126
FA56349-13MS	100-42-5	Styrene	MS	REC	98	%	78-123
FA56349-13MS	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	108	%	78-124
FA56349-13MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	107	%	71-121
FA56349-13MS	127-18-4	Tetrachloroethylene	MS	REC	88	%	74-129
FA56349-13MS	108-88-3	Toluene	MS	REC	88	%	80-121
FA56349-13MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	101	%	69-129
FA56349-13MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	98	%	69-130
FA56349-13MS	71-55-6	1,1,1-Trichloroethane	MS	REC	90	%	74-131
FA56349-13MS	79-00-5	1,1,2-Trichloroethane	MS	REC	102	%	80-119
FA56349-13MS	79-01-6	Trichloroethylene	MS	REC	91	%	79-123
FA56349-13MS	75-69-4	Trichlorofluoromethane	MS	REC	124	%	65-141
FA56349-13MS	96-18-4	1,2,3-Trichloropropane	MS	REC	99	%	73-122
FA56349-13MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	100	%	76-124
FA56349-13MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	102	%	75-124
FA56349-13MS	108-05-4	Vinyl Acetate	MS	REC	81	%	54-146
FA56349-13MS	75-01-4	Vinyl Chloride	MS	REC	104	%	58-137
FA56349-13MS		m,p-Xylene	MS	REC	99	%	80-121
FA56349-13MS	95-47-6	o-Xylene	MS	REC	96	%	78-122
FA56349-13MS	1330-20-7	Xylene (total)	MS	REC	98	%	79-121
FA56349-13MS	1868-53-7	Dibromofluoromethane	MS	SURR	103	%	80-119
FA56349-13MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	103	%	81-118
FA56349-13MS	2037-26-5	Toluene-D8	MS	SURR	96	%	89-112
FA56349-13MS	460-00-4	4-Bromofluorobenzene	MS	SURR	97	%	85-114
FA56349-13MSD	67-64-1	Acetone	MSD	REC	89	%	39-160
FA56349-13MSD	67-64-1	Acetone	MSD	RPD	1	%	20
FA56349-13MSD	71-43-2	Benzene	MSD	REC	84	%	79-120
FA56349-13MSD	71-43-2	Benzene	MSD	RPD	0	%	20
FA56349-13MSD	108-86-1	Bromobenzene	MSD	REC	100	%	80-120
FA56349-13MSD	108-86-1	Bromobenzene	MSD	RPD	0	%	20
FA56349-13MSD	74-97-5	Bromochloromethane	MSD	REC	84	%	78-123
FA56349-13MSD	74-97-5	Bromochloromethane	MSD	RPD	1	%	20
FA56349-13MSD	75-27-4	Bromodichloromethane	MSD	REC	100	%	79-125
FA56349-13MSD	75-27-4	Bromodichloromethane	MSD	RPD	1	%	20
FA56349-13MSD	75-25-2	Bromoform	MSD	REC	96	%	66-130
FA56349-13MSD	75-25-2	Bromoform	MSD	RPD	0	%	20
FA56349-13MSD	78-93-3	2-Butanone (MEK)	MSD	REC	90	%	56-143

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-13MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	2	%	20
FA56349-13MSD	104-51-8	n-Butylbenzene	MSD	REC	112	%	75-128
FA56349-13MSD	104-51-8	n-Butylbenzene	MSD	RPD	1	%	20
FA56349-13MSD	135-98-8	sec-Butylbenzene	MSD	REC	106	%	77-126
FA56349-13MSD	135-98-8	sec-Butylbenzene	MSD	RPD	1	%	20
FA56349-13MSD	98-06-6	tert-Butylbenzene	MSD	REC	103	%	78-124
FA56349-13MSD	98-06-6	tert-Butylbenzene	MSD	RPD	0	%	20
FA56349-13MSD	75-15-0	Carbon Disulfide	MSD	REC	66	%	64-133
FA56349-13MSD	75-15-0	Carbon Disulfide	MSD	RPD	1	%	20
FA56349-13MSD	56-23-5	Carbon Tetrachloride	MSD	REC	97	%	72-136
FA56349-13MSD	56-23-5	Carbon Tetrachloride	MSD	RPD	0	%	20
FA56349-13MSD	108-90-7	Chlorobenzene	MSD	REC	94	%	82-118
FA56349-13MSD	108-90-7	Chlorobenzene	MSD	RPD	1	%	20
FA56349-13MSD	75-00-3	Chloroethane	MSD	REC	110	%	60-138
FA56349-13MSD	75-00-3	Chloroethane	MSD	RPD	4	%	20
FA56349-13MSD	67-66-3	Chloroform	MSD	REC	89	%	79-124
FA56349-13MSD	67-66-3	Chloroform	MSD	RPD	0	%	20
FA56349-13MSD	95-49-8	o-Chlorotoluene	MSD	REC	102	%	79-122
FA56349-13MSD	95-49-8	o-Chlorotoluene	MSD	RPD	0	%	20
FA56349-13MSD	106-43-4	p-Chlorotoluene	MSD	REC	102	%	78-122
FA56349-13MSD	106-43-4	p-Chlorotoluene	MSD	RPD	0	%	20
FA56349-13MSD	124-48-1	Dibromochloromethane	MSD	REC	100	%	74-126
FA56349-13MSD	124-48-1	Dibromochloromethane	MSD	RPD	0	%	20
FA56349-13MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	103	%	62-128
FA56349-13MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	2	%	20
FA56349-13MSD	106-93-4	1,2-Dibromoethane	MSD	REC	93	%	77-121
FA56349-13MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	1	%	20
FA56349-13MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	127	%	32-152
FA56349-13MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
FA56349-13MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	101	%	80-119
FA56349-13MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	0	%	20
FA56349-13MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	103	%	80-119
FA56349-13MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	0	%	20
FA56349-13MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	100	%	79-118
FA56349-13MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	0	%	20
FA56349-13MSD	75-34-3	1,1-Dichloroethane	MSD	REC	88	%	77-125
FA56349-13MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	0	%	20
FA56349-13MSD	107-06-2	1,2-Dichloroethane	MSD	REC	86	%	73-128
FA56349-13MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	2	%	20
FA56349-13MSD	75-35-4	1,1-Dichloroethylene	MSD	REC	74	%	71-131
FA56349-13MSD	75-35-4	1,1-Dichloroethylene	MSD	RPD	2	%	20
FA56349-13MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	82	%	78-123
FA56349-13MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	1	%	20
FA56349-13MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	81	%	75-124
FA56349-13MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	0	%	20

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-13MSD	78-87-5	1,2-Dichloropropane	MSD	REC	94	%	78-122
FA56349-13MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	0	%	20
FA56349-13MSD	142-28-9	1,3-Dichloropropane	MSD	REC	92	%	80-119
FA56349-13MSD	142-28-9	1,3-Dichloropropane	MSD	RPD	2	%	20
FA56349-13MSD	594-20-7	2,2-Dichloropropane	MSD	REC	110	%	60-139
FA56349-13MSD	594-20-7	2,2-Dichloropropane	MSD	RPD	2	%	20
FA56349-13MSD	563-58-6	1,1-Dichloropropene	MSD	REC	84	%	79-125
FA56349-13MSD	563-58-6	1,1-Dichloropropene	MSD	RPD	1	%	20
FA56349-13MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	87	%	75-124
FA56349-13MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	2	%	20
FA56349-13MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	93	%	73-127
FA56349-13MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	12	%	20
FA56349-13MSD	100-41-4	Ethylbenzene	MSD	REC	97	%	79-121
FA56349-13MSD	100-41-4	Ethylbenzene	MSD	RPD	0	%	20
FA56349-13MSD	87-68-3	Hexachlorobutadiene	MSD	REC	106	%	66-134
FA56349-13MSD	87-68-3	Hexachlorobutadiene	MSD	RPD	3	%	20
FA56349-13MSD	591-78-6	2-Hexanone	MSD	REC	99	%	57-139
FA56349-13MSD	591-78-6	2-Hexanone	MSD	RPD	2	%	20
FA56349-13MSD	98-82-8	Isopropylbenzene	MSD	REC	106	%	72-131
FA56349-13MSD	98-82-8	Isopropylbenzene	MSD	RPD	1	%	20
FA56349-13MSD	99-87-6	p-Isopropyltoluene	MSD	REC	107	%	77-127
FA56349-13MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	0	%	20
FA56349-13MSD	74-83-9	Methyl Bromide	MSD	REC	104	%	53-141
FA56349-13MSD	74-83-9	Methyl Bromide	MSD	RPD	2	%	20
FA56349-13MSD	74-87-3	Methyl Chloride	MSD	REC	106	%	50-139
FA56349-13MSD	74-87-3	Methyl Chloride	MSD	RPD	1	%	20
FA56349-13MSD	74-88-4	Methyl Iodide	MSD	REC	66	%	69-131
FA56349-13MSD	74-88-4	Methyl Iodide	MSD	RPD	2	%	20
FA56349-13MSD	74-95-3	Methylene Bromide	MSD	REC	92	%	79-123
FA56349-13MSD	74-95-3	Methylene Bromide	MSD	RPD	0	%	20
FA56349-13MSD	75-09-2	Methylene Chloride	MSD	REC	85	%	74-124
FA56349-13MSD	75-09-2	Methylene Chloride	MSD	RPD	1	%	20
FA56349-13MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	97	%	67-130
FA56349-13MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	2	%	20
FA56349-13MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	77	%	71-124
FA56349-13MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	4	%	20
FA56349-13MSD	91-20-3	Naphthalene	MSD	REC	94	%	61-128
FA56349-13MSD	91-20-3	Naphthalene	MSD	RPD	3	%	20
FA56349-13MSD	103-65-1	n-Propylbenzene	MSD	REC	102	%	76-126
FA56349-13MSD	103-65-1	n-Propylbenzene	MSD	RPD	0	%	20
FA56349-13MSD	100-42-5	Styrene	MSD	REC	96	%	78-123
FA56349-13MSD	100-42-5	Styrene	MSD	RPD	3	%	20
FA56349-13MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	109	%	78-124
FA56349-13MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	1	%	20
FA56349-13MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	109	%	71-121

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-13MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	2	%	20
FA56349-13MSD	127-18-4	Tetrachloroethylene	MSD	REC	87	%	74-129
FA56349-13MSD	127-18-4	Tetrachloroethylene	MSD	RPD	1	%	20
FA56349-13MSD	108-88-3	Toluene	MSD	REC	89	%	80-121
FA56349-13MSD	108-88-3	Toluene	MSD	RPD	1	%	20
FA56349-13MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	103	%	69-129
FA56349-13MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	2	%	20
FA56349-13MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	101	%	69-130
FA56349-13MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	3	%	20
FA56349-13MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	90	%	74-131
FA56349-13MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	0	%	20
FA56349-13MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	101	%	80-119
FA56349-13MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	1	%	20
FA56349-13MSD	79-01-6	Trichloroethylene	MSD	REC	91	%	79-123
FA56349-13MSD	79-01-6	Trichloroethylene	MSD	RPD	0	%	20
FA56349-13MSD	75-69-4	Trichlorofluoromethane	MSD	REC	119	%	65-141
FA56349-13MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	4	%	20
FA56349-13MSD	96-18-4	1,2,3-Trichloropropane	MSD	REC	101	%	73-122
FA56349-13MSD	96-18-4	1,2,3-Trichloropropane	MSD	RPD	2	%	20
FA56349-13MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	99	%	76-124
FA56349-13MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	0	%	20
FA56349-13MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	101	%	75-124
FA56349-13MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	1	%	20
FA56349-13MSD	108-05-4	Vinyl Acetate	MSD	REC	84	%	54-146
FA56349-13MSD	108-05-4	Vinyl Acetate	MSD	RPD	4	%	20
FA56349-13MSD	75-01-4	Vinyl Chloride	MSD	REC	109	%	58-137
FA56349-13MSD	75-01-4	Vinyl Chloride	MSD	RPD	4	%	20
FA56349-13MSD		m,p-Xylene	MSD	REC	98	%	80-121
FA56349-13MSD		m,p-Xylene	MSD	RPD	0	%	20
FA56349-13MSD	95-47-6	o-Xylene	MSD	REC	98	%	78-122
FA56349-13MSD	95-47-6	o-Xylene	MSD	RPD	1	%	20
FA56349-13MSD	1330-20-7	Xylene (total)	MSD	REC	98	%	79-121
FA56349-13MSD	1330-20-7	Xylene (total)	MSD	RPD	0	%	20
FA56349-13MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	103	%	80-119
FA56349-13MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	104	%	81-118
FA56349-13MSD	2037-26-5	Toluene-D8	MSD	SURR	97	%	89-112
FA56349-13MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	98	%	85-114
VI1696-MB	1868-53-7	Dibromofluoromethane	MB	SURR	99	%	80-119
VI1696-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	103	%	81-118
VI1696-MB	2037-26-5	Toluene-D8	MB	SURR	98	%	89-112
VI1696-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	98	%	85-114
FA56349-12	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA56349-12	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	100	%	81-118
FA56349-12	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56349-12	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-13	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	80-119
FA56349-13	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA56349-13	2037-26-5	Toluene-D8	SAMP	SURR	95	%	89-112
FA56349-13	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56349-14	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA56349-14	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA56349-14	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
FA56349-14	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56349-15	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA56349-15	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
FA56349-15	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
FA56349-15	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-16	1868-53-7	Dibromofluoromethane	SAMP	SURR	101	%	80-119
FA56349-16	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	106	%	81-118
FA56349-16	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56349-16	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56349-17	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA56349-17	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	106	%	81-118
FA56349-17	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
FA56349-17	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-18	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	80-119
FA56349-18	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
FA56349-18	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
FA56349-18	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56349-19	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56349-19	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
FA56349-19	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56349-19	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
VZ2006	SW846 8260B BY SIM						
VZ2006-BS	71-43-2	Benzene	BSP	REC	104	%	79-120
VZ2006-BS	56-23-5	Carbon Tetrachloride	BSP	REC	106	%	72-136
VZ2006-BS	67-66-3	Chloroform	BSP	REC	102	%	79-124
VZ2006-BS	75-34-3	1,1-Dichloroethane	BSP	REC	102	%	77-125
VZ2006-BS	107-06-2	1,2-Dichloroethane	BSP	REC	100	%	73-128
VZ2006-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	102	%	71-131
VZ2006-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	96	%	78-123
VZ2006-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	100	%	75-124
VZ2006-BS	540-59-0	1,2-Dichloroethene (total)	BSP	REC	98	%	79-121
VZ2006-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	78-122
VZ2006-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	106	%	75-124
VZ2006-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	108	%	73-127
VZ2006-BS	542-75-6	1,3-Dichloropropene (total)	BSP	REC	107	%	77-123
VZ2006-BS	74-87-3	Methyl Chloride	BSP	REC	104	%	50-139

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VZ2006-BS	75-09-2	Methylene Chloride	BSP	REC	90	%	74-124
VZ2006-BS	127-18-4	Tetrachloroethylene	BSP	REC	108	%	74-129
VZ2006-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	102	%	74-131
VZ2006-BS	79-01-6	Trichloroethylene	BSP	REC	100	%	79-123
VZ2006-BS	75-01-4	Vinyl Chloride	BSP	REC	100	%	58-137
VZ2006-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	100	%	81-118
VZ2006-BS	2037-26-5	Toluene-D8	BSP	SURR	96	%	89-112
FA56349-13MS	71-43-2	Benzene	MS	REC	104	%	79-120
FA56349-13MS	56-23-5	Carbon Tetrachloride	MS	REC	108	%	72-136
FA56349-13MS	67-66-3	Chloroform	MS	REC	106	%	79-124
FA56349-13MS	75-34-3	1,1-Dichloroethane	MS	REC	104	%	77-125
FA56349-13MS	107-06-2	1,2-Dichloroethane	MS	REC	98	%	73-128
FA56349-13MS	75-35-4	1,1-Dichloroethylene	MS	REC	108	%	71-131
FA56349-13MS	156-59-2	cis-1,2-Dichloroethylene	MS	REC	96	%	78-123
FA56349-13MS	156-60-5	trans-1,2-Dichloroethylene	MS	REC	100	%	75-124
FA56349-13MS	540-59-0	1,2-Dichloroethene (total)	MS	REC	98	%	79-121
FA56349-13MS	78-87-5	1,2-Dichloropropane	MS	REC	98	%	78-122
FA56349-13MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	86	%	75-124
FA56349-13MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	96	%	73-127
FA56349-13MS	542-75-6	1,3-Dichloropropene (total)	MS	REC	92	%	77-123
FA56349-13MS	74-87-3	Methyl Chloride	MS	REC	110	%	50-139
FA56349-13MS	75-09-2	Methylene Chloride	MS	REC	88	%	74-124
FA56349-13MS	127-18-4	Tetrachloroethylene	MS	REC	106	%	74-129
FA56349-13MS	71-55-6	1,1,1-Trichloroethane	MS	REC	104	%	74-131
FA56349-13MS	79-01-6	Trichloroethylene	MS	REC	98	%	79-123
FA56349-13MS	75-01-4	Vinyl Chloride	MS	REC	108	%	58-137
FA56349-13MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	101	%	81-118
FA56349-13MS	2037-26-5	Toluene-D8	MS	SURR	94	%	89-112
FA56349-13MSD	71-43-2	Benzene	MSD	REC	100	%	79-120
FA56349-13MSD	71-43-2	Benzene	MSD	RPD	4	%	20
FA56349-13MSD	56-23-5	Carbon Tetrachloride	MSD	REC	102	%	72-136
FA56349-13MSD	56-23-5	Carbon Tetrachloride	MSD	RPD	6	%	20
FA56349-13MSD	67-66-3	Chloroform	MSD	REC	100	%	79-124
FA56349-13MSD	67-66-3	Chloroform	MSD	RPD	6	%	20
FA56349-13MSD	75-34-3	1,1-Dichloroethane	MSD	REC	98	%	77-125
FA56349-13MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	6	%	20
FA56349-13MSD	107-06-2	1,2-Dichloroethane	MSD	REC	96	%	73-128
FA56349-13MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	2	%	20
FA56349-13MSD	75-35-4	1,1-Dichloroethylene	MSD	REC	100	%	71-131
FA56349-13MSD	75-35-4	1,1-Dichloroethylene	MSD	RPD	8	%	20
FA56349-13MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	92	%	78-123
FA56349-13MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA56349-13MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	94	%	75-124
FA56349-13MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	6	%	20
FA56349-13MSD	540-59-0	1,2-Dichloroethene (total)	MSD	REC	93	%	79-121

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-13MSD	540-59-0	1,2-Dichloroethene (total)	MSD	RPD	5	%	20
FA56349-13MSD	78-87-5	1,2-Dichloropropane	MSD	REC	100	%	78-122
FA56349-13MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
FA56349-13MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	94	%	75-124
FA56349-13MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	9	%	20
FA56349-13MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	100	%	73-127
FA56349-13MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	4	%	20
FA56349-13MSD	542-75-6	1,3-Dichloropropene (total)	MSD	REC	97	%	77-123
FA56349-13MSD	542-75-6	1,3-Dichloropropene (total)	MSD	RPD	5	%	20
FA56349-13MSD	74-87-3	Methyl Chloride	MSD	REC	102	%	50-139
FA56349-13MSD	74-87-3	Methyl Chloride	MSD	RPD	8	%	20
FA56349-13MSD	75-09-2	Methylene Chloride	MSD	REC	88	%	74-124
FA56349-13MSD	75-09-2	Methylene Chloride	MSD	RPD	0	%	20
FA56349-13MSD	127-18-4	Tetrachloroethylene	MSD	REC	102	%	74-129
FA56349-13MSD	127-18-4	Tetrachloroethylene	MSD	RPD	4	%	20
FA56349-13MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	100	%	74-131
FA56349-13MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	4	%	20
FA56349-13MSD	79-01-6	Trichloroethylene	MSD	REC	96	%	79-123
FA56349-13MSD	79-01-6	Trichloroethylene	MSD	RPD	2	%	20
FA56349-13MSD	75-01-4	Vinyl Chloride	MSD	REC	100	%	58-137
FA56349-13MSD	75-01-4	Vinyl Chloride	MSD	RPD	8	%	20
FA56349-13MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	102	%	81-118
FA56349-13MSD	2037-26-5	Toluene-D8	MSD	SURR	95	%	89-112
VZ2006-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	110	%	81-118
VZ2006-MB	2037-26-5	Toluene-D8	MB	SURR	105	%	89-112
FA56349-13	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	122 [a]	%	81-118
FA56349-13	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
FA56349-15	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	123 [a]	%	81-118
FA56349-15	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
FA56349-16	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	125 [a]	%	81-118
FA56349-16	2037-26-5	Toluene-D8	SAMP	SURR	103	%	89-112
FA56349-17	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	128 [b]	%	81-118
FA56349-17	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
FA56349-18	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	128 [b]	%	81-118
FA56349-18	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
VZ2011	SW846 8260B BY SIM						
VZ2011-BS	71-43-2	Benzene	BSP	REC	94	%	79-120
VZ2011-BS	56-23-5	Carbon Tetrachloride	BSP	REC	86	%	72-136
VZ2011-BS	67-66-3	Chloroform	BSP	REC	80	%	79-124
VZ2011-BS	75-34-3	1,1-Dichloroethane	BSP	REC	86	%	77-125
VZ2011-BS	107-06-2	1,2-Dichloroethane	BSP	REC	84	%	73-128
VZ2011-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	90	%	71-131
VZ2011-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	92	%	78-123

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VZ2011-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	90	%	75-124
VZ2011-BS	540-59-0	1,2-Dichloroethene (total)	BSP	REC	91	%	79-121
VZ2011-BS	78-87-5	1,2-Dichloropropane	BSP	REC	92	%	78-122
VZ2011-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	114	%	75-124
VZ2011-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	118	%	73-127
VZ2011-BS	542-75-6	1,3-Dichloropropene (total)	BSP	REC	116	%	77-123
VZ2011-BS	74-87-3	Methyl Chloride	BSP	REC	86	%	50-139
VZ2011-BS	75-09-2	Methylene Chloride	BSP	REC	88	%	74-124
VZ2011-BS	127-18-4	Tetrachloroethylene	BSP	REC	98	%	74-129
VZ2011-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	86	%	74-131
VZ2011-BS	79-01-6	Trichloroethylene	BSP	REC	90	%	79-123
VZ2011-BS	75-01-4	Vinyl Chloride	BSP	REC	86	%	58-137
VZ2011-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	86	%	81-118
VZ2011-BS	2037-26-5	Toluene-D8	BSP	SURR	103	%	89-112
FA56505-3MS*	71-43-2	Benzene	MS	REC	102	%	79-120
FA56505-3MS*	56-23-5	Carbon Tetrachloride	MS	REC	112	%	72-136
FA56505-3MS*	67-66-3	Chloroform	MS	REC	106	%	79-124
FA56505-3MS*	75-34-3	1,1-Dichloroethane	MS	REC	110	%	77-125
FA56505-3MS*	107-06-2	1,2-Dichloroethane	MS	REC	98	%	73-128
FA56505-3MS*	75-35-4	1,1-Dichloroethylene	MS	REC	106	%	71-131
FA56505-3MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	99	%	78-123
FA56505-3MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	100	%	75-124
FA56505-3MS*	540-59-0	1,2-Dichloroethene (total)	MS	REC	99	%	79-121
FA56505-3MS*	78-87-5	1,2-Dichloropropane	MS	REC	100	%	78-122
FA56505-3MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	92	%	75-124
FA56505-3MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	102	%	73-127
FA56505-3MS*	542-75-6	1,3-Dichloropropene (total)	MS	REC	98	%	77-123
FA56505-3MS*	74-87-3	Methyl Chloride	MS	REC	112	%	50-139
FA56505-3MS*	75-09-2	Methylene Chloride	MS	REC	102	%	74-124
FA56505-3MS*	127-18-4	Tetrachloroethylene	MS	REC	108	%	74-129
FA56505-3MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	110	%	74-131
FA56505-3MS*	79-01-6	Trichloroethylene	MS	REC	98	%	79-123
FA56505-3MS*	75-01-4	Vinyl Chloride	MS	REC	108	%	58-137
FA56505-3MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	104	%	81-118
FA56505-3MS*	2037-26-5	Toluene-D8	MS	SURR	95	%	89-112
FA56505-3MSD*	71-43-2	Benzene	MSD	REC	98	%	79-120
FA56505-3MSD*	71-43-2	Benzene	MSD	RPD	4	%	20
FA56505-3MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	104	%	72-136
FA56505-3MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	7	%	20
FA56505-3MSD*	67-66-3	Chloroform	MSD	REC	98	%	79-124
FA56505-3MSD*	67-66-3	Chloroform	MSD	RPD	8	%	20
FA56505-3MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	104	%	77-125
FA56505-3MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	6	%	20
FA56505-3MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	92	%	73-128
FA56505-3MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	6	%	20

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56505-3MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	98	%	71-131
FA56505-3MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	8	%	20
FA56505-3MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	97	%	78-123
FA56505-3MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	2	%	20
FA56505-3MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	98	%	75-124
FA56505-3MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	2	%	20
FA56505-3MSD*	540-59-0	1,2-Dichloroethene (total)	MSD	REC	97	%	79-121
FA56505-3MSD*	540-59-0	1,2-Dichloroethene (total)	MSD	RPD	2	%	20
FA56505-3MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	96	%	78-122
FA56505-3MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	4	%	20
FA56505-3MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	94	%	75-124
FA56505-3MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	2	%	20
FA56505-3MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	100	%	73-127
FA56505-3MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	2	%	20
FA56505-3MSD*	542-75-6	1,3-Dichloropropene (total)	MSD	REC	98	%	77-123
FA56505-3MSD*	542-75-6	1,3-Dichloropropene (total)	MSD	RPD	0	%	20
FA56505-3MSD*	74-87-3	Methyl Chloride	MSD	REC	104	%	50-139
FA56505-3MSD*	74-87-3	Methyl Chloride	MSD	RPD	7	%	20
FA56505-3MSD*	75-09-2	Methylene Chloride	MSD	REC	96	%	74-124
FA56505-3MSD*	75-09-2	Methylene Chloride	MSD	RPD	6	%	20
FA56505-3MSD*	127-18-4	Tetrachloroethylene	MSD	REC	100	%	74-129
FA56505-3MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	7	%	20
FA56505-3MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	102	%	74-131
FA56505-3MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	8	%	20
FA56505-3MSD*	79-01-6	Trichloroethylene	MSD	REC	94	%	79-123
FA56505-3MSD*	79-01-6	Trichloroethylene	MSD	RPD	4	%	20
FA56505-3MSD*	75-01-4	Vinyl Chloride	MSD	REC	100	%	58-137
FA56505-3MSD*	75-01-4	Vinyl Chloride	MSD	RPD	8	%	20
FA56505-3MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	99	%	81-118
FA56505-3MSD*	2037-26-5	Toluene-D8	MSD	SURR	97	%	89-112
VZ2011-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	97	%	81-118
VZ2011-MB	2037-26-5	Toluene-D8	MB	SURR	112 [c]	%	89-112
FA56349-14	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
FA56349-14	2037-26-5	Toluene-D8	SAMP	SURR	107	%	89-112
FA56349-19	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	114	%	81-118
FA56349-19	2037-26-5	Toluene-D8	SAMP	SURR	110	%	89-112
VZ2012	SW846 8260B BY SIM						
VZ2012-BS	71-43-2	Benzene	BSP	REC	100	%	79-120
VZ2012-BS	56-23-5	Carbon Tetrachloride	BSP	REC	106	%	72-136
VZ2012-BS	67-66-3	Chloroform	BSP	REC	94	%	79-124
VZ2012-BS	75-34-3	1,1-Dichloroethane	BSP	REC	100	%	77-125
VZ2012-BS	107-06-2	1,2-Dichloroethane	BSP	REC	94	%	73-128
VZ2012-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	104	%	71-131

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VZ2012-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	96	%	78-123
VZ2012-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	98	%	75-124
VZ2012-BS	540-59-0	1,2-Dichloroethene (total)	BSP	REC	97	%	79-121
VZ2012-BS	78-87-5	1,2-Dichloropropane	BSP	REC	100	%	78-122
VZ2012-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	116	%	75-124
VZ2012-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	118	%	73-127
VZ2012-BS	542-75-6	1,3-Dichloropropene (total)	BSP	REC	116	%	77-123
VZ2012-BS	74-87-3	Methyl Chloride	BSP	REC	98	%	50-139
VZ2012-BS	75-09-2	Methylene Chloride	BSP	REC	94	%	74-124
VZ2012-BS	127-18-4	Tetrachloroethylene	BSP	REC	104	%	74-129
VZ2012-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	102	%	74-131
VZ2012-BS	79-01-6	Trichloroethylene	BSP	REC	98	%	79-123
VZ2012-BS	75-01-4	Vinyl Chloride	BSP	REC	96	%	58-137
VZ2012-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	95	%	81-118
VZ2012-BS	2037-26-5	Toluene-D8	BSP	SURR	96	%	89-112
FA56394-12MS*	71-43-2	Benzene	MS	REC	104	%	79-120
FA56394-12MS*	56-23-5	Carbon Tetrachloride	MS	REC	116	%	72-136
FA56394-12MS*	67-66-3	Chloroform	MS	REC	108	%	79-124
FA56394-12MS*	75-34-3	1,1-Dichloroethane	MS	REC	112	%	77-125
FA56394-12MS*	107-06-2	1,2-Dichloroethane	MS	REC	104	%	73-128
FA56394-12MS*	75-35-4	1,1-Dichloroethylene	MS	REC	106	%	71-131
FA56394-12MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	98	%	78-123
FA56394-12MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	100	%	75-124
FA56394-12MS*	540-59-0	1,2-Dichloroethene (total)	MS	REC	99	%	79-121
FA56394-12MS*	78-87-5	1,2-Dichloropropane	MS	REC	104	%	78-122
FA56394-12MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	98	%	75-124
FA56394-12MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	106	%	73-127
FA56394-12MS*	542-75-6	1,3-Dichloropropene (total)	MS	REC	102	%	77-123
FA56394-12MS*	74-87-3	Methyl Chloride	MS	REC	116	%	50-139
FA56394-12MS*	75-09-2	Methylene Chloride	MS	REC	104	%	74-124
FA56394-12MS*	127-18-4	Tetrachloroethylene	MS	REC	110	%	74-129
FA56394-12MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	112	%	74-131
FA56394-12MS*	79-01-6	Trichloroethylene	MS	REC	104	%	79-123
FA56394-12MS*	75-01-4	Vinyl Chloride	MS	REC	108	%	58-137
FA56394-12MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	108	%	81-118
FA56394-12MS*	2037-26-5	Toluene-D8	MS	SURR	95	%	89-112
FA56394-12MSD*	71-43-2	Benzene	MSD	REC	100	%	79-120
FA56394-12MSD*	71-43-2	Benzene	MSD	RPD	4	%	20
FA56394-12MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	110	%	72-136
FA56394-12MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	5	%	20
FA56394-12MSD*	67-66-3	Chloroform	MSD	REC	102	%	79-124
FA56394-12MSD*	67-66-3	Chloroform	MSD	RPD	6	%	20
FA56394-12MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	108	%	77-125
FA56394-12MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	4	%	20
FA56394-12MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	98	%	73-128

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56394-12MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	6	%	20
FA56394-12MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	106	%	71-131
FA56394-12MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	0	%	20
FA56394-12MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	98	%	78-123
FA56394-12MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	0	%	20
FA56394-12MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	100	%	75-124
FA56394-12MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	0	%	20
FA56394-12MSD*	540-59-0	1,2-Dichloroethene (total)	MSD	REC	99	%	79-121
FA56394-12MSD*	540-59-0	1,2-Dichloroethene (total)	MSD	RPD	0	%	20
FA56394-12MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	98	%	78-122
FA56394-12MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	6	%	20
FA56394-12MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	98	%	75-124
FA56394-12MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	0	%	20
FA56394-12MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	104	%	73-127
FA56394-12MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	2	%	20
FA56394-12MSD*	542-75-6	1,3-Dichloropropene (total)	MSD	REC	101	%	77-123
FA56394-12MSD*	542-75-6	1,3-Dichloropropene (total)	MSD	RPD	1	%	20
FA56394-12MSD*	74-87-3	Methyl Chloride	MSD	REC	110	%	50-139
FA56394-12MSD*	74-87-3	Methyl Chloride	MSD	RPD	5	%	20
FA56394-12MSD*	75-09-2	Methylene Chloride	MSD	REC	100	%	74-124
FA56394-12MSD*	75-09-2	Methylene Chloride	MSD	RPD	4	%	20
FA56394-12MSD*	127-18-4	Tetrachloroethylene	MSD	REC	104	%	74-129
FA56394-12MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	6	%	20
FA56394-12MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	108	%	74-131
FA56394-12MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	4	%	20
FA56394-12MSD*	79-01-6	Trichloroethylene	MSD	REC	96	%	79-123
FA56394-12MSD*	79-01-6	Trichloroethylene	MSD	RPD	8	%	20
FA56394-12MSD*	75-01-4	Vinyl Chloride	MSD	REC	102	%	58-137
FA56394-12MSD*	75-01-4	Vinyl Chloride	MSD	RPD	6	%	20
FA56394-12MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	103	%	81-118
FA56394-12MSD*	2037-26-5	Toluene-D8	MSD	SURR	96	%	89-112
VZ2012-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	109	%	81-118
VZ2012-MB	2037-26-5	Toluene-D8	MB	SURR	108	%	89-112
FA56349-14	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	130 [a]	%	81-118
FA56349-14	2037-26-5	Toluene-D8	SAMP	SURR	107	%	89-112
GFF1693	RSKSOP-147/175						
GFF1693-BS	74-82-8	Methane	BSP	REC	115	%	73-125
GFF1693-BS	74-84-0	Ethane	BSP	REC	116	%	74-131
GFF1693-BS	74-85-1	Ethene	BSP	REC	119	%	72-133
GFF1693-BSD	74-82-8	Methane	BSD	REC	111	%	73-125
GFF1693-BSD	74-82-8	Methane	BSD	RPD	3	%	30
GFF1693-BSD	74-84-0	Ethane	BSD	REC	111	%	74-131
GFF1693-BSD	74-84-0	Ethane	BSD	RPD	4	%	30

* Sample used for QC is not from job FA56349

QC Evaluation: DOD QSM5 Limits

Job Number: FA56349
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/31/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
GFF1693-BSD	74-85-1	Ethene	BSD	REC	113	%	72-133
GFF1693-BSD	74-85-1	Ethene	BSD	RPD	5	%	30
FA56349-1MS	74-82-8	Methane	MS	REC	85	%	73-125
FA56349-1MS	74-84-0	Ethane	MS	REC	111	%	74-131
FA56349-1MS	74-85-1	Ethene	MS	REC	114	%	72-133
FA56349-1DUP	74-82-8	Methane	DUP	RPD	3	%	30
FA56349-1DUP	74-84-0	Ethane	DUP	RPD	200	%	30
FA56349-1DUP	74-85-1	Ethene	DUP	RPD	0	%	30

(a) Outside DOD QSM control limits.
(b) Outside DOD QSM control limits; however, sample is ND.
(c) Outside control limits.

* Sample used for QC is not from job FA56349

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-MB	I56598.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-MB	I56598.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	0.41	2.0	0.30	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl Iodide	ND	1.0	0.27	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-MB	I56598.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1696-MB	I56653.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1696-MB	I56653.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	0.43	2.0	0.30	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl Iodide	ND	1.0	0.27	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1696-MB	I56653.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2006-MB	Z53229.D	1	08/02/18	MM	n/a	n/a	VZ2006

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-13, FA56349-15, FA56349-16, FA56349-17, FA56349-18

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.10	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.10	ug/l	
67-66-3	Chloroform	ND	0.50	0.10	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.10	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	0.50	0.10	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	0.50	0.10	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.10	ug/l	
75-09-2	Methylene Chloride	ND	2.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.10	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.10	ug/l	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	110%	74-125%
2037-26-5	Toluene-D8	105%	88-111%

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2011-MB	Z53353.D	1	08/09/18	MM	n/a	n/a	VZ2011

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-19

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.10	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.10	ug/l	
67-66-3	Chloroform	ND	0.50	0.10	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.10	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	0.50	0.10	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	0.50	0.10	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.10	ug/l	
75-09-2	Methylene Chloride	0.55	2.0	0.50	ug/l	J
127-18-4	Tetrachloroethylene	ND	0.50	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.10	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.10	ug/l	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	97%	74-125%
2037-26-5	Toluene-D8	112%* [a]	88-111%

(a) Outside control limits.

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2012-MB	Z53374.D	1	08/10/18	MM	n/a	n/a	VZ2012

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-14

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.10	ug/l	
56-23-5	Carbon Tetrachloride	ND	0.50	0.10	ug/l	
67-66-3	Chloroform	ND	0.50	0.10	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.10	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.10	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.10	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	0.50	0.10	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.10	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	0.50	0.10	ug/l	
74-87-3	Methyl Chloride	ND	0.50	0.10	ug/l	
75-09-2	Methylene Chloride	ND	2.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.10	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.10	ug/l	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	109%	74-125%
2037-26-5	Toluene-D8	108%	88-111%

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-BS	I56597.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	124	99	50-147
71-43-2	Benzene	25	24.6	98	81-122
108-86-1	Bromobenzene	25	25.6	102	80-121
74-97-5	Bromochloromethane	25	24.8	99	76-123
75-27-4	Bromodichloromethane	25	27.3	109	79-123
75-25-2	Bromoform	25	26.5	106	66-123
78-93-3	2-Butanone (MEK)	125	123	98	56-143
104-51-8	n-Butylbenzene	25	28.9	116	79-126
135-98-8	sec-Butylbenzene	25	27.2	109	83-133
98-06-6	tert-Butylbenzene	25	26.2	105	80-133
75-15-0	Carbon Disulfide	25	24.5	98	66-148
56-23-5	Carbon Tetrachloride	25	29.0	116	76-136
108-90-7	Chlorobenzene	25	24.9	100	82-124
75-00-3	Chloroethane	25	27.3	109	62-144
67-66-3	Chloroform	25	25.4	102	80-124
95-49-8	o-Chlorotoluene	25	26.0	104	81-127
106-43-4	p-Chlorotoluene	25	26.0	104	83-130
124-48-1	Dibromochloromethane	25	27.6	110	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	25.9	104	64-123
106-93-4	1,2-Dibromoethane	25	25.4	102	75-120
75-71-8	Dichlorodifluoromethane	25	33.4	134	42-167
95-50-1	1,2-Dichlorobenzene	25	25.5	102	82-124
541-73-1	1,3-Dichlorobenzene	25	26.2	105	84-125
106-46-7	1,4-Dichlorobenzene	25	25.0	100	78-120
75-34-3	1,1-Dichloroethane	25	26.1	104	81-122
107-06-2	1,2-Dichloroethane	25	24.4	98	75-125
75-35-4	1,1-Dichloroethylene	25	24.4	98	78-137
156-59-2	cis-1,2-Dichloroethylene	25	24.6	98	78-120
156-60-5	trans-1,2-Dichloroethylene	25	24.8	99	76-127
78-87-5	1,2-Dichloropropane	25	26.1	104	76-124
142-28-9	1,3-Dichloropropane	25	24.3	97	80-118
594-20-7	2,2-Dichloropropane	25	32.7	131	74-139
563-58-6	1,1-Dichloropropene	25	25.4	102	79-131
10061-01-5	cis-1,3-Dichloropropene	25	26.3	105	75-118
10061-02-6	trans-1,3-Dichloropropene	25	26.7	107	80-120
100-41-4	Ethylbenzene	25	25.5	102	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-BS	I56597.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	27.7	111	75-142
591-78-6	2-Hexanone	125	127	102	61-129
98-82-8	Isopropylbenzene	25	27.7	111	83-132
99-87-6	p-Isopropyltoluene	25	27.4	110	79-130
74-83-9	Methyl Bromide	25	27.2	109	59-143
74-87-3	Methyl Chloride	25	27.4	110	50-159
74-88-4	Methyl Iodide	25	21.9	88	73-123
74-95-3	Methylene Bromide	25	25.0	100	78-119
75-09-2	Methylene Chloride	25	25.6	102	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	126	101	66-122
1634-04-4	Methyl Tert Butyl Ether	25	24.0	96	72-117
91-20-3	Naphthalene	25	24.3	97	63-132
103-65-1	n-Propylbenzene	25	26.4	106	82-133
100-42-5	Styrene	25	26.5	106	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	27.8	111	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	26.6	106	72-120
127-18-4	Tetrachloroethylene	25	25.9	104	76-135
108-88-3	Toluene	25	24.7	99	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.3	105	68-131
120-82-1	1,2,4-Trichlorobenzene	25	26.3	105	73-129
71-55-6	1,1,1-Trichloroethane	25	26.1	104	75-130
79-00-5	1,1,2-Trichloroethane	25	26.3	105	76-119
79-01-6	Trichloroethylene	25	25.5	102	81-126
75-69-4	Trichlorofluoromethane	25	29.1	116	71-156
96-18-4	1,2,3-Trichloropropane	25	25.1	100	77-120
95-63-6	1,2,4-Trimethylbenzene	25	26.0	104	79-120
108-67-8	1,3,5-Trimethylbenzene	25	26.8	107	79-120
108-05-4	Vinyl Acetate	125	116	93	43-154
75-01-4	Vinyl Chloride	25	28.4	114	69-159
	m,p-Xylene	50	52.3	105	79-126
95-47-6	o-Xylene	25	25.8	103	80-127
1330-20-7	Xylene (total)	75	78.1	104	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-BS	I56597.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1696-BS	I56652.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	117	94	50-147
71-43-2	Benzene	25	25.5	102	81-122
108-86-1	Bromobenzene	25	25.0	100	80-121
74-97-5	Bromochloromethane	25	25.4	102	76-123
75-27-4	Bromodichloromethane	25	27.1	108	79-123
75-25-2	Bromoform	25	25.2	101	66-123
78-93-3	2-Butanone (MEK)	125	116	93	56-143
104-51-8	n-Butylbenzene	25	27.4	110	79-126
135-98-8	sec-Butylbenzene	25	26.2	105	83-133
98-06-6	tert-Butylbenzene	25	25.4	102	80-133
75-15-0	Carbon Disulfide	25	26.7	107	66-148
56-23-5	Carbon Tetrachloride	25	30.5	122	76-136
108-90-7	Chlorobenzene	25	23.9	96	82-124
75-00-3	Chloroethane	25	28.1	112	62-144
67-66-3	Chloroform	25	25.4	102	80-124
95-49-8	o-Chlorotoluene	25	25.1	100	81-127
106-43-4	p-Chlorotoluene	25	25.1	100	83-130
124-48-1	Dibromochloromethane	25	26.3	105	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.8	95	64-123
106-93-4	1,2-Dibromoethane	25	24.8	99	75-120
75-71-8	Dichlorodifluoromethane	25	32.6	130	42-167
95-50-1	1,2-Dichlorobenzene	25	24.1	96	82-124
541-73-1	1,3-Dichlorobenzene	25	25.0	100	84-125
106-46-7	1,4-Dichlorobenzene	25	23.9	96	78-120
75-34-3	1,1-Dichloroethane	25	27.4	110	81-122
107-06-2	1,2-Dichloroethane	25	24.8	99	75-125
75-35-4	1,1-Dichloroethylene	25	27.9	112	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.6	102	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.0	108	76-127
78-87-5	1,2-Dichloropropane	25	26.5	106	76-124
142-28-9	1,3-Dichloropropane	25	23.7	95	80-118
594-20-7	2,2-Dichloropropane	25	35.3	141*	74-139
563-58-6	1,1-Dichloropropene	25	26.8	107	79-131
10061-01-5	cis-1,3-Dichloropropene	25	26.2	105	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.7	103	80-120
100-41-4	Ethylbenzene	25	24.9	100	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1696-BS	I56652.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	26.1	104	75-142
591-78-6	2-Hexanone	125	123	98	61-129
98-82-8	Isopropylbenzene	25	26.9	108	83-132
99-87-6	p-Isopropyltoluene	25	26.3	105	79-130
74-83-9	Methyl Bromide	25	27.2	109	59-143
74-87-3	Methyl Chloride	25	26.9	108	50-159
74-88-4	Methyl Iodide	25	24.1	96	73-123
74-95-3	Methylene Bromide	25	25.5	102	78-119
75-09-2	Methylene Chloride	25	27.5	110	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	121	97	66-122
1634-04-4	Methyl Tert Butyl Ether	25	25.6	102	72-117
91-20-3	Naphthalene	25	22.8	91	63-132
103-65-1	n-Propylbenzene	25	25.6	102	82-133
100-42-5	Styrene	25	25.7	103	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.5	106	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	25.1	100	72-120
127-18-4	Tetrachloroethylene	25	26.1	104	76-135
108-88-3	Toluene	25	24.9	100	80-120
87-61-6	1,2,3-Trichlorobenzene	25	24.8	99	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.6	98	73-129
71-55-6	1,1,1-Trichloroethane	25	27.5	110	75-130
79-00-5	1,1,2-Trichloroethane	25	24.9	100	76-119
79-01-6	Trichloroethylene	25	26.0	104	81-126
75-69-4	Trichlorofluoromethane	25	28.1	112	71-156
96-18-4	1,2,3-Trichloropropane	25	24.0	96	77-120
95-63-6	1,2,4-Trimethylbenzene	25	25.0	100	79-120
108-67-8	1,3,5-Trimethylbenzene	25	25.8	103	79-120
108-05-4	Vinyl Acetate	125	108	86	43-154
75-01-4	Vinyl Chloride	25	28.0	112	69-159
	m,p-Xylene	50	50.9	102	79-126
95-47-6	o-Xylene	25	25.2	101	80-127
1330-20-7	Xylene (total)	75	76.2	102	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1696-BS	I56652.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2006-BS	Z53228.D	1	08/02/18	MM	n/a	n/a	VZ2006

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-13, FA56349-15, FA56349-16, FA56349-17, FA56349-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	5	5.2	104	81-122
56-23-5	Carbon Tetrachloride	5	5.3	106	76-136
67-66-3	Chloroform	5	5.1	102	80-124
75-34-3	1,1-Dichloroethane	5	5.1	102	81-122
107-06-2	1,2-Dichloroethane	5	5.0	100	75-125
75-35-4	1,1-Dichloroethylene	5	5.1	102	78-137
156-59-2	cis-1,2-Dichloroethylene	5	4.8	96	78-120
156-60-5	trans-1,2-Dichloroethylene	5	5.0	100	76-127
540-59-0	1,2-Dichloroethene (total)	10	9.8	98	76-127
78-87-5	1,2-Dichloropropane	5	5.2	104	76-124
10061-01-5	cis-1,3-Dichloropropene	5	5.3	106	75-118
10061-02-6	trans-1,3-Dichloropropene	5	5.4	108	80-120
542-75-6	1,3-Dichloropropene (total)	10	10.7	107	75-120
74-87-3	Methyl Chloride	5	5.2	104	50-159
75-09-2	Methylene Chloride	5	4.5	90	69-135
127-18-4	Tetrachloroethylene	5	5.4	108	76-135
71-55-6	1,1,1-Trichloroethane	5	5.1	102	75-130
79-01-6	Trichloroethylene	5	5.0	100	81-126
75-01-4	Vinyl Chloride	5	5.0	100	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	74-125%
2037-26-5	Toluene-D8	96%	88-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2011-BS	Z53352.D	1	08/09/18	MM	n/a	n/a	VZ2011

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	5	4.7	94	81-122
56-23-5	Carbon Tetrachloride	5	4.3	86	76-136
67-66-3	Chloroform	5	4.0	80	80-124
75-34-3	1,1-Dichloroethane	5	4.3	86	81-122
107-06-2	1,2-Dichloroethane	5	4.2	84	75-125
75-35-4	1,1-Dichloroethylene	5	4.5	90	78-137
156-59-2	cis-1,2-Dichloroethylene	5	4.6	92	78-120
156-60-5	trans-1,2-Dichloroethylene	5	4.5	90	76-127
540-59-0	1,2-Dichloroethene (total)	10	9.1	91	76-127
78-87-5	1,2-Dichloropropane	5	4.6	92	76-124
10061-01-5	cis-1,3-Dichloropropene	5	5.7	114	75-118
10061-02-6	trans-1,3-Dichloropropene	5	5.9	118	80-120
542-75-6	1,3-Dichloropropene (total)	10	11.6	116	75-120
74-87-3	Methyl Chloride	5	4.3	86	50-159
75-09-2	Methylene Chloride	5	4.4	88	69-135
127-18-4	Tetrachloroethylene	5	4.9	98	76-135
71-55-6	1,1,1-Trichloroethane	5	4.3	86	75-130
79-01-6	Trichloroethylene	5	4.5	90	81-126
75-01-4	Vinyl Chloride	5	4.3	86	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	86%	74-125%
2037-26-5	Toluene-D8	103%	88-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2012-BS	Z53373.D	1	08/10/18	MM	n/a	n/a	VZ2012

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-14

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	5	5.0	100	81-122
56-23-5	Carbon Tetrachloride	5	5.3	106	76-136
67-66-3	Chloroform	5	4.7	94	80-124
75-34-3	1,1-Dichloroethane	5	5.0	100	81-122
107-06-2	1,2-Dichloroethane	5	4.7	94	75-125
75-35-4	1,1-Dichloroethylene	5	5.2	104	78-137
156-59-2	cis-1,2-Dichloroethylene	5	4.8	96	78-120
156-60-5	trans-1,2-Dichloroethylene	5	4.9	98	76-127
540-59-0	1,2-Dichloroethene (total)	10	9.7	97	76-127
78-87-5	1,2-Dichloropropane	5	5.0	100	76-124
10061-01-5	cis-1,3-Dichloropropene	5	5.8	116	75-118
10061-02-6	trans-1,3-Dichloropropene	5	5.9	118	80-120
542-75-6	1,3-Dichloropropene (total)	10	11.6	116	75-120
74-87-3	Methyl Chloride	5	4.9	98	50-159
75-09-2	Methylene Chloride	5	4.7	94	69-135
127-18-4	Tetrachloroethylene	5	5.2	104	76-135
71-55-6	1,1,1-Trichloroethane	5	5.1	102	75-130
79-01-6	Trichloroethylene	5	4.9	98	81-126
75-01-4	Vinyl Chloride	5	4.8	96	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	95%	74-125%
2037-26-5	Toluene-D8	96%	88-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	I56611.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1MSD	I56612.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1	I56608.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Compound	FA56349-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25	U	125	214	171*	125	224	179*	5	50-147/21
71-43-2	Benzene	1.0	U	25	23.1	92	25	23.7	95	3	81-122/14
108-86-1	Bromobenzene	1.0	U	25	24.3	97	25	24.8	99	2	80-121/14
74-97-5	Bromochloromethane	1.0	U	25	23.0	92	25	23.7	95	3	76-123/14
75-27-4	Bromodichloromethane	1.0	U	25	25.3	101	25	26.2	105	3	79-123/19
75-25-2	Bromoform	1.0	U	25	24.2	97	25	24.9	100	3	66-123/21
78-93-3	2-Butanone (MEK)	5.0	U	125	127	102	125	134	107	5	56-143/18
104-51-8	n-Butylbenzene	1.0	U	25	26.7	107	25	27.5	110	3	79-126/16
135-98-8	sec-Butylbenzene	1.0	U	25	25.4	102	25	26.2	105	3	83-133/16
98-06-6	tert-Butylbenzene	1.0	U	25	24.4	98	25	25.4	102	4	80-133/16
75-15-0	Carbon Disulfide	2.0	U	25	18.8	75	25	18.9	76	1	66-148/23
56-23-5	Carbon Tetrachloride	1.0	U	25	26.3	105	25	27.0	108	3	76-136/23
108-90-7	Chlorobenzene	1.0	U	25	23.6	94	25	24.3	97	3	82-124/14
75-00-3	Chloroethane	2.0	U	25	25.7	103	25	25.0	100	3	62-144/20
67-66-3	Chloroform	1.0	U	25	23.2	93	25	24.1	96	4	80-124/15
95-49-8	o-Chlorotoluene	1.0	U	25	24.4	98	25	25.2	101	3	81-127/15
106-43-4	p-Chlorotoluene	1.0	U	25	24.4	98	25	25.2	101	3	83-130/15
124-48-1	Dibromochloromethane	1.0	U	25	25.0	100	25	25.8	103	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	25	26.0	104	25	26.9	108	3	64-123/18
106-93-4	1,2-Dibromoethane	2.0	U	25	24.0	96	25	25.0	100	4	75-120/13
75-71-8	Dichlorodifluoromethane	2.0	U	25	31.7	127	25	32.4	130	2	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0	U	25	24.0	96	25	24.7	99	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0	U	25	24.8	99	25	25.3	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0	U	25	24.1	96	25	24.4	98	1	78-120/15
75-34-3	1,1-Dichloroethane	1.0	U	25	24.3	97	25	25.3	101	4	81-122/15
107-06-2	1,2-Dichloroethane	1.0	U	25	23.4	94	25	24.2	97	3	75-125/14
75-35-4	1,1-Dichloroethylene	1.0	U	25	21.5	86	25	22.6	90	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0	U	25	22.3	89	25	23.2	93	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0	U	25	22.8	91	25	23.8	95	4	76-127/17
78-87-5	1,2-Dichloropropane	1.0	U	25	24.5	98	25	25.0	100	2	76-124/14
142-28-9	1,3-Dichloropropane	1.0	U	25	23.0	92	25	23.9	96	4	80-118/13
594-20-7	2,2-Dichloropropane	1.0	U	25	28.6	114	25	29.9	120	4	74-139/17
563-58-6	1,1-Dichloropropene	1.0	U	25	23.2	93	25	24.2	97	4	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0	U	25	21.2	85	25	21.9	88	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0	U	25	25.7	103	25	27.4	110	6	80-120/22
100-41-4	Ethylbenzene	1.0	U	25	24.2	97	25	25.0	100	3	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	I56611.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1MSD	I56612.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1	I56608.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Compound	FA56349-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U		25	25.0	100	25	25.8	103	3	75-142/19
591-78-6	2-Hexanone	10 U		125	133	106	125	139	111	4	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	25.9	104	25	27.0	108	4	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U		25	25.5	102	25	26.3	105	3	79-130/16
74-83-9	Methyl Bromide	2.0 U		25	24.5	98	25	25.3	101	3	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	25.2	101	25	26.5	106	5	50-159/19
74-88-4	Methyl Iodide	1.0 U		25	19.1	76	25	19.9	80	4	73-123/16
74-95-3	Methylene Bromide	2.0 U		25	24.2	97	25	25.0	100	3	78-119/14
75-09-2	Methylene Chloride	5.0 U		25	24.4	98	25	24.8	99	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	130	104	125	137	110	5	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	21.6	86	25	23.1	92	7	72-117/14
91-20-3	Naphthalene	5.0 U		25	22.8	91	25	24.0	96	5	63-132/25
103-65-1	n-Propylbenzene	1.0 U		25	24.8	99	25	25.5	102	3	82-133/15
100-42-5	Styrene	1.0 U		25	24.8	99	25	25.7	103	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	26.2	105	25	27.1	108	3	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	26.6	106	25	27.3	109	3	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	22.6	90	25	23.3	93	3	76-135/16
108-88-3	Toluene	1.0 U		25	23.0	92	25	23.7	95	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	24.4	98	25	25.3	101	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	24.0	96	25	24.9	100	4	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	23.9	96	25	25.2	101	5	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.1	100	25	26.0	104	4	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	24.5	98	25	25.0	100	2	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	28.8	115	25	29.6	118	3	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U		25	25.2	101	25	25.6	102	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U		25	24.4	98	25	25.1	100	3	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U		25	25.0	100	25	25.9	104	4	79-120/19
108-05-4	Vinyl Acetate	10 U		125	108	86	125	116	93	7	43-154/14
75-01-4	Vinyl Chloride	1.0 U		25	25.0	100	25	26.8	107	7	69-159/18
	m,p-Xylene	2.0 U		50	48.7	97	50	50.8	102	4	79-126/15
95-47-6	o-Xylene	1.0 U		25	24.0	96	25	25.1	100	4	80-127/14
1330-20-7	Xylene (total)	3.0 U		75	72.7	97	75	75.9	101	4	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	I56611.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1MSD	I56612.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1	I56608.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-7, FA56349-8, FA56349-9, FA56349-10, FA56349-11

CAS No.	Surrogate Recoveries	MS	MSD	FA56349-1	Limits
1868-53-7	Dibromofluoromethane	103%	104%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	104%	107%	79-125%
2037-26-5	Toluene-D8	97%	98%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	97%	95%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-13MS	I56673.D	1	08/10/18	AJ	n/a	n/a	VI1696
FA56349-13MSD	I56674.D	1	08/10/18	AJ	n/a	n/a	VI1696
FA56349-13	I56655.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Compound	FA56349-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25	U	125	110	88	125	111	89	1	50-147/21
71-43-2	Benzene	1.0	U	25	21.1	84	25	21.1	84	0	81-122/14
108-86-1	Bromobenzene	1.0	U	25	25.1	100	25	25.1	100	0	80-121/14
74-97-5	Bromochloromethane	1.0	U	25	21.3	85	25	21.0	84	1	76-123/14
75-27-4	Bromodichloromethane	1.0	U	25	25.3	101	25	25.0	100	1	79-123/19
75-25-2	Bromoform	1.0	U	25	24.2	97	25	24.1	96	0	66-123/21
78-93-3	2-Butanone (MEK)	5.0	U	125	110	88	125	112	90	2	56-143/18
104-51-8	n-Butylbenzene	1.0	U	25	27.8	111	25	28.0	112	1	79-126/16
135-98-8	sec-Butylbenzene	1.0	U	25	26.6	106	25	26.4	106	1	83-133/16
98-06-6	tert-Butylbenzene	1.0	U	25	25.7	103	25	25.7	103	0	80-133/16
75-15-0	Carbon Disulfide	2.0	U	25	16.5	66	25	16.4	66	1	66-148/23
56-23-5	Carbon Tetrachloride	1.0	U	25	24.4	98	25	24.3	97	0	76-136/23
108-90-7	Chlorobenzene	1.0	U	25	23.8	95	25	23.6	94	1	82-124/14
75-00-3	Chloroethane	2.0	U	25	26.3	105	25	27.4	110	4	62-144/20
67-66-3	Chloroform	1.0	U	25	22.3	89	25	22.2	89	0	80-124/15
95-49-8	o-Chlorotoluene	1.0	U	25	25.4	102	25	25.4	102	0	81-127/15
106-43-4	p-Chlorotoluene	1.0	U	25	25.4	102	25	25.4	102	0	83-130/15
124-48-1	Dibromochloromethane	1.0	U	25	24.9	100	25	25.0	100	0	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	25	25.4	102	25	25.8	103	2	64-123/18
106-93-4	1,2-Dibromoethane	2.0	U	25	23.0	92	25	23.3	93	1	75-120/13
75-71-8	Dichlorodifluoromethane	2.0	U	25	31.0	124	25	31.7	127	2	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0	U	25	25.2	101	25	25.3	101	0	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0	U	25	25.7	103	25	25.7	103	0	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0	U	25	24.9	100	25	25.0	100	0	78-120/15
75-34-3	1,1-Dichloroethane	1.0	U	25	22.0	88	25	22.0	88	0	81-122/15
107-06-2	1,2-Dichloroethane	1.0	U	25	22.1	88	25	21.6	86	2	75-125/14
75-35-4	1,1-Dichloroethylene	1.0	U	25	18.3	73*	25	18.6	74*	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0	U	25	20.4	82	25	20.6	82	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0	U	25	20.1	80	25	20.2	81	0	76-127/17
78-87-5	1,2-Dichloropropane	1.0	U	25	23.5	94	25	23.6	94	0	76-124/14
142-28-9	1,3-Dichloropropane	1.0	U	25	22.5	90	25	22.9	92	2	80-118/13
594-20-7	2,2-Dichloropropane	1.0	U	25	27.0	108	25	27.6	110	2	74-139/17
563-58-6	1,1-Dichloropropene	1.0	U	25	20.9	84	25	21.1	84	1	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0	U	25	21.3	85	25	21.8	87	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0	U	25	26.4	106	25	23.3	93	12	80-120/22
100-41-4	Ethylbenzene	1.0	U	25	24.2	97	25	24.3	97	0	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-13MS	I56673.D	1	08/10/18	AJ	n/a	n/a	VI1696
FA56349-13MSD	I56674.D	1	08/10/18	AJ	n/a	n/a	VI1696
FA56349-13	I56655.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Compound	FA56349-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U		25	25.8	103	25	26.5	106	3	75-142/19
591-78-6	2-Hexanone	10 U		125	121	97	125	124	99	2	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	26.8	107	25	26.6	106	1	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U		25	26.6	106	25	26.7	107	0	79-130/16
74-83-9	Methyl Bromide	2.0 U		25	25.5	102	25	26.1	104	2	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	26.2	105	25	26.4	106	1	50-159/19
74-88-4	Methyl Iodide	1.0 U		25	16.1	64*	25	16.5	66*	2	73-123/16
74-95-3	Methylene Bromide	2.0 U		25	23.0	92	25	23.0	92	0	78-119/14
75-09-2	Methylene Chloride	5.0 U		25	21.5	86	25	21.2	85	1	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	119	95	125	121	97	2	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	18.5	74	25	19.2	77	4	72-117/14
91-20-3	Naphthalene	5.0 U		25	22.8	91	25	23.5	94	3	63-132/25
103-65-1	n-Propylbenzene	1.0 U		25	25.6	102	25	25.6	102	0	82-133/15
100-42-5	Styrene	1.0 U		25	24.6	98	25	23.9	96	3	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	26.9	108	25	27.2	109	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	26.7	107	25	27.2	109	2	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	21.9	88	25	21.7	87	1	76-135/16
108-88-3	Toluene	1.0 U		25	21.9	88	25	22.2	89	1	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	25.2	101	25	25.7	103	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	24.5	98	25	25.2	101	3	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	22.4	90	25	22.4	90	0	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.4	102	25	25.2	101	1	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	22.7	91	25	22.7	91	0	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	31.0	124	25	29.8	119	4	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U		25	24.8	99	25	25.2	101	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U		25	24.9	100	25	24.8	99	0	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U		25	25.5	102	25	25.3	101	1	79-120/19
108-05-4	Vinyl Acetate	10 U		125	101	81	125	105	84	4	43-154/14
75-01-4	Vinyl Chloride	1.0 U		25	26.1	104	25	27.2	109	4	69-159/18
	m,p-Xylene	2.0 U		50	49.4	99	50	49.2	98	0	79-126/15
95-47-6	o-Xylene	1.0 U		25	24.1	96	25	24.4	98	1	80-127/14
1330-20-7	Xylene (total)	3.0 U		75	73.6	98	75	73.6	98	0	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-13MS	I56673.D	1	08/10/18	AJ	n/a	n/a	VI1696
FA56349-13MSD	I56674.D	1	08/10/18	AJ	n/a	n/a	VI1696
FA56349-13	I56655.D	1	08/10/18	AJ	n/a	n/a	VI1696

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19

CAS No.	Surrogate Recoveries	MS	MSD	FA56349-13	Limits
1868-53-7	Dibromofluoromethane	103%	103%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	102%	79-125%
2037-26-5	Toluene-D8	96%	97%	95%	85-112%
460-00-4	4-Bromofluorobenzene	97%	98%	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-13MS	Z53245.D	1	08/02/18	MM	n/a	n/a	VZ2006
FA56349-13MSD	Z53246.D	1	08/02/18	MM	n/a	n/a	VZ2006
FA56349-13	Z53236.D	1	08/02/18	MM	n/a	n/a	VZ2006

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-13, FA56349-15, FA56349-16, FA56349-17, FA56349-18

CAS No.	Compound	FA56349-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.50	U	5	5.2	104	5	5.0	100	4	81-122/14
56-23-5	Carbon Tetrachloride	0.50	U	5	5.4	108	5	5.1	102	6	76-136/23
67-66-3	Chloroform	0.50	U	5	5.3	106	5	5.0	100	6	80-124/15
75-34-3	1,1-Dichloroethane	0.50	U	5	5.2	104	5	4.9	98	6	81-122/15
107-06-2	1,2-Dichloroethane	0.50	U	5	4.9	98	5	4.8	96	2	75-125/14
75-35-4	1,1-Dichloroethylene	0.50	U	5	5.4	108	5	5.0	100	8	78-137/18
156-59-2	cis-1,2-Dichloroethylene	0.50	U	5	4.8	96	5	4.6	92	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	0.50	U	5	5.0	100	5	4.7	94	6	76-127/17
540-59-0	1,2-Dichloroethene (total)	0.50	U	10	9.8	98	10	9.3	93	5	76-127/17
78-87-5	1,2-Dichloropropane	0.50	U	5	4.9	98	5	5.0	100	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	0.50	U	5	4.3	86	5	4.7	94	9	75-118/23
10061-02-6	trans-1,3-Dichloropropene	0.50	U	5	4.8	96	5	5.0	100	4	80-120/22
542-75-6	1,3-Dichloropropene (total)	0.50	U	10	9.2	92	10	9.7	97	5	75-120/23
74-87-3	Methyl Chloride	0.50	U	5	5.5	110	5	5.1	102	8	50-159/19
75-09-2	Methylene Chloride	2.0	U	5	4.4	88	5	4.4	88	0	69-135/16
127-18-4	Tetrachloroethylene	0.50	U	5	5.3	106	5	5.1	102	4	76-135/16
71-55-6	1,1,1-Trichloroethane	0.50	U	5	5.2	104	5	5.0	100	4	75-130/16
79-01-6	Trichloroethylene	0.50	U	5	4.9	98	5	4.8	96	2	81-126/15
75-01-4	Vinyl Chloride	0.10	U	5	5.4	108	5	5.0	100	8	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA56349-13	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	102%	122% [a]	74-125%
2037-26-5	Toluene-D8	94%	95%	101%	88-111%

(a) Outside DOD QSM control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56505-3MS	Z53366.D	1	08/09/18	MM	n/a	n/a	VZ2011
FA56505-3MSD	Z53367.D	1	08/09/18	MM	n/a	n/a	VZ2011
FA56505-3 [a]	Z53363.D	1	08/09/18	MM	n/a	n/a	VZ2011

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-19

CAS No.	Compound	FA56505-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.50 U		5	5.1	102	5	4.9	98	4	81-122/14
56-23-5	Carbon Tetrachloride	0.50 U		5	5.6	112	5	5.2	104	7	76-136/23
67-66-3	Chloroform	0.50 U		5	5.3	106	5	4.9	98	8	80-124/15
75-34-3	1,1-Dichloroethane	0.50 U		5	5.5	110	5	5.2	104	6	81-122/15
107-06-2	1,2-Dichloroethane	0.50 U		5	4.9	98	5	4.6	92	6	75-125/14
75-35-4	1,1-Dichloroethylene	0.50 U		5	5.3	106	5	4.9	98	8	78-137/18
156-59-2	cis-1,2-Dichloroethylene	0.17	J	5	5.1	99	5	5.0	97	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	0.50 U		5	5.0	100	5	4.9	98	2	76-127/17
540-59-0	1,2-Dichloroethene (total)	0.17	J	10	10.1	99	10	9.9	97	2	76-127/17
78-87-5	1,2-Dichloropropane	0.50 U		5	5.0	100	5	4.8	96	4	76-124/14
10061-01-5	cis-1,3-Dichloropropene	0.50 U		5	4.6	92	5	4.7	94	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	0.50 U		5	5.1	102	5	5.0	100	2	80-120/22
542-75-6	1,3-Dichloropropene (total)	0.50 U		10	9.8	98	10	9.8	98	0	75-120/23
74-87-3	Methyl Chloride	0.50 U		5	5.6	112	5	5.2	104	7	50-159/19
75-09-2	Methylene Chloride	2.0 U		5	5.1	102	5	4.8	96	6	69-135/16
127-18-4	Tetrachloroethylene	0.68		5	6.1	108	5	5.7	100	7	76-135/16
71-55-6	1,1,1-Trichloroethane	0.50 U		5	5.5	110	5	5.1	102	8	75-130/16
79-01-6	Trichloroethylene	0.40	J	5	5.3	98	5	5.1	94	4	81-126/15
75-01-4	Vinyl Chloride	0.10 U		5	5.4	108	5	5.0	100	8	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA56505-3	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	99%	123% [b]	74-125%
2037-26-5	Toluene-D8	95%	97%	108%	88-111%

(a) Confirmation run for surrogate recoveries.
(b) Outside DOD QSM control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56394-12MS	Z53387.D	1	08/10/18	MM	n/a	n/a	VZ2012
FA56394-12MSD	Z53388.D	1	08/10/18	MM	n/a	n/a	VZ2012
FA56394-12	Z53384.D	1	08/10/18	MM	n/a	n/a	VZ2012

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA56349-14

CAS No.	Compound	FA56394-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.50	U	5	5.2	104	5	5.0	100	4	81-122/14
56-23-5	Carbon Tetrachloride	0.50	U	5	5.8	116	5	5.5	110	5	76-136/23
67-66-3	Chloroform	0.50	U	5	5.4	108	5	5.1	102	6	80-124/15
75-34-3	1,1-Dichloroethane	0.50	U	5	5.6	112	5	5.4	108	4	81-122/15
107-06-2	1,2-Dichloroethane	0.50	U	5	5.2	104	5	4.9	98	6	75-125/14
75-35-4	1,1-Dichloroethylene	0.50	U	5	5.3	106	5	5.3	106	0	78-137/18
156-59-2	cis-1,2-Dichloroethylene	0.50	U	5	4.9	98	5	4.9	98	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	0.50	U	5	5.0	100	5	5.0	100	0	76-127/17
540-59-0	1,2-Dichloroethene (total)	0.50	U	10	9.9	99	10	9.9	99	0	76-127/17
78-87-5	1,2-Dichloropropane	0.50	U	5	5.2	104	5	4.9	98	6	76-124/14
10061-01-5	cis-1,3-Dichloropropene	0.50	U	5	4.9	98	5	4.9	98	0	75-118/23
10061-02-6	trans-1,3-Dichloropropene	0.50	U	5	5.3	106	5	5.2	104	2	80-120/22
542-75-6	1,3-Dichloropropene (total)	0.50	U	10	10.2	102	10	10.1	101	1	75-120/23
74-87-3	Methyl Chloride	0.50	U	5	5.8	116	5	5.5	110	5	50-159/19
75-09-2	Methylene Chloride	2.0	U	5	5.2	104	5	5.0	100	4	69-135/16
127-18-4	Tetrachloroethylene	0.50	U	5	5.5	110	5	5.2	104	6	76-135/16
71-55-6	1,1,1-Trichloroethane	0.50	U	5	5.6	112	5	5.4	108	4	75-130/16
79-01-6	Trichloroethylene	0.50	U	5	5.2	104	5	4.8	96	8	81-126/15
75-01-4	Vinyl Chloride	0.10	U	5	5.4	108	5	5.1	102	6	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA56394-12	Limits
17060-07-0	1,2-Dichloroethane-D4	108%	103%	128%* [a]	74-125%
2037-26-5	Toluene-D8	95%	96%	106%	88-111%

(a) Outside control limits; however, sample is ND.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1683-BFB
Lab File ID: I56313.D
Instrument ID: GCMSI
Injection Date: 07/25/18
Injection Time: 14:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	74779	24.9		Pass
75	30.0 - 60.0% of mass 95	151371	50.4		Pass
95	Base peak, 100% relative abundance	300437	100.0		Pass
96	5.0 - 9.0% of mass 95	21401	7.12		Pass
173	Less than 2.0% of mass 174	1809	0.60	(0.84) [a]	Pass
174	50.0 - 100.0% of mass 95	215941	71.9		Pass
175	5.0 - 9.0% of mass 174	15559	5.18	(7.21) [a]	Pass
176	95.0 - 101.0% of mass 174	207501	69.1	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	13778	4.59	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1683-IC1683	I56314.D	07/25/18	15:14	00:38	Initial cal 1
VI1683-IC1683	I56315.D	07/25/18	15:37	01:01	Initial cal 2
VI1683-IC1683	I56316.D	07/25/18	16:01	01:25	Initial cal 3
VI1683-IC1683	I56317.D	07/25/18	16:25	01:49	Initial cal 4
VI1683-ICC1683	I56318.D	07/25/18	16:49	02:13	Initial cal 5
VI1683-IC1683	I56319.D	07/25/18	17:13	02:37	Initial cal 6
VI1683-IC1683	I56320.D	07/25/18	17:36	03:00	Initial cal 7
VI1683-ICV1683	I56322.D	07/25/18	18:24	03:48	Initial cal verification 5
VI1683-BS	I56323.D	07/25/18	18:48	04:12	Blank Spike
VI1683-MB	I56324.D	07/25/18	19:12	04:36	Method Blank

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1694-BFB
Lab File ID: I56595.D
Instrument ID: GCMSI
Injection Date: 08/08/18
Injection Time: 08:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	74563	25.7		Pass
75	30.0 - 60.0% of mass 95	147696	50.9		Pass
95	Base peak, 100% relative abundance	289920	100.0		Pass
96	5.0 - 9.0% of mass 95	19783	6.82		Pass
173	Less than 2.0% of mass 174	1808	0.62	(0.86) [a]	Pass
174	50.0 - 100.0% of mass 95	211013	72.8		Pass
175	5.0 - 9.0% of mass 174	15554	5.36	(7.37) [a]	Pass
176	95.0 - 101.0% of mass 174	203589	70.2	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	13319	4.59	(6.54) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1694-CC1683	I56596.D	08/08/18	08:41	00:24	Continuing cal 5
VI1694-BS	I56597.D	08/08/18	09:13	00:56	Blank Spike
VI1694-MB	I56598.D	08/08/18	09:37	01:20	Method Blank
ZZZZZZ	I56599.D	08/08/18	10:11	01:54	(unrelated sample)
ZZZZZZ	I56600.D	08/08/18	10:35	02:18	(unrelated sample)
ZZZZZZ	I56601.D	08/08/18	10:59	02:42	(unrelated sample)
ZZZZZZ	I56602.D	08/08/18	11:23	03:06	(unrelated sample)
ZZZZZZ	I56603.D	08/08/18	11:46	03:29	(unrelated sample)
ZZZZZZ	I56604.D	08/08/18	12:10	03:53	(unrelated sample)
ZZZZZZ	I56605.D	08/08/18	12:34	04:17	(unrelated sample)
ZZZZZZ	I56606.D	08/08/18	12:58	04:41	(unrelated sample)
ZZZZZZ	I56607.D	08/08/18	13:22	05:05	(unrelated sample)
FA56349-1	I56608.D	08/08/18	13:45	05:28	20/241W-3
FA56349-2	I56609.D	08/08/18	14:31	06:14	20/241W-10
FA56349-3	I56610.D	08/08/18	14:55	06:38	20/24MW-6
FA56349-1MS	I56611.D	08/08/18	15:19	07:02	Matrix Spike
FA56349-1MSD	I56612.D	08/08/18	15:43	07:26	Matrix Spike Duplicate
FA56349-4	I56614.D	08/08/18	16:30	08:13	20/24MW-6B
FA56349-5	I56615.D	08/08/18	16:54	08:37	20/24MW-8
FA56349-6	I56616.D	08/08/18	17:18	09:01	20/24MW-18
FA56349-7	I56617.D	08/08/18	17:42	09:25	20/241W-1B
FA56349-8	I56618.D	08/08/18	18:06	09:49	20/241W-3B
FA56349-9	I56619.D	08/08/18	18:29	10:12	20/241W-09
FA56349-10	I56620.D	08/08/18	18:53	10:36	TB

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1694-BFB
Lab File ID: I56595.D
Instrument ID: GCMSI
Injection Date: 08/08/18
Injection Time: 08:17

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
FA56349-11	I56621.D	08/08/18	19:17	11:00	FD-B-GW
VI1694-ECC1683	I56622.D	08/08/18	19:41	11:24	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1696-BFB
Lab File ID: I56650.D
Instrument ID: GCMSI
Injection Date: 08/10/18
Injection Time: 08:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	75635	25.5		Pass
75	30.0 - 60.0% of mass 95	150648	50.8		Pass
95	Base peak, 100% relative abundance	296747	100.0		Pass
96	5.0 - 9.0% of mass 95	20880	7.04		Pass
173	Less than 2.0% of mass 174	1849	0.62	(0.86) [a]	Pass
174	50.0 - 100.0% of mass 95	214861	72.4		Pass
175	5.0 - 9.0% of mass 174	16399	5.53	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	206520	69.6	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	13910	4.69	(6.74) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1696-CC1683	I56651.D	08/10/18	08:36	00:24	Continuing cal 5
VI1696-BS	I56652.D	08/10/18	09:09	00:57	Blank Spike
VI1696-MB	I56653.D	08/10/18	09:33	01:21	Method Blank
FA56349-12	I56654.D	08/10/18	10:22	02:10	FB-GW
FA56349-13	I56655.D	08/10/18	10:47	02:35	SW-1
FA56349-14	I56656.D	08/10/18	11:10	02:58	SW-2
FA56349-15	I56657.D	08/10/18	11:33	03:21	SW-3
FA56349-16	I56658.D	08/10/18	11:57	03:45	SW-4
FA56349-17	I56659.D	08/10/18	12:21	04:09	SW-5
FA56349-18	I56660.D	08/10/18	13:43	05:31	FD-B-SW
FA56349-19	I56661.D	08/10/18	14:06	05:54	FB-B-SW
ZZZZZZ	I56662.D	08/10/18	14:30	06:18	(unrelated sample)
ZZZZZZ	I56663.D	08/10/18	14:54	06:42	(unrelated sample)
ZZZZZZ	I56664.D	08/10/18	15:17	07:05	(unrelated sample)
ZZZZZZ	I56665.D	08/10/18	15:41	07:29	(unrelated sample)
ZZZZZZ	I56666.D	08/10/18	16:05	07:53	(unrelated sample)
ZZZZZZ	I56667.D	08/10/18	16:29	08:17	(unrelated sample)
ZZZZZZ	I56668.D	08/10/18	16:53	08:41	(unrelated sample)
ZZZZZZ	I56669.D	08/10/18	17:16	09:04	(unrelated sample)
ZZZZZZ	I56670.D	08/10/18	17:40	09:28	(unrelated sample)
ZZZZZZ	I56671.D	08/10/18	18:04	09:52	(unrelated sample)
ZZZZZZ	I56672.D	08/10/18	18:28	10:16	(unrelated sample)
FA56349-13MS	I56673.D	08/10/18	18:51	10:39	Matrix Spike
FA56349-13MSD	I56674.D	08/10/18	19:15	11:03	Matrix Spike Duplicate

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1696-BFB
Lab File ID: I56650.D
Instrument ID: GCMSI
Injection Date: 08/10/18
Injection Time: 08:12

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1696-ECC1683	I56675.D	08/10/18	19:39	11:27	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VZ2005-BFB
Lab File ID: Z53198.D
Instrument ID: GCMSZ
Injection Date: 07/26/18
Injection Time: 08:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	229120	22.4		Pass
75	30.0 - 60.0% of mass 95	543744	53.1		Pass
95	Base peak, 100% relative abundance	1023957	100.0		Pass
96	5.0 - 9.0% of mass 95	71643	7.00		Pass
173	Less than 2.0% of mass 174	5142	0.50	(0.62) [a]	Pass
174	50.0 - 100.0% of mass 95	822805	80.4		Pass
175	5.0 - 9.0% of mass 174	59429	5.80	(7.22) [a]	Pass
176	95.0 - 101.0% of mass 174	814805	79.6	(99.0) [a]	Pass
177	5.0 - 9.0% of mass 176	51251	5.01	(6.29) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ2005-IC2005	Z53200.D	07/26/18	09:48	01:24	Initial cal 1
VZ2005-IC2005	Z53201.D	07/26/18	10:09	01:45	Initial cal 2
VZ2005-IC2005	Z53202.D	07/26/18	10:31	02:07	Initial cal 3
VZ2005-IC2005	Z53203.D	07/26/18	10:52	02:28	Initial cal 4
VZ2005-ICC2005	Z53204.D	07/26/18	11:13	02:49	Initial cal 5
VZ2005-IC2005	Z53205.D	07/26/18	11:34	03:10	Initial cal 6
VZ2005-IC2005	Z53206.D	07/26/18	11:56	03:32	Initial cal 7
VZ2005-ICV2005	Z53209.D	07/26/18	13:30	05:06	Initial cal verification 5
VZ2005-BS	Z53210.D	07/26/18	14:33	06:09	Blank Spike
VZ2005-MB	Z53212.D	07/26/18	15:25	07:01	Method Blank
ZZZZZZ	Z53213.D	07/26/18	15:46	07:22	(unrelated sample)
FA56092-2	Z53214.D	07/26/18	16:08	07:44	(used for QC only; not part of job FA56349)
ZZZZZZ	Z53215.D	07/26/18	17:06	08:42	(unrelated sample)
ZZZZZZ	Z53216.D	07/26/18	17:30	09:06	(unrelated sample)
ZZZZZZ	Z53217.D	07/26/18	17:55	09:31	(unrelated sample)
ZZZZZZ	Z53218.D	07/26/18	18:19	09:55	(unrelated sample)
FA56092-2MS	Z53219.D	07/26/18	18:44	10:20	Matrix Spike
FA56092-2MSD	Z53220.D	07/26/18	19:09	10:45	Matrix Spike Duplicate
VZ2005-ECC2005	Z53221.D	07/26/18	19:34	11:10	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VZ2006-BFB
Lab File ID: Z53224.D
Instrument ID: GCMSZ
Injection Date: 08/02/18
Injection Time: 14:03

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	233301	22.1		Pass
75	30.0 - 60.0% of mass 95	552363	52.3		Pass
95	Base peak, 100% relative abundance	1056747	100.0		Pass
96	5.0 - 9.0% of mass 95	78421	7.42		Pass
173	Less than 2.0% of mass 174	4566	0.43	(0.56) [a]	Pass
174	50.0 - 100.0% of mass 95	819627	77.6		Pass
175	5.0 - 9.0% of mass 174	56163	5.31	(6.85) [a]	Pass
176	95.0 - 101.0% of mass 174	786987	74.5	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	51232	4.85	(6.51) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ2006-CC2005	Z53225.D	08/02/18	14:39	00:36	Continuing cal 5
VZ2006-BS	Z53228.D	08/02/18	16:09	02:06	Blank Spike
VZ2006-MB	Z53229.D	08/02/18	16:41	02:38	Method Blank
FA56218-1	Z53230.D	08/02/18	17:06	03:03	(used for QC only; not part of job FA56349)
ZZZZZZ	Z53231.D	08/02/18	17:30	03:27	(unrelated sample)
ZZZZZZ	Z53232.D	08/02/18	17:55	03:52	(unrelated sample)
ZZZZZZ	Z53233.D	08/02/18	18:20	04:17	(unrelated sample)
ZZZZZZ	Z53234.D	08/02/18	18:44	04:41	(unrelated sample)
ZZZZZZ	Z53235.D	08/02/18	19:09	05:06	(unrelated sample)
FA56349-13	Z53236.D	08/02/18	19:34	05:31	SW-1
FA56349-15	Z53238.D	08/02/18	20:24	06:21	SW-3
FA56349-16	Z53239.D	08/02/18	20:49	06:46	SW-4
FA56349-17	Z53240.D	08/02/18	21:13	07:10	SW-5
FA56349-18	Z53241.D	08/02/18	21:38	07:35	FD-B-SW
FA56218-1MS	Z53243.D	08/02/18	22:28	08:25	Matrix Spike
FA56218-1MSD	Z53244.D	08/02/18	22:52	08:49	Matrix Spike Duplicate
FA56349-13MS	Z53245.D	08/02/18	23:17	09:14	Matrix Spike
FA56349-13MSD	Z53246.D	08/02/18	23:42	09:39	Matrix Spike Duplicate
VZ2006-ECC2005	Z53247.D	08/03/18	00:02	09:59	Ending cal 4

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VZ2011-BFB
Lab File ID: Z53341.D
Instrument ID: GCMSZ
Injection Date: 08/09/18
Injection Time: 08:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	247594	21.7		Pass
75	30.0 - 60.0% of mass 95	585749	51.3		Pass
95	Base peak, 100% relative abundance	1141760	100.0		Pass
96	5.0 - 9.0% of mass 95	79035	6.92		Pass
173	Less than 2.0% of mass 174	6650	0.58	(0.74) [a]	Pass
174	50.0 - 100.0% of mass 95	902656	79.1		Pass
175	5.0 - 9.0% of mass 174	66992	5.87	(7.42) [a]	Pass
176	95.0 - 101.0% of mass 174	873109	76.5	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	55163	4.83	(6.32) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ2011-IC2011	Z53342.D	08/09/18	09:48	00:53	Initial cal 1
VZ2011-IC2011	Z53343.D	08/09/18	10:13	01:18	Initial cal 2
VZ2011-IC2011	Z53344.D	08/09/18	10:38	01:43	Initial cal 3
VZ2011-IC2011	Z53345.D	08/09/18	11:03	02:08	Initial cal 4
VZ2011-ICC2011	Z53346.D	08/09/18	11:28	02:33	Initial cal 5
VZ2011-IC2011	Z53347.D	08/09/18	11:52	02:57	Initial cal 6
VZ2011-IC2011	Z53348.D	08/09/18	12:17	03:22	Initial cal 7
VZ2011-ICV2011	Z53351.D	08/09/18	13:37	04:42	Initial cal verification 5
VZ2011-BS	Z53352.D	08/09/18	14:23	05:28	Blank Spike
VZ2011-MB	Z53353.D	08/09/18	14:47	05:52	Method Blank
FA56349-14	Z53356.D	08/09/18	16:05	07:10	SW-2
FA56349-19	Z53357.D	08/09/18	16:30	07:35	FB-B-SW
ZZZZZZ	Z53359.D	08/09/18	17:20	08:25	(unrelated sample)
ZZZZZZ	Z53360.D	08/09/18	17:40	08:45	(unrelated sample)
ZZZZZZ	Z53361.D	08/09/18	18:05	09:10	(unrelated sample)
FA56505-3	Z53363.D	08/09/18	18:55	10:00	(used for QC only; not part of job FA56349)
ZZZZZZ	Z53364.D	08/09/18	19:20	10:25	(unrelated sample)
ZZZZZZ	Z53365.D	08/09/18	19:45	10:50	(unrelated sample)
FA56505-3MS	Z53366.D	08/09/18	20:09	11:14	Matrix Spike
FA56505-3MSD	Z53367.D	08/09/18	20:34	11:39	Matrix Spike Duplicate
VZ2011-ECC2011	Z53368.D	08/09/18	20:55	12:00	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VZ2012-BFB
Lab File ID: Z53371.D
Instrument ID: GCMSZ
Injection Date: 08/10/18
Injection Time: 09:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	186524	21.7		Pass
75	30.0 - 60.0% of mass 95	440917	51.4		Pass
95	Base peak, 100% relative abundance	858304	100.0		Pass
96	5.0 - 9.0% of mass 95	65723	7.66		Pass
173	Less than 2.0% of mass 174	4438	0.52	(0.65) [a]	Pass
174	50.0 - 100.0% of mass 95	680000	79.2		Pass
175	5.0 - 9.0% of mass 174	47317	5.51	(6.96) [a]	Pass
176	95.0 - 101.0% of mass 174	651264	75.9	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	44053	5.13	(6.76) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ2012-CC2011	Z53372.D	08/10/18	10:15	00:32	Continuing cal 5
VZ2012-BS	Z53373.D	08/10/18	10:53	01:10	Blank Spike
VZ2012-MB	Z53374.D	08/10/18	11:33	01:50	Method Blank
FA56394-13	Z53375.D	08/10/18	12:10	02:27	(used for QC only; not part of job FA56349)
ZZZZZZ	Z53376.D	08/10/18	12:35	02:52	(unrelated sample)
ZZZZZZ	Z53377.D	08/10/18	13:00	03:17	(unrelated sample)
ZZZZZZ	Z53378.D	08/10/18	13:24	03:41	(unrelated sample)
ZZZZZZ	Z53379.D	08/10/18	13:49	04:06	(unrelated sample)
ZZZZZZ	Z53380.D	08/10/18	14:14	04:31	(unrelated sample)
ZZZZZZ	Z53381.D	08/10/18	14:38	04:55	(unrelated sample)
ZZZZZZ	Z53382.D	08/10/18	15:03	05:20	(unrelated sample)
ZZZZZZ	Z53383.D	08/10/18	15:28	05:45	(unrelated sample)
FA56394-12	Z53384.D	08/10/18	15:53	06:10	(used for QC only; not part of job FA56349)
FA56349-14	Z53385.D	08/10/18	16:17	06:34	SW-2
FA56394-12MS	Z53387.D	08/10/18	17:07	07:24	Matrix Spike
FA56394-12MSD	Z53388.D	08/10/18	17:32	07:49	Matrix Spike Duplicate
FA56394-13MS	Z53389.D	08/10/18	17:53	08:10	Matrix Spike
FA56394-13MSD	Z53390.D	08/10/18	18:15	08:32	Matrix Spike Duplicate
VZ2012-ECC2011	Z53391.D	08/10/18	18:35	08:52	Ending cal 5

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1694-CC1683	**Injection Date:**	08/08/18
Lab File ID:	I56596.D	**Injection Time:**	08:41
Instrument ID:	GCMSI	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1197770	9.42	847395	12.46	427469	14.13	101391	5.62
Check Std [b]	1112012	9.41	812808	12.46	415980	14.13	97054	5.61
Upper Limit [c]	2224024	9.58	1625616	12.63	831960	14.30	194108	5.78
Lower Limit [d]	556006	9.24	406404	12.29	207990	13.96	48527	5.44

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VI1694-BS	1159021	9.41	826881	12.46	422069	14.13	105695	5.61
VI1694-MB	1128546	9.41	804908	12.46	408061	14.13	90318	5.60
ZZZZZZ	1107608	9.41	771175	12.46	388977	14.13	65882	5.60
ZZZZZZ	1069763	9.42	756761	12.46	384341	14.13	70103	5.60
ZZZZZZ	1063976	9.42	759560	12.46	382412	14.13	71152	5.60
ZZZZZZ	1044919	9.42	744625	12.46	380455	14.13	72621	5.60
ZZZZZZ	1044846	9.42	740524	12.46	376989	14.13	75568	5.60
ZZZZZZ	1037933	9.42	740619	12.46	378297	14.13	78583	5.62
ZZZZZZ	1015484	9.42	729014	12.46	370901	14.13	74902	5.62
ZZZZZZ	1019456	9.42	721059	12.46	370811	14.13	72716	5.60
ZZZZZZ	1010958	9.42	724524	12.46	365010	14.13	78310	5.60
FA56349-1	998579	9.42	716992	12.46	366106	14.13	77972	5.61
FA56349-2 [e]	979688	9.41	697327	12.46	366470	14.13	84376	5.61
FA56349-3	988300	9.42	708204	12.46	360160	14.13	81529	5.60
FA56349-1MS	1068873	9.42	775842	12.46	400629	14.13	100608	5.62
FA56349-1MSD	1109107	9.42	795128	12.46	411562	14.13	110095	5.62
FA56349-4	1044824	9.42	742172	12.46	378072	14.13	94100	5.61
FA56349-5	1050443	9.42	748773	12.46	379900	14.13	96465	5.62
FA56349-6	1032055	9.42	741657	12.46	375728	14.13	88465	5.60
FA56349-7	1009989	9.42	724267	12.46	368183	14.13	91233	5.61
FA56349-8	1019560	9.42	718102	12.46	370630	14.13	89209	5.60
FA56349-9	1026516	9.42	729689	12.46	374274	14.13	91060	5.60
FA56349-10	1009971	9.42	719541	12.46	364422	14.13	84572	5.60
FA56349-11	1004297	9.42	713639	12.46	366111	14.13	87094	5.60
VI1694-ECC1683	1081258	9.42	791366	12.46	404551	14.13	99293	5.62

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VI1683-ICC1683 I56318.D 07/25/18 16:49
(b) Check Std Limit = -50 to + 100% of initial cal area.

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1694-CC1683	**Injection Date:**	08/08/18
Lab File ID:	I56596.D	**Injection Time:**	08:41
Instrument ID:	GCMSI	**Method:**	SW846 8260C

Lab	IS 1		IS 2		IS 3		IS 4	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
(e) Sample vial(s) contained bubbles greater than 6mm; reported results are considered minimum values.

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1696-CC1683	**Injection Date:**	08/10/18
Lab File ID:	I56651.D	**Injection Time:**	08:36
Instrument ID:	GCMSI	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1197770	9.42	847395	12.46	427469	14.13	101391	5.62
Check Std [b]	1133186	9.42	809581	12.46	419428	14.13	94259	5.62
Upper Limit [c]	2266372	9.59	1619162	12.63	838856	14.30	188518	5.79
Lower Limit [d]	566593	9.25	404791	12.29	209714	13.96	47130	5.45

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VI1696-BS	1131170	9.41	821330	12.46	416767	14.13	102559	5.60
VI1696-MB	1077840	9.41	767208	12.46	386389	14.13	87103	5.60
FA56349-12	1124541	9.41	797049	12.46	397054	14.13	65120	5.60
FA56349-13	1096850	9.42	784605	12.46	395758	14.13	73732	5.60
FA56349-14	1081152	9.42	770511	12.46	388500	14.13	77006	5.61
FA56349-15	1065620	9.42	761505	12.46	385345	14.13	75451	5.62
FA56349-16	1054035	9.42	755545	12.46	381068	14.13	80930	5.61
FA56349-17	1045763	9.42	749842	12.46	381391	14.13	82959	5.60
FA56349-18	1032213	9.41	735889	12.46	373037	14.13	77904	5.60
FA56349-19	1019350	9.41	732895	12.46	373210	14.13	74698	5.60
ZZZZZZ	1022710	9.42	732020	12.46	372256	14.13	75555	5.61
ZZZZZZ	1027682	9.42	730479	12.46	371703	14.13	76563	5.60
ZZZZZZ	1017678	9.42	732001	12.46	369910	14.13	78688	5.60
ZZZZZZ	1011281	9.42	721399	12.46	368093	14.13	75273	5.60
ZZZZZZ	1019793	9.42	723198	12.46	368803	14.13	76542	5.60
ZZZZZZ	1008440	9.42	718153	12.46	366737	14.13	75628	5.60
ZZZZZZ	1005889	9.42	714600	12.46	362175	14.13	76086	5.60
ZZZZZZ	1009089	9.42	713471	12.46	362407	14.13	75278	5.60
ZZZZZZ	998339	9.42	710443	12.46	363237	14.13	72496	5.60
ZZZZZZ	987249	9.42	714101	12.46	360607	14.13	71217	5.60
ZZZZZZ	974705	9.42	723398	12.46	363091	14.13	67351	5.61
FA56349-13MS	1072952	9.41	783960	12.46	405093	14.13	89294	5.61
FA56349-13MSD	1106485	9.41	797967	12.46	404820	14.13	96505	5.62
VI1696-ECC1683	1114075	9.42	808693	12.46	417260	14.13	102837	5.61

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VI1683-ICC1683 I56318.D 07/25/18 16:49
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1696-CC1683	**Injection Date:**	08/10/18
Lab File ID:	I56651.D	**Injection Time:**	08:36
Instrument ID:	GCMSI	**Method:**	SW846 8260C

Lab	**IS 1**		**IS 2**		**IS 3**		**IS 4**	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VZ2006-CC2005	**Injection Date:**	08/02/18
Lab File ID:	Z53225.D	**Injection Time:**	14:39
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	7581745	7.48	6427219	10.60
Check Std [b]	8196964	7.48	6784295	10.60
Upper Limit [c]	16393928	7.65	13568590	10.77
Lower Limit [d]	4098482	7.31	3392148	10.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ2006-BS	7596060	7.48	6476083	10.60
VZ2006-MB	6559327	7.48	5033610	10.60
FA56218-1	6158312	7.48	4761556	10.60
ZZZZZZ	5955980	7.48	4826649	10.60
ZZZZZZ	5828367	7.48	4376429	10.60
ZZZZZZ	5780393	7.48	4477795	10.60
ZZZZZZ	5399083	7.48	4003869	10.60
ZZZZZZ	5248437	7.48	3911130	10.60
FA56349-13	5204758	7.48	3827702	10.60
FA56349-15	5330908	7.48	4208325	10.60
FA56349-16	5280031	7.48	4198924	10.60
FA56349-17	4894256	7.48	3716786	10.60
FA56349-18	4724231	7.48	3578117	10.60
FA56218-1MS	5921004	7.48	4814944	10.60
FA56218-1MSD	6299334	7.48	5108854	10.60
FA56349-13MS	6501891	7.48	5131065	10.60
FA56349-13MSD	6848154	7.48	5788328	10.60
VZ2006-ECC2005	7644063	7.48	6867888	10.60

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5

(a) Initial Cal is: VZ2005-ICC2005 Z53204.D 07/26/18 11:13
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VZ2011-ICC2011	**Injection Date:**	08/09/18
Lab File ID:	Z53346.D	**Injection Time:**	11:28
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	8256078	7.48	7288040	10.60
Check Std [b]	8256078	7.48	7288040	10.60
Upper Limit [c]	16512156	7.65	14576080	10.77
Lower Limit [d]	4128039	7.31	3644020	10.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ2011-BS	8530359	7.48	7400123	10.60
VZ2011-MB	6554884	7.48	4800341	10.60
FA56349-14 [e]	5739979	7.48	4683113	10.60
FA56349-19	5170506	7.48	3845167	10.60
ZZZZZZ	3864492*	7.48	3377135*	10.60
ZZZZZZ	4954943	7.48	4049748	10.60
ZZZZZZ	4669100	7.48	3579421*	10.60
FA56505-3	4595619	7.48	3501464*	10.60
ZZZZZZ	4495616	7.48	3429281*	10.60
ZZZZZZ	4481271	7.48	3333986*	10.60
FA56505-3MS	5801660	7.48	4647207	10.60
FA56505-3MSD	6117033	7.48	4971350	10.60
VZ2011-ECC2011	7009286	7.48	6137981	10.60

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5

(a) Initial Cal is: VZ2011-ICC2011 Z53346.D 08/09/18 11:28
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
(e) Confirmation run for internal standard areas.

Internal Standard Area Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VZ2012-CC2011	**Injection Date:**	08/10/18
Lab File ID:	Z53372.D	**Injection Time:**	10:15
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	8256078	7.48	7288040	10.60
Check Std [b]	6392383	7.48	6101612	10.60
Upper Limit [c]	12784766	7.65	12203224	10.77
Lower Limit [d]	3196192	7.31	3050806	10.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ2012-BS	6204193	7.48	5490335	10.60
VZ2012-MB	5092198	7.48	4059990	10.60
FA56394-13	4767012	7.48	3766874	10.60
ZZZZZZ	4277896	7.48	3372510	10.60
ZZZZZZ	4502753	7.48	3870960	10.60
ZZZZZZ	4365869	7.48	3545000	10.60
ZZZZZZ	4018937	7.48	3020575*	10.60
ZZZZZZ	4181734	7.48	3421109	10.60
ZZZZZZ	3943088	7.48	2919641*	10.60
ZZZZZZ	4021042	7.48	3295827	10.60
ZZZZZZ	3784984	7.48	2961803*	10.60
FA56394-12	4194028	7.48	3532614	10.60
FA56349-14	3755997	7.48	2859663*	10.60
FA56394-12MS	5091111	7.48	4150860	10.60
FA56394-12MSD	5441997	7.48	4452782	10.60
FA56394-13MS	6006924	7.48	5294239	10.60
FA56394-13MSD	5843393	7.48	4762447	10.60
VZ2012-ECC2011	6819323	7.48	6458515	10.60

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5

(a) Initial Cal is: VZ2011-ICC2011 Z53346.D 08/09/18 11:28
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA56349-1	I56608.D	102	107	97	95
FA56349-2	I56609.D	103	110	98	95
FA56349-3	I56610.D	104	108	99	96
FA56349-4	I56614.D	102	107	98	97
FA56349-5	I56615.D	103	108	98	97
FA56349-6	I56616.D	103	108	96	96
FA56349-7	I56617.D	104	108	99	96
FA56349-8	I56618.D	104	109	99	96
FA56349-9	I56619.D	104	109	98	96
FA56349-10	I56620.D	103	109	99	96
FA56349-11	I56621.D	102	108	99	96
FA56349-12	I56654.D	99	100	99	99
FA56349-13	I56655.D	100	102	95	97
FA56349-14	I56656.D	99	103	97	97
FA56349-15	I56657.D	99	105	97	96
FA56349-16	I56658.D	101	106	98	97
FA56349-17	I56659.D	99	106	97	96
FA56349-18	I56660.D	100	105	97	96
FA56349-19	I56661.D	102	107	98	96
FA56349-13MS	I56673.D	103	103	96	97
FA56349-13MSD	I56674.D	103	104	97	98
FA56349-1MS	I56611.D	103	105	97	96
FA56349-1MSD	I56612.D	104	104	98	97
VI1694-BS	I56597.D	102	102	99	98
VI1694-MB	I56598.D	99	104	98	98
VI1696-BS	I56652.D	101	102	98	100
VI1696-MB	I56653.D	99	103	98	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Surrogate Recovery Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8260B BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2
FA56349-13	Z53236.D	122 [a]	101
FA56349-14	Z53356.D	108	107
FA56349-14	Z53385.D	130* [a]	107
FA56349-15	Z53238.D	123 [a]	102
FA56349-16	Z53239.D	125 [a]	103
FA56349-17	Z53240.D	128* [b]	101
FA56349-18	Z53241.D	128* [b]	100
FA56349-19	Z53357.D	114	110
FA56349-13MS	Z53245.D	101	94
FA56349-13MSD	Z53246.D	102	95
FA56394-12MS	Z53387.D	108	95
FA56394-12MSD	Z53388.D	103	96
FA56505-3MS	Z53366.D	104	95
FA56505-3MSD	Z53367.D	99	97
VZ2006-BS	Z53228.D	100	96
VZ2006-MB	Z53229.D	110	105
VZ2011-BS	Z53352.D	86	103
VZ2011-MB	Z53353.D	97	112* [c]
VZ2012-BS	Z53373.D	95	96
VZ2012-MB	Z53374.D	109	108

Surrogate Compounds	Recovery Limits
S1 = 1,2-Dichloroethane-D4	74-125%
S2 = Toluene-D8	88-111%

(a) Outside DOD QSM control limits.
(b) Outside DOD QSM control limits; however, sample is ND.
(c) Outside control limits.

Initial Calibration Summary

Job Number: FA56349 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report MSVOA16

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Method       : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Calibration Files
1   =I56314.D    2   =I56315.D    3   =I56316.D    4   =I56317.D
5   =I56318.D    6   =I56319.D    7   =I56320.D

   Compound              1     2     3     4     5     6     7     Avg   %RSD
-------------------------------------------------------------------------------

1) I   Fluorobenzene         ----------------ISTD---------------------
2)  Dichlorodifluorom 0.274 0.308 0.275 0.288 0.282 0.279 0.287 0.285   4.07
3)P Chloromethane     0.439 0.418 0.390 0.384 0.365 0.372 0.369 0.391   7.09
4)  1,3-Butadiene     0.243 0.200 0.180 0.199 0.216 0.213 0.224 0.211   9.50
5)C Vinyl Chloride    0.339 0.331 0.304 0.327 0.330 0.329 0.342 0.329   3.79
6)  Bromomethane      0.215 0.184 0.175 0.163 0.159 0.157 0.152 0.172  12.56
7)  Chloroethane      0.195 0.163 0.138 0.102 0.084 0.070       0.126  38.75
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9922
              Response Ratio = 0.00000 + 0.11744 *A + -0.03433 *A^2

8)  Trichlorofluorome 0.416 0.422 0.374 0.398 0.356 0.352 0.326 0.378   9.50
9)  Ethyl Ether       0.287 0.284 0.290 0.295 0.295 0.291 0.298 0.291   1.65
10)  1,2-Dichlorotrifl 0.349 0.365 0.335 0.354 0.348 0.346 0.352 0.350   2.61
11)C 1,1-Dichloroethen 0.470 0.459 0.442 0.470 0.475 0.473 0.485 0.468   2.95
12)  Freon 113        0.264 0.274 0.251 0.261 0.262 0.255 0.261 0.261   2.85
13)  Carbon Disulfide 0.691 0.709 0.684 0.748 0.769 0.780 0.809 0.741   6.48
14)  Iodomethane      0.407 0.394 0.376 0.402 0.403 0.405 0.418 0.401   3.23
15)  Allyl chloride   0.345 0.385 0.375 0.412 0.424 0.433 0.442 0.402   8.77
16)  Methylene Chlorid 0.695 0.509 0.486 0.470 0.463 0.452 0.456 0.504  17.15
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.46608 *A + -0.00604 *A^2

17)  Acetone          0.077 0.079 0.081 0.085 0.089 0.085 0.086 0.083   5.21
18)  Methyl acetate   0.106 0.153 0.179 0.205 0.210 0.207 0.213 0.182  22.04
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.19960 *A + 0.00134 *A^2

19)  trans-1,2-Dichlor 0.434 0.448 0.441 0.468 0.473 0.475 0.487 0.461   4.29
20)  Hexane           0.375 0.374 0.347 0.362 0.349 0.335 0.334 0.354   4.75
21)  Methyl Tert Butyl 0.521 0.540 0.544 0.584 0.597 0.602 0.626 0.573   6.78
22)  Acetonitrile           0.024 0.025 0.030 0.032 0.031 0.031 0.029  12.16
23)  Di-isopropyl ethe 0.960 0.979 0.979 1.061 1.064 1.075 1.093 1.030   5.34
24)  Chloroprene      0.388 0.442 0.438 0.497 0.505 0.522 0.527 0.474  10.97
25)P 1,1-Dichloroethan 0.559 0.554 0.538 0.555 0.555 0.557 0.568 0.555   1.61
26)  Acrylonitrile    0.021 0.079 0.098 0.118 0.125 0.126 0.131 0.100  39.36
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.11541 *A + 0.00153 *A^2

27)  ETBE             0.692 0.772 0.796 0.867 0.881 0.891 0.916 0.831   9.68
28)  Vinyl acetate    0.361 0.527 0.591 0.664 0.662 0.697 0.699 0.600  20.36
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.64932 *A + 0.00524 *A^2

29)  cis-1,2-Dichloroe 0.233 0.262 0.258 0.272 0.271 0.277 0.287 0.266   6.54
30)  2,2-Dichloropropa 0.197 0.207 0.206 0.240 0.248 0.269 0.284 0.236  14.34
31)  Bromochloromethan 0.111 0.127 0.126 0.133 0.133 0.137 0.140 0.130   7.26
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32)  Cyclohexane       0.574 0.619 0.589 0.636 0.633 0.622 0.635 0.615   3.98
33)C Chloroform        0.524 0.481 0.457 0.469 0.467 0.469 0.479 0.478   4.58
34)  Ethyl acetate     0.133 0.239 0.263 0.291 0.292 0.293 0.297 0.258  22.86
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.28449 *A + 0.00127 *A^2

35)  Tetrahydrofuran   0.135 0.164 0.180 0.186 0.187 0.182 0.183 0.174  10.81
36)S Dibromofluorometh 0.258 0.258 0.262 0.266 0.268 0.269 0.269 0.264   1.85
37)  Carbon Tetrachlor 0.270 0.283 0.266 0.291 0.295 0.299 0.310 0.288   5.54
38)  1,1,1-Trichloroet 0.363 0.369 0.358 0.390 0.398 0.401 0.415 0.385   5.62
39)  2-Butanone        0.068 0.097 0.111 0.124 0.129 0.128 0.132 0.113  20.61
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.12222 *A + 0.00095 *A^2

40)  1,1-Dichloroprope 0.303 0.331 0.322 0.355 0.354 0.357 0.364 0.341   6.63
41)  tert-Butyl format 0.071 0.073 0.081 0.097 0.110 0.128 0.143 0.100  27.67
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.08592 *A + 0.00287 *A^2

42)  Propionitrile     0.034 0.041 0.044 0.047 0.048 0.046 0.046 0.044  11.50
43)  Methacrylonitrile 0.155 0.175 0.173 0.181 0.179 0.169 0.166 0.171   5.14
44)  Benzene           1.055 1.024 0.986 1.021 1.005 1.009 1.026 1.018   2.10
45)  TAME              0.455 0.507 0.518 0.576 0.590 0.606 0.632 0.555  11.39
46)S 1,2-Dichloroethan 0.359 0.360 0.358 0.357 0.356 0.354 0.355 0.357   0.69
47)  1,2-Dichloroethan 0.449 0.447 0.432 0.442 0.434 0.435 0.438 0.440   1.50
48)  Trichloroethene   0.266 0.268 0.258 0.272 0.270 0.272 0.276 0.269   2.16
49)  Methylcyclohexane 0.427 0.432 0.417 0.449 0.450 0.446 0.458 0.440   3.35
50)  Dibromomethane    0.152 0.160 0.162 0.171 0.170 0.173 0.176 0.166   5.13
51)C 1,2-Dichloropropa 0.307 0.318 0.314 0.334 0.331 0.335 0.338 0.325   3.74
52)  Bromodichlorometh 0.283 0.300 0.306 0.334 0.336 0.346 0.354 0.323   8.20
53)  Methyl methacryla 0.126 0.161 0.190 0.224 0.240 0.250 0.255 0.206  23.73
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.22300 *A + 0.01651 *A^2

54)  2-Chloroethyl vin 0.138 0.176 0.190 0.206 0.211 0.212 0.209 0.192  14.08
55)  cis-1,3-Dichlorop 0.281 0.335 0.351 0.407 0.416 0.429 0.443 0.380  15.61
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.39225 *A + 0.02559 *A^2


56) I   Chlorobenzene-d5      ----------------ISTD---------------------
57)S Toluene-d8        1.379 1.375 1.386 1.372 1.371 1.393 1.383 1.380   0.57
58)C Toluene           1.621 1.533 1.488 1.546 1.506 1.552 1.565 1.544   2.79
59)  2-Nitropropane    0.052 0.060 0.069 0.083 0.085 0.088 0.091 0.076  20.26
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.08026 *A + 0.00110 *A^2

60)  4-Methyl-2-pentan 0.414 0.399 0.412 0.428 0.425 0.411 0.402 0.413   2.56
61)  trans-1,3-Dichlor 0.026 0.029 0.032 0.033 0.031 0.030 0.031 0.030   7.78
62)  Tetrachloroethene 0.376 0.400 0.391 0.417 0.431 0.384 0.388 0.398   4.90
63)  Ethyl methacrylat 0.241 0.347 0.372 0.435 0.454 0.471 0.481 0.400  21.58
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.42779 *A + 0.02741 *A^2

64)  1,1,2-Trichloroet 0.270 0.289 0.292 0.300 0.289 0.294 0.295 0.290   3.33
65)  Dibromochlorometh 0.259 0.319 0.328 0.363 0.366 0.381 0.388 0.344  13.19
66)  1,3-Dichloropropa 0.559 0.574 0.571 0.598 0.587 0.593 0.598 0.583   2.59
67)  1,2-Dibromoethane 0.267 0.298 0.312 0.336 0.334 0.340 0.348 0.319   9.04
68)  2-hexanone        0.345 0.331 0.343 0.360 0.361 0.336 0.319 0.342   4.40
69)  1-Chlorohexane    0.533 0.513 0.498 0.522 0.540 0.540 0.564 0.530   4.07
```

Initial Calibration Summary

Job Number: FA56349 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
 70)C Ethylbenzene      1.789 1.768 1.700 1.795 1.745 1.796 1.772 1.766   1.95
 71)P Chlorobenzene     1.095 1.025 0.972 0.997 0.967 0.986 0.991 1.005   4.39
 72)  1,1,1,2-Tetrachlo 0.271 0.296 0.292 0.320 0.319 0.331 0.339 0.310   7.87
 73)  m,p-Xylene        1.272 1.355 1.304 1.386 1.362 1.377 1.362 1.345   3.08
 74)  o-Xylene          1.170 1.298 1.302 1.411 1.391 1.428 1.445 1.349   7.28
 75)  Styrene           0.708 0.900 0.904 1.009 1.009 1.046 1.062 0.948  13.06
 76)P Bromoform         0.150 0.176 0.186 0.215 0.220 0.230 0.238 0.202  15.84
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 0.20580 *A + 0.01648 *A^2

 77)  Isopropylbenzene  1.255 1.458 1.435 1.558 1.540 1.579 1.583 1.487   7.91

 78) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
 79)S 4-Bromofluorobenz 0.771 0.777 0.783 0.795 0.793 0.803 0.805 0.790   1.66
 80)  cis-1,4-Dichloro- 0.266 0.277 0.273 0.321 0.331 0.341 0.344 0.308  11.12
 81)  n-Propylbenzene   3.811 3.967 3.861 4.158 4.076 4.078 4.070 4.003   3.19
 82)  Bromobenzene      0.747 0.769 0.745 0.787 0.786 0.796 0.800 0.776   2.90
 83)P 1,1,2,2-Tetrachlo 0.863 0.881 0.853 0.895 0.880 0.868 0.876 0.874   1.59
 84)  1,3,5-Trimethylbe 2.158 2.462 2.447 2.652 2.630 2.656 2.652 2.523   7.33
 85)  2-Chlorotoluene   2.301 2.386 2.324 2.479 2.477 2.517 2.540 2.432   3.91
 86)  trans-1,4-Dichlor 0.222 0.250 0.273 0.310 0.311 0.312 0.318 0.285  13.13
 87)  1,2,3-Trichloropr 0.209 0.246 0.228 0.246 0.241 0.238 0.239 0.235   5.62
 88)  Cyclohexanone     0.028 0.035 0.036 0.042 0.042 0.040 0.039 0.037  13.12
 89)  4-Chlorotoluene   2.301 2.386 2.324 2.479 2.477 2.517 2.540 2.432   3.91
 90)  tert-Butylbenzene 1.426 1.509 1.485 1.608 1.615 1.635 1.651 1.561   5.55
 91)  a-Methyl styrene              0.019                           0.019   0.00
 92)  1,2,4-Trimethylbe 2.186 2.557 2.549 2.731 2.717 2.751 2.772 2.609   7.96
 93)  Pentachloroethane 0.332 0.368 0.364 0.409 0.388 0.491 0.500 0.407  15.90
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9973
               Response Ratio = 0.00000 + 0.37152 *A + 0.06751 *A^2

 94)  sec-Butylbenzene  2.894 3.181 3.101 3.351 3.326 3.329 3.363 3.221   5.42
 95)  4-Isopropyltoluen 2.192 2.514 2.513 2.743 2.738 2.763 2.811 2.611   8.45
 96)  1,3-Dichlorobenze 1.420 1.396 1.381 1.465 1.450 1.473 1.495 1.440   2.92
 97)  1,4-Dichlorobenze 1.690 1.579 1.523 1.567 1.516 1.539 1.556 1.567   3.75
 98)  n-Butylbenzene    1.268 1.415 1.422 1.577 1.584 1.610 1.647 1.503   9.16
 99)  Benzyl Chloride   0.060 0.100 0.116 0.174 0.187 0.227 0.245 0.158  43.26
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 0.15325 *A + 0.04719 *A^2

100)  1,2-Dichlorobenze 1.367 1.373 1.341 1.429 1.419 1.434 1.454 1.402   2.99
101)  1,2-Dibromo-3-Chl 0.097 0.110 0.117 0.142 0.146 0.149 0.156 0.131  17.38
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.13512 *A + 0.01035 *A^2

102)  Hexachlorobutadie 0.452 0.437 0.427 0.472 0.477 0.486 0.510 0.466   6.25
103)  1,2,4-Trichlorobe 0.819 0.854 0.871 0.964 0.977 0.999 1.032 0.931   8.78
104)  Naphthalene       1.500 1.903 2.074 2.394 2.447 2.466 2.529 2.188  17.42
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 2.33042 *A + 0.09975 *A^2

105)  1,2,3-Trichlorobe 0.797 0.809 0.839 0.893 0.907 0.917 0.948 0.873   6.64

106) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
107)  Ethanol           0.048 0.180 0.189 0.188 0.188 0.181 0.182 0.165  31.33
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.18817 *A + -0.00089 *A^2

108)  Acrolein          1.222 3.681 3.841 4.096 4.035 4.093 3.992 3.566  29.28
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
```

Initial Calibration Summary

Job Number: FA56349 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
                Response Ratio = 0.00000 + 4.12258 *A + -0.05810 *A^2

109)  Tert Butyl Alcoho 1.600 1.540 1.597 1.658 1.616 1.584 1.621 1.602   2.27
110)  Isobutyl alcohol  0.649 0.563 0.600 0.707 0.700 0.707 0.711 0.662   9.07
111)  Tert Amyl Alcohol 0.768 0.848 0.914 1.091 1.077 1.100 1.159 0.994  15.04
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 1.00771 *A + 0.03719 *A^2

112)  1,4-Dioxane       0.060 0.132 0.142 0.171 0.160 0.158 0.157 0.140  26.92
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
                Response Ratio = 0.00000 + 0.16309 *A + -0.00084 *A^2

113)  3,3-Dimethyl-1-bu 1.650 1.596 1.594 1.790 1.873 1.748 1.682 1.705   6.10
 ---------------------------------------------------------------------------
 (#) = Out of Range

           I-July2518.M        Thu Jul 26 08:21:24 2018
```

6.7.1

6

Initial Calibration Verification

Job Number: FA56349 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\072518\I56322.D            Vial: 9
Acq On    : 25 Jul 2018   6:24 pm                     Operator: ANAJ
Sample    : ICV1683-5                                 Inst    : MSVOA16
Misc      : MS40872,VI1683,,,,,                       Multiplr: 1.00
MS Integration Params: med.p

Method       : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	104	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.296	-3.9	109	0.00	2.25
3	P	Chloromethane	0.391	0.351	10.2	100	-0.01	2.53
4		1,3-Butadiene	0.211	0.180	14.7	86	-0.01	2.64
5	C	Vinyl Chloride	0.329	0.320	2.7	101	-0.01	2.66
6		Bromomethane	0.172	0.172	0.0	112	-0.01	3.10
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	32.088	19.8	95	-0.02	3.26
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.389	-2.9	113	-0.01	3.51
9		Ethyl Ether	0.291	0.297	-2.1	105	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.353	-0.9	105	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.490	-4.7	107	-0.01	4.21
12		Freon 113	0.261	0.236	9.6	94	-0.01	4.31
13		Carbon Disulfide	0.741	0.817	-10.3	110	-0.02	4.26
14		Iodomethane	0.401	0.409	-2.0	105	-0.01	4.42
15		Allyl chloride	0.402	0.403	-0.2	99	-0.01	4.92
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	41.556	-3.9	107	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.084	-1.2	98	0.00	5.16
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	206.883	-3.4	105	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.477	-3.5	104	0.00	5.35
20		Hexane	0.354	0.340	4.0	101	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.622	-8.6	108	-0.01	5.55
22		Acetonitrile	0.029	0.032	-10.3	104	0.00	5.88
23		Di-isopropyl ether	1.030	1.099	-6.7	107	0.00	6.18
24		Chloroprene	0.474	0.484	-2.1	100	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.584	-5.2	109	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	205.471	-2.7	104	0.00	6.39
		----------	AvgRF	CCRF	%Dev		----------	

Initial Calibration Verification

Job Number: FA56349 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.930	-11.9	110	0.00	6.80
		----------	Amount	Calc.	%Drift		----------	
28		Vinyl acetate	200.000	194.769	2.6	102	0.00	6.77
		----------	AvgRF	CCRF	%Dev		----------	
29		cis-1,2-Dichloroethene	0.266	0.279	-4.9	107	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.259	-9.7	108	-0.01	7.45
31		Bromochloromethane	0.130	0.135	-3.8	105	0.00	7.61
32		Cyclohexane	0.615	0.632	-2.8	104	0.00	7.65
33	C	Chloroform	0.478	0.475	0.6	105	-0.01	7.76
		----------	Amount	Calc.	%Drift		----------	
34		Ethyl acetate	200.000	201.997	-1.0	104	0.00	8.00
		----------	AvgRF	CCRF	%Dev		----------	
35		Tetrahydrofuran	0.174	0.187	-7.5	104	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.264	0.0	102	0.00	8.09
37		Carbon Tetrachloride	0.288	0.277	3.8	98	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.387	-0.5	101	0.00	8.13
		----------	Amount	Calc.	%Drift		----------	
39		2-Butanone	200.000	209.892	-4.9	106	0.00	8.30
		----------	AvgRF	CCRF	%Dev		----------	
40		1,1-Dichloropropene	0.341	0.358	-5.0	105	0.00	8.36
		----------	Amount	Calc.	%Drift		----------	
41		tert-Butyl formate	400.000	296.136	26.0#	72	0.00	8.57
		----------	AvgRF	CCRF	%Dev		----------	
42		Propionitrile	0.044	0.047	-6.8	101	0.00	8.79
43		Methacrylonitrile	0.171	0.176	-2.9	102	0.00	8.84
44		Benzene	1.018	1.030	-1.2	106	0.00	8.79
45		TAME	0.555	0.608	-9.5	107	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.353	1.1	103	0.00	8.99
47		1,2-Dichloroethane	0.440	0.441	-0.2	105	0.00	9.10
48		Trichloroethene	0.269	0.273	-1.5	105	0.00	9.66
49		Methylcyclohexane	0.440	0.461	-4.8	106	0.00	9.65
50		Dibromomethane	0.166	0.175	-5.4	107	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.342	-5.2	107	0.00	10.25
52		Bromodichloromethane	0.323	0.346	-7.1	107	0.00	10.34
		----------	Amount	Calc.	%Drift		----------	
53		Methyl methacrylate	40.000	39.888	0.3	102	0.00	10.51
		----------	AvgRF	CCRF	%Dev		----------	
54		2-Chloroethyl vinyl ether	0.192	0.226	-17.7	111	0.00	10.91
		----------	Amount	Calc.	%Drift		----------	
55		cis-1,3-Dichloropropene	40.000	39.535	1.2	102	0.00	10.98
		----------	AvgRF	CCRF	%Dev		----------	
56	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	12.46
57	S	Toluene-d8	1.380	1.375	0.4	104	0.00	11.15
58	C	Toluene	1.544	1.553	-0.6	107	0.00	11.20
		----------	Amount	Calc.	%Drift		----------	
59		2-Nitropropane	200.000	178.791	10.6	91	0.00	11.38

Initial Calibration Verification

Job Number: FA56349 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	106	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	108	0.00	11.93
62		Tetrachloroethene	0.398	0.390	2.0	94	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	41.227	-3.1	106	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.304	-4.8	109	0.00	11.70
65		Dibromochloromethane	0.344	0.376	-9.3	106	0.00	11.86
66		1,3-Dichloropropane	0.583	0.587	-0.7	104	0.00	11.93
67		1,2-Dibromoethane	0.319	0.342	-7.2	106	0.00	12.05
68		2-hexanone	0.342	0.357	-4.4	102	0.00	12.21
69		1-Chlorohexane	0.530	0.549	-3.6	105	0.00	12.44
70	C	Ethylbenzene	1.766	1.790	-1.4	106	0.00	12.48
71	P	Chlorobenzene	1.005	0.998	0.7	107	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.320	-3.2	104	0.00	12.52
73		m,p-Xylene	1.345	1.401	-4.2	107	0.00	12.59
74		o-Xylene	1.349	1.441	-6.8	107	0.00	12.91
75		Styrene	0.948	1.057	-11.5	109	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.604	-1.5	105	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.662	-11.8	112	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.799	-1.1	105	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.304	1.3	96	0.00	13.38
81		n-Propylbenzene	4.003	4.146	-3.6	106	0.00	13.43
82		Bromobenzene	0.776	0.811	-4.5	107	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.934	-6.9	111	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.727	-8.1	108	0.00	13.55
85		2-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.285	0.0	96	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.248	-5.5	107	0.00	13.58
88		Cyclohexanone	0.037	0.032	13.5	80	0.00	13.62
89		4-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
90		tert-Butylbenzene	1.561	1.631	-4.5	105	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.724	-4.4	104	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	39.863	0.3	114	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.389	-5.2	106	0.00	13.91
95		4-Isopropyltoluene	2.611	2.841	-8.8	108	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.524	-5.8	110	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.568	-0.1	108	0.00	14.14
98		n-Butylbenzene	1.503	1.640	-9.1	108	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	39.157	2.1	104	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.449	-3.4	106	0.00	14.43

Initial Calibration Verification

Job Number: FA56349 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

		Amount	Calc.	%Drift			
101	1,2-Dibromo-3-Chloropropa	40.000	40.578	-1.4	104	0.00	14.96

		AvgRF	CCRF	%Dev			
102	Hexachlorobutadiene	0.466	0.493	-5.8	108	0.00	15.38
103	1,2,4-Trichlorobenzene	0.931	1.019	-9.5	109	0.00	15.41

		Amount	Calc.	%Drift			
104	Naphthalene	40.000	41.942	-4.9	108	0.00	15.63

		AvgRF	CCRF	%Dev			
105	1,2,3-Trichlorobenzene	0.873	0.937	-7.3	108	0.00	15.75
106 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	106	0.00	5.62

		Amount	Calc.	%Drift			
107	Ethanol	800.000	819.004	-2.4	107	0.00	4.23
108	Acrolein	200.000	151.695	24.2#	81	0.00	4.70

		AvgRF	CCRF	%Dev			
109	Tert Butyl Alcohol	1.602	1.841	-14.9	121	0.00	5.73
110	Isobutyl alcohol	0.662	0.700	-5.7	106	0.00	9.21

		Amount	Calc.	%Drift			
111	Tert Amyl Alcohol	400.000	416.240	-4.1	110	0.00	9.33
112	1,4-Dioxane	800.000	823.330	-2.9	110	0.00	10.55

		AvgRF	CCRF	%Dev			
113	3,3-Dimethyl-1-butanol	1.705	1.738	-1.9	98	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Thu Jul 26 08:21:15 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\080818\I56596.D            Vial: 1
Acq On    :  8 Aug 2018   8:41 am                     Operator: ANAJ
Sample    : CC1683-5                                  Inst    : MSVOA16
Misc      : MS40961,VI1694,,,,,                       Multiplr: 1.00
MS Integration Params: med.p

Method       : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	93	0.00	9.41
2		Dichlorodifluoromethane	0.285	0.283	0.7	93	0.00	2.25
3	P	Chloromethane	0.391	0.401	-2.6	102	-0.01	2.53
4		1,3-Butadiene	0.211	0.220	-4.3	94	-0.01	2.64
5	C	Vinyl Chloride	0.329	0.331	-0.6	93	-0.01	2.66
6		Bromomethane	0.172	0.156	9.3	91	0.00	3.11
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	38.837	2.9	98	-0.01	3.26
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.393	-4.0	102	0.00	3.51
9		Ethyl Ether	0.291	0.277	4.8	87	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.337	3.7	90	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.420	10.3	82	-0.01	4.21
12		Freon 113	0.261	0.230	11.9	81	0.00	4.32
13		Carbon Disulfide	0.741	0.661	10.8	80	-0.02	4.26
14		Iodomethane	0.401	0.345	14.0	80	-0.01	4.42
15		Allyl chloride	0.402	0.449	-11.7	98	0.00	4.93
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	39.980	0.1	93	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.091	-9.6	95	0.00	5.16
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	197.775	1.1	90	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.437	5.2	86	0.00	5.35
20		Hexane	0.354	0.318	10.2	85	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.556	3.0	87	0.00	5.56
22		Acetonitrile	0.029	0.033	-13.8	97	0.00	5.88
23		Di-isopropyl ether	1.030	1.030	0.0	90	0.00	6.18
24		Chloroprene	0.474	0.475	-0.2	87	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.540	2.7	90	0.00	6.33
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	208.680	-4.3	95	0.00	6.39
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.897	-7.9	95	0.00	6.80
		----------	Amount	Calc.	%Drift		----------	
28		Vinyl acetate	200.000	217.411	-8.7	102	0.00	6.77
		----------	AvgRF	CCRF	%Dev		----------	
29		cis-1,2-Dichloroethene	0.266	0.255	4.1	87	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.288	-22.0#	108	-0.01	7.45
31		Bromochloromethane	0.130	0.129	0.8	90	0.00	7.61
32		Cyclohexane	0.615	0.574	6.7	84	0.00	7.64
33	C	Chloroform	0.478	0.452	5.4	90	-0.01	7.76
		----------	Amount	Calc.	%Drift		----------	
34		Ethyl acetate	200.000	206.642	-3.3	95	0.00	7.99
		----------	AvgRF	CCRF	%Dev		----------	
35		Tetrahydrofuran	0.174	0.185	-6.3	92	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.274	-3.8	95	0.00	8.09
37		Carbon Tetrachloride	0.288	0.310	-7.6	97	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.388	-0.8	91	0.00	8.13
		----------	Amount	Calc.	%Drift		----------	
39		2-Butanone	200.000	203.698	-1.8	92	0.00	8.31
		----------	AvgRF	CCRF	%Dev		----------	
40		1,1-Dichloropropene	0.341	0.326	4.4	85	0.00	8.36
		----------	Amount	Calc.	%Drift		----------	
41		tert-Butyl formate	400.000	607.428	-51.9#	155	0.00	8.57
		----------	AvgRF	CCRF	%Dev		----------	
42		Propionitrile	0.044	0.049	-11.4	94	0.00	8.79
43		Methacrylonitrile	0.171	0.188	-9.9	97	0.00	8.84
44		Benzene	1.018	0.963	5.4	89	0.00	8.79
45		TAME	0.555	0.575	-3.6	91	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.368	-3.1	96	0.00	8.99
47		1,2-Dichloroethane	0.440	0.428	2.7	91	0.00	9.10
48		Trichloroethene	0.269	0.259	3.7	89	0.00	9.65
49		Methylcyclohexane	0.440	0.411	6.6	85	0.00	9.65
50		Dibromomethane	0.166	0.165	0.6	90	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.324	0.3	91	0.00	10.25
52		Bromodichloromethane	0.323	0.335	-3.7	92	0.00	10.34
		----------	Amount	Calc.	%Drift		----------	
53		Methyl methacrylate	40.000	38.584	3.5	88	0.00	10.51
		----------	AvgRF	CCRF	%Dev		----------	
54		2-Chloroethyl vinyl ether	0.192	0.214	-11.5	94	0.00	10.91
		----------	Amount	Calc.	%Drift		----------	
55		cis-1,3-Dichloropropene	40.000	41.809	-4.5	97	0.00	10.98
		----------	AvgRF	CCRF	%Dev		----------	
56	I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00	12.46
57	S	Toluene-d8	1.380	1.341	2.8	94	0.00	11.15
58	C	Toluene	1.544	1.421	8.0	90	0.00	11.19
		----------	Amount	Calc.	%Drift		----------	
59		2-Nitropropane	200.000	219.262	-9.6	105	0.00	11.38

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.426	-3.1	96	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.031	-3.3	97	0.00	11.93
62		Tetrachloroethene	0.398	0.353	11.3	78	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	37.192	7.0	88	0.00	11.69
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.284	2.1	94	0.00	11.70
65		Dibromochloromethane	0.344	0.354	-2.9	93	0.00	11.86
66		1,3-Dichloropropane	0.583	0.563	3.4	92	0.00	11.93
67		1,2-Dibromoethane	0.319	0.317	0.6	91	0.00	12.05
68		2-hexanone	0.342	0.362	-5.8	96	0.00	12.21
69		1-Chlorohexane	0.530	0.486	8.3	86	0.00	12.44
70	C	Ethylbenzene	1.766	1.671	5.4	92	0.00	12.48
71	P	Chlorobenzene	1.005	0.940	6.5	93	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.322	-3.9	97	0.00	12.52
73		m,p-Xylene	1.345	1.294	3.8	91	0.00	12.59
74		o-Xylene	1.349	1.309	3.0	90	0.00	12.91
75		Styrene	0.948	0.958	-1.1	91	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.671	-1.7	97	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.450	2.5	90	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.773	2.2	95	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.350	-13.6	103	0.00	13.38
81		n-Propylbenzene	4.003	3.889	2.8	93	0.00	13.43
82		Bromobenzene	0.776	0.746	3.9	92	0.00	13.43
83	P	1,1,2,2-Tetrachloroethane	0.874	0.848	3.0	94	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.481	1.7	92	0.00	13.55
85		2-Chlorotoluene	2.432	2.371	2.5	93	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.328	-15.1	103	0.00	13.59
87		1,2,3-Trichloropropane	0.235	0.228	3.0	92	0.00	13.58
88		Cyclohexanone	0.037	0.043	-16.2	100	0.00	13.62
89		4-Chlorotoluene	2.432	2.371	2.5	93	0.00	13.67
90		tert-Butylbenzene	1.561	1.509	3.3	91	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.579	1.1	92	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	44.529	-11.3	121	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.146	2.3	92	0.00	13.91
95		4-Isopropyltoluene	2.611	2.561	1.9	91	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.382	4.0	93	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.463	6.6	94	0.00	14.14
98		n-Butylbenzene	1.503	1.550	-3.1	95	0.00	14.28
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	52.350	-30.9#	138	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.338	4.6	92	0.00	14.43

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

		Amount	Calc.	%Drift			
101	1,2-Dibromo-3-Chloropropa	40.000	39.225	1.9	94	0.00	14.96

		AvgRF	CCRF	%Dev			
102	Hexachlorobutadiene	0.466	0.445	4.5	91	0.00	15.38
103	1,2,4-Trichlorobenzene	0.931	0.902	3.1	90	0.00	15.41

		Amount	Calc.	%Drift			
104	Naphthalene	40.000	36.719	8.2	88	0.00	15.63

		AvgRF	CCRF	%Dev			
105	1,2,3-Trichlorobenzene	0.873	0.845	3.2	91	0.00	15.76
106 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	96	-0.01	5.61

		Amount	Calc.	%Drift			
107	Ethanol	800.000	783.889	2.0	92	0.00	4.22
108	Acrolein	200.000	185.806	7.1	90	0.00	4.70

		AvgRF	CCRF	%Dev			
109	Tert Butyl Alcohol	1.602	1.578	1.5	94	0.00	5.73
110	Isobutyl alcohol	0.662	0.668	-0.9	91	0.00	9.20

		Amount	Calc.	%Drift			
111	Tert Amyl Alcohol	400.000	384.548	3.9	91	0.00	9.33
112	1,4-Dioxane	800.000	722.942	9.6	87	0.00	10.54

		AvgRF	CCRF	%Dev			
113	3,3-Dimethyl-1-butanol	1.705	1.800	-5.6	92	0.00	12.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Wed Aug 08 08:58:15 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\080818\I56622.D            Vial: 24
Acq On    :  8 Aug 2018   7:41 pm                     Operator: ANAJ
Sample    : ECC1683-5                                 Inst    : MSVOA16
Misc      : MS40987,VI1694,,,,,                       Multiplr: 1.00
MS Integration Params: med.p

Method       : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	90	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.268	6.0	86	0.00	2.25
3	P	Chloromethane	0.391	0.373	4.6	92	-0.01	2.53
4		1,3-Butadiene	0.211	0.209	0.9	87	0.00	2.64
5	C	Vinyl Chloride	0.329	0.316	4.0	86	-0.01	2.66
6		Bromomethane	0.172	0.156	9.3	88	0.00	3.10
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	38.190	4.5	94	-0.01	3.26
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.355	6.1	90	-0.01	3.51
9		Ethyl Ether	0.291	0.263	9.6	81	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.319	8.9	83	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.397	15.2	75	0.00	4.22
12		Freon 113	0.261	0.218	16.5	75	-0.01	4.31
13		Carbon Disulfide	0.741	0.605	18.4	71	0.00	4.27
14		Iodomethane	0.401	0.320	20.2	72	0.00	4.43
15		Allyl chloride	0.402	0.391	2.7	83	0.00	4.93
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	37.906	5.2	85	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.085	-2.4	86	0.00	5.17
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	196.383	1.8	87	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.421	8.7	80	0.00	5.36
20		Hexane	0.354	0.300	15.3	78	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.535	6.6	81	0.00	5.56
22		Acetonitrile	0.029	0.030	-3.4	87	0.00	5.89
23		Di-isopropyl ether	1.030	0.957	7.1	81	0.00	6.18
24		Chloroprene	0.474	0.438	7.6	78	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.522	5.9	85	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	198.734	0.6	87	0.00	6.40
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.850	-2.3	87	0.00	6.80
		----------	Amount	Calc.	%Drift	----------		
28		Vinyl acetate	200.000	196.652	1.7	90	0.00	6.77
		----------	AvgRF	CCRF	%Dev	----------		
29		cis-1,2-Dichloroethene	0.266	0.243	8.6	81	0.00	7.27
30		2,2-Dichloropropane	0.236	0.257	-8.9	93	0.00	7.46
31		Bromochloromethane	0.130	0.126	3.1	86	0.00	7.61
32		Cyclohexane	0.615	0.562	8.6	80	0.00	7.65
33	C	Chloroform	0.478	0.454	5.0	88	0.00	7.77
		----------	Amount	Calc.	%Drift	----------		
34		Ethyl acetate	200.000	210.613	-5.3	94	0.00	8.00
		----------	AvgRF	CCRF	%Dev	----------		
35		Tetrahydrofuran	0.174	0.196	-12.6	95	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.263	0.4	89	0.00	8.09
37		Carbon Tetrachloride	0.288	0.322	-11.8	99	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.404	-4.9	92	0.00	8.13
		----------	Amount	Calc.	%Drift	----------		
39		2-Butanone	200.000	217.247	-8.6	96	0.00	8.31
		----------	AvgRF	CCRF	%Dev	----------		
40		1,1-Dichloropropene	0.341	0.348	-2.1	89	0.00	8.37
		----------	Amount	Calc.	%Drift	----------		
41		tert-Butyl formate	400.000	607.434	-51.9#	151	0.00	8.57
		----------	AvgRF	CCRF	%Dev	----------		
42		Propionitrile	0.044	0.053	-20.5	99	0.00	8.79
43		Methacrylonitrile	0.171	0.204	-19.3	103	0.00	8.84
44		Benzene	1.018	1.025	-0.7	92	0.00	8.79
45		TAME	0.555	0.601	-8.3	92	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.377	-5.6	96	0.00	9.00
47		1,2-Dichloroethane	0.440	0.463	-5.2	96	0.00	9.10
48		Trichloroethene	0.269	0.279	-3.7	93	0.00	9.66
49		Methylcyclohexane	0.440	0.426	3.2	85	0.00	9.65
50		Dibromomethane	0.166	0.178	-7.2	94	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.343	-5.5	94	0.00	10.25
52		Bromodichloromethane	0.323	0.355	-9.9	95	0.00	10.34
		----------	Amount	Calc.	%Drift	----------		
53		Methyl methacrylate	40.000	41.248	-3.1	92	0.00	10.52
		----------	AvgRF	CCRF	%Dev	----------		
54		2-Chloroethyl vinyl ether	0.192	0.222	-15.6	95	0.00	10.91
		----------	Amount	Calc.	%Drift	----------		
55		cis-1,3-Dichloropropene	40.000	42.945	-7.4	97	0.00	10.98
		----------	AvgRF	CCRF	%Dev	----------		
56	I	Chlorobenzene-d5	1.000	1.000	0.0	93	0.00	12.46
57	S	Toluene-d8	1.380	1.348	2.3	92	0.00	11.15
58	C	Toluene	1.544	1.520	1.6	94	0.00	11.20
		----------	Amount	Calc.	%Drift	----------		
59		2-Nitropropane	200.000	236.540	-18.3	111	0.00	11.38

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.462	-11.9	102	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.031	-3.3	95	0.00	11.93
62		Tetrachloroethene	0.398	0.404	-1.5	88	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	38.318	4.2	88	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.307	-5.9	99	0.00	11.70
65		Dibromochloromethane	0.344	0.373	-8.4	95	0.00	11.87
66		1,3-Dichloropropane	0.583	0.598	-2.6	95	0.00	11.93
67		1,2-Dibromoethane	0.319	0.336	-5.3	94	0.00	12.05
68		2-hexanone	0.342	0.403	-17.8	104	0.00	12.21
69		1-Chlorohexane	0.530	0.516	2.6	89	0.00	12.44
70	C	Ethylbenzene	1.766	1.767	-0.1	95	0.00	12.48
71	P	Chlorobenzene	1.005	0.986	1.9	95	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.340	-9.7	100	0.00	12.52
73		m,p-Xylene	1.345	1.372	-2.0	94	0.00	12.59
74		o-Xylene	1.349	1.380	-2.3	93	0.00	12.91
75		Styrene	0.948	0.996	-5.1	92	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	42.205	-5.5	98	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.527	-2.7	93	0.00	13.14
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.767	2.9	91	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.350	-13.6	100	0.00	13.38
81		n-Propylbenzene	4.003	4.098	-2.4	95	0.00	13.43
82		Bromobenzene	0.776	0.789	-1.7	95	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.931	-6.5	100	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.634	-4.4	95	0.00	13.55
85		2-Chlorotoluene	2.432	2.470	-1.6	94	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.339	-18.9	103	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.254	-8.1	100	0.00	13.58
88		Cyclohexanone	0.037	0.046	-24.3	103	0.00	13.62
89		4-Chlorotoluene	2.432	2.470	-1.6	94	0.00	13.67
90		tert-Butylbenzene	1.561	1.601	-2.6	94	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.711	-3.9	94	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	40.674	-1.7	106	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.306	-2.6	94	0.00	13.91
95		4-Isopropyltoluene	2.611	2.700	-3.4	93	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.446	-0.4	94	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.537	1.9	96	0.00	14.14
98		n-Butylbenzene	1.503	1.599	-6.4	96	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	47.423	-18.6	119	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.415	-0.9	94	0.00	14.43

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

		Amount	Calc.	%Drift			
101	1,2-Dibromo-3-Chloropropa	40.000	43.436	-8.6	102	0.00	14.96

		AvgRF	CCRF	%Dev			
102	Hexachlorobutadiene	0.466	0.455	2.4	90	0.00	15.38
103	1,2,4-Trichlorobenzene	0.931	0.934	-0.3	90	0.00	15.41

		Amount	Calc.	%Drift			
104	Naphthalene	40.000	39.994	0.0	93	0.00	15.63

		AvgRF	CCRF	%Dev			
105	1,2,3-Trichlorobenzene	0.873	0.885	-1.4	92	0.00	15.76
106 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	98	0.00	5.62

		Amount	Calc.	%Drift			
107	Ethanol	800.000	747.495	6.6	90	0.00	4.22
108	Acrolein	200.000	148.132	25.9	73	0.00	4.71

		AvgRF	CCRF	%Dev			
109	Tert Butyl Alcohol	1.602	1.564	2.4	95	0.00	5.74
110	Isobutyl alcohol	0.662	0.731	-10.4	102	0.00	9.21

		Amount	Calc.	%Drift			
111	Tert Amyl Alcohol	400.000	437.233	-9.3	107	0.00	9.34
112	1,4-Dioxane	800.000	766.204	4.2	94	0.00	10.55

		AvgRF	CCRF	%Dev			
113	3,3-Dimethyl-1-butanol	1.705	2.043	-19.8	107	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Thu Aug 09 11:01:57 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56651.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\081018\I56651.D            Vial: 1
Acq On    : 10 Aug 2018   8:36 am                     Operator: ANAJ
Sample    : CC1683-5                                  Inst    : MSVOA16
Misc      : MS41007,VI1696,,,,,                       Multiplr: 1.00
MS Integration Params: med.p

Method       : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	95	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.266	6.7	89	0.00	2.26
3	P	Chloromethane	0.391	0.387	1.0	100	-0.01	2.53
4		1,3-Butadiene	0.211	0.214	-1.4	94	0.00	2.64
5	C	Vinyl Chloride	0.329	0.319	3.0	91	-0.01	2.66
6		Bromomethane	0.172	0.153	11.0	91	0.00	3.11
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	38.156	4.6	98	0.00	3.27
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.383	-1.3	102	-0.01	3.51
9		Ethyl Ether	0.291	0.305	-4.8	98	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.360	-2.9	98	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.522	-11.5	104	-0.01	4.21
12		Freon 113	0.261	0.267	-2.3	97	0.00	4.32
13		Carbon Disulfide	0.741	0.836	-12.8	103	-0.01	4.26
14		Iodomethane	0.401	0.401	0.0	94	-0.01	4.42
15		Allyl chloride	0.402	0.440	-9.5	98	0.00	4.93
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	44.625	-11.6	105	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.088	-6.0	94	0.00	5.16
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	205.855	-2.9	95	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.507	-10.0	101	0.00	5.35
20		Hexane	0.354	0.365	-3.1	99	0.00	5.50
21		Methyl Tert Butyl Ether	0.573	0.592	-3.3	94	0.00	5.56
22		Acetonitrile	0.029	0.032	-10.3	96	0.00	5.88
23		Di-isopropyl ether	1.030	1.104	-7.2	98	0.00	6.18
24		Chloroprene	0.474	0.458	3.4	86	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.594	-7.0	101	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	194.694	2.7	90	0.00	6.40
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56651.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.948	-14.1	102	0.00	6.80
		----------	Amount	Calc.	%Drift		----------	
28		Vinyl acetate	200.000	207.472	-3.7	99	0.00	6.78
		----------	AvgRF	CCRF	%Dev		----------	
29		cis-1,2-Dichloroethene	0.266	0.280	-5.3	97	0.00	7.27
30		2,2-Dichloropropane	0.236	0.321	-36.0#	122	0.00	7.46
31		Bromochloromethane	0.130	0.134	-3.1	95	0.00	7.61
32		Cyclohexane	0.615	0.648	-5.4	97	0.00	7.65
33	C	Chloroform	0.478	0.481	-0.6	97	-0.01	7.76
		----------	Amount	Calc.	%Drift		----------	
34		Ethyl acetate	200.000	194.006	3.0	91	0.00	8.01
		----------	AvgRF	CCRF	%Dev		----------	
35		Tetrahydrofuran	0.174	0.180	-3.4	91	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.271	-2.7	96	0.00	8.09
37		Carbon Tetrachloride	0.288	0.345	-19.8	111	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.427	-10.9	102	0.00	8.13
		----------	Amount	Calc.	%Drift		----------	
39		2-Butanone	200.000	199.809	0.1	92	0.00	8.31
		----------	AvgRF	CCRF	%Dev		----------	
40		1,1-Dichloropropene	0.341	0.363	-6.5	97	0.00	8.37
		----------	Amount	Calc.	%Drift		----------	
41		tert-Butyl formate	400.000	600.006	-50.0#	155	0.00	8.57
		----------	AvgRF	CCRF	%Dev		----------	
42		Propionitrile	0.044	0.046	-4.5	91	0.00	8.79
43		Methacrylonitrile	0.171	0.180	-5.3	95	0.00	8.84
44		Benzene	1.018	1.051	-3.2	99	0.00	8.79
45		TAME	0.555	0.604	-8.8	97	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.362	-1.4	96	0.00	9.00
47		1,2-Dichloroethane	0.440	0.452	-2.7	98	0.00	9.10
48		Trichloroethene	0.269	0.279	-3.7	98	0.00	9.66
49		Methylcyclohexane	0.440	0.443	-0.7	93	0.00	9.65
50		Dibromomethane	0.166	0.174	-4.8	97	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.347	-6.8	99	0.00	10.25
52		Bromodichloromethane	0.323	0.353	-9.3	99	0.00	10.34
		----------	Amount	Calc.	%Drift		----------	
53		Methyl methacrylate	40.000	37.371	6.6	87	0.00	10.51
		----------	AvgRF	CCRF	%Dev		----------	
54		2-Chloroethyl vinyl ether	0.192	0.204	-6.2	92	0.00	10.91
		----------	Amount	Calc.	%Drift		----------	
55		cis-1,3-Dichloropropene	40.000	43.780	-9.5	103	0.00	10.98
		----------	AvgRF	CCRF	%Dev		----------	
56	I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00	12.46
57	S	Toluene-d8	1.380	1.356	1.7	94	0.00	11.15
58	C	Toluene	1.544	1.534	0.6	97	0.00	11.20
		----------	Amount	Calc.	%Drift		----------	
59		2-Nitropropane	200.000	222.876	-11.4	106	0.00	11.38

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56651.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	98	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.031	-3.3	96	0.00	11.93
62		Tetrachloroethene	0.398	0.380	4.5	84	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	36.658	8.4	86	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.294	-1.4	97	0.00	11.70
65		Dibromochloromethane	0.344	0.373	-8.4	97	0.00	11.86
66		1,3-Dichloropropane	0.583	0.589	-1.0	96	0.00	11.93
67		1,2-Dibromoethane	0.319	0.331	-3.8	95	0.00	12.05
68		2-hexanone	0.342	0.364	-6.4	96	0.00	12.21
69		1-Chlorohexane	0.530	0.506	4.5	90	0.00	12.44
70	C	Ethylbenzene	1.766	1.786	-1.1	98	0.00	12.48
71	P	Chlorobenzene	1.005	0.989	1.6	98	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.342	-10.3	103	0.00	12.52
73		m,p-Xylene	1.345	1.381	-2.7	97	0.00	12.59
74		o-Xylene	1.349	1.397	-3.6	96	0.00	12.91
75		Styrene	0.948	1.003	-5.8	95	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	41.798	-4.5	100	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.531	-3.0	95	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.766	3.0	95	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.334	-8.4	99	0.00	13.38
81		n-Propylbenzene	4.003	4.045	-1.0	97	0.00	13.43
82		Bromobenzene	0.776	0.772	0.5	96	0.00	13.43
83	P	1,1,2,2-Tetrachloroethane	0.874	0.856	2.1	95	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.588	-2.6	97	0.00	13.55
85		2-Chlorotoluene	2.432	2.457	-1.0	97	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.324	-13.7	102	0.00	13.59
87		1,2,3-Trichloropropane	0.235	0.233	0.9	95	0.00	13.58
88		Cyclohexanone	0.037	0.037	0.0	87	0.00	13.62
89		4-Chlorotoluene	2.432	2.457	-1.0	97	0.00	13.67
90		tert-Butylbenzene	1.561	1.577	-1.0	96	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.681	-2.8	97	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	43.390	-8.5	118	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.271	-1.6	96	0.00	13.91
95		4-Isopropyltoluene	2.611	2.688	-2.9	96	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.436	0.3	97	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.518	3.1	98	0.00	14.14
98		n-Butylbenzene	1.503	1.608	-7.0	100	0.00	14.28
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	52.662	-31.7#	140	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.392	0.7	96	0.00	14.43

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56651.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

		Amount	Calc.	%Drift			
101	1,2-Dibromo-3-Chloropropa	40.000	39.114	2.2	94	0.00	14.96

		AvgRF	CCRF	%Dev			
102	Hexachlorobutadiene	0.466	0.462	0.9	95	0.00	15.38
103	1,2,4-Trichlorobenzene	0.931	0.947	-1.7	95	0.00	15.41

		Amount	Calc.	%Drift			
104	Naphthalene	40.000	37.590	6.0	91	0.00	15.63

		AvgRF	CCRF	%Dev			
105	1,2,3-Trichlorobenzene	0.873	0.869	0.5	94	0.00	15.76
106 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	93	0.00	5.62

		Amount	Calc.	%Drift			
107	Ethanol	800.000	740.628	7.4	85	-0.01	4.21
108	Acrolein	200.000	186.268	6.9	88	0.00	4.71

		AvgRF	CCRF	%Dev			
109	Tert Butyl Alcohol	1.602	1.651	-3.1	95	0.00	5.73
110	Isobutyl alcohol	0.662	0.668	-0.9	89	0.00	9.21

		Amount	Calc.	%Drift			
111	Tert Amyl Alcohol	400.000	402.608	-0.7	93	0.00	9.34
112	1,4-Dioxane	800.000	747.283	6.6	87	0.00	10.55

		AvgRF	CCRF	%Dev			
113	3,3-Dimethyl-1-butanol	1.705	1.769	-3.8	88	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Fri Aug 10 08:55:18 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56675.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\081018\I56675.D            Vial: 22
Acq On    : 10 Aug 2018   7:39 pm                     Operator: ANAJ
Sample    : ECC1683-5                                 Inst    : MSVOA16
Misc      : MS41011,VI1696,,,,,                       Multiplr: 1.00
MS Integration Params: med.p

Method       : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	93	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.266	6.7	88	0.00	2.26
3	P	Chloromethane	0.391	0.407	-4.1	104	0.00	2.53
4		1,3-Butadiene	0.211	0.236	-11.8	101	0.00	2.64
5	C	Vinyl Chloride	0.329	0.340	-3.3	96	-0.01	2.66
6		Bromomethane	0.172	0.162	5.8	94	0.00	3.10
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	40.683	-1.7	101	-0.01	3.26
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.399	-5.6	104	-0.01	3.51
9		Ethyl Ether	0.291	0.318	-9.3	100	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.380	-8.6	102	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.552	-17.9	108	0.00	4.22
12		Freon 113	0.261	0.283	-8.4	100	0.00	4.32
13		Carbon Disulfide	0.741	0.891	-20.2	108	-0.01	4.26
14		Iodomethane	0.401	0.422	-5.2	97	-0.01	4.42
15		Allyl chloride	0.402	0.455	-13.2	100	0.00	4.93
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	47.706	-19.3	110	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.084	-1.2	88	0.00	5.17
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	214.897	-7.4	98	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.532	-15.4	105	0.00	5.36
20		Hexane	0.354	0.369	-4.2	98	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.619	-8.0	97	0.00	5.56
22		Acetonitrile	0.029	0.034	-17.2	99	0.00	5.88
23		Di-isopropyl ether	1.030	1.165	-13.1	102	0.00	6.18
24		Chloroprene	0.474	0.475	-0.2	88	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.624	-12.4	104	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	200.405	-0.2	91	0.00	6.40
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56675.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.995	-19.7	105	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	213.076	-6.5	101	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.290	-9.0	99	0.00	7.27
30		2,2-Dichloropropane	0.236	0.335	-41.9	125	0.00	7.46
31		Bromochloromethane	0.130	0.139	-6.9	97	0.00	7.61
32		Cyclohexane	0.615	0.686	-11.5	101	0.00	7.65
33	C	Chloroform	0.478	0.505	-5.6	101	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	201.634	-0.8	93	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.188	-8.0	94	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.272	-3.0	94	0.00	8.09
37		Carbon Tetrachloride	0.288	0.360	-25.0	113	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.449	-16.6	105	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	196.383	1.8	89	0.00	8.31
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.377	-10.6	99	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	627.445	-56.9#	162	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.048	-9.1	93	0.00	8.79
43		Methacrylonitrile	0.171	0.188	-9.9	98	0.00	8.84
44		Benzene	1.018	1.091	-7.2	101	0.00	8.79
45		TAME	0.555	0.632	-13.9	100	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.366	-2.5	96	0.00	9.00
47		1,2-Dichloroethane	0.440	0.477	-8.4	102	0.00	9.10
48		Trichloroethene	0.269	0.291	-8.2	100	0.00	9.65
49		Methylcyclohexane	0.440	0.461	-4.8	95	0.00	9.65
50		Dibromomethane	0.166	0.179	-7.8	98	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.359	-10.5	101	0.00	10.25
52		Bromodichloromethane	0.323	0.361	-11.8	100	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	38.579	3.6	88	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.206	-7.3	91	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	44.972	-12.4	104	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00	12.46
57	S	Toluene-d8	1.380	1.343	2.7	93	0.00	11.15
58	C	Toluene	1.544	1.577	-2.1	100	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	221.886	-10.9	106	0.00	11.38

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56675.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.428	-3.6	96	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.033	-10.0	102	0.00	11.93
62		Tetrachloroethene	0.398	0.391	1.8	87	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	37.596	6.0	89	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.298	-2.8	98	0.00	11.70
65		Dibromochloromethane	0.344	0.377	-9.6	98	0.00	11.86
66		1,3-Dichloropropane	0.583	0.607	-4.1	99	0.00	11.93
67		1,2-Dibromoethane	0.319	0.340	-6.6	97	0.00	12.05
68		2-hexanone	0.342	0.364	-6.4	96	0.00	12.21
69		1-Chlorohexane	0.530	0.544	-2.6	96	0.00	12.44
70	C	Ethylbenzene	1.766	1.830	-3.6	100	0.00	12.48
71	P	Chlorobenzene	1.005	1.008	-0.3	99	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.347	-11.9	104	0.00	12.52
73		m,p-Xylene	1.345	1.427	-6.1	100	0.00	12.59
74		o-Xylene	1.349	1.445	-7.1	99	0.00	12.91
75		Styrene	0.948	1.035	-9.2	98	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	42.141	-5.4	100	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.591	-7.0	99	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.776	1.8	96	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.351	-14.0	103	0.00	13.38
81		n-Propylbenzene	4.003	4.229	-5.6	101	0.00	13.43
82		Bromobenzene	0.776	0.801	-3.2	99	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.897	-2.6	99	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.706	-7.3	100	0.00	13.55
85		2-Chlorotoluene	2.432	2.568	-5.6	101	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.334	-17.2	105	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.242	-3.0	98	0.00	13.58
88		Cyclohexanone	0.037	0.042	-13.5	99	0.00	13.62
89		4-Chlorotoluene	2.432	2.568	-5.6	101	0.00	13.67
90		tert-Butylbenzene	1.561	1.642	-5.2	99	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.814	-7.9	101	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	44.088	-10.2	120	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.426	-6.4	101	0.00	13.91
95		4-Isopropyltoluene	2.611	2.811	-7.7	100	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.486	-3.2	100	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.572	-0.3	101	0.00	14.14
98		n-Butylbenzene	1.503	1.668	-11.0	103	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	51.439	-28.6	136	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.443	-2.9	99	0.00	14.43

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VI1696-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56675.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

		Amount	Calc.	%Drift			
101	1,2-Dibromo-3-Chloropropa	40.000	41.231	-3.1	99	0.00	14.96
		AvgRF	CCRF	%Dev			
102	Hexachlorobutadiene	0.466	0.484	-3.9	99	0.00	15.38
103	1,2,4-Trichlorobenzene	0.931	0.964	-3.5	96	0.00	15.41
		Amount	Calc.	%Drift			
104	Naphthalene	40.000	38.669	3.3	93	0.00	15.63
		AvgRF	CCRF	%Dev			
105	1,2,3-Trichlorobenzene	0.873	0.897	-2.7	97	0.00	15.76
106 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	101	-0.01	5.61
		Amount	Calc.	%Drift			
107	Ethanol	800.000	821.927	-2.7	103	0.00	4.23
108	Acrolein	200.000	171.221	14.4	88	0.00	4.71
		AvgRF	CCRF	%Dev			
109	Tert Butyl Alcohol	1.602	1.589	0.8	100	0.00	5.73
110	Isobutyl alcohol	0.662	0.644	2.7	93	0.00	9.20
		Amount	Calc.	%Drift			
111	Tert Amyl Alcohol	400.000	390.042	2.5	98	0.00	9.33
112	1,4-Dioxane	800.000	732.992	8.4	93	0.00	10.54
		AvgRF	CCRF	%Dev			
113	3,3-Dimethyl-1-butanol	1.705	1.699	0.4	92	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Mon Aug 13 08:16:22 2018

Initial Calibration Summary

Job Number: FA56349 **Sample:** VZ2005-ICC2005
Account: EAENYS EA Engineering **Lab FileID:** Z53204.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
                        Response Factor Report  MSVOA15

 Method       : C:\msdchem\1\METHODS\SIMCL072618.M (RTE Integrator)
 Title        : WATER-EPA 8260B
 Last Update  : Fri Jul 27 14:59:47 2018
 Response via : Initial Calibration

 Calibration Files
 1   =z53200.D    2   =z53201.D    3   =z53202.D    4   =z53203.D
 5   =z53204.D    6   =z53205.D    7   =z53206.D

    Compound             1     2     3     4     5     6     7     Avg   %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)  Vinyl Chloride    0.538 0.657 0.589 0.527 0.499 0.498 0.481 0.541  11.46
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.53545 *A + -0.01353 *A^2

 3)  Chloromethane     0.585 0.628 0.532 0.466 0.443 0.426 0.422 0.500  16.44
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.47121 *A + -0.01296 *A^2

 4)M 1,1-Dichloroethen 0.363 0.379 0.361 0.321 0.313 0.337 0.328 0.343   7.20
 5)T Methylene Chlorid       1.036 0.708 0.518 0.470 0.453 0.446 0.605  38.41
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9978
              Response Ratio = 0.00000 + 0.52286 *A + -0.02035 *A^2

 6)T trans-1,2-Dichlor 0.386 0.427 0.389 0.364 0.373 0.385 0.391 0.388   5.17
 7)P 1,1-Dichloroethan 0.747 0.816 0.758 0.685 0.680 0.679 0.673 0.720   7.63
 8)T cis-1,2-Dichloroe 0.365 0.405 0.379 0.360 0.373 0.385 0.393 0.380   4.14
 9)  Chloroform        1.016 0.945 0.865 0.783 0.776 0.767 0.758 0.844  12.00
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.80018 *A + -0.01072 *A^2

10)T Carbon Tetrachlor 0.579 0.636 0.594 0.544 0.537 0.545 0.545 0.568   6.42
11)T 1,1,1-Trichloroet 0.669 0.696 0.652 0.593 0.601 0.609 0.600 0.632   6.44
12)T Benzene           1.178 1.309 1.284 1.248 1.300 1.278 1.254 1.264   3.48
13)S,M1,2-Dichloroethan 0.448 0.447 0.431 0.411 0.391 0.379 0.374 0.411   7.58
14)T 1,2-Dichloroethan 0.546 0.592 0.567 0.538 0.534 0.510 0.501 0.541   5.80
15)M Trichloroethene   0.490 0.401 0.381 0.372 0.389 0.378 0.376 0.398  10.44
16)  1,2-Dichloropropa 0.319 0.355 0.337 0.326 0.336 0.329 0.326 0.333   3.52
17)T cis-1,3-Dichlorop 0.297 0.309 0.297 0.328 0.374 0.354 0.379 0.334  10.53
            ---- Quadratic regression ----  Coefficient =  0.9984
              Response Ratio = -0.00614 + 0.33638 *A + 0.01042 *A^2


18) I   Chlorobenzene-d5      ----------------ISTD---------------------
19)S,MToluene-d8        1.027 1.031 0.997 0.954 0.937 0.968 0.996 0.987   3.60
20)T trans-1,3-Dichlor 0.318 0.328 0.335 0.360 0.401 0.400 0.422 0.367  11.28
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.35636 *A + 0.01627 *A^2

21)T Tetrachloroethene 0.507 0.484 0.446 0.402 0.393 0.390 0.386 0.430  11.58
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.40654 *A + -0.00530 *A^2

---------------------------------------------------------------------------
(#) = Out of Range
```

Initial Calibration Summary

Job Number: FA56349 **Sample:** VZ2005-ICC2005
Account: EAENYS EA Engineering **Lab FileID:** Z53204.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

SIMCL072618.M Fri Jul 27 15:25:45 2018

Initial Calibration Verification

Job Number: FA56349 **Sample:** VZ2005-ICV2005
Account: EAENYS EA Engineering **Lab FileID:** Z53209.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\072618\z53209.D            Vial: 2
Acq On    : 26 Jul 2018   1:30 pm                    Operator: melissam
Sample    : icv2005-5                                Inst    : MSVOA15
Misc      : MS40817,VZ2005,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL072618.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Fri Jul 27 14:59:47 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	99	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	9.257	7.4	94	0.00	2.90
3		Chloromethane	10.000	9.724	2.8	97	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.343	0.327	4.7	103	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	9.483	5.2	97	0.00	4.78
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.388	0.381	1.8	101	0.00	4.96
7	P	1,1-Dichloroethane	0.720	0.691	4.0	101	0.00	5.62
8	T	cis-1,2-Dichloroethene	0.380	0.376	1.1	100	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	9.729	2.7	97	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.568	0.542	4.6	100	0.00	6.63
11	T	1,1,1-Trichloroethane	0.632	0.600	5.1	99	0.00	6.70
12	T	Benzene	1.264	1.288	-1.9	98	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.411	0.369	10.2	93	0.00	7.20
14	T	1,2-Dichloroethane	0.541	0.516	4.6	96	0.00	7.27
15	M	Trichloroethene	0.398	0.379	4.8	97	0.00	7.65
16		1,2-Dichloropropane	0.333	0.344	-3.3	101	0.00	8.18
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	11.103	-11.0	105	0.00	8.86
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00	10.60
19	S,M	Toluene-d8	0.987	0.991	-0.4	103	0.00	9.04
			Amount	Calc.	%Drift			
20	T	trans-1,3-Dichloropropene	10.000	11.753	-17.5	112	0.00	9.49
21	T	Tetrachloroethene	10.000	10.363	-3.6	101	0.00	9.48

Initial Calibration Verification

Job Number: FA56349 **Sample:** VZ2005-ICV2005
Account: EAENYS EA Engineering **Lab FileID:** Z53209.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 z53204.D   SIMCL072618.M       Fri Jul 27 15:25:57 2018
```

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2006-CC2005
Account: EAENYS EA Engineering **Lab FileID:** Z53225.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\080218\z53225.D            Vial: 2
Acq On    :  2 Aug 2018   2:39 pm                    Operator: melissam
Sample    : cc2005-5                                 Inst    : MSVOA15
Misc      : ms40817,vz2006,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL072618.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Fri Jul 27 14:59:47 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	108	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	9.830	1.7	108	0.00	2.90
3		Chloromethane	10.000	10.010	-0.1	109	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.343	0.341	0.6	118	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	9.105	8.9	102	0.00	4.78
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.388	0.382	1.5	111	0.00	4.96
7	P	1,1-Dichloroethane	0.720	0.689	4.3	109	0.00	5.62
8	T	cis-1,2-Dichloroethene	0.380	0.375	1.3	109	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	10.165	-1.6	110	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.568	0.573	-0.9	115	0.00	6.63
11	T	1,1,1-Trichloroethane	0.632	0.622	1.6	112	0.00	6.70
12	T	Benzene	1.264	1.286	-1.7	107	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.411	0.401	2.4	111	0.00	7.20
14	T	1,2-Dichloroethane	0.541	0.523	3.3	106	0.00	7.27
15	M	Trichloroethene	0.398	0.384	3.5	107	0.00	7.65
16		1,2-Dichloropropane	0.333	0.326	2.1	105	0.00	8.18
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	9.760	2.4	100	0.00	8.85
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	106	0.00	10.60
19	S,M	Toluene-d8	0.987	0.936	5.2	105	0.00	9.04
			Amount	Calc.	%Drift			
20	T	trans-1,3-Dichloropropene	10.000	9.726	2.7	99	0.00	9.49
21	T	Tetrachloroethene	10.000	9.956	0.4	106	0.00	9.48

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2006-CC2005
Account: EAENYS EA Engineering **Lab FileID:** Z53225.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 z53204.D   SIMCL072618.M       Tue Aug 07 07:42:48 2018
```

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2006-ECC2005
Account: EAENYS EA Engineering **Lab FileID:** Z53247.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\080218\Z53247.D            Vial: 21
Acq On    :  3 Aug 2018  12:02 am                    Operator: melissam
Sample    : ECC2005-5                                Inst    : MSVOA15
Misc      : MS40952,VZ2006,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL072618.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Fri Jul 27 14:59:47 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	101	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	9.377	6.2	97	0.00	2.90
3		Chloromethane	10.000	9.504	5.0	97	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.343	0.314	8.5	101	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	8.715	12.9	91	0.00	4.78
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.388	0.363	6.4	98	0.00	4.96
7	P	1,1-Dichloroethane	0.720	0.667	7.4	99	0.00	5.62
8	T	cis-1,2-Dichloroethene	0.380	0.357	6.1	96	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	9.885	1.2	100	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.568	0.541	4.8	102	0.00	6.63
11	T	1,1,1-Trichloroethane	0.632	0.600	5.1	101	0.00	6.70
12	T	Benzene	1.264	1.294	-2.4	100	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.411	0.402	2.2	104	0.00	7.21
14	T	1,2-Dichloroethane	0.541	0.543	-0.4	102	0.00	7.28
15	M	Trichloroethene	0.398	0.390	2.0	101	0.00	7.65
16		1,2-Dichloropropane	0.333	0.342	-2.7	102	0.00	8.19
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	10.771	-7.7	103	0.00	8.86
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00	10.60
19	S,M	Toluene-d8	0.987	0.911	7.7	104	0.00	9.04
			Amount	Calc.	%Drift			
20	T	trans-1,3-Dichloropropene	10.000	10.365	-3.7	108	0.00	9.49
21	T	Tetrachloroethene	10.000	9.600	4.0	103	0.00	9.48

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2006-ECC2005
Account: EAENYS EA Engineering **Lab FileID:** Z53247.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 z53204.D   SIMCL072618.M       Tue Aug 07 07:43:06 2018
```

Initial Calibration Summary

Job Number: FA56349 **Sample:** VZ2011-ICC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53346.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
                    Response Factor Report  MSVOA15

 Method       : C:\msdchem\1\METHODS\SIMCL080918.M (RTE Integrator)
 Title        : WATER-EPA 8260B
 Last Update  : Thu Aug 09 15:01:26 2018
 Response via : Initial Calibration

 Calibration Files
 1   =z53342.D    2   =z53343.D    3   =z53344.D    4   =z53345.D
 5   =z53346.D    6   =z53347.D    7   =z53348.D

    Compound             1     2     3     4     5     6     7     Avg   %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)  Vinyl Chloride    0.409 0.623 0.517 0.494 0.463 0.445 0.413 0.481  15.42
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.52238 *A + -0.02709 *A^2

 3)  Chloromethane     0.496 0.635 0.535 0.477 0.436 0.409 0.382 0.482  17.78
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.50006 *A + -0.02976 *A^2

 4)M 1,1-Dichloroethen 0.348 0.447 0.391 0.385 0.371 0.363 0.352 0.379   8.89
 5)T Methylene Chlorid       0.803 0.632 0.543 0.494 0.470 0.439 0.563  24.00
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.56737 *A + -0.03234 *A^2

 6)T trans-1,2-Dichlor 0.389 0.453 0.410 0.409 0.409 0.412 0.398 0.411   4.88
 7)P 1,1-Dichloroethan 0.750 0.946 0.853 0.810 0.763 0.731 0.685 0.791  11.01
 8)T cis-1,2-Dichloroe 0.358 0.409 0.386 0.386 0.391 0.394 0.383 0.387   3.89
 9)  Chloroform        1.145 1.153 1.001 0.940 0.878 0.833 0.773 0.960  15.39
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.99614 *A + -0.05557 *A^2

10)T Carbon Tetrachlor 0.592 0.800 0.680 0.665 0.639 0.602 0.583 0.652  11.53
11)T 1,1,1-Trichloroet 0.641 0.852 0.729 0.715 0.679 0.647 0.613 0.697  11.50
12)T Benzene           1.205 1.464 1.360 1.388 1.406 1.372 1.299 1.356   6.12
13)S,M1,2-Dichloroethan 0.524 0.524 0.507 0.463 0.427 0.404 0.384 0.462  12.66
14)T 1,2-Dichloroethan 0.644 0.736 0.650 0.606 0.585 0.549 0.528 0.614  11.42
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.63534 *A + -0.02714 *A^2

15)M Trichloroethene   0.438 0.473 0.411 0.417 0.425 0.419 0.407 0.427   5.29
16)  1,2-Dichloropropa 0.346 0.427 0.370 0.356 0.357 0.345 0.349 0.364   8.01
17)T cis-1,3-Dichlorop 0.344 0.400 0.334 0.323 0.360 0.373 0.435 0.367  10.77
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
              Response Ratio = 0.00000 + 0.27015 *A + 0.03991 *A^2


18) I   Chlorobenzene-d5      ----------------ISTD---------------------
19)S,MToluene-d8        1.000 0.978 0.936 0.875 0.866 0.870 0.919 0.920   5.88
20)T trans-1,3-Dichlor 0.349 0.407 0.364 0.352 0.379 0.395 0.453 0.385   9.52
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 0.29734 *A + 0.03752 *A^2

21)T Tetrachloroethene 0.468 0.533 0.456 0.429 0.395 0.385 0.381 0.435  12.67
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.42220 *A + -0.01092 *A^2
```

Initial Calibration Summary

Job Number: FA56349 **Sample:** VZ2011-ICC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53346.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
--------------------------------------------------------------------------------
(#) = Out of Range

          SIMCL080918.M        Fri Aug 10 10:26:50 2018
```

Initial Calibration Verification

Job Number: FA56349 **Sample:** VZ2011-ICV2011
Account: EAENYS EA Engineering **Lab FileID:** Z53351.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\080918\z53351.D            Vial: 10
Acq On    :  9 Aug 2018   1:37 pm                     Operator: melissam
Sample    : icv2011-5                                 Inst    : MSVOA15
Misc      : ms40981,vz2011,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL080918.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Thu Aug 09 15:01:26 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	103	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	8.496	15.0	90	0.00	2.90
3		Chloromethane	10.000	8.552	14.5	91	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.379	0.321	15.3	89	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	9.330	6.7	99	0.00	4.78
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.411	0.372	9.5	94	0.00	4.96
7	P	1,1-Dichloroethane	0.791	0.696	12.0	94	0.00	5.62
8	T	cis-1,2-Dichloroethene	0.387	0.363	6.2	96	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	8.574	14.3	91	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.652	0.554	15.0	89	0.00	6.63
11	T	1,1,1-Trichloroethane	0.697	0.595	14.6	90	0.00	6.70
12	T	Benzene	1.356	1.287	5.1	94	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.462	0.399	13.6	96	0.00	7.20
			Amount	Calc.	%Drift			
14	T	1,2-Dichloroethane	10.000	9.071	9.3	94	0.00	7.27
			AvgRF	CCRF	%Dev			
15	M	Trichloroethene	0.427	0.385	9.8	93	0.00	7.65
16		1,2-Dichloropropane	0.364	0.342	6.0	99	0.00	8.18
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	10.737	-7.4	109	0.00	8.86
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	10.60
19	S,M	Toluene-d8	0.920	0.918	0.2	110	0.00	9.04
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: FA56349 **Sample:** VZ2011-ICV2011
Account: EAENYS EA Engineering **Lab FileID:** Z53351.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

20	T	trans-1,3-Dichloropropene	10.000	11.371	-13.7	119	0.00	9.49
21	T	Tetrachloroethene	10.000	9.464	5.4	100	0.00	9.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z53346.D SIMCL080918.M Fri Aug 10 10:29:04 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2011-ECC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53368.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\080918\z53368.D            Vial: 28
Acq On    :  9 Aug 2018   8:55 pm                     Operator: melissam
Sample    : ECC2011-5                                 Inst    : MSVOA15
Misc      : ms41007,vz2011,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL080918.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Thu Aug 09 15:01:26 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	85	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	9.734	2.7	84	0.00	2.90
3		Chloromethane	10.000	9.856	1.4	85	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.379	0.373	1.6	85	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	10.540	-5.4	90	0.00	4.79
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.411	0.414	-0.7	86	0.00	4.96
7	P	1,1-Dichloroethane	0.791	0.777	1.8	86	0.00	5.62
8	T	cis-1,2-Dichloroethene	0.387	0.398	-2.8	86	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	10.117	-1.2	86	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.652	0.646	0.9	86	0.00	6.63
11	T	1,1,1-Trichloroethane	0.697	0.692	0.7	87	0.00	6.70
12	T	Benzene	1.356	1.414	-4.3	85	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.462	0.426	7.8	85	0.00	7.21
			Amount	Calc.	%Drift			
14	T	1,2-Dichloroethane	10.000	10.083	-0.8	85	0.00	7.28
			AvgRF	CCRF	%Dev			
15	M	Trichloroethene	0.427	0.423	0.9	84	0.00	7.65
16		1,2-Dichloropropane	0.364	0.361	0.8	86	0.00	8.18
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	9.969	0.3	82	0.00	8.86
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	84	0.00	10.60
19	S,M	Toluene-d8	0.920	0.867	5.8	84	0.00	9.04
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2011-ECC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53368.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

20	T	trans-1,3-Dichloropropene	10.000	9.915	0.9	82	0.00	9.49
21	T	Tetrachloroethene	10.000	9.802	2.0	84	0.00	9.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z53346.D SIMCL080918.M Fri Aug 10 10:29:22 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2012-CC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53372.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\081018\z53372.D            Vial: 1
Acq On    : 10 Aug 2018  10:15 am                     Operator: melissam
Sample    : cc2011-5                                  Inst    : MSVOA15
Misc      : ms40981,vz2012,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL080918.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Thu Aug 09 15:01:26 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	77	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	9.484	5.2	75	0.00	2.90
3		Chloromethane	10.000	9.616	3.8	76	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.379	0.358	5.5	75	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	9.856	1.4	78	0.00	4.78
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.411	0.407	1.0	77	0.00	4.96
7	P	1,1-Dichloroethane	0.791	0.778	1.6	79	0.00	5.62
8	T	cis-1,2-Dichloroethene	0.387	0.386	0.3	76	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	10.303	-3.0	80	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.652	0.670	-2.8	81	0.00	6.63
11	T	1,1,1-Trichloroethane	0.697	0.689	1.1	79	0.00	6.70
12	T	Benzene	1.356	1.442	-6.3	79	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.462	0.449	2.8	81	0.00	7.20
			Amount	Calc.	%Drift			
14	T	1,2-Dichloroethane	10.000	10.601	-6.0	81	0.00	7.27
			AvgRF	CCRF	%Dev			
15	M	Trichloroethene	0.427	0.446	-4.4	81	0.00	7.65
16		1,2-Dichloropropane	0.364	0.373	-2.5	81	0.00	8.18
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	11.018	-10.2	85	0.00	8.85
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	84	0.00	10.60
19	S,M	Toluene-d8	0.920	0.819	11.0	79	0.00	9.04
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2012-CC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53372.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

20	T	trans-1,3-Dichloropropene	10.000	10.428	-4.3	87	0.00	9.49
21	T	Tetrachloroethene	10.000	9.802	2.0	83	0.00	9.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z53346.D SIMCL080918.M Mon Aug 13 12:03:03 2018

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2012-ECC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53391.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\081018\Z53391.D            Vial: 18
Acq On    : 10 Aug 2018   6:35 pm                    Operator: melissam
Sample    : ECC2011-5                                Inst    : MSVOA15
Misc      : MS41007,VZ2012,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\SIMCL080918.M (RTE Integrator)
Title        : WATER-EPA 8260B
Last Update  : Thu Aug 09 15:01:26 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	83	0.00	7.48
			Amount	Calc.	%Drift			
2		Vinyl Chloride	10.000	8.738	12.6	74	0.00	2.90
3		Chloromethane	10.000	9.433	5.7	79	0.00	2.79
			AvgRF	CCRF	%Dev			
4	M	1,1-Dichloroethene	0.379	0.350	7.7	78	0.00	4.15
			Amount	Calc.	%Drift			
5	T	Methylene Chloride	10.000	9.582	4.2	81	0.00	4.79
			AvgRF	CCRF	%Dev			
6	T	trans-1,2-Dichloroethene	0.411	0.391	4.9	79	0.00	4.96
7	P	1,1-Dichloroethane	0.791	0.741	6.3	80	0.00	5.63
8	T	cis-1,2-Dichloroethene	0.387	0.375	3.1	79	0.00	6.19
			Amount	Calc.	%Drift			
9		Chloroform	10.000	9.476	5.2	79	0.00	6.45
			AvgRF	CCRF	%Dev			
10	T	Carbon Tetrachloride	0.652	0.608	6.7	79	0.00	6.63
11	T	1,1,1-Trichloroethane	0.697	0.653	6.3	79	0.00	6.70
12	T	Benzene	1.356	1.396	-2.9	82	0.00	7.08
13	S,M	1,2-Dichloroethane-d4	0.462	0.423	8.4	82	0.00	7.21
			Amount	Calc.	%Drift			
14	T	1,2-Dichloroethane	10.000	10.103	-1.0	83	0.00	7.28
			AvgRF	CCRF	%Dev			
15	M	Trichloroethene	0.427	0.420	1.6	82	0.00	7.65
16		1,2-Dichloropropane	0.364	0.369	-1.4	85	0.00	8.19
			Amount	Calc.	%Drift			
17	T	cis-1,3-Dichloropropene	10.000	11.230	-12.3	93	0.00	8.86
			AvgRF	CCRF	%Dev			
18	I	Chlorobenzene-d5	1.000	1.000	0.0	89	0.00	10.60
19	S,M	Toluene-d8	0.920	0.864	6.1	88	0.00	9.04
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: FA56349 **Sample:** VZ2012-ECC2011
Account: EAENYS EA Engineering **Lab FileID:** Z53391.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

20	T	trans-1,3-Dichloropropene	10.000	10.904	-9.0	97	0.00	9.49
21	T	Tetrachloroethene	10.000	9.432	5.7	85	0.00	9.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z53346.D SIMCL080918.M Mon Aug 13 12:03:18 2018

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56608.D
Acq On : 8 Aug 2018 1:45 pm
Operator : ANAJ
Sample : FA56349-1 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 08 14:04:22 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	998579	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	716992	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	366106	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	77972	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	268792	50.98	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.96%			
46) 1,2-Dichloroethane-d4	9.000	65	382504	53.65	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 107.30%			
57) Toluene-d8	11.152	98	957867	48.41	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 96.82%			
79) 4-Bromofluorobenzene	13.353	174	275290	47.61	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.22%			

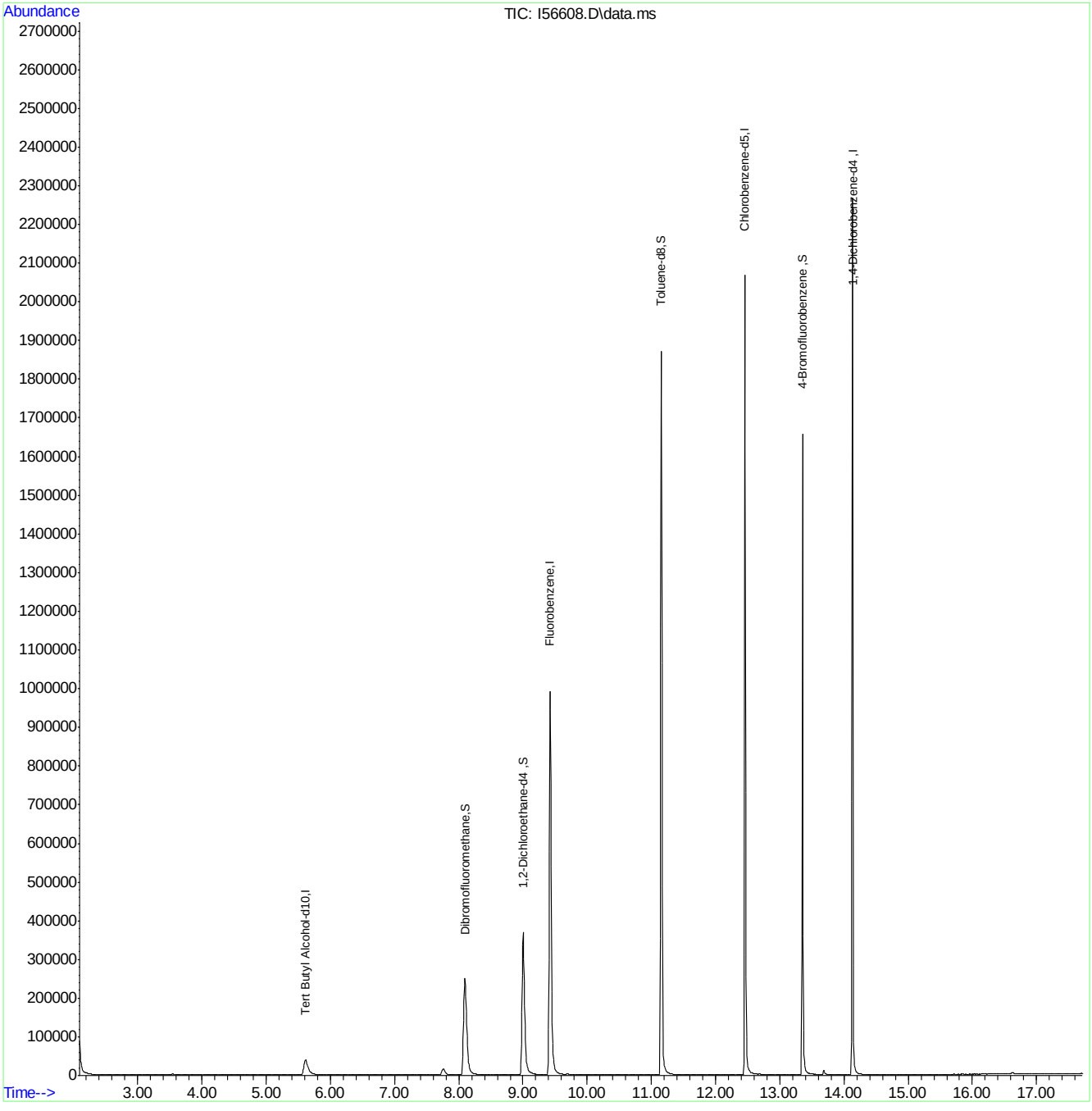
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56608.D
Acq On : 8 Aug 2018 1:45 pm
Operator : ANAJ
Sample : FA56349-1 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 08 14:04:22 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56609.D
Acq On : 8 Aug 2018 2:31 pm
Operator : ANAJ
Sample : FA56349-2 MA,hs Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 08 14:49:06 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

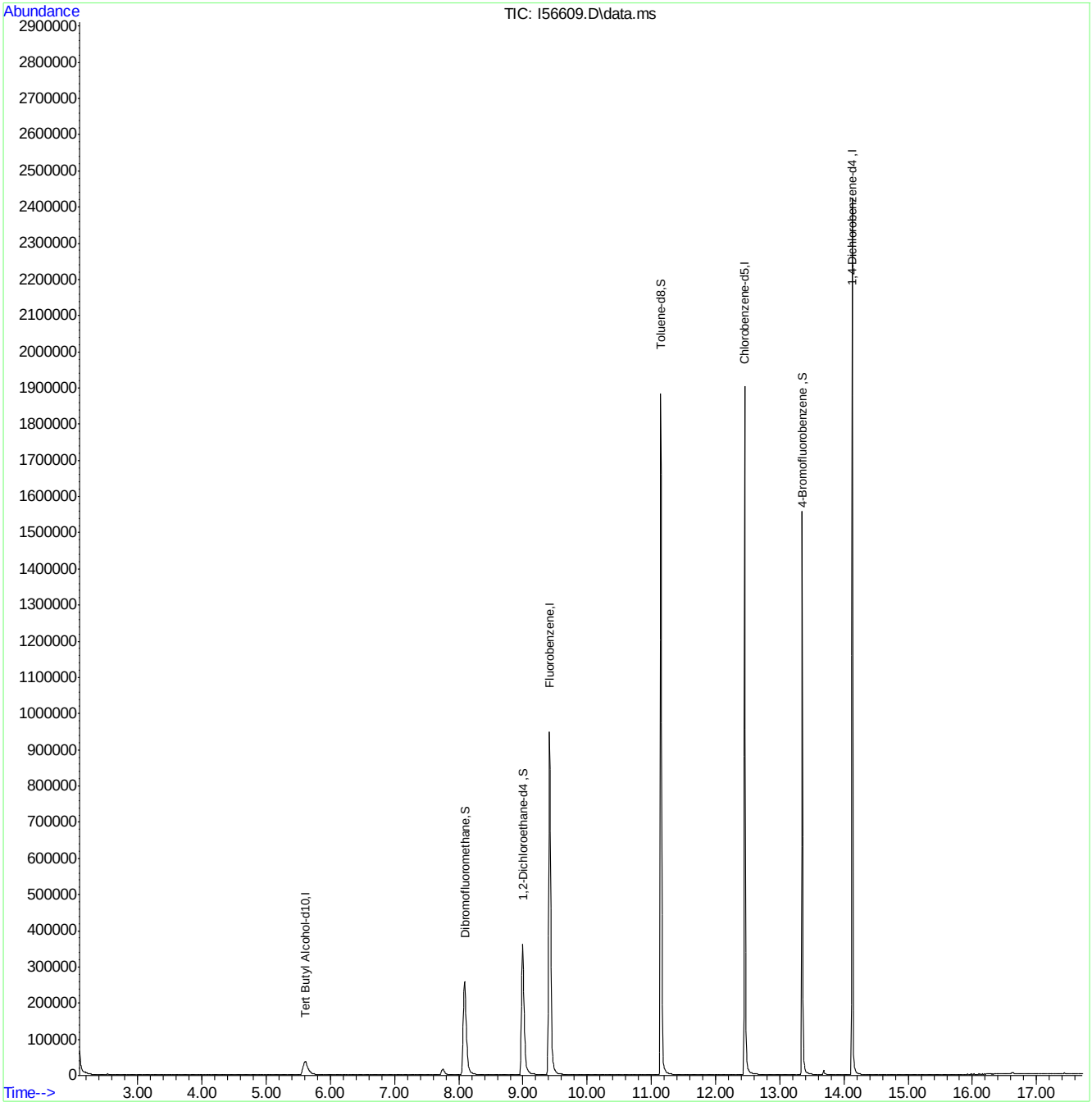
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	979688	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	697327	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	366470	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	84376	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	266652	51.55	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.10%			
46) 1,2-Dichloroethane-d4	8.994	65	383308	54.80	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 109.60%			
57) Toluene-d8	11.146	98	938935	48.79	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.58%			
79) 4-Bromofluorobenzene	13.353	174	273856	47.31	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.62%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56609.D
Acq On : 8 Aug 2018 2:31 pm
Operator : ANAJ
Sample : FA56349-2 MA,hs Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 08 14:49:06 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56610.D
Acq On : 8 Aug 2018 2:55 pm
Operator : ANAJ
Sample : FA56349-3 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 08 15:13:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

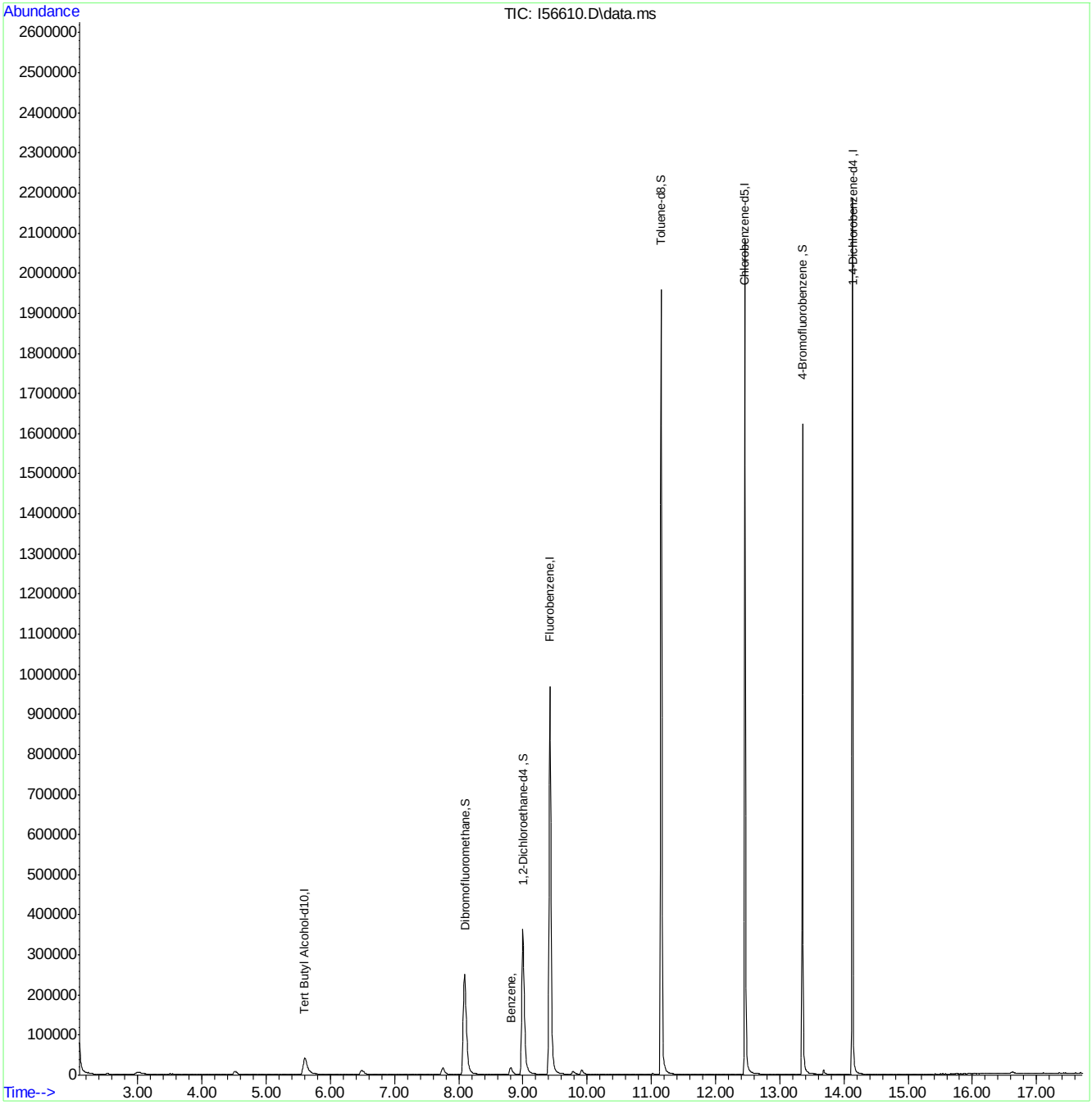
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	988300	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	708204	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	360160	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	81529	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	270624	51.86	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.72%			
46) 1,2-Dichloroethane-d4	9.000	65	380243	53.89	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 107.78%			
57) Toluene-d8	11.152	98	967638	49.51	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.02%			
79) 4-Bromofluorobenzene	13.353	174	273314	48.05	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.10%			
Target Compounds						Qvalue
44) Benzene	8.811	78	26036	1.29	ug/L	87

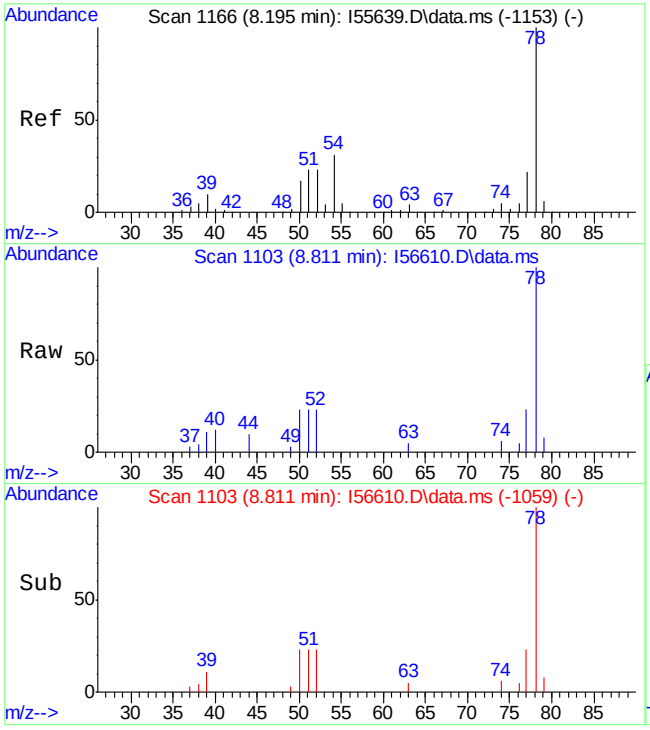
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56610.D
Acq On : 8 Aug 2018 2:55 pm
Operator : ANAJ
Sample : FA56349-3 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 08 15:13:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

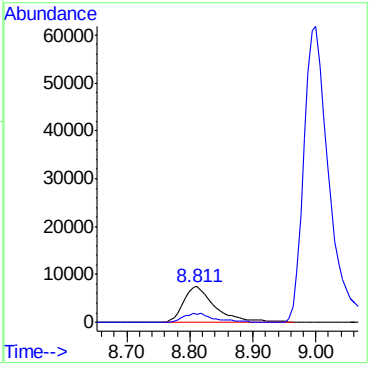




#44
Benzene
Concen: 1.29 ug/L
RT: 8.811 min Scan# 1103
Delta R.T. 0.019 min
Lab File: I56610.D
Acq: 8 Aug 2018 2:55 pm

Tgt Ion: 78 Resp: 26036

Ion	Ratio	Lower	Upper
78	100		
51	23.1	0.1	60.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56614.D
Acq On : 8 Aug 2018 4:30 pm
Operator : ANAJ
Sample : FA56349-4 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 09 10:59:18 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1044824	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	742172	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	378072	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	94100	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	281903	51.10	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.20%			
46) 1,2-Dichloroethane-d4	9.000	65	400026	53.63	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 107.26%			
57) Toluene-d8	11.152	98	1007213	49.18	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.36%			
79) 4-Bromofluorobenzene	13.353	174	289556	48.49	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.98%			
Target Compounds						Qvalue
5) Vinyl Chloride	2.666	62	3682	0.54	ug/L	84
17) Acetone	5.172	43	131642	75.89	ug/L	96
29) cis-1,2-Dichloroethene	7.311	96	1916	0.35	ug/L	89
34) Ethyl acetate	8.025	43	113221	19.01	ug/L	100
109) Tert Butyl Alcohol	5.745	59	2152	3.57	ug/L	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

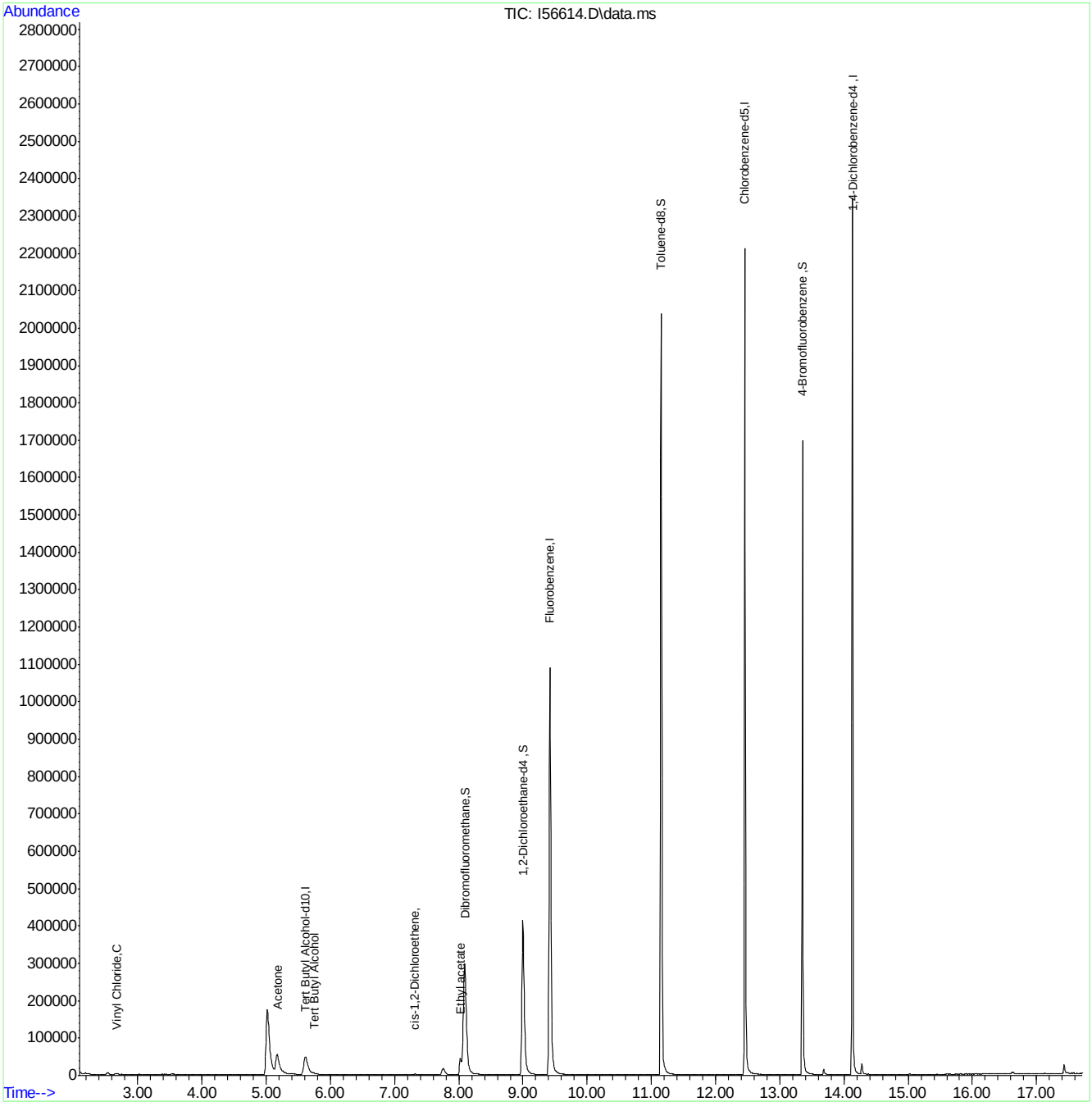
7.1.4

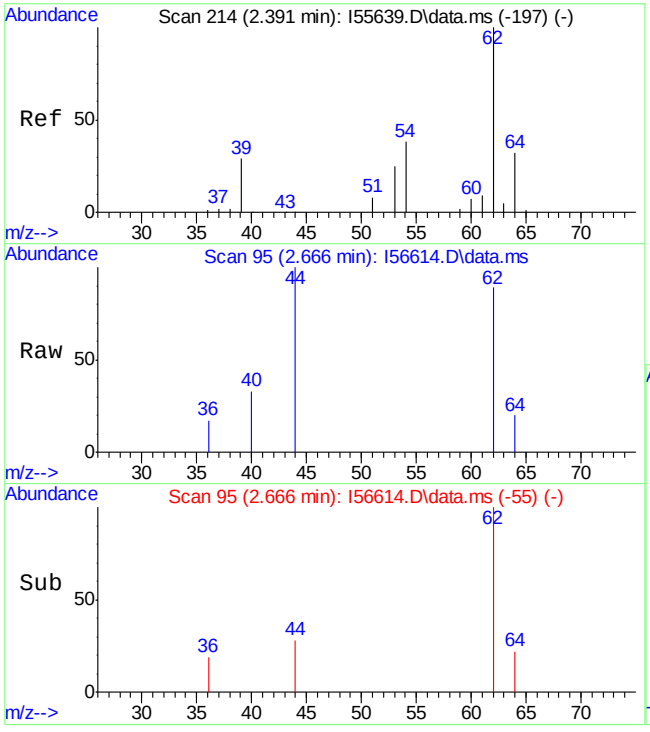
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56614.D
Acq On : 8 Aug 2018 4:30 pm
Operator : ANAJ
Sample : FA56349-4 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 09 10:59:18 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

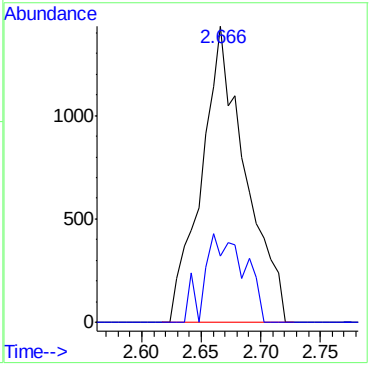


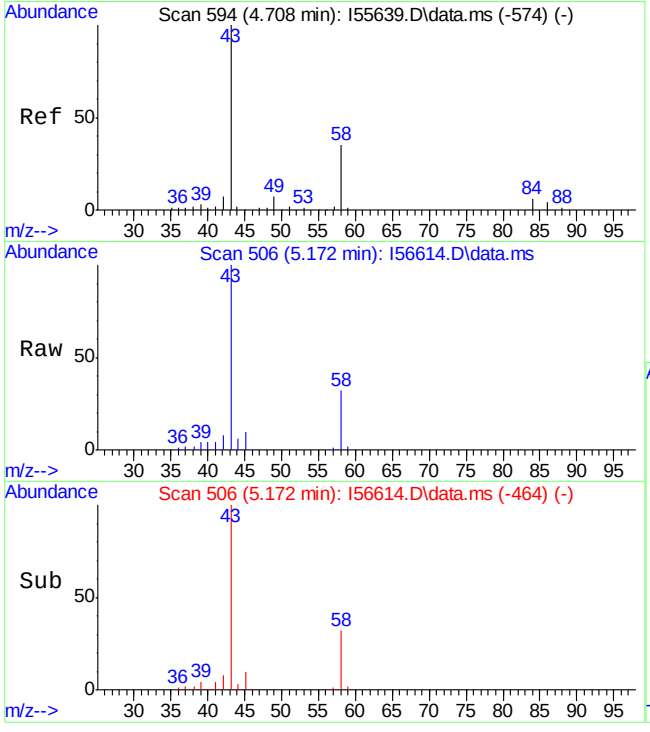


#5
Vinyl Chloride
Concen: 0.54 ug/L
RT: 2.666 min Scan# 95
Delta R.T. -0.006 min
Lab File: I56614.D
Acq: 8 Aug 2018 4:30 pm

Tgt Ion: 62 Resp: 3682

Ion	Ratio	Lower	Upper
62	100		
64	22.4	1.0	61.0

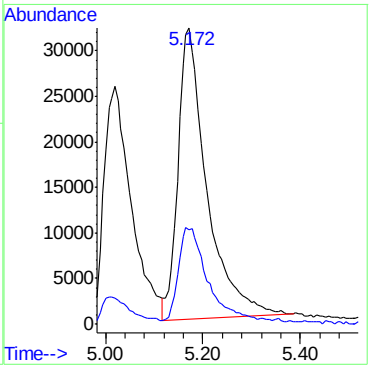


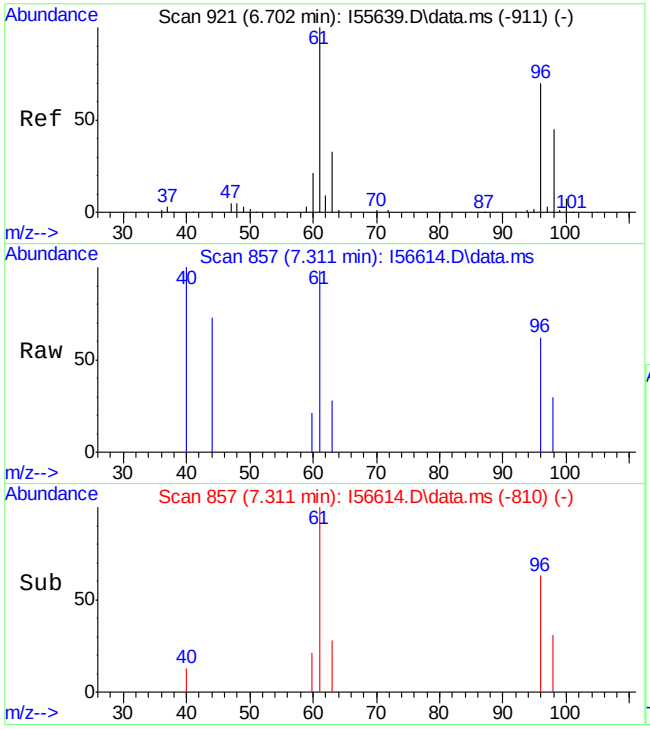


#17
Acetone
Concen: 75.89 ug/L
RT: 5.172 min Scan# 506
Delta R.T. 0.006 min
Lab File: I56614.D
Acq: 8 Aug 2018 4:30 pm

Tgt Ion: 43 Resp: 131642

Ion	Ratio	Lower	Upper
43	100		
58	32.1	4.3	64.3

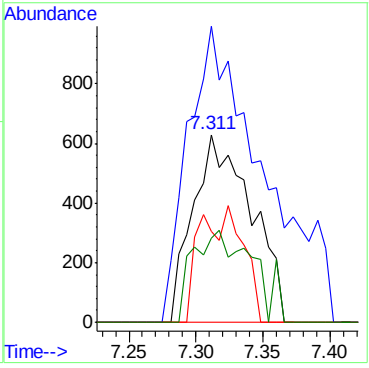


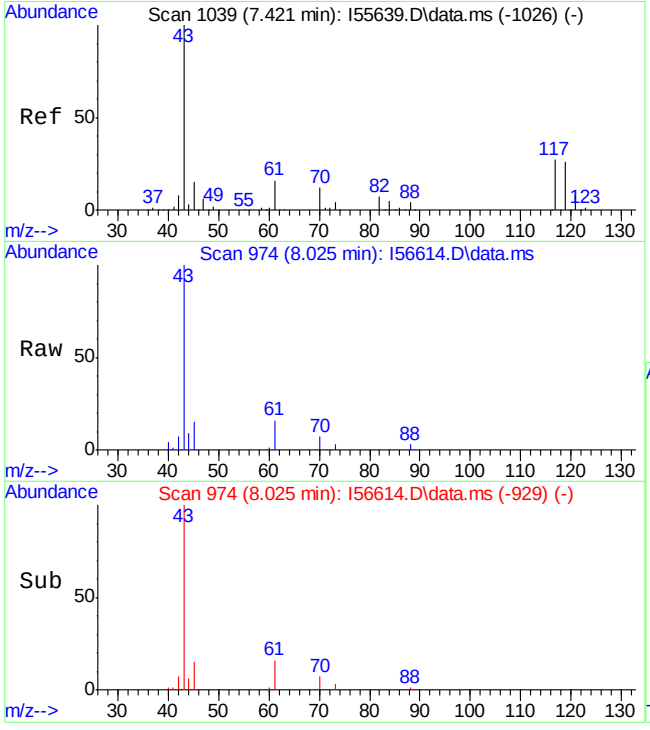


#29
cis-1,2-Dichloroethene
Concen: 0.35 ug/L
RT: 7.311 min Scan# 857
Delta R.T. 0.037 min
Lab File: I56614.D
Acq: 8 Aug 2018 4:30 pm

Tgt Ion: 96 Resp: 1916

Ion	Ratio	Lower	Upper
96	100		
61	157.6	138.9	198.9
98	48.4	34.0	94.0
63	44.6	22.5	82.5

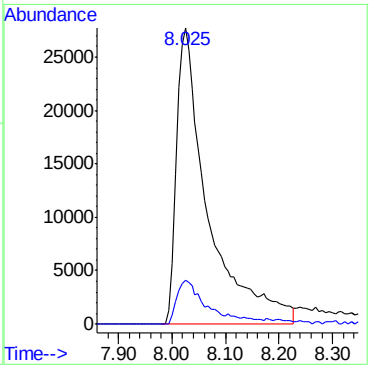


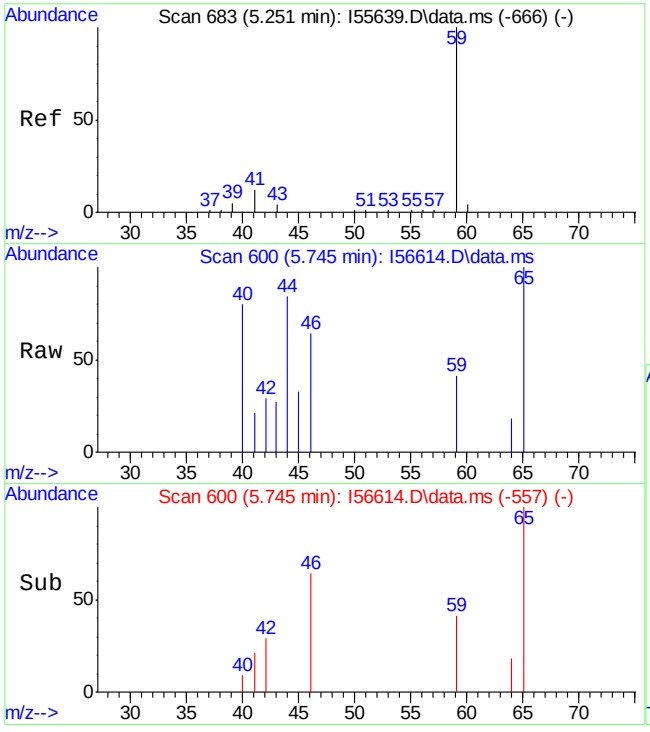


#34
Ethyl acetate
Concen: 19.01 ug/L
RT: 8.025 min Scan# 974
Delta R.T. 0.025 min
Lab File: I56614.D
Acq: 8 Aug 2018 4:30 pm

Tgt Ion: 43 Resp: 113221

Ion	Ratio	Lower	Upper
43	100		
45	14.7	0.0	34.9

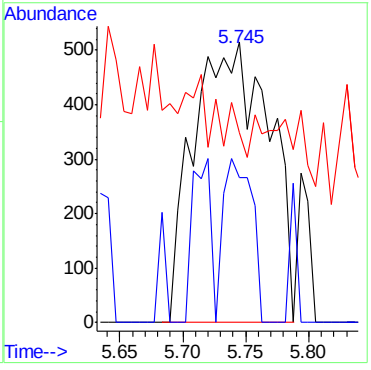




#109
Tert Butyl Alcohol
Concen: 3.57 ug/L
RT: 5.745 min Scan# 600
Delta R.T. 0.013 min
Lab File: I56614.D
Acq: 8 Aug 2018 4:30 pm

Tgt Ion: 59 Resp: 2152

Ion	Ratio	Lower	Upper
59	100		
41	12.4	4.7	44.7
43	5.8	0.0	35.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56615.D
Acq On : 8 Aug 2018 4:54 pm
Operator : ANAJ
Sample : FA56349-5 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 09 10:59:47 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

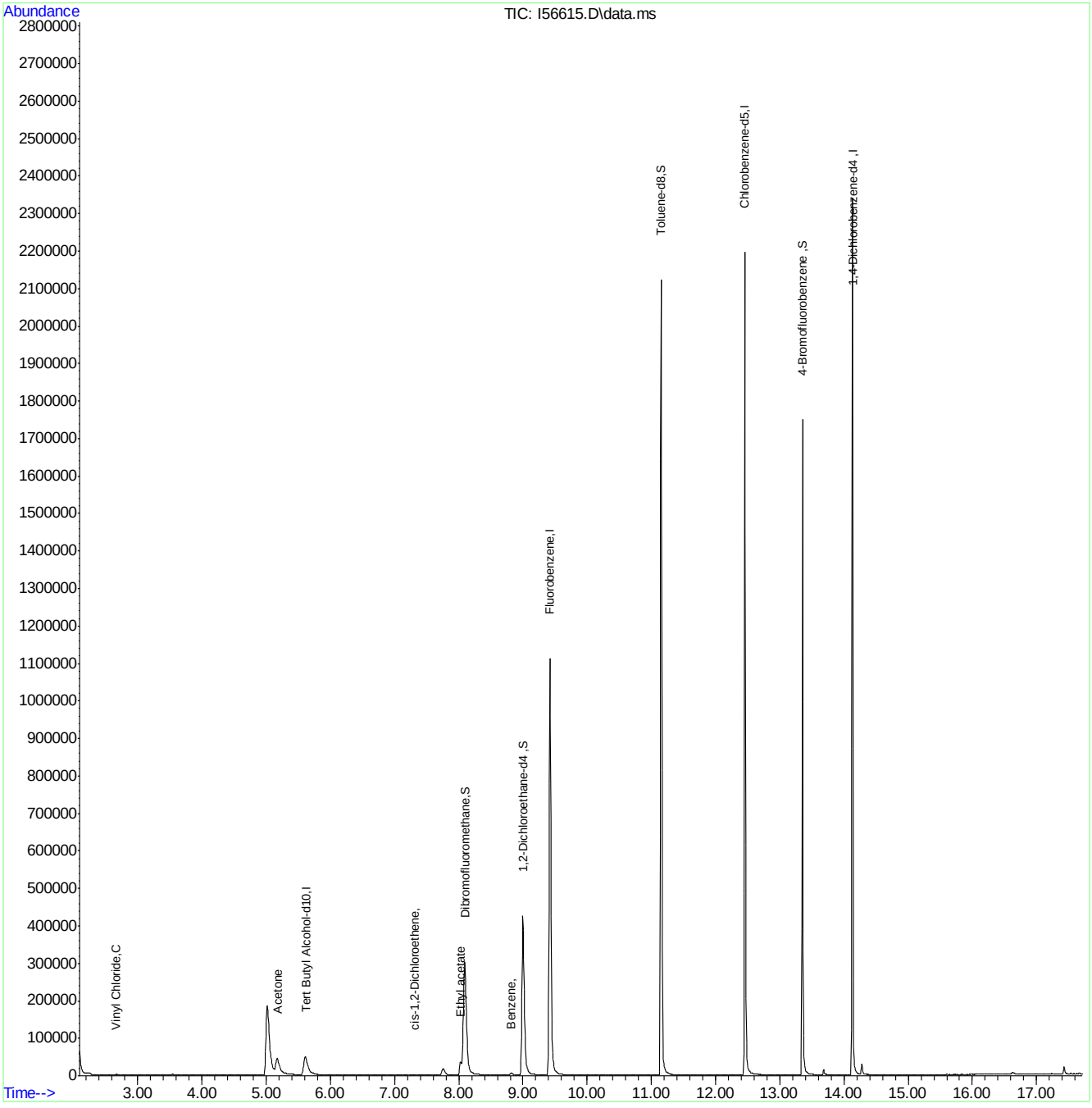
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1050443	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	748773	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	379900	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	96465	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	286286	51.62	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.24%			
46) 1,2-Dichloroethane-d4	9.000	65	406546	54.21	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 108.42%			
57) Toluene-d8	11.152	98	1015318	49.14	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.28%			
79) 4-Bromofluorobenzene	13.353	174	290673	48.44	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.88%			
Target Compounds						Qvalue
5) Vinyl Chloride	2.660	62	2123	0.31	ug/L	98
17) Acetone	5.172	43	111932	64.18	ug/L	100
29) cis-1,2-Dichloroethene	7.311	96	1461	0.26	ug/L	94
34) Ethyl acetate	8.025	43	95909	16.02	ug/L	97
44) Benzene	8.817	78	7739	0.36	ug/L	88

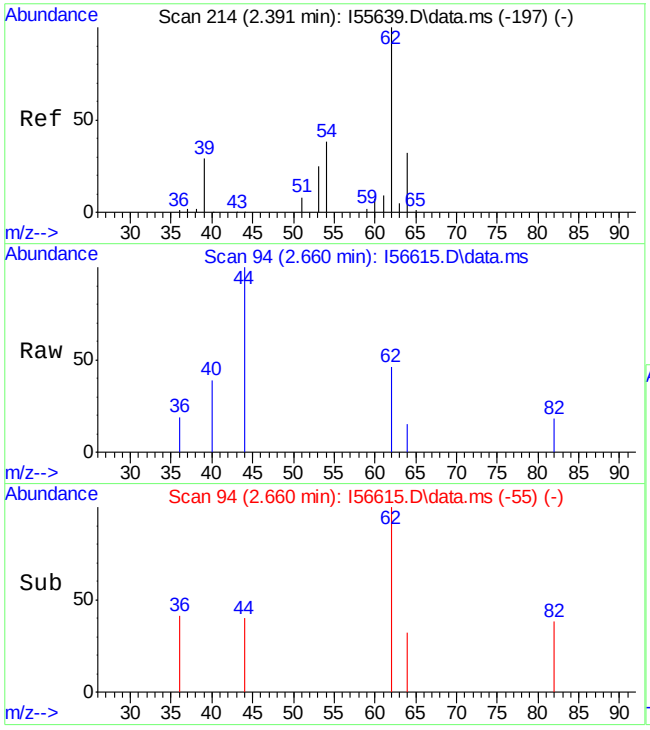
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56615.D
Acq On : 8 Aug 2018 4:54 pm
Operator : ANAJ
Sample : FA56349-5 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 09 10:59:47 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

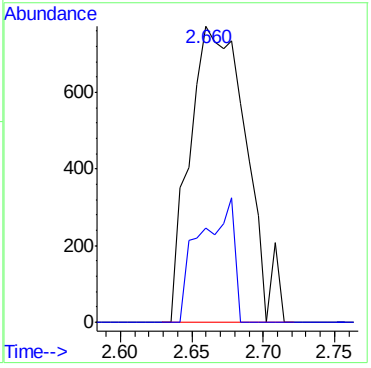


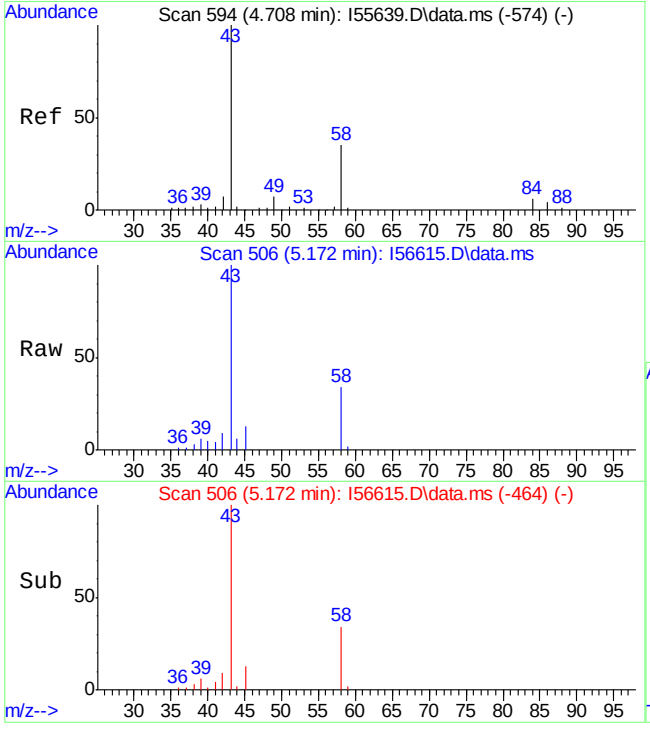


#5
Vinyl Chloride
Concen: 0.31 ug/L
RT: 2.660 min Scan# 94
Delta R.T. -0.012 min
Lab File: I56615.D
Acq: 8 Aug 2018 4:54 pm

Tgt Ion: 62 Resp: 2123

Ion	Ratio	Lower	Upper
62	100		
64	31.9	1.0	61.0

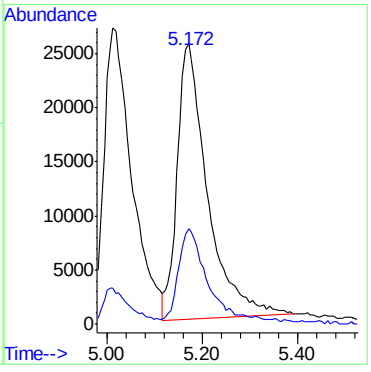


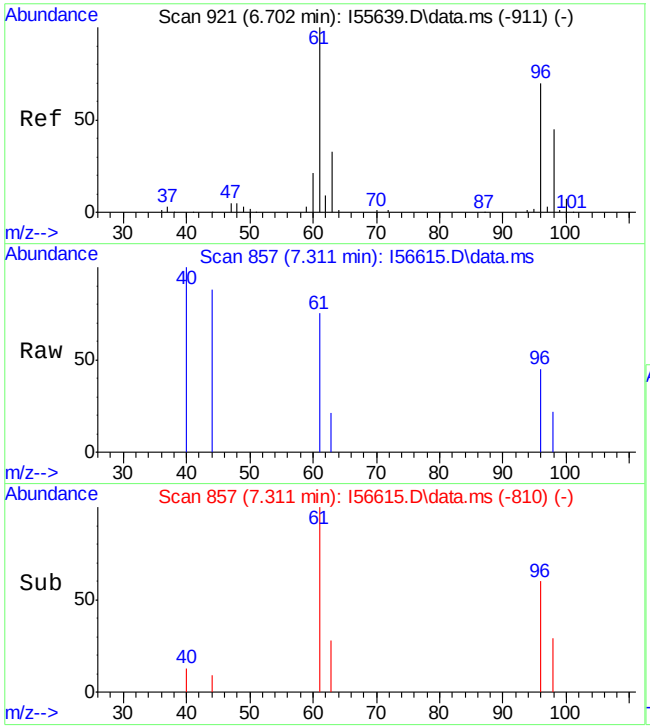


#17
Acetone
Concen: 64.18 ug/L
RT: 5.172 min Scan# 506
Delta R.T. 0.006 min
Lab File: I56615.D
Acq: 8 Aug 2018 4:54 pm

Tgt Ion: 43 Resp: 111932

Ion	Ratio	Lower	Upper
43	100		
58	34.5	4.3	64.3

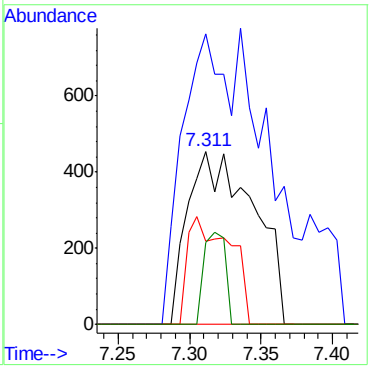


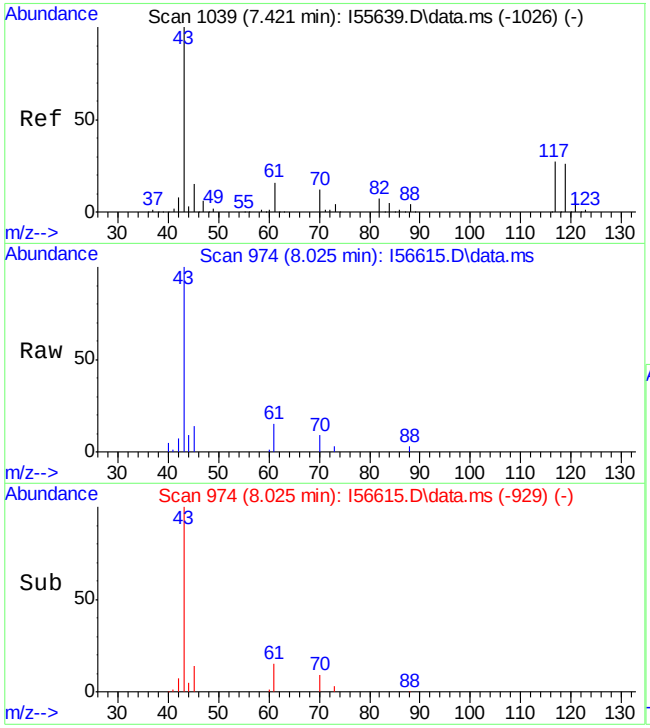


#29
cis-1,2-Dichloroethene
Concen: 0.26 ug/L
RT: 7.311 min Scan# 857
Delta R.T. 0.037 min
Lab File: I56615.D
Acq: 8 Aug 2018 4:54 pm

Tgt Ion: 96 Resp: 1461

Ion	Ratio	Lower	Upper
96	100		
61	167.5	138.9	198.9
98	47.9	34.0	94.0
63	47.7	22.5	82.5

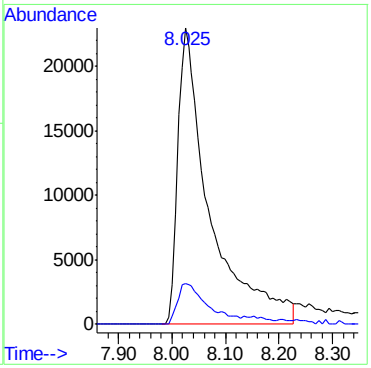


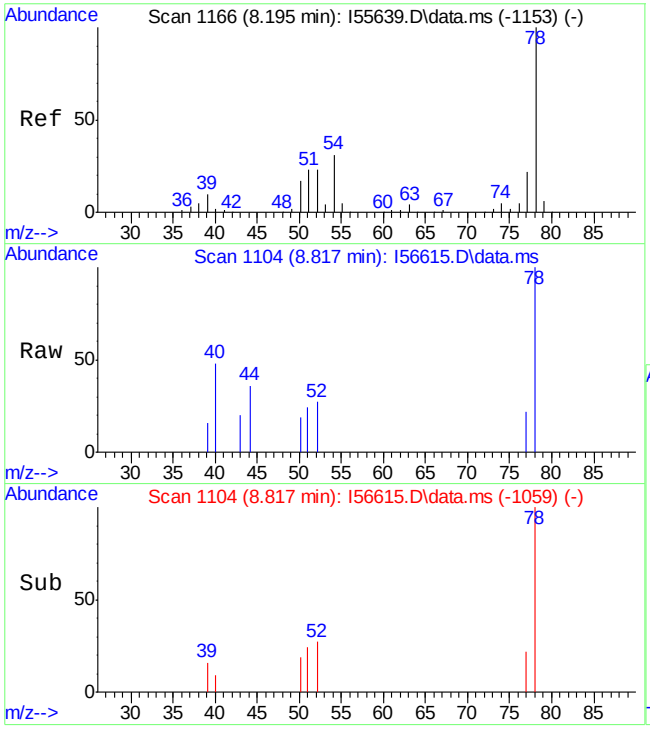


#34
Ethyl acetate
Concen: 16.02 ug/L
RT: 8.025 min Scan# 974
Delta R.T. 0.025 min
Lab File: I56615.D
Acq: 8 Aug 2018 4:54 pm

Tgt Ion: 43 Resp: 95909

Ion	Ratio	Lower	Upper
43	100		
45	13.7	0.0	34.9

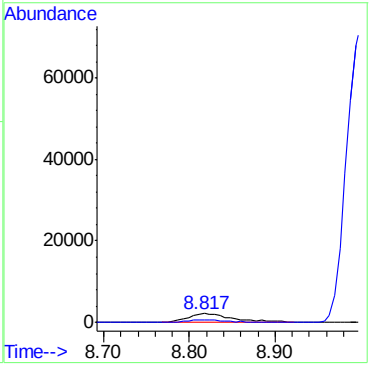




#44
Benzene
Concen: 0.36 ug/L
RT: 8.817 min Scan# 1104
Delta R.T. 0.025 min
Lab File: I56615.D
Acq: 8 Aug 2018 4:54 pm

Tgt Ion: 78 Resp: 7739

Ion	Ratio	Lower	Upper
78	100		
51	23.6	0.1	60.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56616.D
Acq On : 8 Aug 2018 5:18 pm
Operator : ANAJ
Sample : FA56349-6 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 09 10:59:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

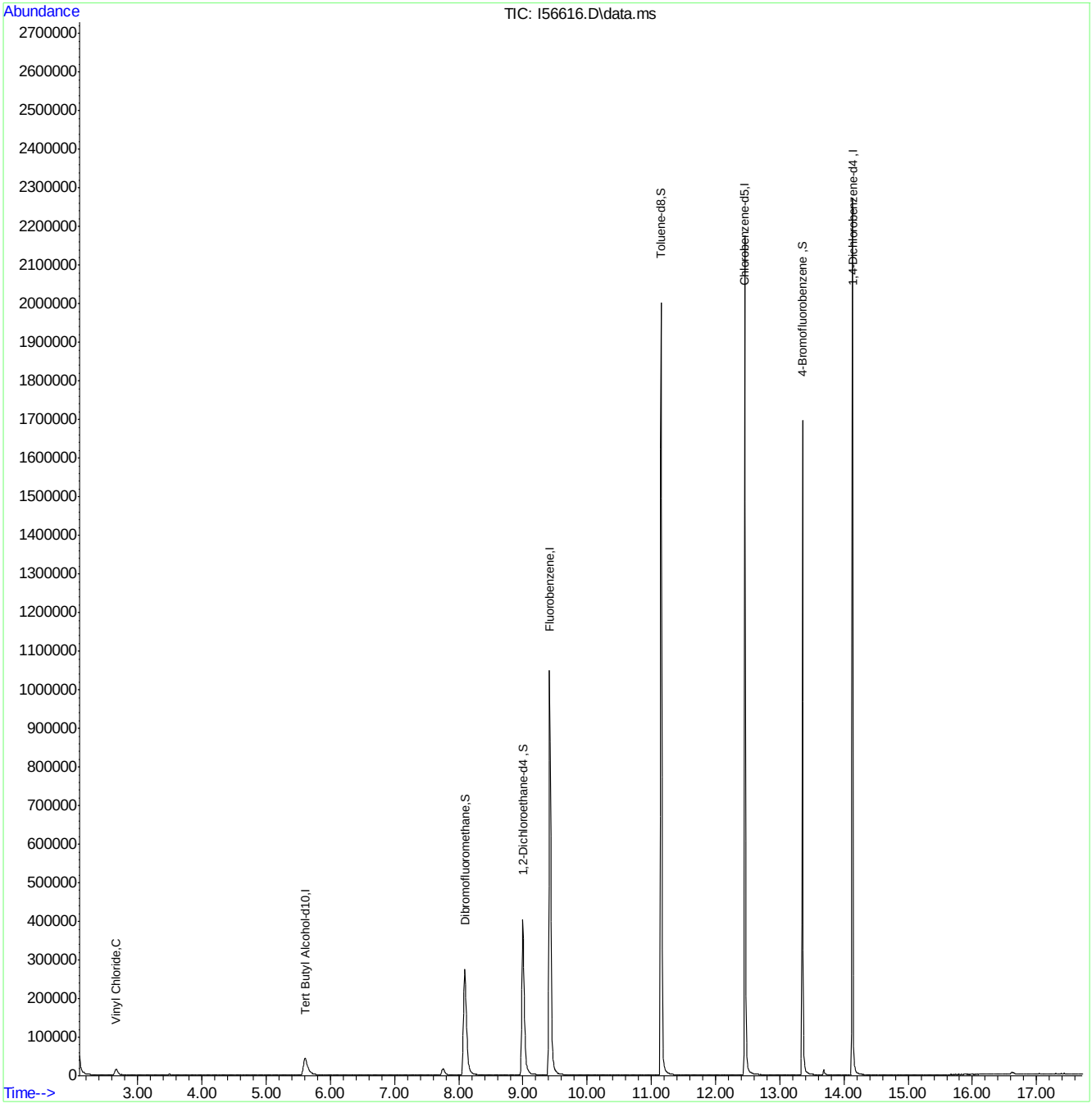
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1032055	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	741657	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	375728	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	88465	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	279265	51.25	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.50%			
46) 1,2-Dichloroethane-d4	9.000	65	397104	53.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 107.80%			
57) Toluene-d8	11.152	98	982458	48.00	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 96.00%			
79) 4-Bromofluorobenzene	13.353	174	283461	47.77	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.54%			
Target Compounds						Qvalue
5) Vinyl Chloride	2.660	62	29381	4.33	ug/L	99

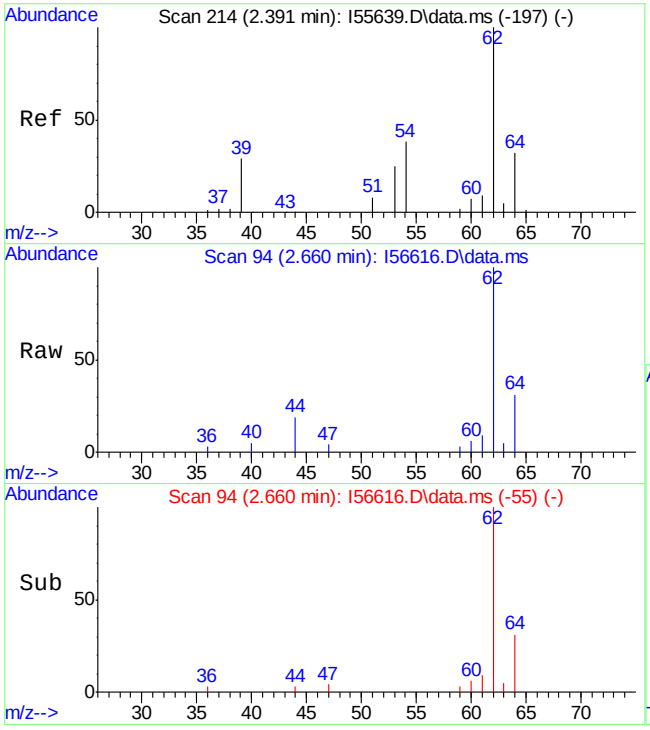
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56616.D
Acq On : 8 Aug 2018 5:18 pm
Operator : ANAJ
Sample : FA56349-6 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 09 10:59:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

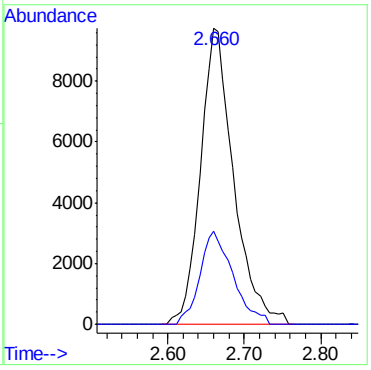




#5
Vinyl Chloride
Concen: 4.33 ug/L
RT: 2.660 min Scan# 94
Delta R.T. -0.012 min
Lab File: I56616.D
Acq: 8 Aug 2018 5:18 pm

Tgt Ion: 62 Resp: 29381

Ion	Ratio	Lower	Upper
62	100		
64	31.5	1.0	61.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56617.D
Acq On : 8 Aug 2018 5:42 pm
Operator : ANAJ
Sample : FA56349-7 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 09 11:00:16 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

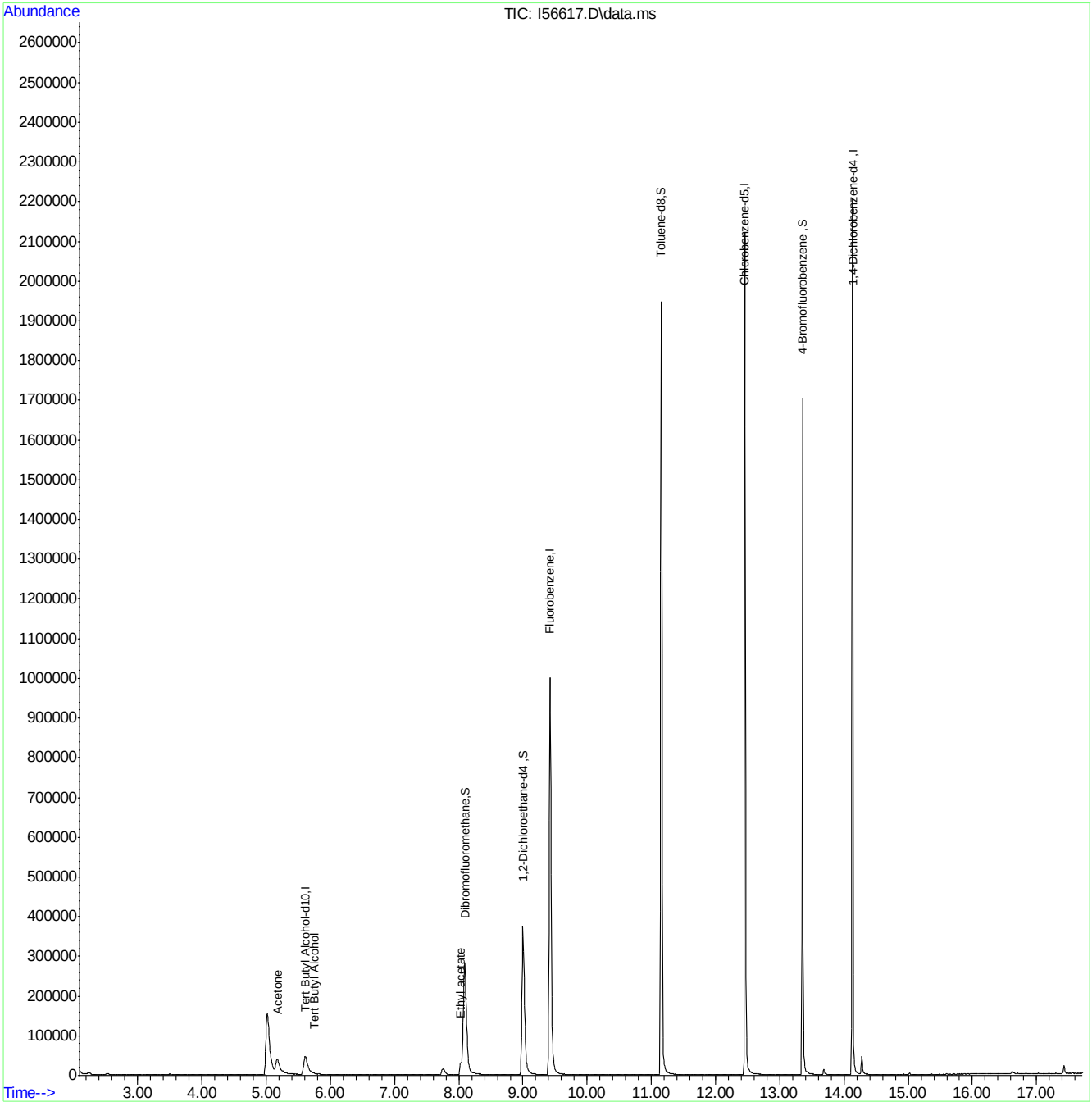
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1009989	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	724267	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	368183	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	91233	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	276884	51.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.84%			
46) 1,2-Dichloroethane-d4	9.000	65	390712	54.19	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 108.38%			
57) Toluene-d8	11.152	98	985790	49.32	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.64%			
79) 4-Bromofluorobenzene	13.353	174	280011	48.15	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.30%			
Target Compounds						Qvalue
17) Acetone	5.172	43	99731	59.48	ug/L	100
34) Ethyl acetate	8.031	43	92245	16.03	ug/L	99
109) Tert Butyl Alcohol	5.751	59	2084	3.56	ug/L #	51

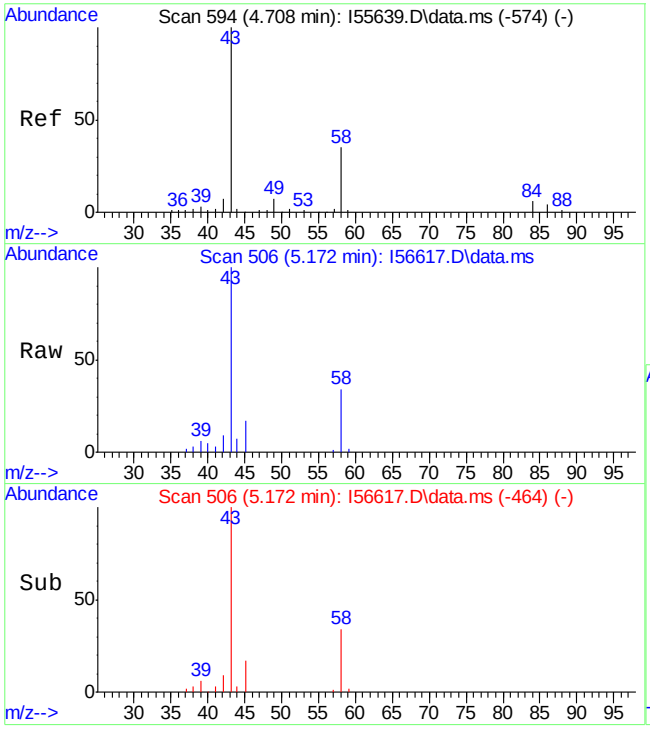
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56617.D
Acq On : 8 Aug 2018 5:42 pm
Operator : ANAJ
Sample : FA56349-7 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 09 11:00:16 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

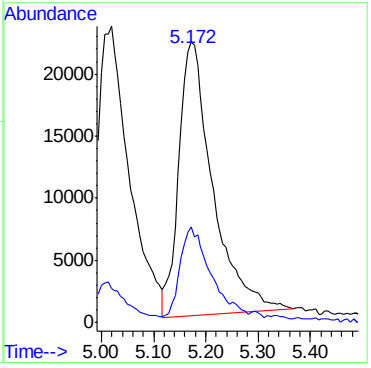


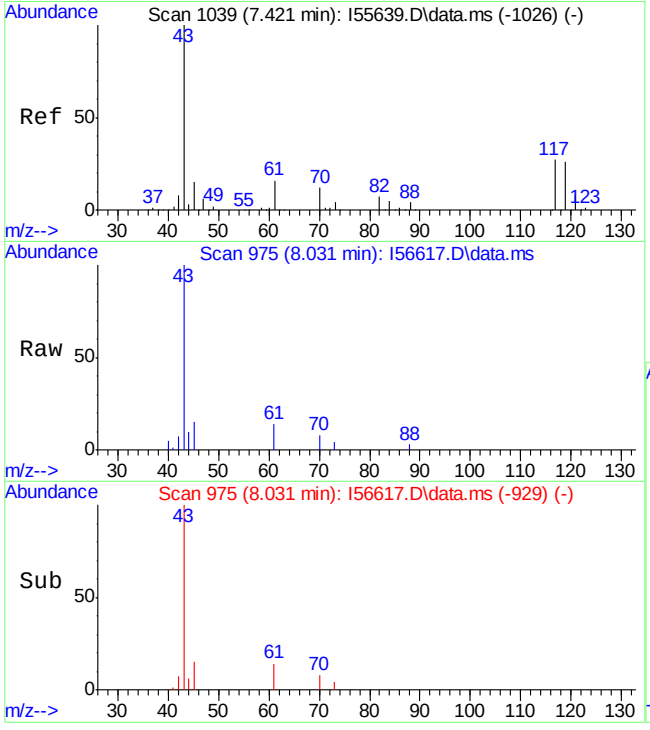


#17
Acetone
Concen: 59.48 ug/L
RT: 5.172 min Scan# 506
Delta R.T. 0.006 min
Lab File: I56617.D
Acq: 8 Aug 2018 5:42 pm

Tgt Ion: 43 Resp: 99731

Ion	Ratio	Lower	Upper
43	100		
58	34.4	4.3	64.3

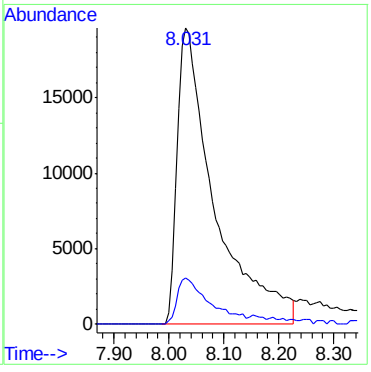


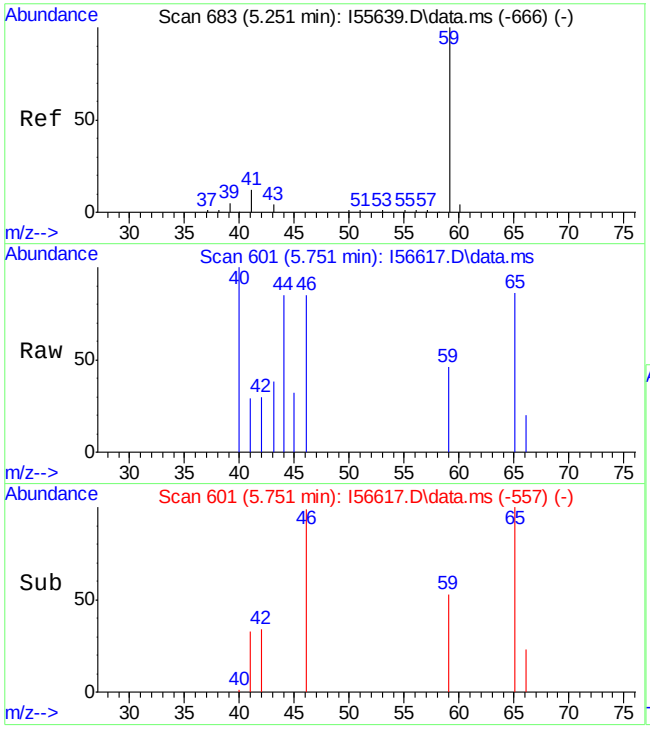


#34
Ethyl acetate
Concen: 16.03 ug/L
RT: 8.031 min Scan# 975
Delta R.T. 0.031 min
Lab File: I56617.D
Acq: 8 Aug 2018 5:42 pm

Tgt Ion: 43 Resp: 92245

Ion	Ratio	Lower	Upper
43	100		
45	15.4	0.0	34.9

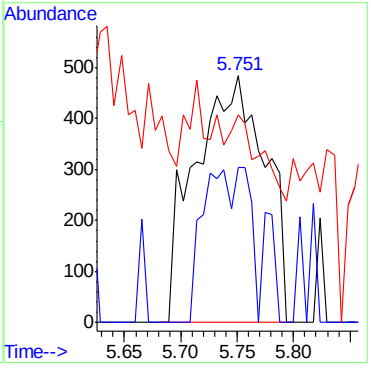




#109
Tert Butyl Alcohol
Concen: 3.56 ug/L
RT: 5.751 min Scan# 601
Delta R.T. 0.019 min
Lab File: I56617.D
Acq: 8 Aug 2018 5:42 pm

Tgt Ion: 59 Resp: 2084

Ion	Ratio	Lower	Upper
59	100		
41	62.5	4.7	44.7#
43	17.7	0.0	35.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56618.D
Acq On : 8 Aug 2018 6:06 pm
Operator : ANAJ
Sample : FA56349-8 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 09 11:00:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

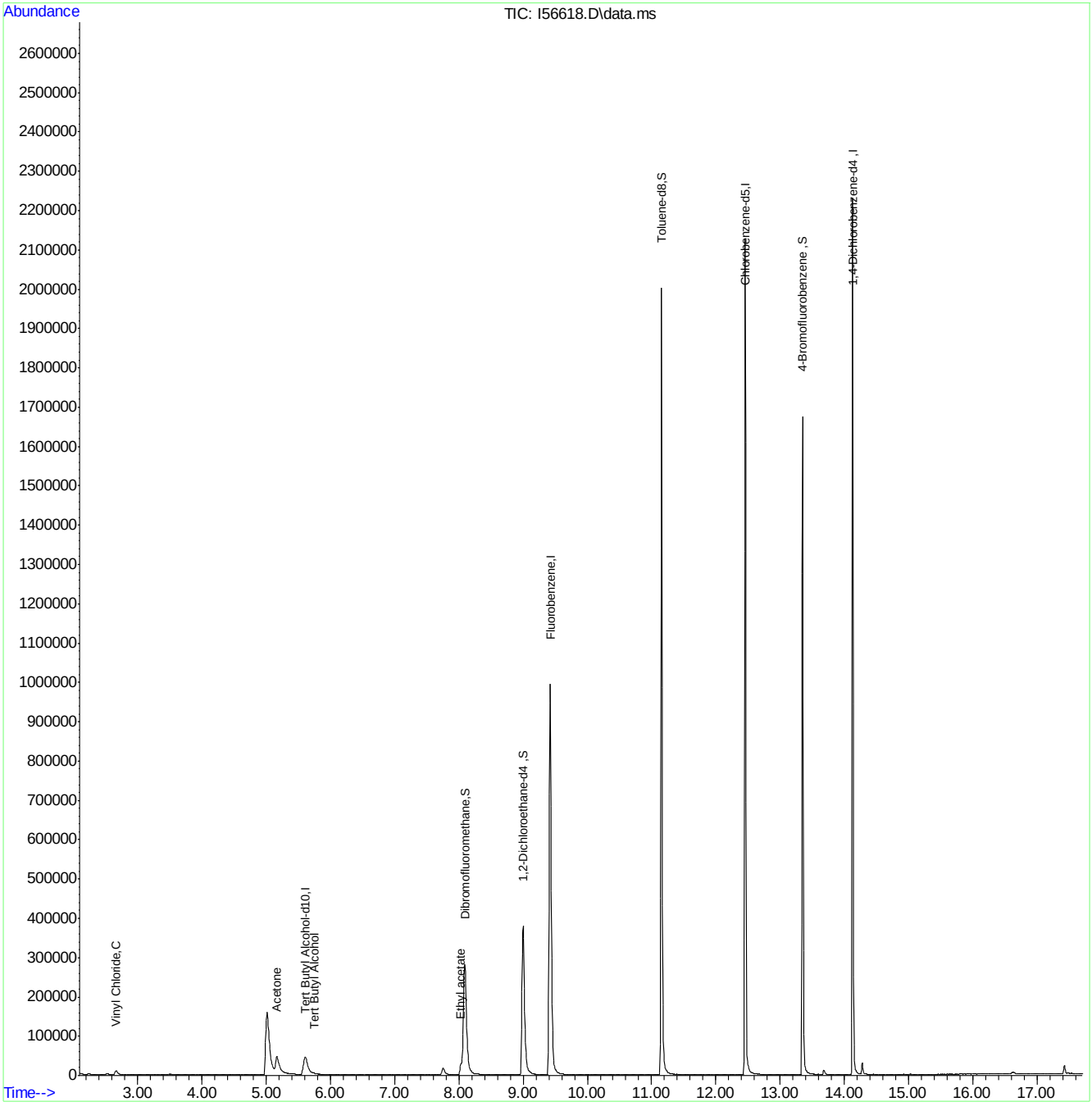
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1019560	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	718102	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	370630	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	89209	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	280404	52.09	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 104.18%			
46) 1,2-Dichloroethane-d4	9.000	65	395579	54.35	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 108.70%			
57) Toluene-d8	11.152	98	985417	49.73	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.46%			
79) 4-Bromofluorobenzene	13.353	174	279631	47.77	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.54%			
Target Compounds						Qvalue
5) Vinyl Chloride	2.660	62	18372	2.74	ug/L	93
17) Acetone	5.166	43	115236	68.08	ug/L	98
34) Ethyl acetate	8.031	43	84797	14.60	ug/L	99
109) Tert Butyl Alcohol	5.757	59	2272	3.97	ug/L	64

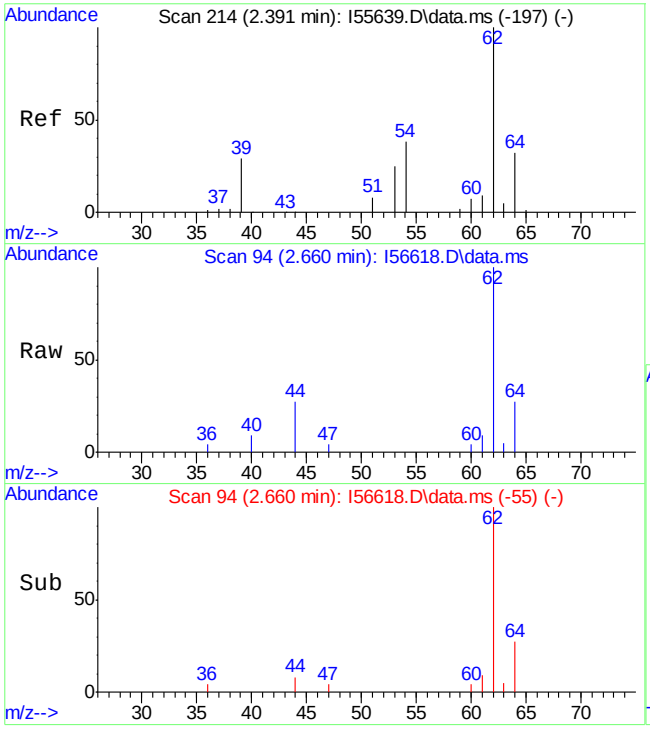
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56618.D
Acq On : 8 Aug 2018 6:06 pm
Operator : ANAJ
Sample : FA56349-8 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 09 11:00:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

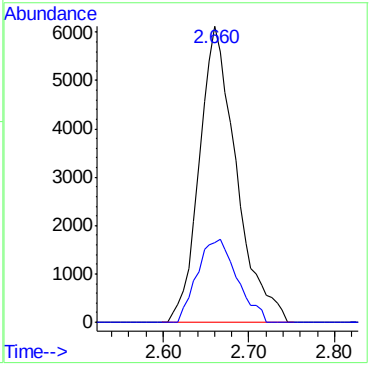


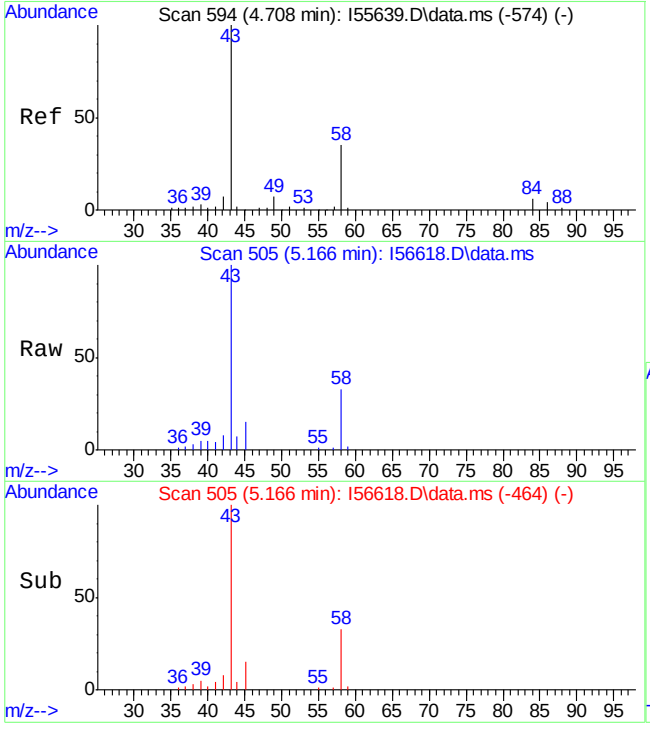


#5
Vinyl Chloride
Concen: 2.74 ug/L
RT: 2.660 min Scan# 94
Delta R.T. -0.012 min
Lab File: I56618.D
Acq: 8 Aug 2018 6:06 pm

Tgt Ion: 62 Resp: 18372

Ion	Ratio	Lower	Upper
62	100		
64	27.0	1.0	61.0

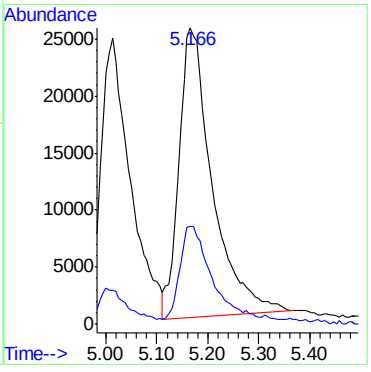


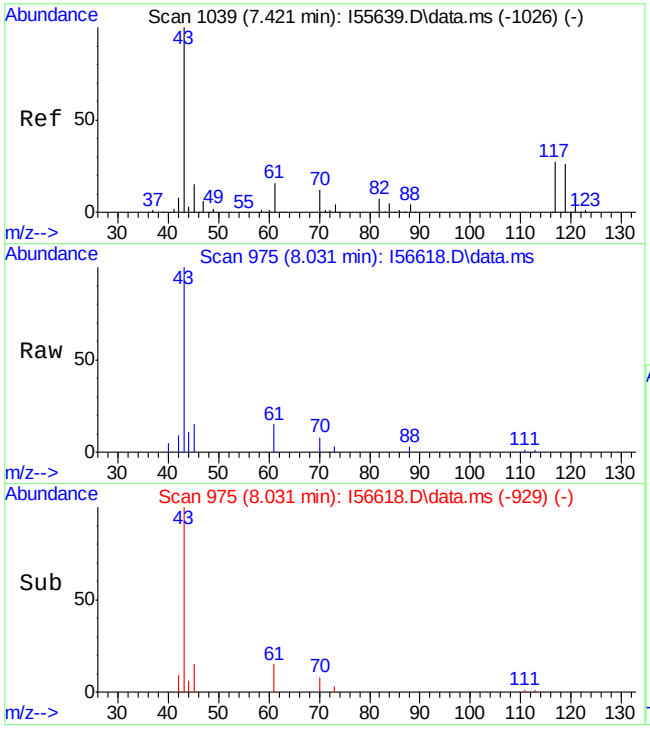


#17
Acetone
Concen: 68.08 ug/L
RT: 5.166 min Scan# 505
Delta R.T. 0.000 min
Lab File: I56618.D
Acq: 8 Aug 2018 6:06 pm

Tgt Ion: 43 Resp: 115236

Ion	Ratio	Lower	Upper
43	100		
58	33.0	4.3	64.3

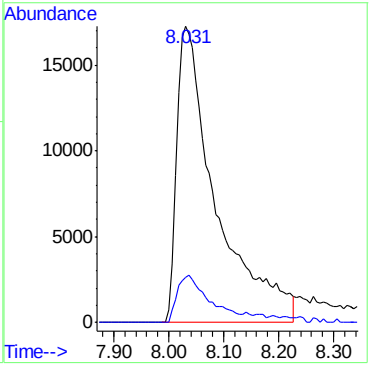


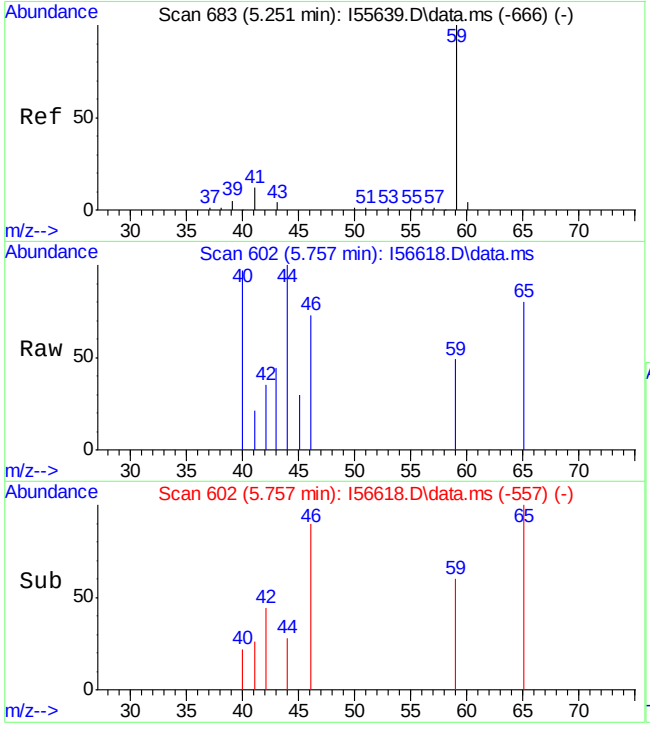


#34
Ethyl acetate
Concen: 14.60 ug/L
RT: 8.031 min Scan# 975
Delta R.T. 0.031 min
Lab File: I56618.D
Acq: 8 Aug 2018 6:06 pm

Tgt Ion: 43 Resp: 84797

Ion	Ratio	Lower	Upper
43	100		
45	15.2	0.0	34.9

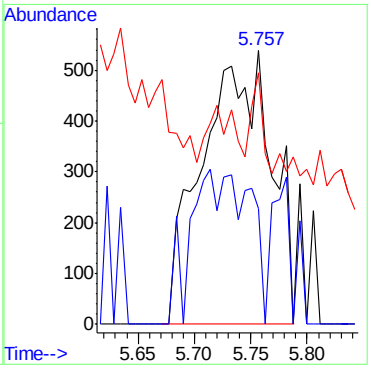




#109
Tert Butyl Alcohol
Concen: 3.97 ug/L
RT: 5.757 min Scan# 602
Delta R.T. 0.025 min
Lab File: I56618.D
Acq: 8 Aug 2018 6:06 pm

Tgt Ion: 59 Resp: 2272

Ion	Ratio	Lower	Upper
59	100		
41	42.4	4.7	44.7
43	30.4	0.0	35.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56619.D
Acq On : 8 Aug 2018 6:29 pm
Operator : ANAJ
Sample : FA56349-9 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 09 11:01:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

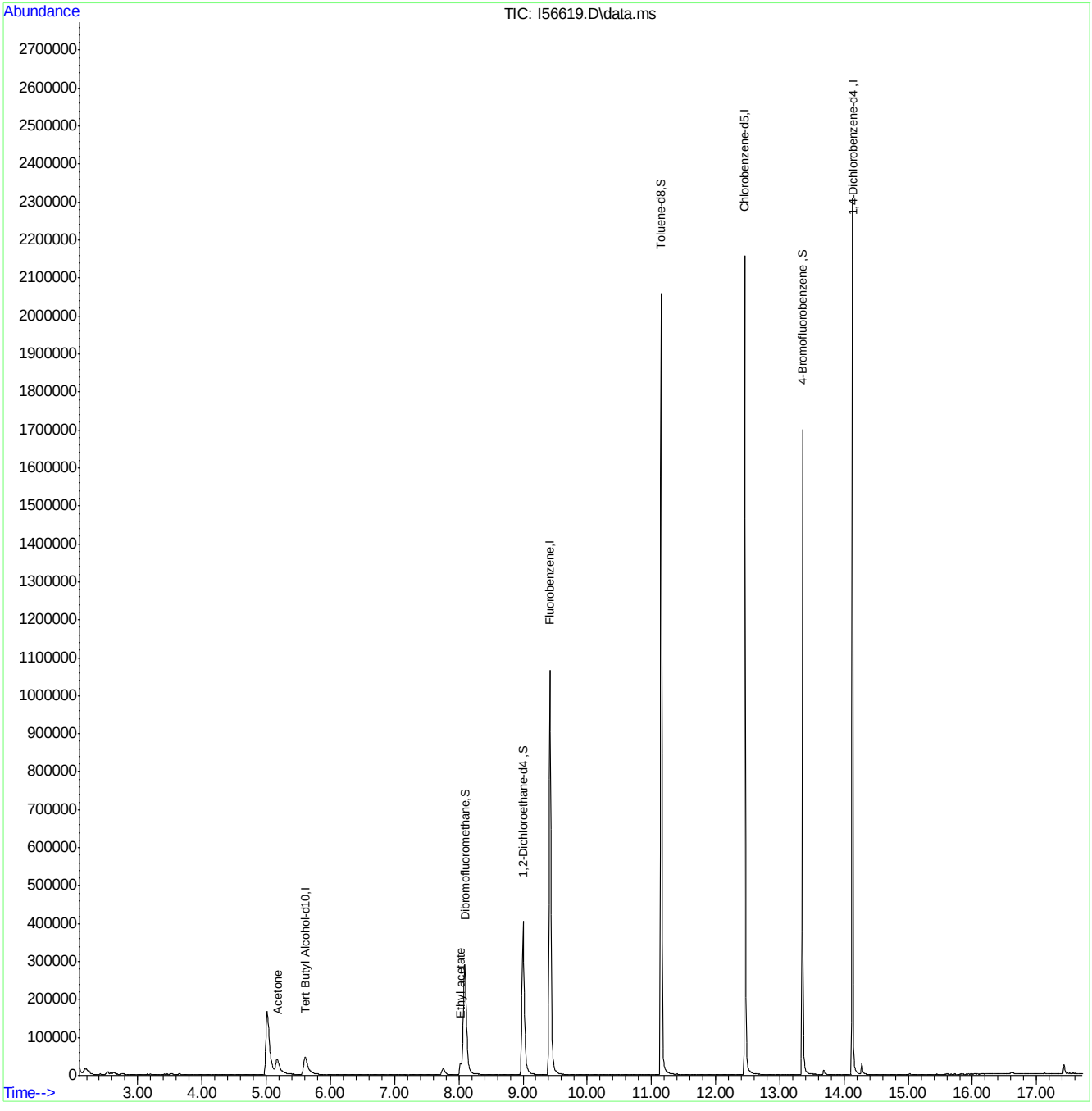
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1026516	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	729689	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	374274	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	91060	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	281907	52.02	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 104.04%			
46) 1,2-Dichloroethane-d4	9.000	65	397741	54.27	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 108.54%			
57) Toluene-d8	11.152	98	991396	49.23	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.46%			
79) 4-Bromofluorobenzene	13.353	174	283214	47.91	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.82%			
Target Compounds						Qvalue
17) Acetone	5.171	43	100068	58.72	ug/L	98
34) Ethyl acetate	8.025	43	87253	14.92	ug/L	100

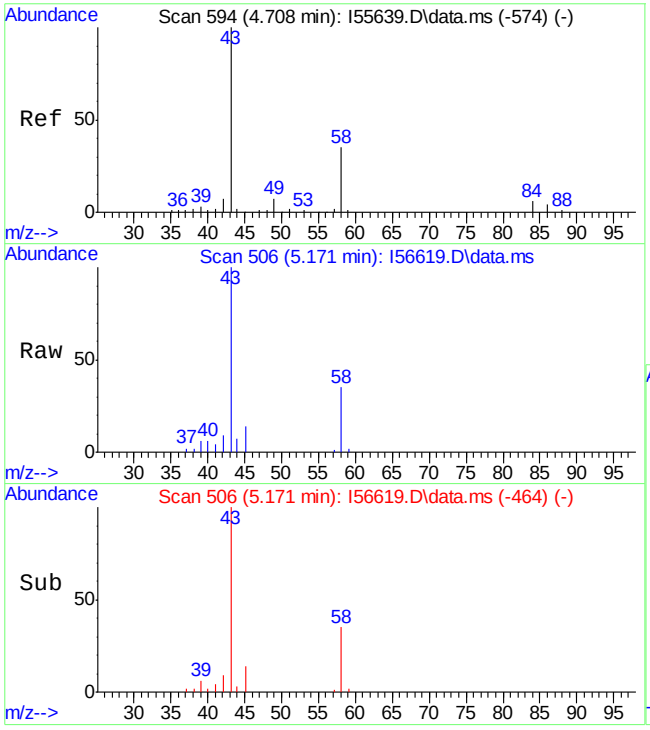
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56619.D
Acq On : 8 Aug 2018 6:29 pm
Operator : ANAJ
Sample : FA56349-9 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 09 11:01:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

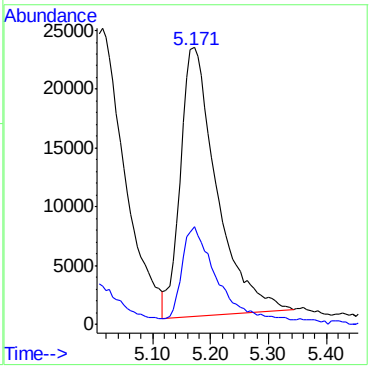


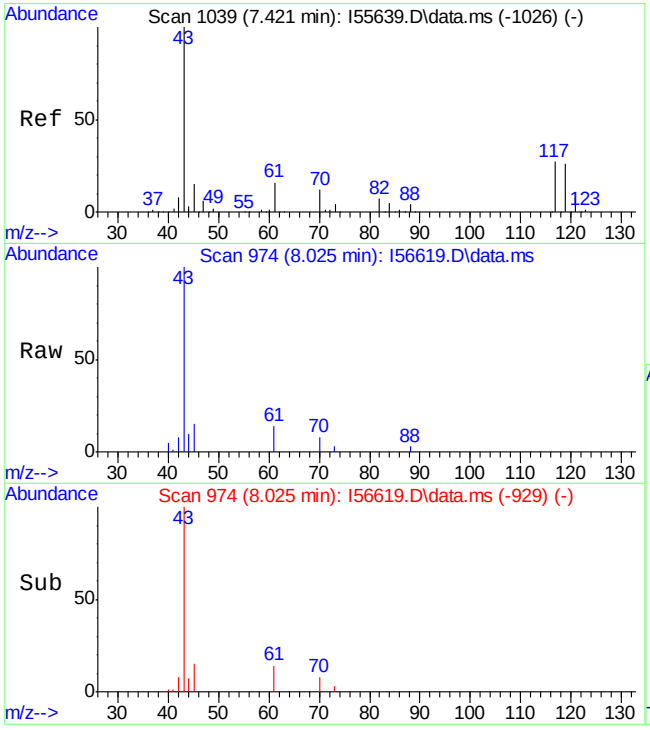


#17
Acetone
Concen: 58.72 ug/L
RT: 5.171 min Scan# 506
Delta R.T. 0.006 min
Lab File: I56619.D
Acq: 8 Aug 2018 6:29 pm

Tgt Ion: 43 Resp: 100068

Ion	Ratio	Lower	Upper
43	100		
58	35.2	4.3	64.3

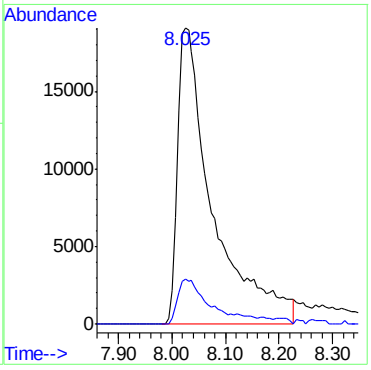




#34
Ethyl acetate
Concen: 14.92 ug/L
RT: 8.025 min Scan# 974
Delta R.T. 0.025 min
Lab File: I56619.D
Acq: 8 Aug 2018 6:29 pm

Tgt Ion: 43 Resp: 87253

Ion	Ratio	Lower	Upper
43	100		
45	15.1	0.0	34.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56620.D
Acq On : 8 Aug 2018 6:53 pm
Operator : ANAJ
Sample : FA56349-10 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 09 11:01:15 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1009971	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	719541	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	364422	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	84572	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	274328	51.45	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.90%			
46) 1,2-Dichloroethane-d4	9.000	65	391436	54.29	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 108.58%			
57) Toluene-d8	11.152	98	987008	49.71	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.42%			
79) 4-Bromofluorobenzene	13.353	174	275234	47.82	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.64%			
Target Compounds						Qvalue
17) Acetone	5.214	43	13294	7.93	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

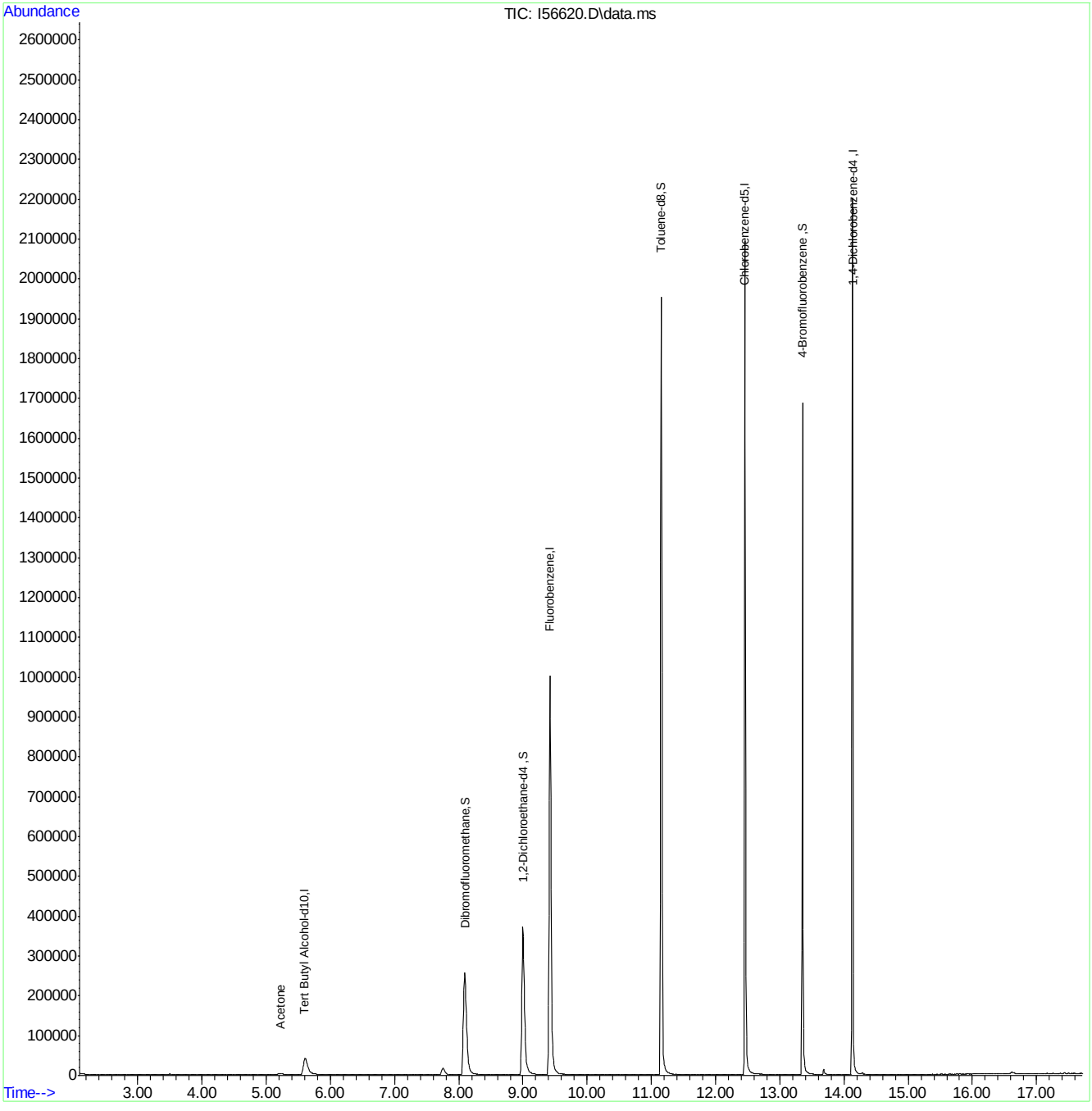
7.1.10

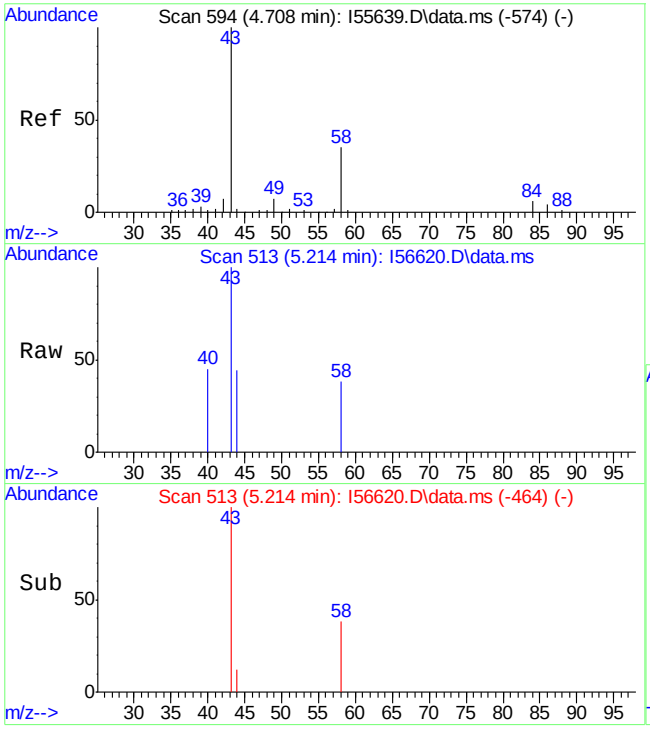
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56620.D
Acq On : 8 Aug 2018 6:53 pm
Operator : ANAJ
Sample : FA56349-10 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 09 11:01:15 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

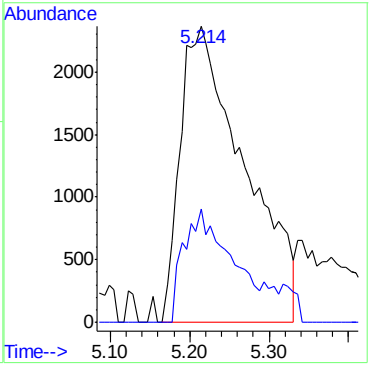




#17
Acetone
Concen: 7.93 ug/L
RT: 5.214 min Scan# 513
Delta R.T. 0.049 min
Lab File: I56620.D
Acq: 8 Aug 2018 6:53 pm

Tgt Ion: 43 Resp: 13294

Ion	Ratio	Lower	Upper
43	100		
58	38.2	4.3	64.3



7.1.10

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56621.D
Acq On : 8 Aug 2018 7:17 pm
Operator : ANAJ
Sample : FA56349-11 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 09 11:01:32 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

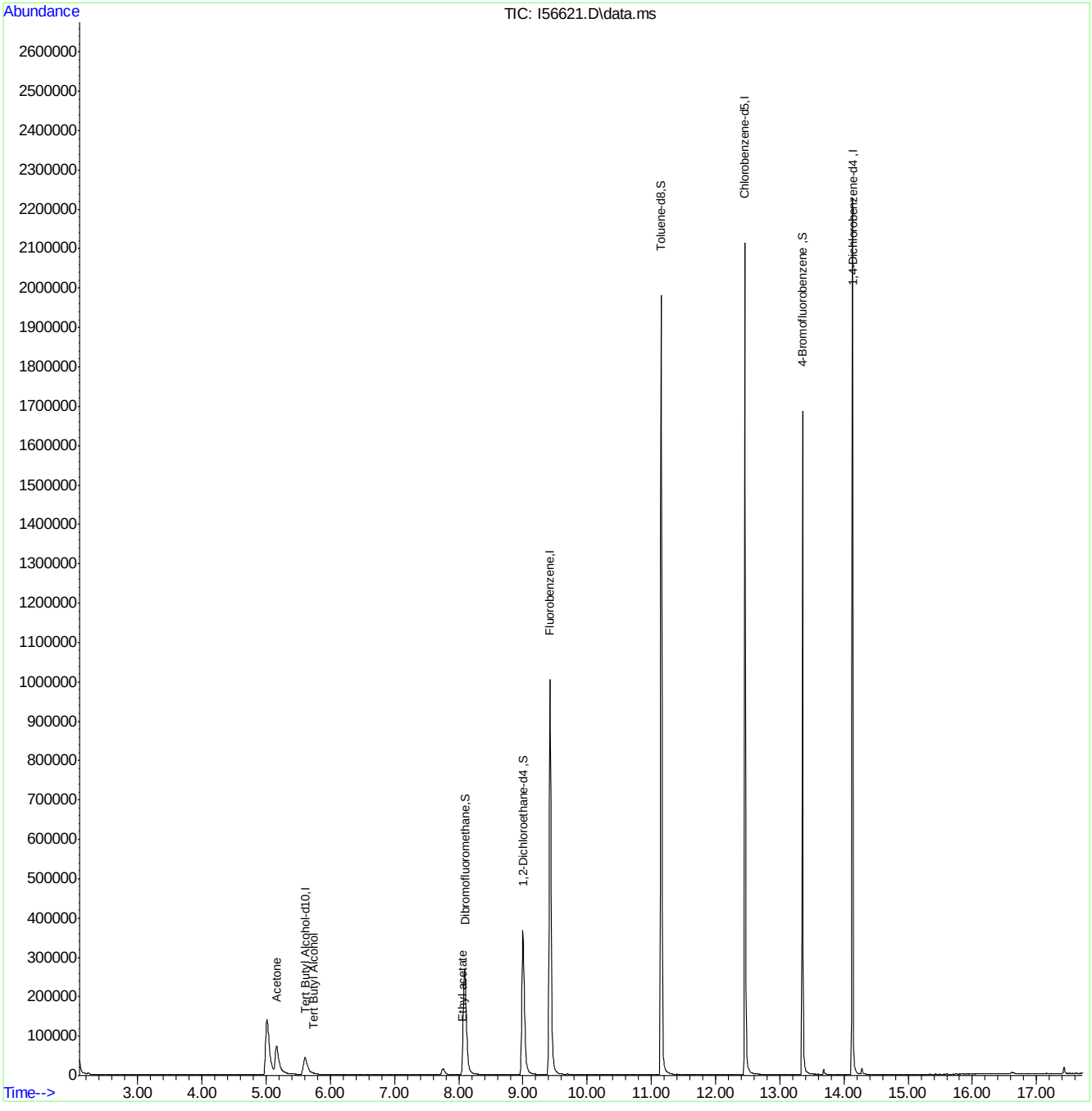
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1004297	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	713639	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	366111	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	87094	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	271704	51.24	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.48%			
46) 1,2-Dichloroethane-d4	9.000	65	387869	54.10	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 108.20%			
57) Toluene-d8	11.152	98	979153	49.72	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.44%			
79) 4-Bromofluorobenzene	13.353	174	278348	48.14	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.28%			
Target Compounds						Qvalue
17) Acetone	5.159	43	181523	108.87	ug/L	97
34) Ethyl acetate	8.049	43	27104	4.74	ug/L	94
109) Tert Butyl Alcohol	5.739	59	2618	4.69	ug/L #	55

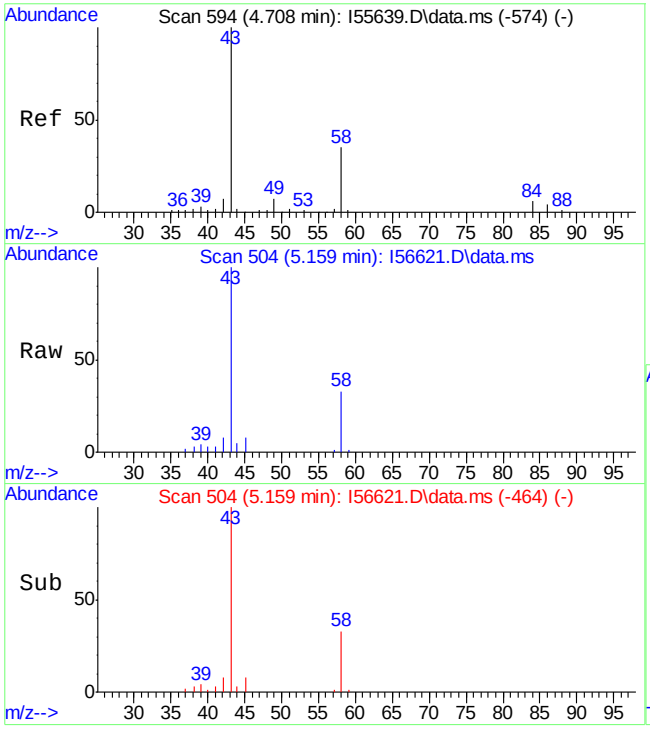
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56621.D
Acq On : 8 Aug 2018 7:17 pm
Operator : ANAJ
Sample : FA56349-11 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 09 11:01:32 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

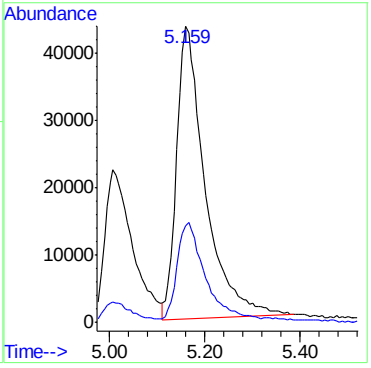


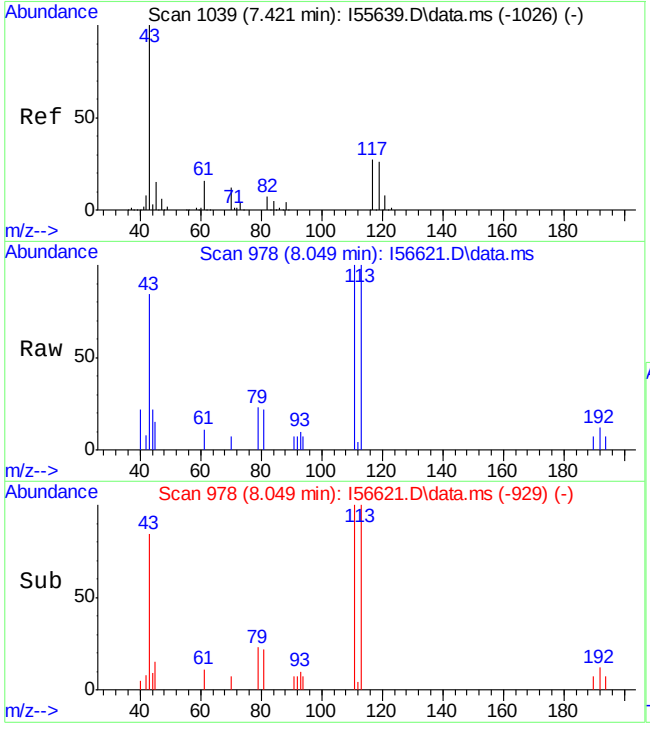


#17
Acetone
Concen: 108.87 ug/L
RT: 5.159 min Scan# 504
Delta R.T. -0.006 min
Lab File: I56621.D
Acq: 8 Aug 2018 7:17 pm

Tgt Ion: 43 Resp: 181523

Ion	Ratio	Lower	Upper
43	100		
58	32.7	4.3	64.3

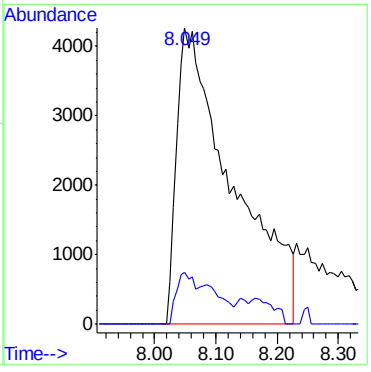


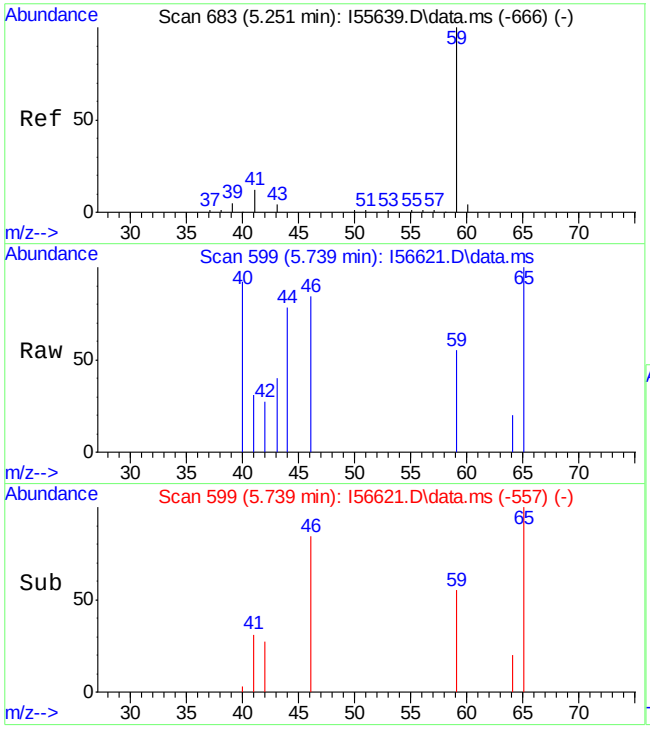


#34
Ethyl acetate
Concen: 4.74 ug/L
RT: 8.049 min Scan# 978
Delta R.T. 0.049 min
Lab File: I56621.D
Acq: 8 Aug 2018 7:17 pm

Tgt Ion: 43 Resp: 27104

Ion	Ratio	Lower	Upper
43	100		
45	17.3	0.0	34.9

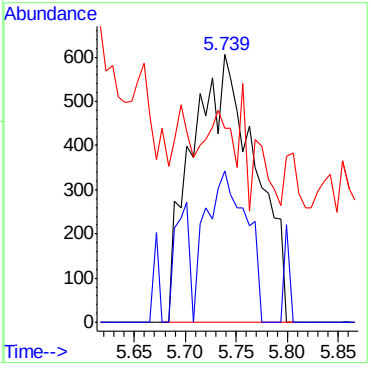




#109
Tert Butyl Alcohol
Concen: 4.69 ug/L
RT: 5.739 min Scan# 599
Delta R.T. 0.006 min
Lab File: I56621.D
Acq: 8 Aug 2018 7:17 pm

Tgt Ion: 59 Resp: 2618

Ion	Ratio	Lower	Upper
59	100		
41	56.4	4.7	44.7#
43	9.4	0.0	35.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56654.D
Acq On : 10 Aug 2018 10:22 am
Operator : ANAJ
Sample : FA56349-12 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 10:40:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1124541	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	797049	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	397054	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	65120	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	292644	49.29	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.58%			
46) 1,2-Dichloroethane-d4	8.994	65	402026	50.08	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.16%			
57) Toluene-d8	11.152	98	1083994	49.28	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.56%			
79) 4-Bromofluorobenzene	13.353	174	310156	49.46	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.92%			
Target Compounds						Qvalue
109) Tert Butyl Alcohol	5.732	59	11699	28.03	ug/L	82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

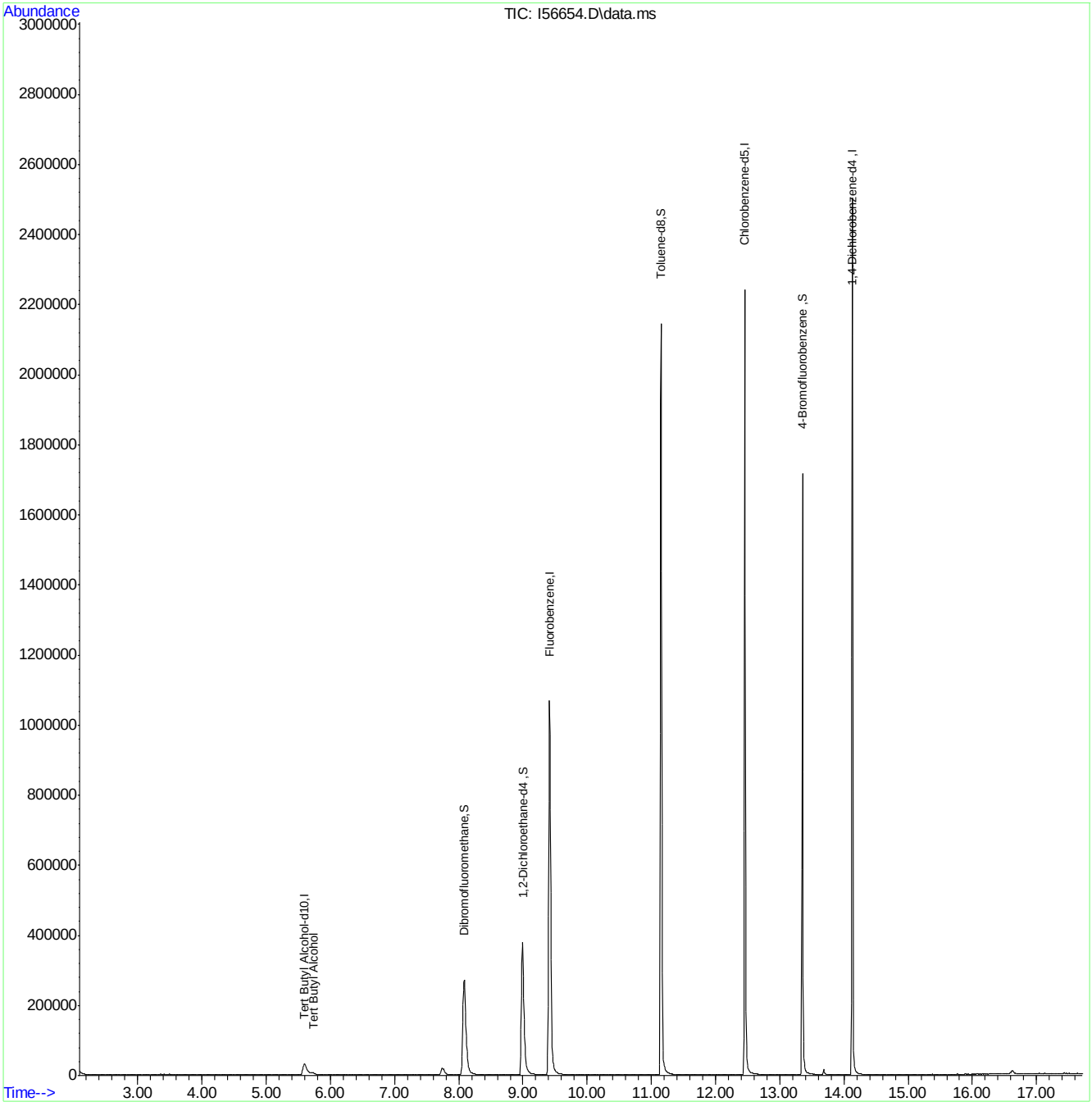
7.1.12

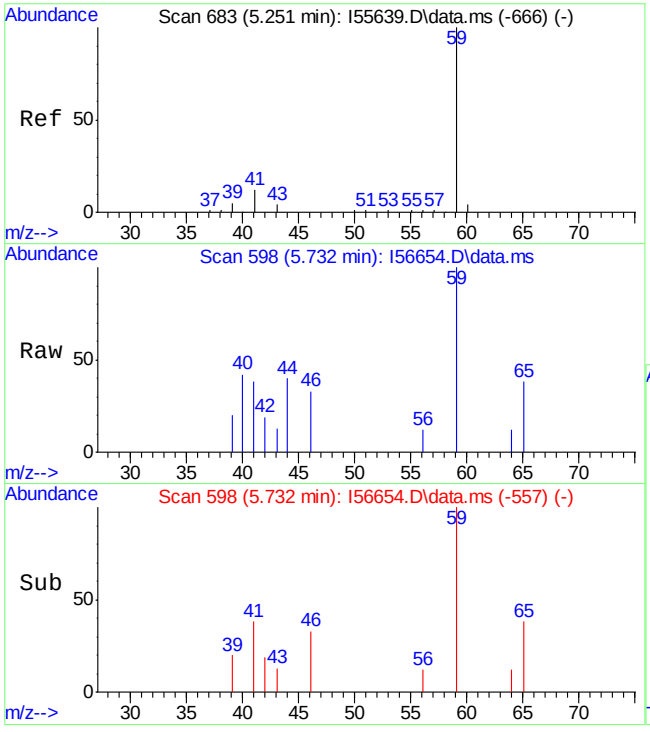
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56654.D
Acq On : 10 Aug 2018 10:22 am
Operator : ANAJ
Sample : FA56349-12 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 10:40:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

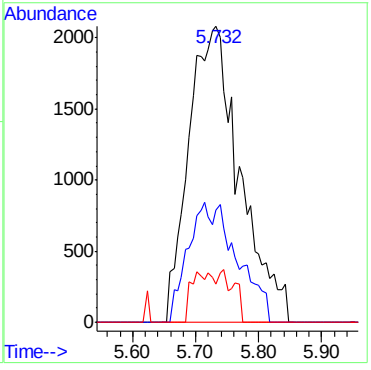




#109
Tert Butyl Alcohol
Concen: 28.03 ug/L
RT: 5.732 min Scan# 598
Delta R.T. 0.000 min
Lab File: I56654.D
Acq: 10 Aug 2018 10:22 am

Tgt Ion: 59 Resp: 11699

Ion	Ratio	Lower	Upper
59	100		
41	37.8	4.7	44.7
43	12.9	0.0	35.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56655.D
Acq On : 10 Aug 2018 10:47 am
Operator : ANAJ
Sample : FA56349-13 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 11:10:49 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1096850	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	784605	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	395758	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	73732	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	289065	49.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.84%			
46) 1,2-Dichloroethane-d4	8.994	65	400976	51.21	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.42%			
57) Toluene-d8	11.152	98	1030349	47.59	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 95.18%			
79) 4-Bromofluorobenzene	13.353	174	303448	48.55	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.10%			

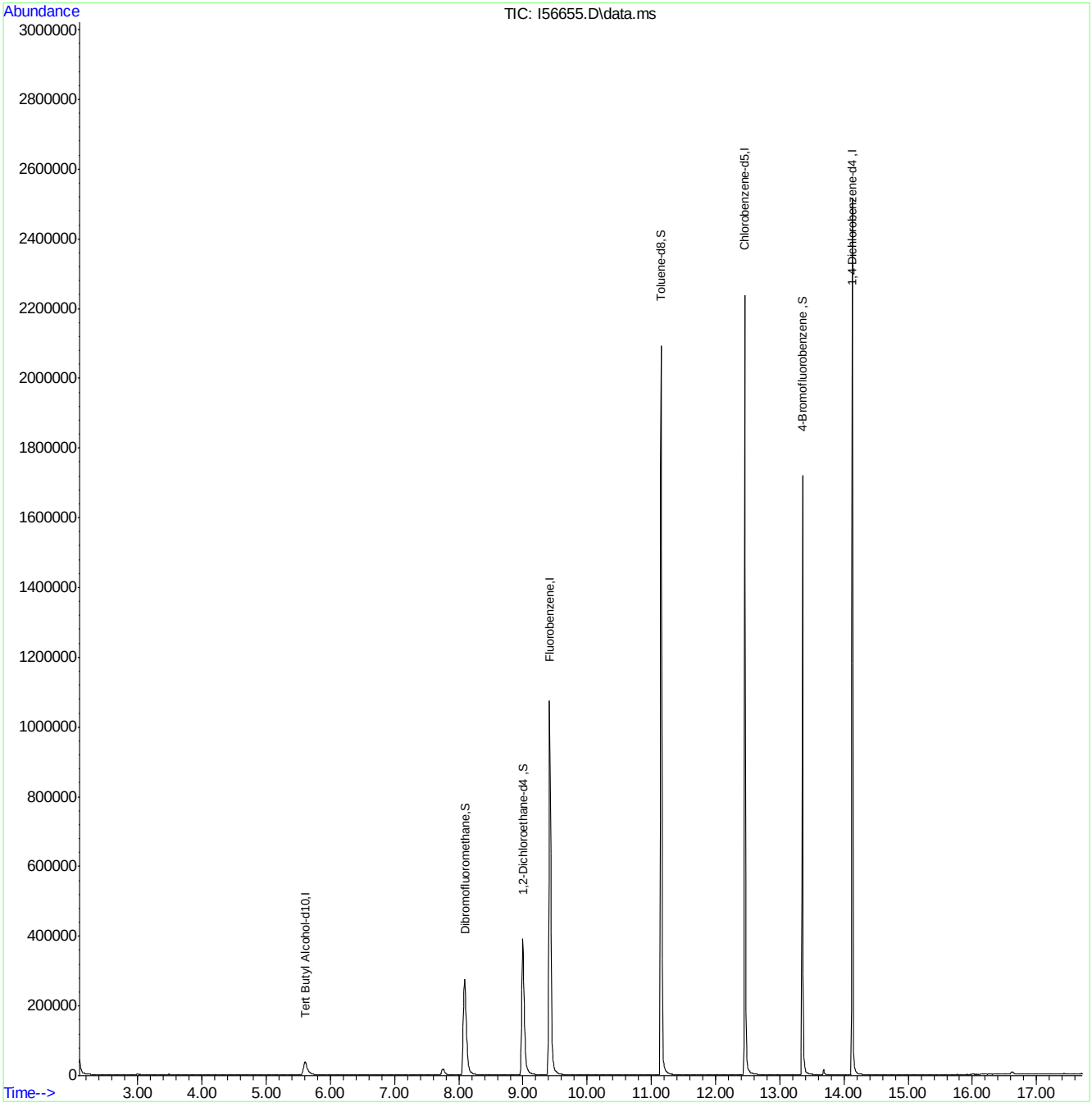
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56655.D
Acq On : 10 Aug 2018 10:47 am
Operator : ANAJ
Sample : FA56349-13 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 11:10:49 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56656.D
Acq On : 10 Aug 2018 11:10 am
Operator : ANAJ
Sample : FA56349-14 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 12:11:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1081152	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	770511	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	388500	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	77006	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.098	113	283302	49.63	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.26%			
46) 1,2-Dichloroethane-d4	9.000	65	395732	51.27	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.54%			
57) Toluene-d8	11.152	98	1033972	48.63	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.26%			
79) 4-Bromofluorobenzene	13.353	174	298400	48.63	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.26%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

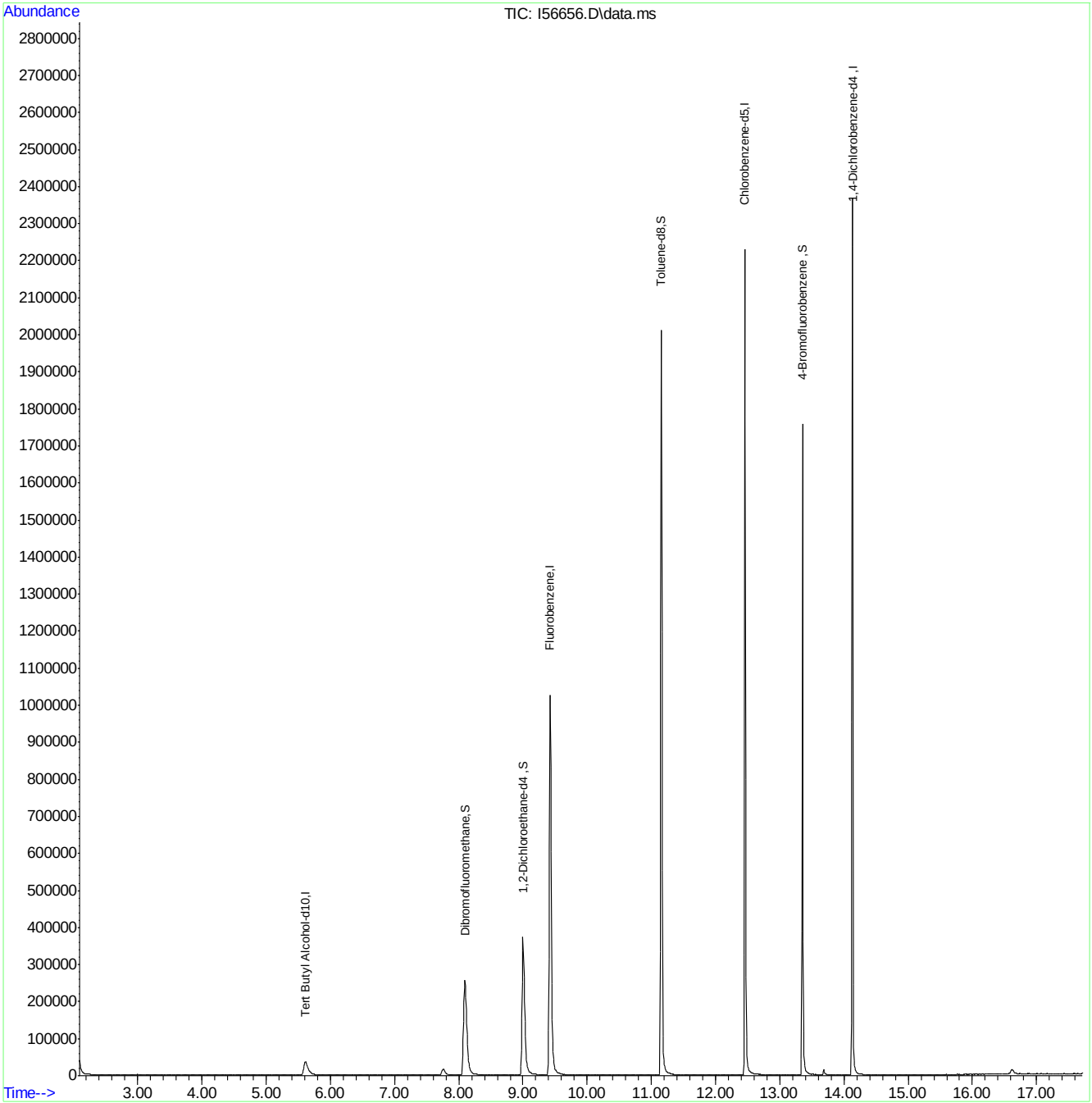
7.1.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56656.D
Acq On : 10 Aug 2018 11:10 am
Operator : ANAJ
Sample : FA56349-14 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 12:11:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56657.D
Acq On : 10 Aug 2018 11:33 am
Operator : ANAJ
Sample : FA56349-15 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 12:11:38 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1065620	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	761505	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	385345	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	75451	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.098	113	279426	49.67	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.34%			
46) 1,2-Dichloroethane-d4	9.000	65	399383	52.50	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.00%			
57) Toluene-d8	11.152	98	1020844	48.58	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.16%			
79) 4-Bromofluorobenzene	13.353	174	293631	48.25	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.50%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

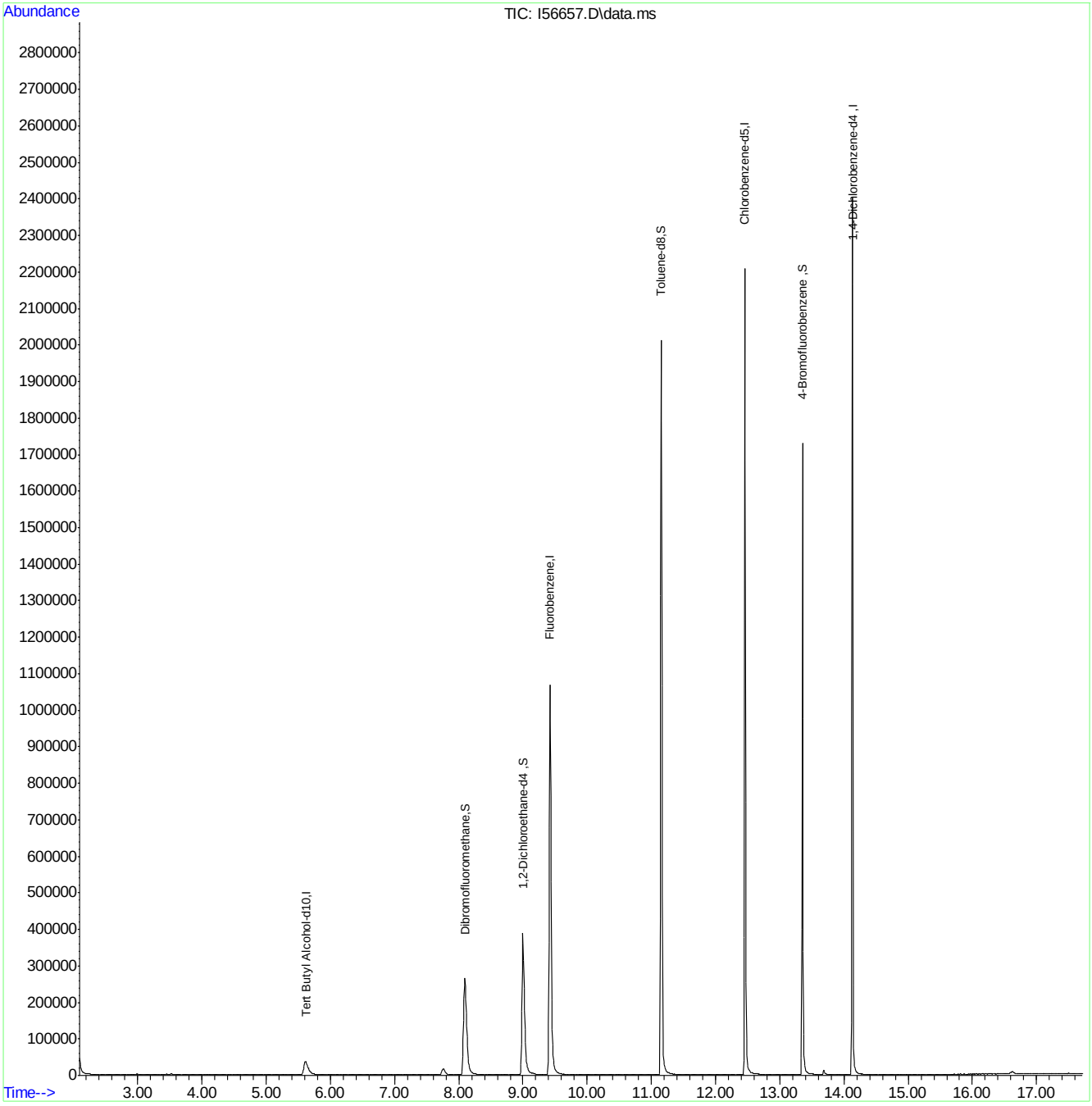
7.1.15

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56657.D
Acq On : 10 Aug 2018 11:33 am
Operator : ANAJ
Sample : FA56349-15 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 12:11:38 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56658.D
Acq On : 10 Aug 2018 11:57 am
Operator : ANAJ
Sample : FA56349-16 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 10 12:14:01 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1054035	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	755545	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	381068	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	80930	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	282358	50.74	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.48%			
46) 1,2-Dichloroethane-d4	9.000	65	397325	52.80	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.60%			
57) Toluene-d8	11.152	98	1023041	49.07	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.14%			
79) 4-Bromofluorobenzene	13.353	174	292070	48.53	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.06%			

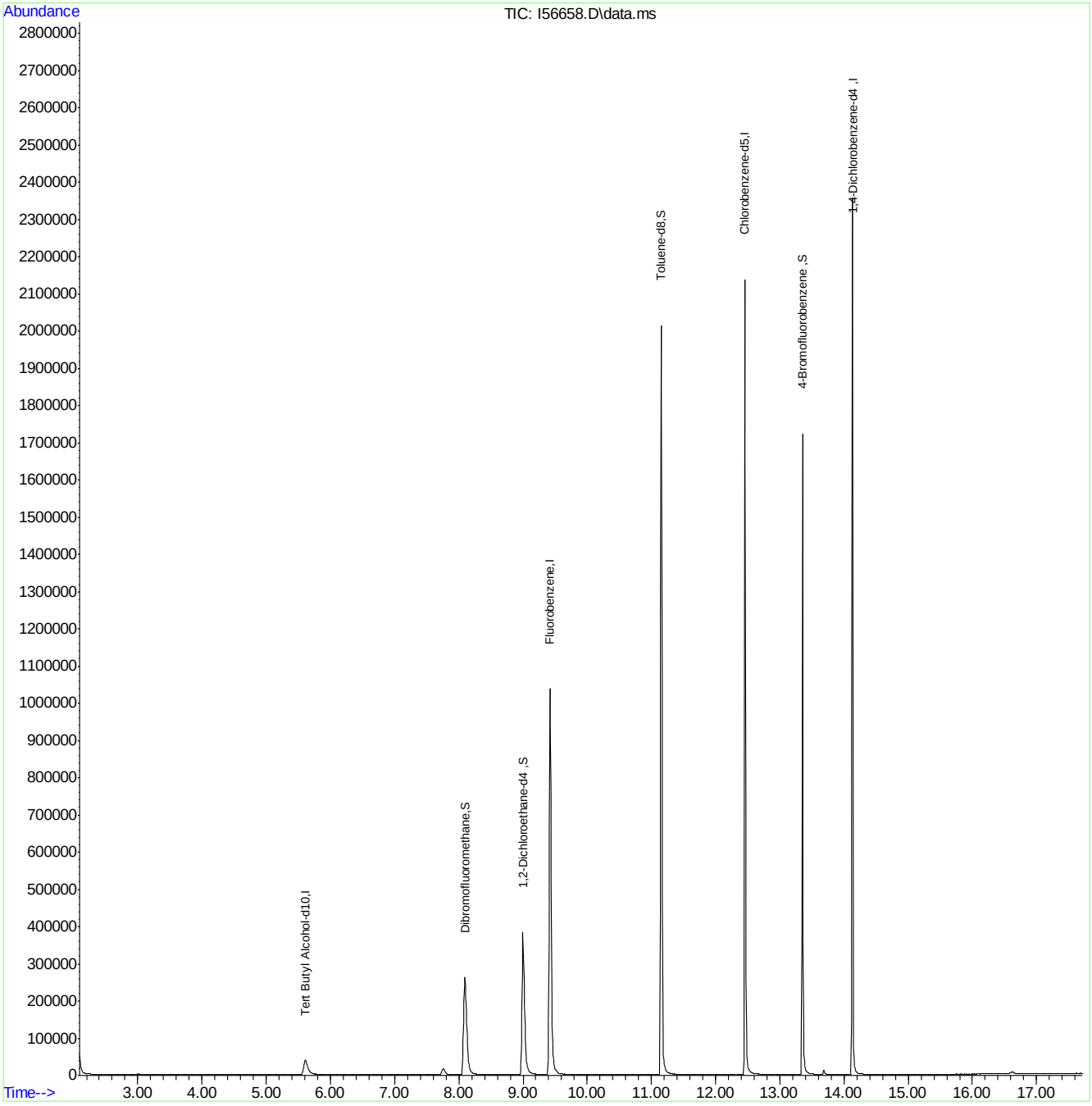
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56658.D
Acq On : 10 Aug 2018 11:57 am
Operator : ANAJ
Sample : FA56349-16 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 10 12:14:01 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56659.D
Acq On : 10 Aug 2018 12:21 pm
Operator : ANAJ
Sample : FA56349-17 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 10 12:38:38 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

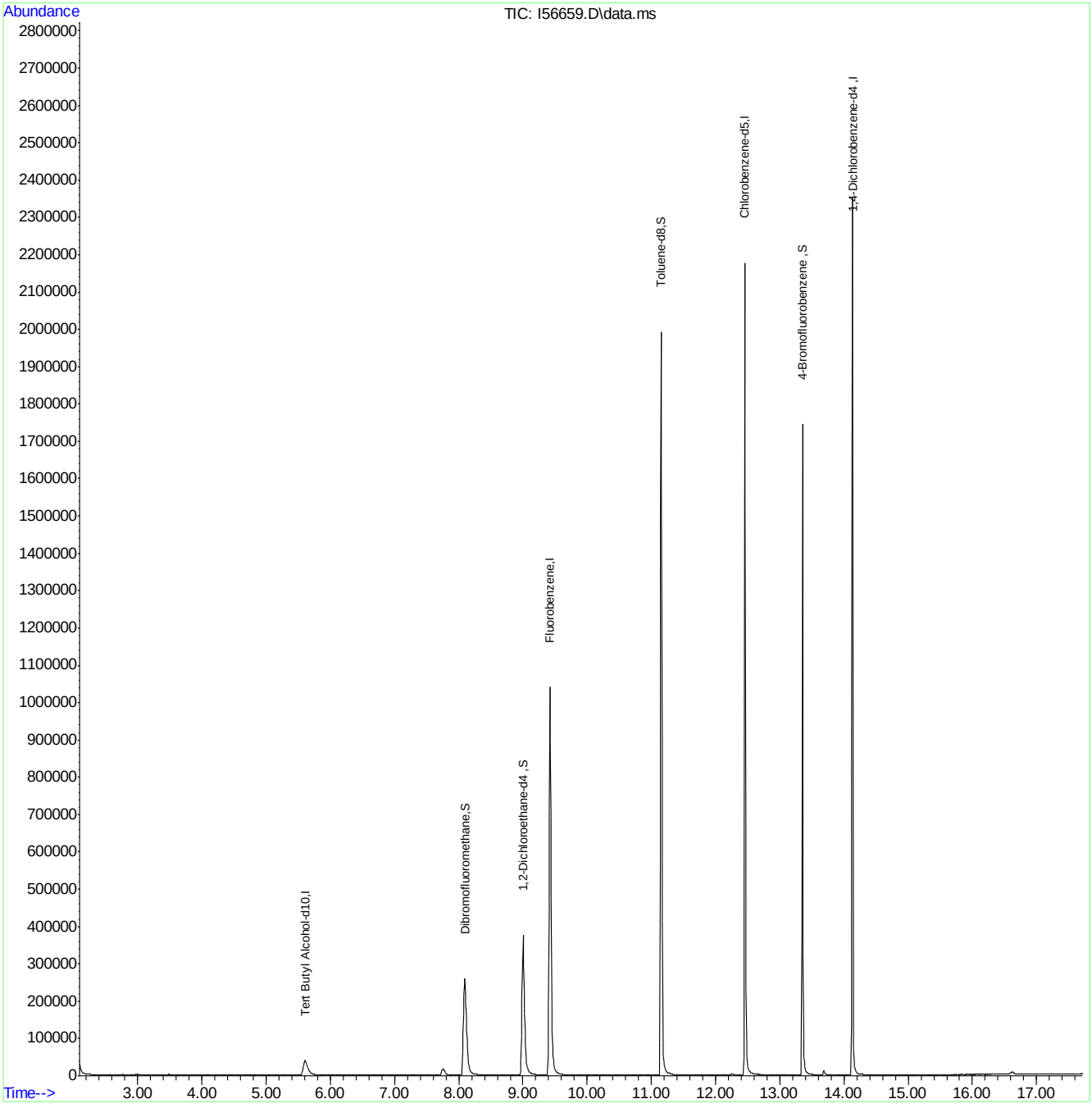
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1045763	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	749842	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	381391	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	82959	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	274317	49.68	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.36%			
46) 1,2-Dichloroethane-d4	9.000	65	394514	52.84	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.68%			
57) Toluene-d8	11.152	98	1006861	48.66	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.32%			
79) 4-Bromofluorobenzene	13.353	174	290627	48.25	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.50%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56659.D
Acq On : 10 Aug 2018 12:21 pm
Operator : ANAJ
Sample : FA56349-17 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 10 12:38:38 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



I-July2518.M Mon Aug 13 08:22:04 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56660.D
Acq On : 10 Aug 2018 1:43 pm
Operator : ANAJ
Sample : FA56349-18 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 10 15:28:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1032213	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	735889	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	373037	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	77904	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	273606	50.20	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.40%			
46) 1,2-Dichloroethane-d4	8.994	65	388560	52.73	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.46%			
57) Toluene-d8	11.152	98	986679	48.59	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.18%			
79) 4-Bromofluorobenzene	13.353	174	282897	48.02	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.04%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

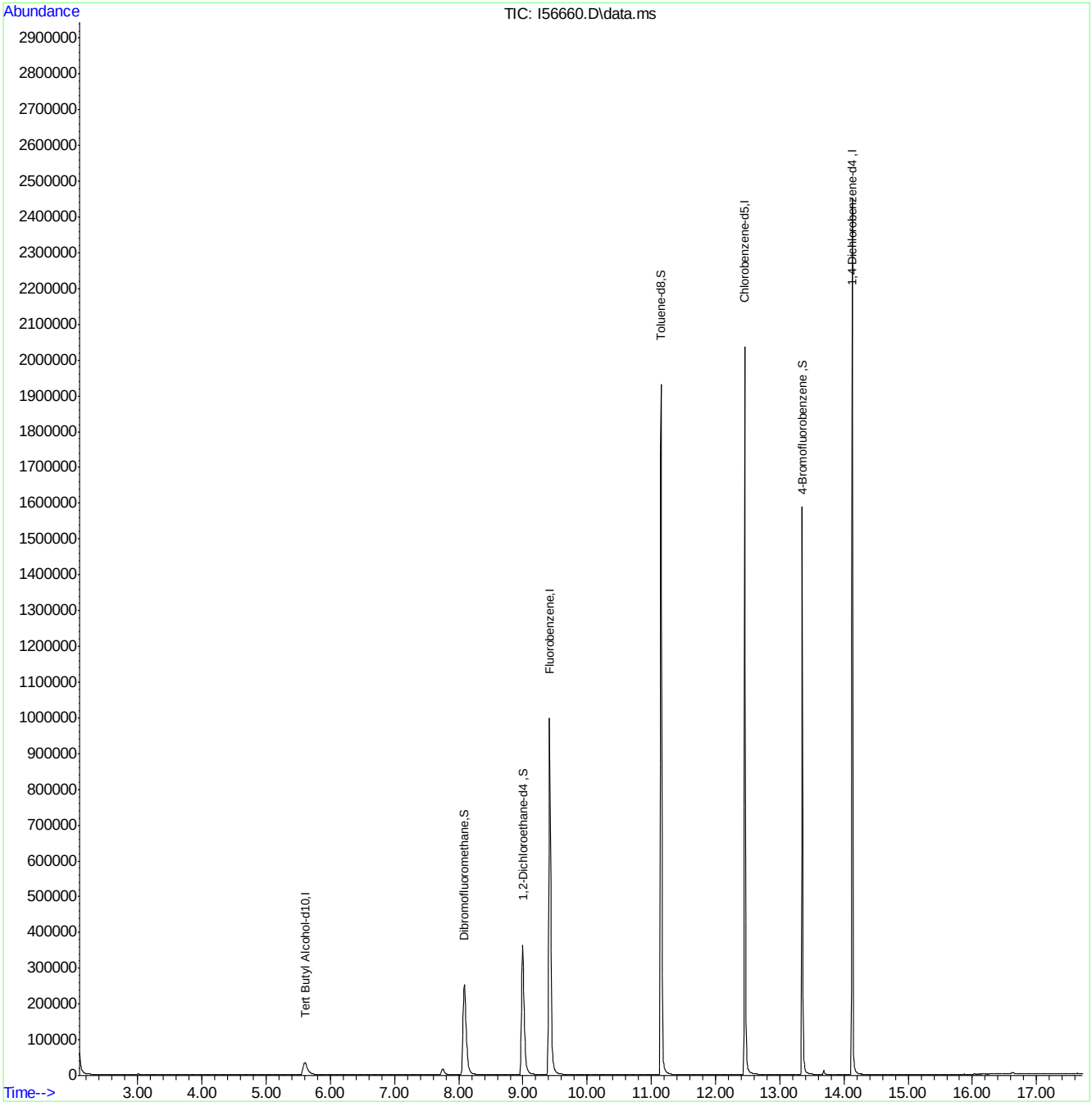
7.1.18

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56660.D
Acq On : 10 Aug 2018 1:43 pm
Operator : ANAJ
Sample : FA56349-18 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 10 15:28:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 08/13/18 15:33

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56661.D
Acq On : 10 Aug 2018 2:06 pm
Operator : ANAJ
Sample : FA56349-19 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 10 15:29:27 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1019350	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	732895	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	373210	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	74698	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	274109	50.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.86%			
46) 1,2-Dichloroethane-d4	8.994	65	388743	53.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 106.84%			
57) Toluene-d8	11.152	98	991047	49.00	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.00%			
79) 4-Bromofluorobenzene	13.353	174	284009	48.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.36%			
Target Compounds						Qvalue
109) Tert Butyl Alcohol	5.726	59	13090m	27.34	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

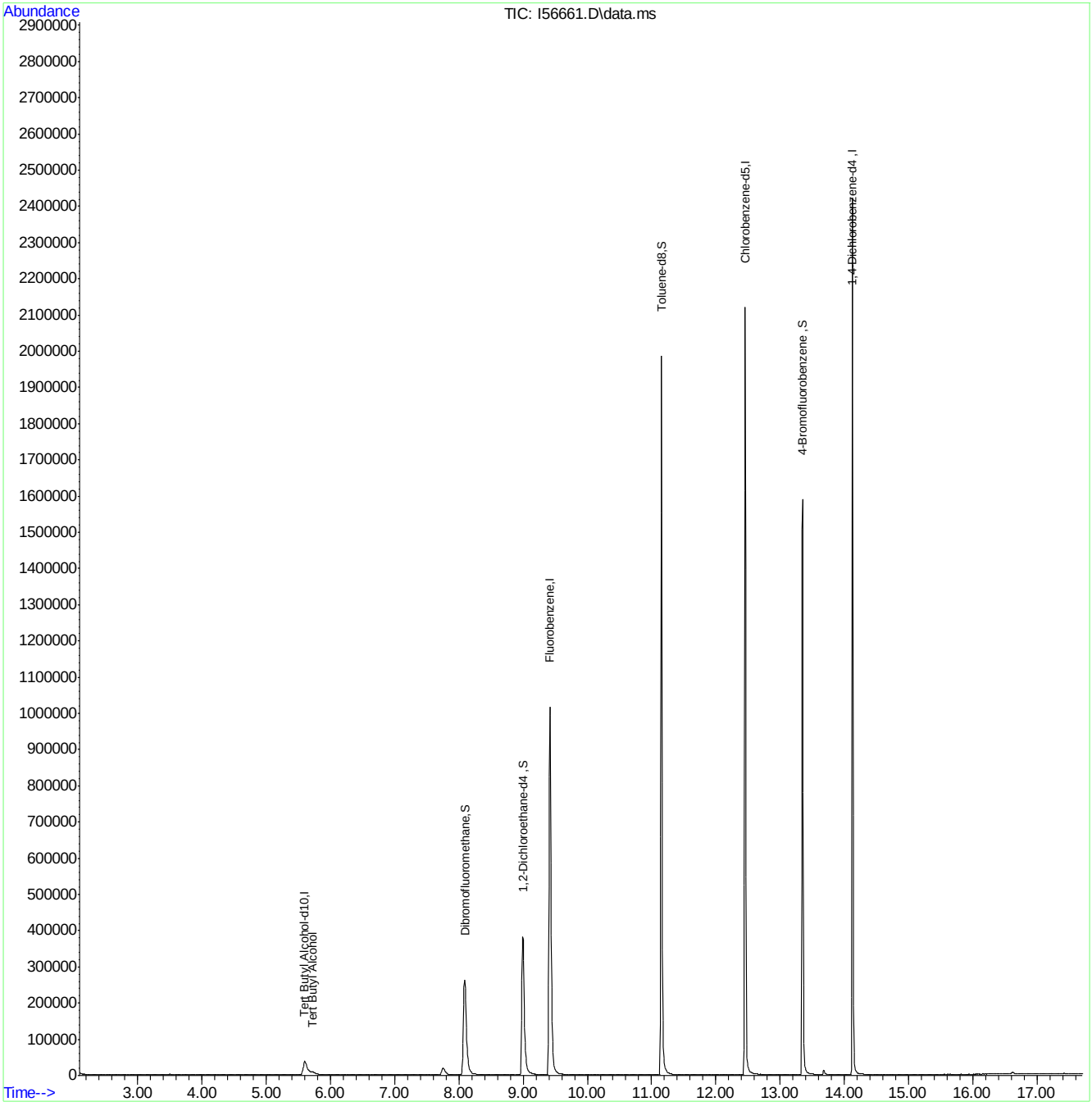
7.1.19

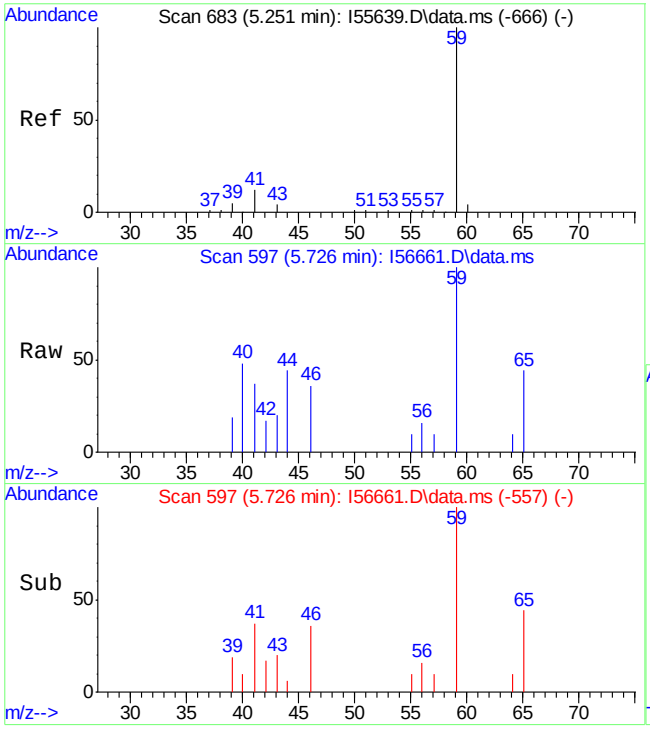
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56661.D
Acq On : 10 Aug 2018 2:06 pm
Operator : ANAJ
Sample : FA56349-19 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 10 15:29:27 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

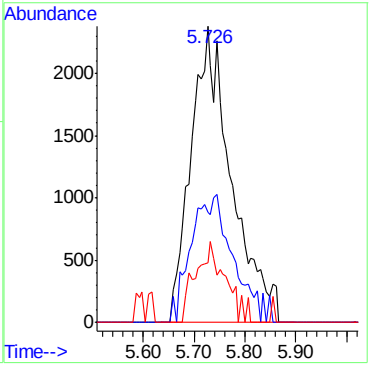




#109
Tert Butyl Alcohol
Concen: 27.34 ug/L m
RT: 5.726 min Scan# 597
Delta R.T. -0.006 min
Lab File: I56661.D
Acq: 10 Aug 2018 2:06 pm

Tgt Ion: 59 Resp: 13090

Ion	Ratio	Lower	Upper
59	100		
41	37.0	4.7	44.7
43	20.0	0.0	35.2



Manual Integration Approval Summary

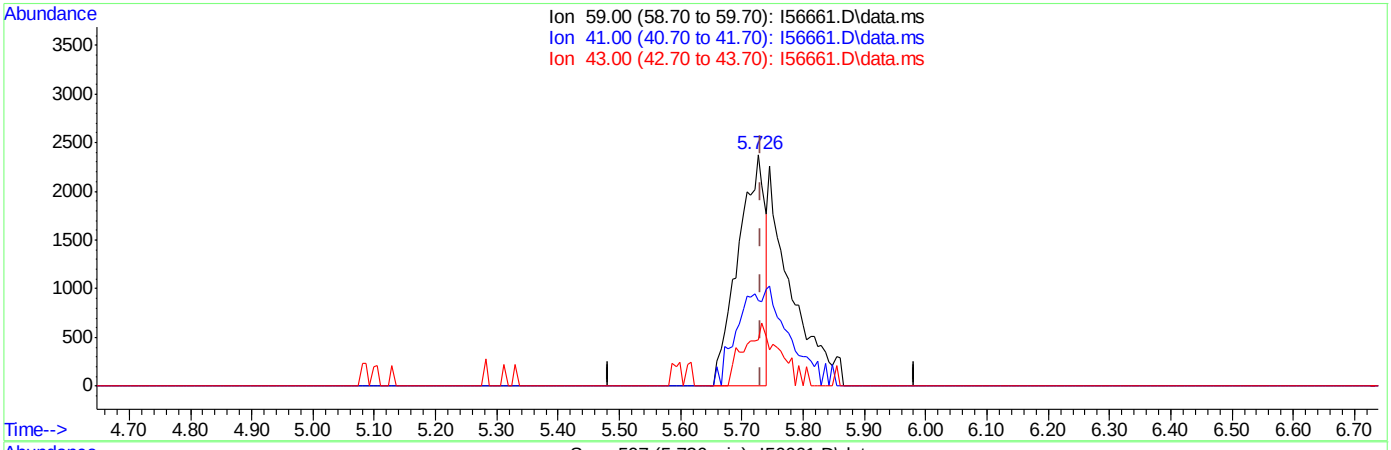
Sample Number:	FA56349-19	**Method:**	SW846 8260C
Lab FileID:	I56661.D	**Analyst approved:**	08/13/18 08:25 Ana Jimenez
Injection Time:	08/10/18 14:06	**Supervisor approved:**	08/13/18 15:33 Melissa Mangual

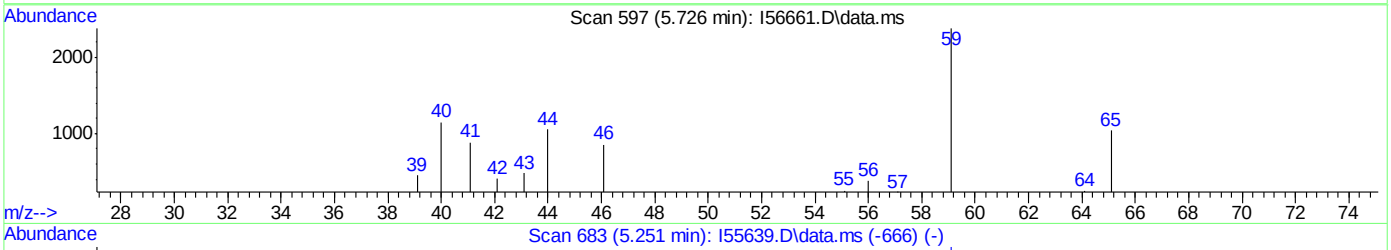
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tert-Butyl Alcohol	75-65-0		5.73	Poor instrument integration

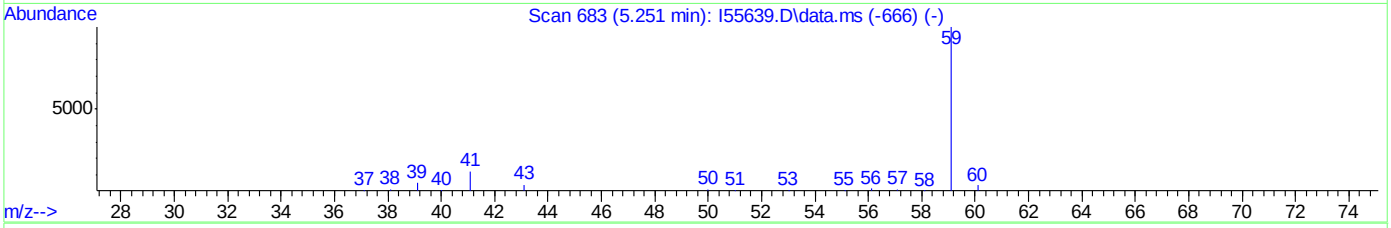
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56661.D
Acq On : 10 Aug 2018 2:06 pm
Operator : ANAJ
Sample : FA56349-19 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 10 15:28:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56661.D\data.ms

(109) Tert Butyl Alcohol

5.726min (-0.006) 15.00ug/L

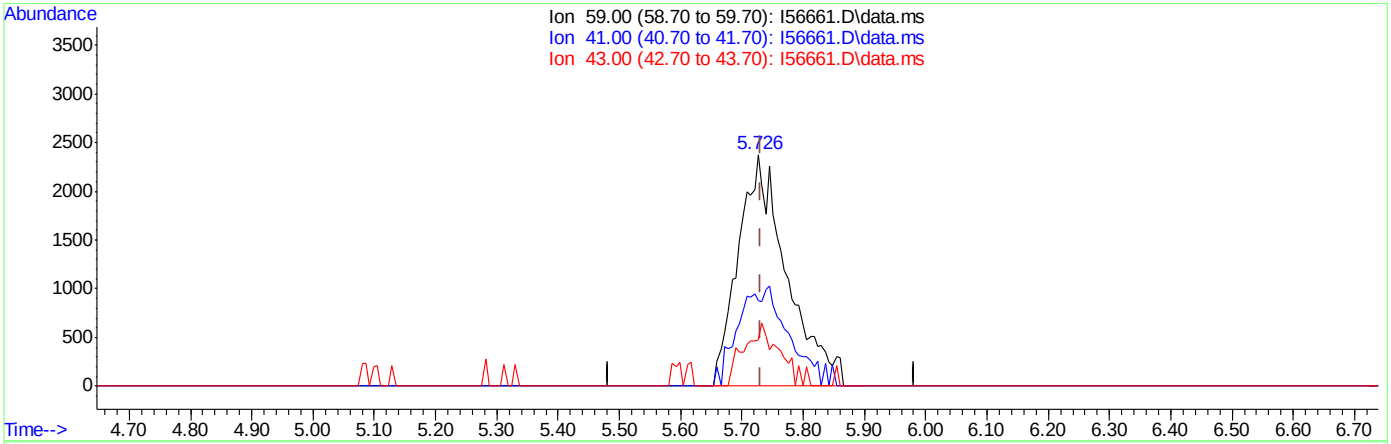
response 7182

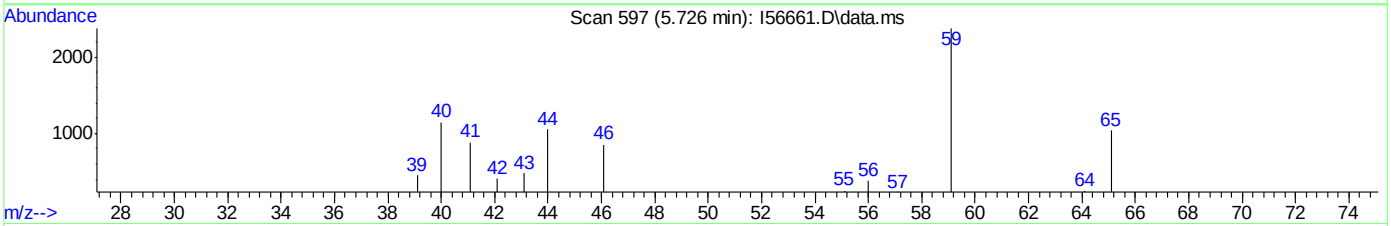
Ion	Exp%	Act%
59.00	100	100
41.00	24.70	37.01
43.00	15.20	19.97
0.00	0.00	0.00

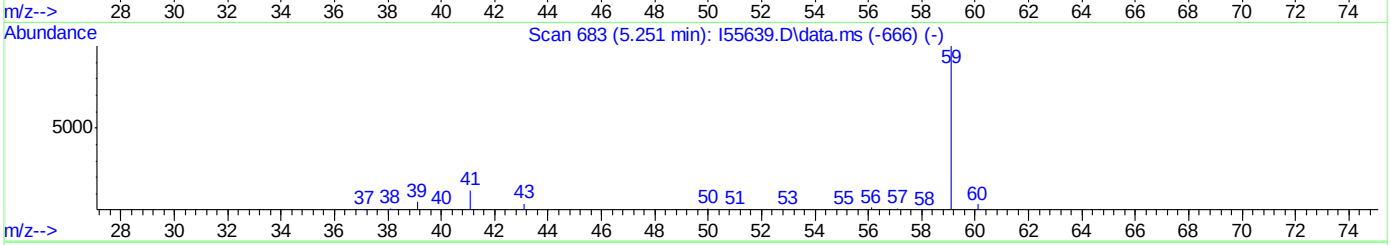
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56661.D
Acq On : 10 Aug 2018 2:06 pm
Operator : ANAJ
Sample : FA56349-19 MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 10 15:28:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56661.D\data.ms

(109) Tert Butyl Alcohol

5.726min (-0.006) 27.34ug/L m

response 13090

Ion	Exp%	Act%
59.00	100	100
41.00	24.70	37.01
43.00	15.20	19.97
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53236.D
Acq On : 2 Aug 2018 7:34 pm
Operator : melissam
Sample : FA56349-13 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 07:12:27 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	5204758	5.00	ppb	0.00
18) Chlorobenzene-d5	10.600	117	3827702	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.205	65	2619539	6.12	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 122.40%			
19) Toluene-d8	9.044	98	3800483	5.03	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.60%			

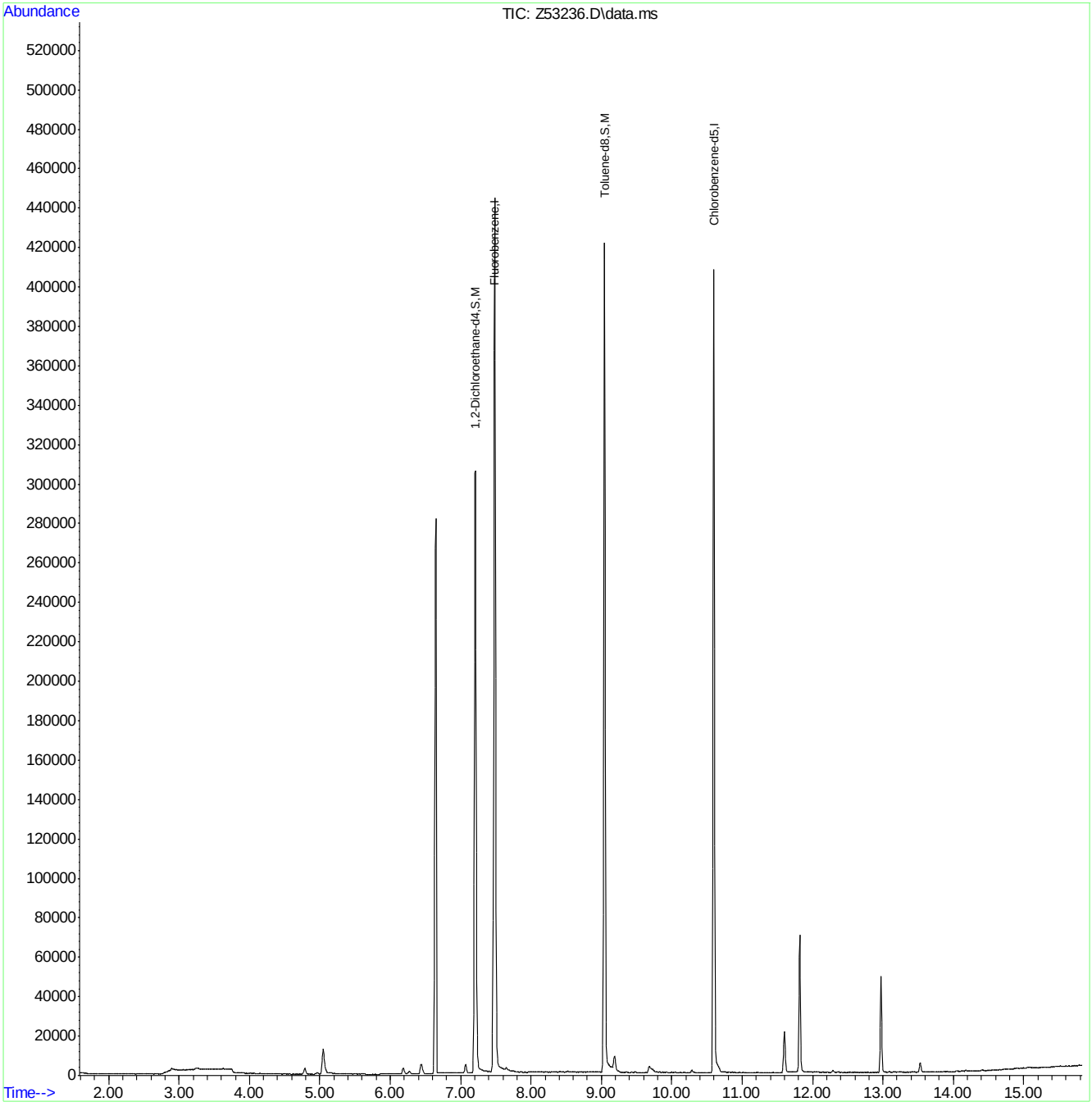
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53236.D
Acq On : 2 Aug 2018 7:34 pm
Operator : melissam
Sample : FA56349-13 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 07:12:27 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53385.D
Acq On : 10 Aug 2018 4:17 pm
Operator : melissam
Sample : FA56349-14 Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 13 11:19:47 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

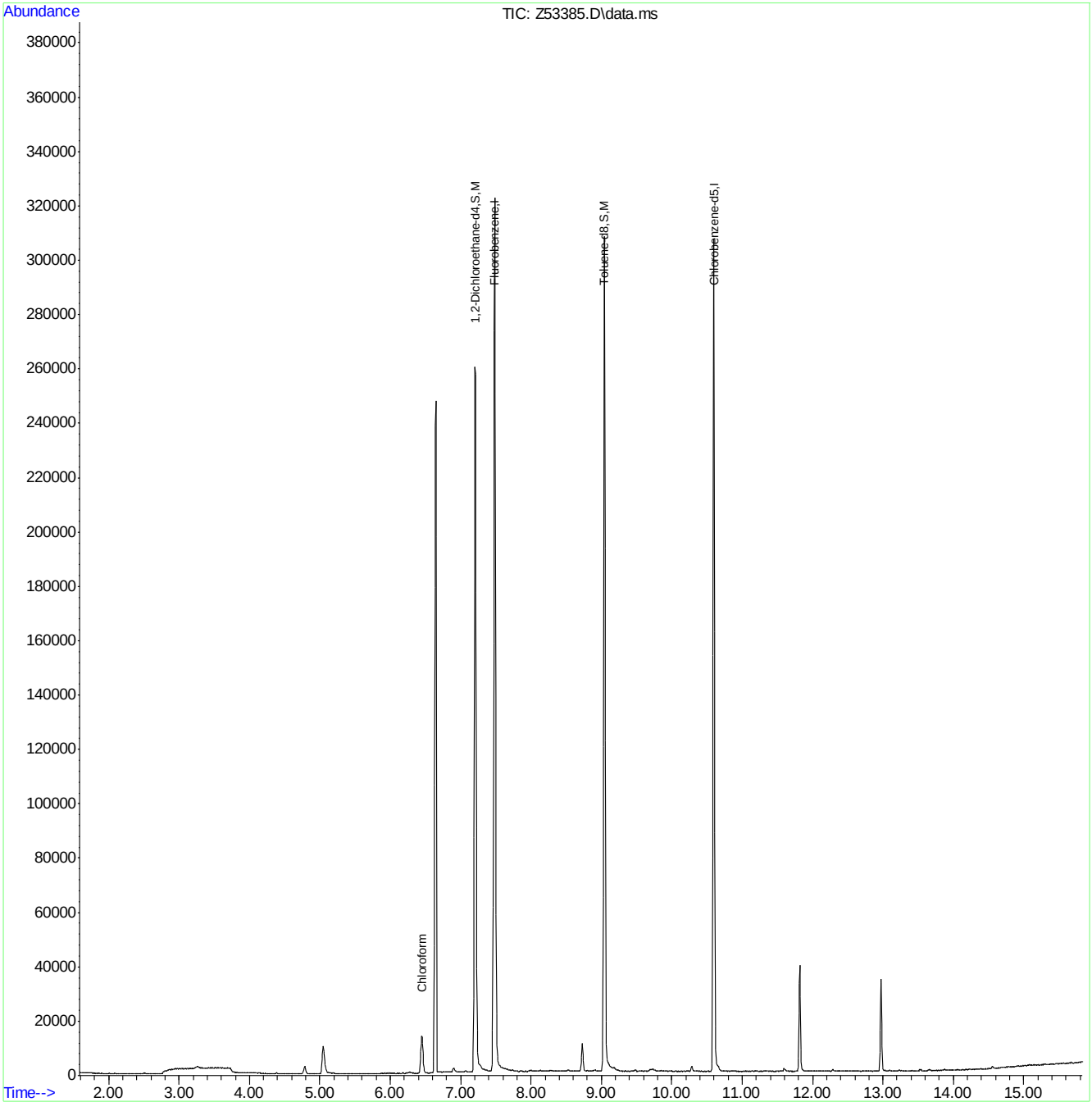
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	3755997	5.00	ppb	0.00
18) Chlorobenzene-d5	10.599	117	2859663	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.204	65	2247921	6.48	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 129.60%#			
19) Toluene-d8	9.041	98	2823829	5.36	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.20%			
Target Compounds						Qvalue
9) Chloroform	6.454	83	117024	0.16	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

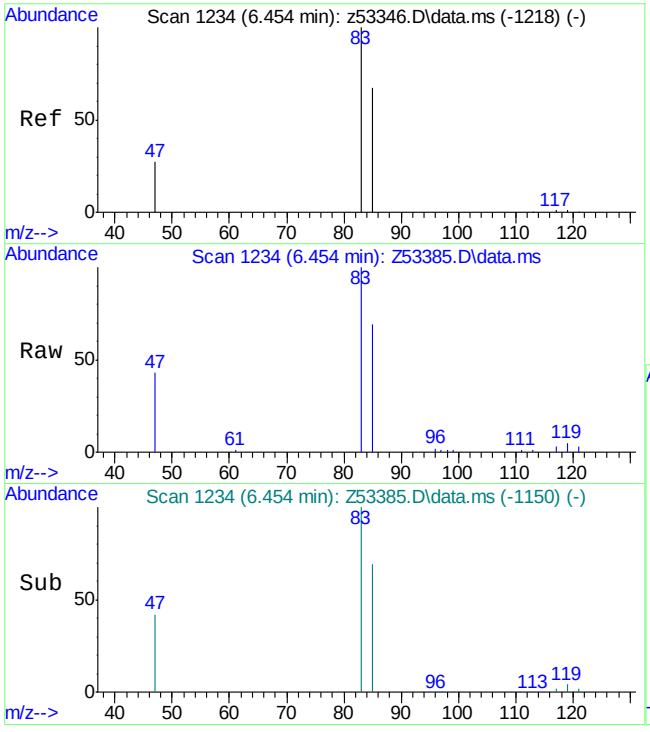
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53385.D
Acq On : 10 Aug 2018 4:17 pm
Operator : melissam
Sample : FA56349-14 Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 13 11:19:47 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



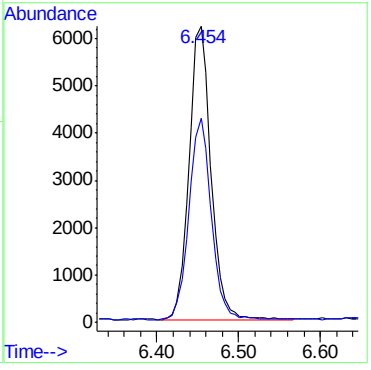
SIMCL080918.M Mon Aug 13 12:08:08 2018 Page: 2



#9
Chloroform
Concen: 0.16 ppb
RT: 6.454 min Scan# 1234
Delta R.T. 0.000 min
Lab File: Z53385.D
Acq: 10 Aug 2018 4:17 pm

Tgt Ion: 83 Resp: 117024

Ion	Ratio	Lower	Upper
83	100		
85	70.8	47.4	87.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53356.D
Acq On : 9 Aug 2018 4:05 pm
Operator : melissam
Sample : FA56349-14 Inst : MSVOA15
Misc : ms40952,vz2011,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 10 10:05:50 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

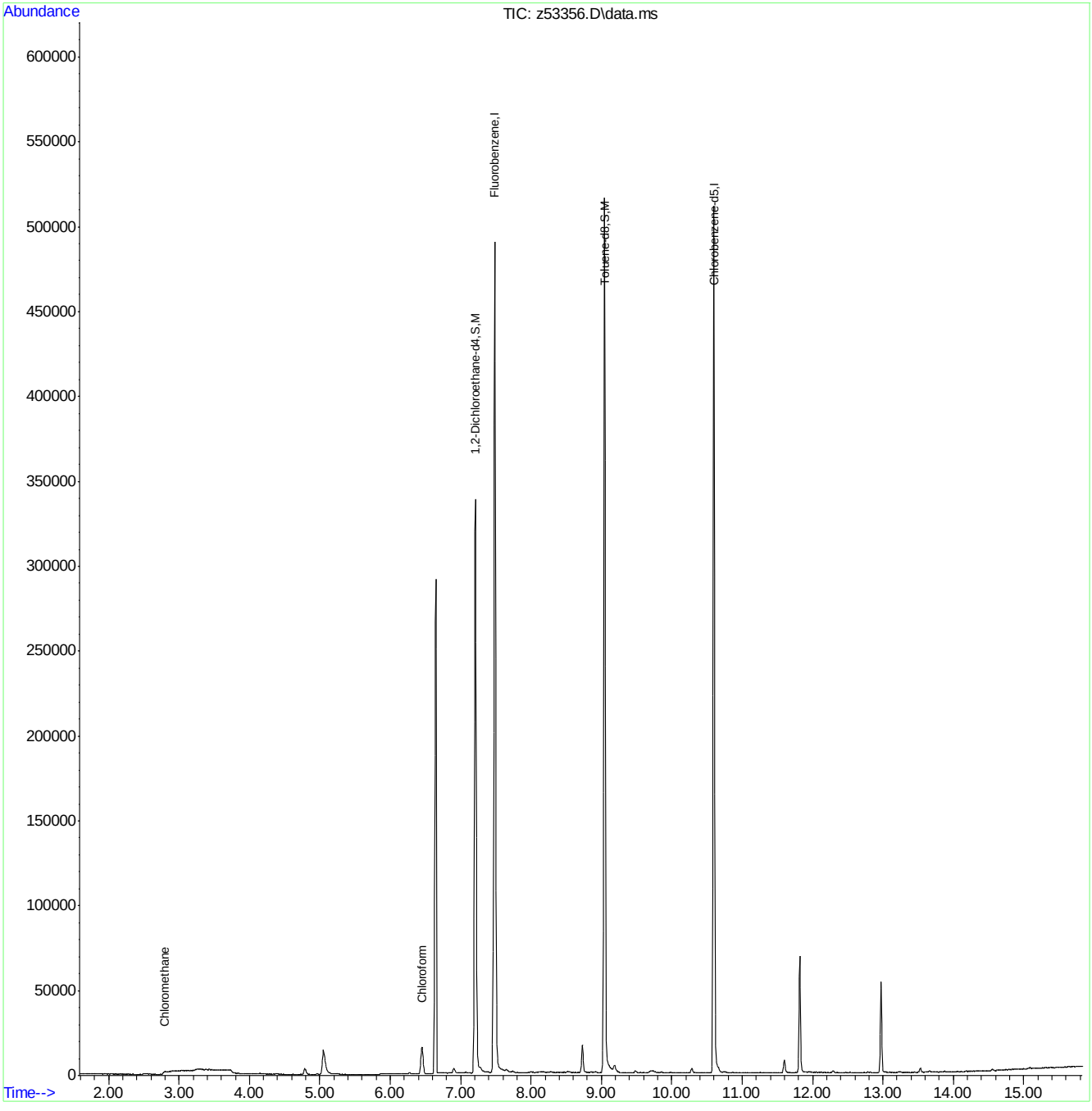
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	5739979	5.00	ppb	0.00
18) Chlorobenzene-d5	10.599	117	4683113	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.211	65	2875991	5.42	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 108.40%			
19) Toluene-d8	9.044	98	4619225	5.36	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.20%			
Target Compounds						Qvalue
3) Chloromethane	2.797	50	36023	0.06	ppb	87
9) Chloroform	6.454	83	136430	0.12	ppb	98

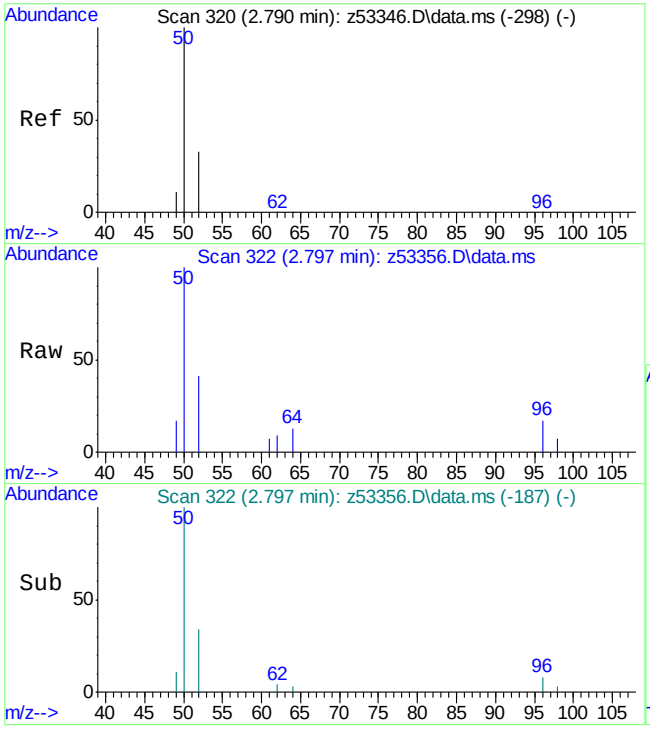
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53356.D
Acq On : 9 Aug 2018 4:05 pm
Operator : melissam
Sample : FA56349-14 Inst : MSVOA15
Misc : ms40952,vz2011,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 10 10:05:50 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

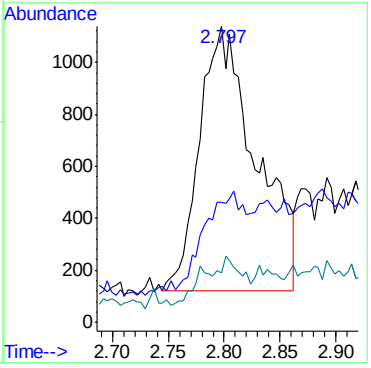


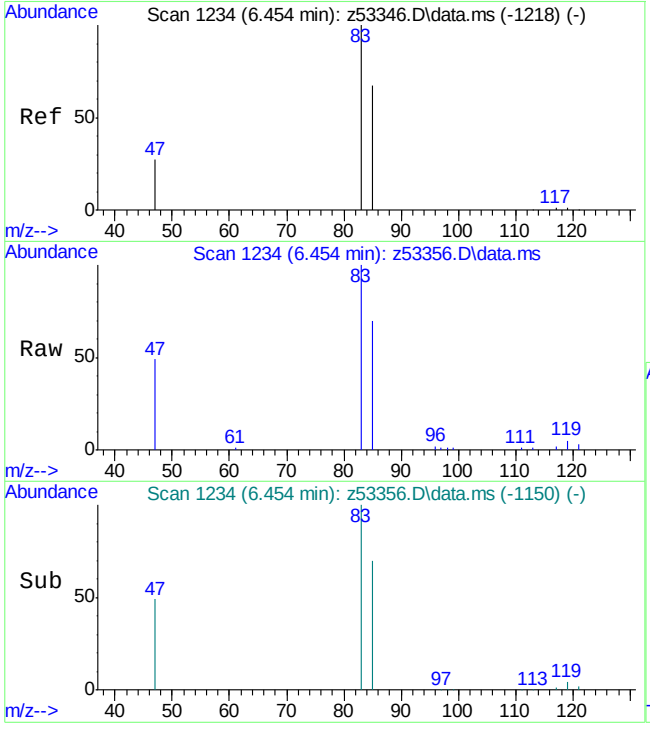


#3
Chloromethane
Concen: 0.06 ppb
RT: 2.797 min Scan# 322
Delta R.T. 0.007 min
Lab File: z53356.D
Acq: 9 Aug 2018 4:05 pm

Tgt Ion: 50 Resp: 36023

Ion	Ratio	Lower	Upper
50	100		
52	27.3	13.7	53.7
49	3.1	0.0	30.3

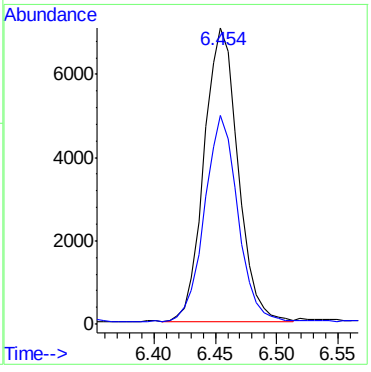




#9
Chloroform
Concen: 0.12 ppb
RT: 6.454 min Scan# 1234
Delta R.T. 0.000 min
Lab File: z53356.D
Acq: 9 Aug 2018 4:05 pm

Tgt Ion: 83 Resp: 136430

Ion	Ratio	Lower	Upper
83	100		
85	69.3	47.4	87.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53238.D
Acq On : 2 Aug 2018 8:24 pm
Operator : melissam
Sample : FA56349-15 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 07:12:58 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

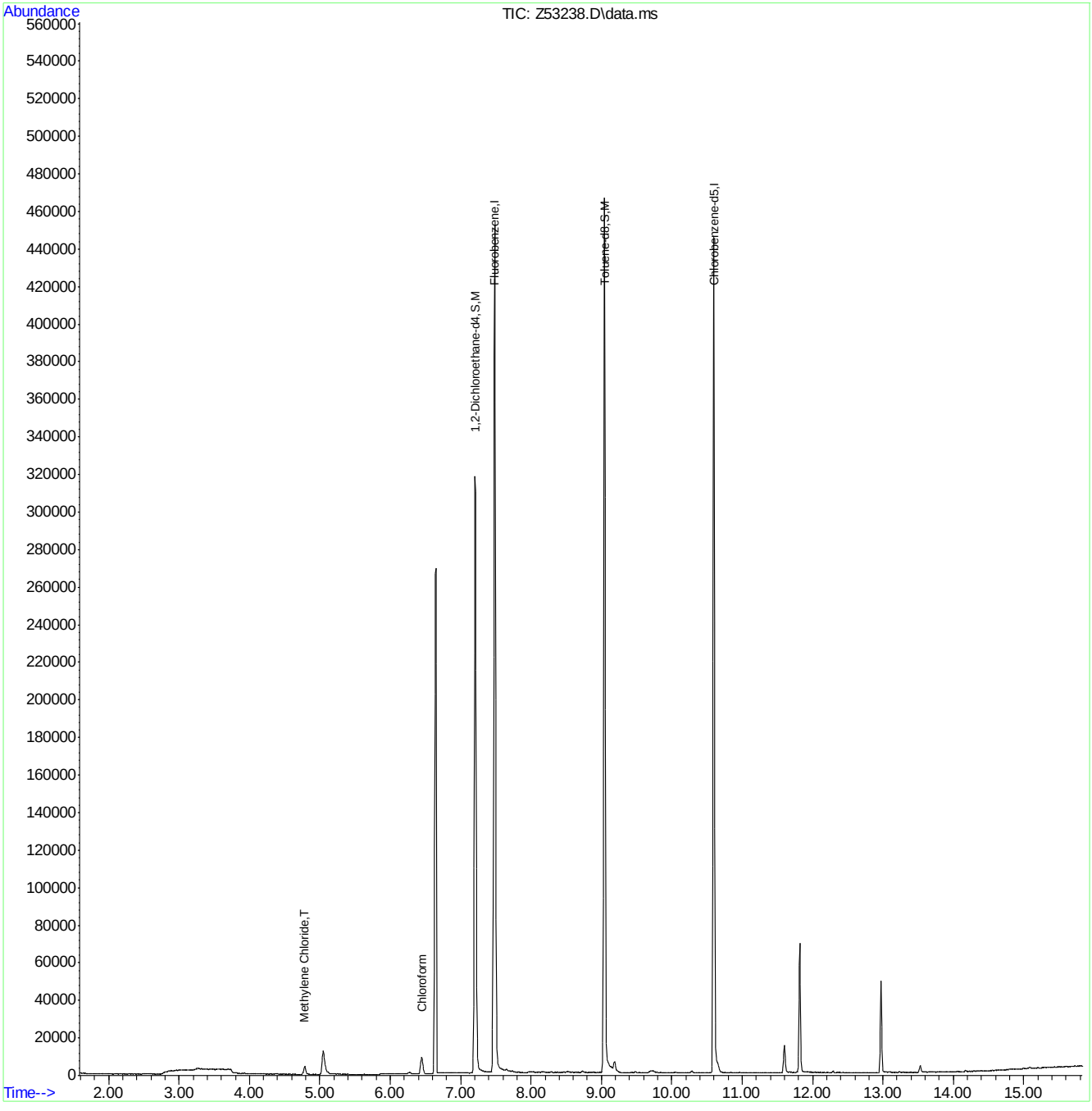
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	5330908	5.00	ppb	0.00
18) Chlorobenzene-d5	10.600	117	4208325	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.205	65	2697896	6.15	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 123.00%			
19) Toluene-d8	9.044	98	4235749	5.10	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.00%			
Target Compounds						Qvalue
5) Methylene Chloride	4.785	84	28639	0.05	ppb	98
9) Chloroform	6.448	83	66720	0.08	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

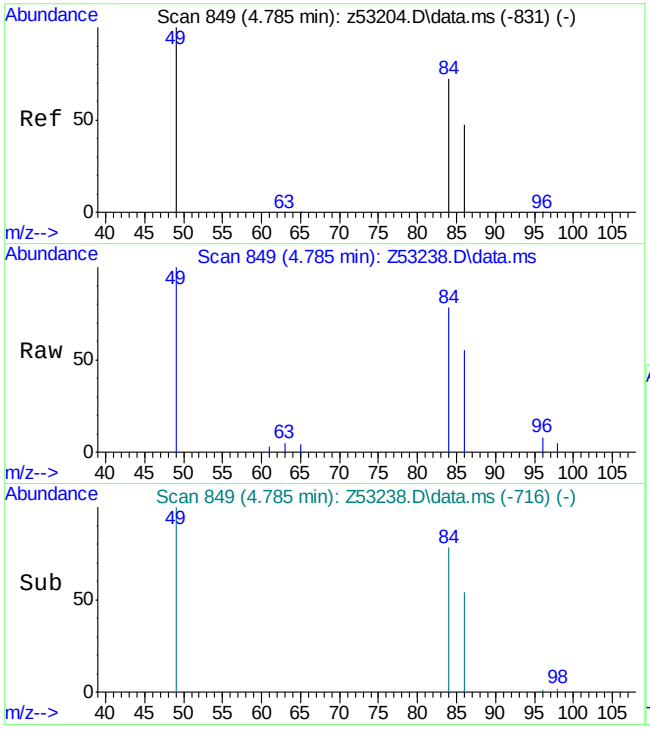
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53238.D
Acq On : 2 Aug 2018 8:24 pm
Operator : melissam
Sample : FA56349-15 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 07:12:58 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



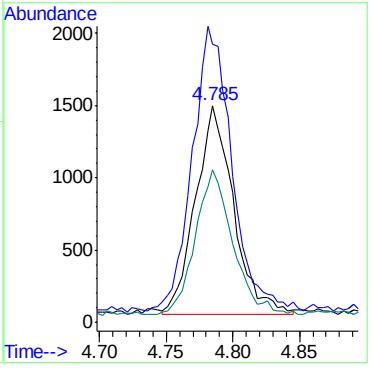
SIMCL072618.M Tue Aug 07 07:53:23 2018 Page: 2

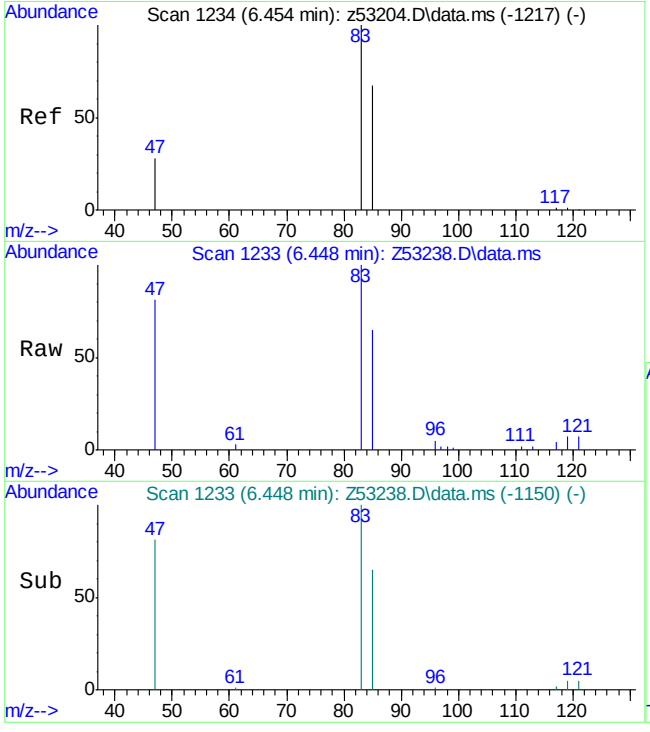


#5
Methylene Chloride
Concen: 0.05 ppb
RT: 4.785 min Scan# 849
Delta R.T. -0.000 min
Lab File: Z53238.D
Acq: 2 Aug 2018 8:24 pm

Tgt Ion: 84 Resp: 28639

Ion	Ratio	Lower	Upper
84	100		
49	142.4	121.0	161.0
86	67.6	45.7	85.7

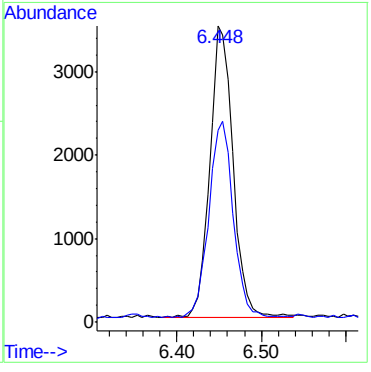




#9
Chloroform
Concen: 0.08 ppb
RT: 6.448 min Scan# 1233
Delta R.T. -0.006 min
Lab File: Z53238.D
Acq: 2 Aug 2018 8:24 pm

Tgt Ion: 83 Resp: 66720

Ion	Ratio	Lower	Upper
83	100		
85	70.7	47.6	87.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53239.D
Acq On : 2 Aug 2018 8:49 pm
Operator : melissam
Sample : FA56349-16 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 07:13:06 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	7.483	96	5280031	5.00 ppb	0.00
18) Chlorobenzene-d5	10.599	117	4198924	5.00 ppb	0.00
System Monitoring Compounds					
13) 1,2-Dichloroethane-d4	7.211	65	2725279	6.27 ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery	= 125.40%#	
19) Toluene-d8	9.044	98	4254096	5.13 ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery	= 102.60%	
Target Compounds					Qvalue
9) Chloroform	6.454	83	42640	0.05 ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

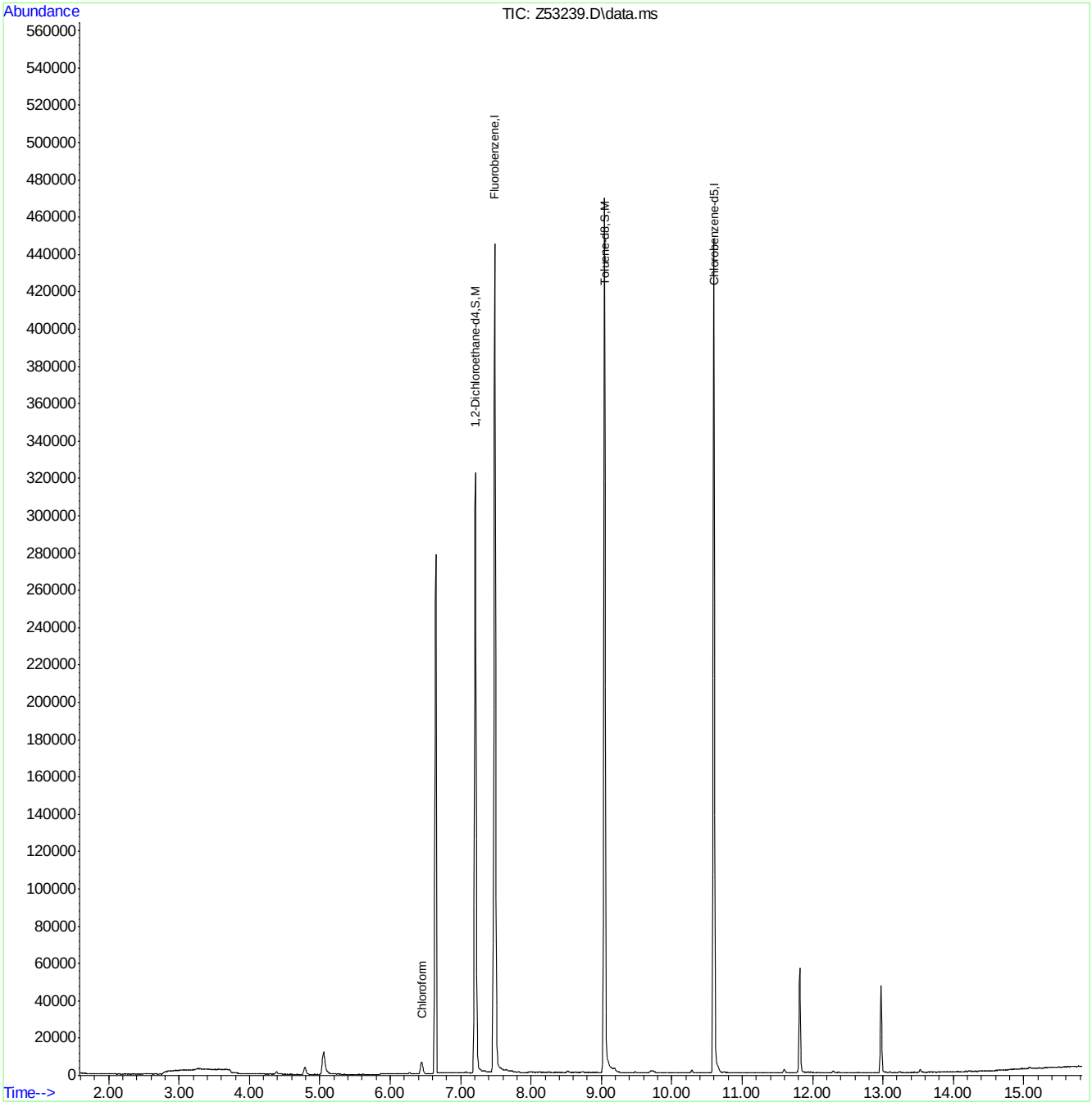
7.1.24

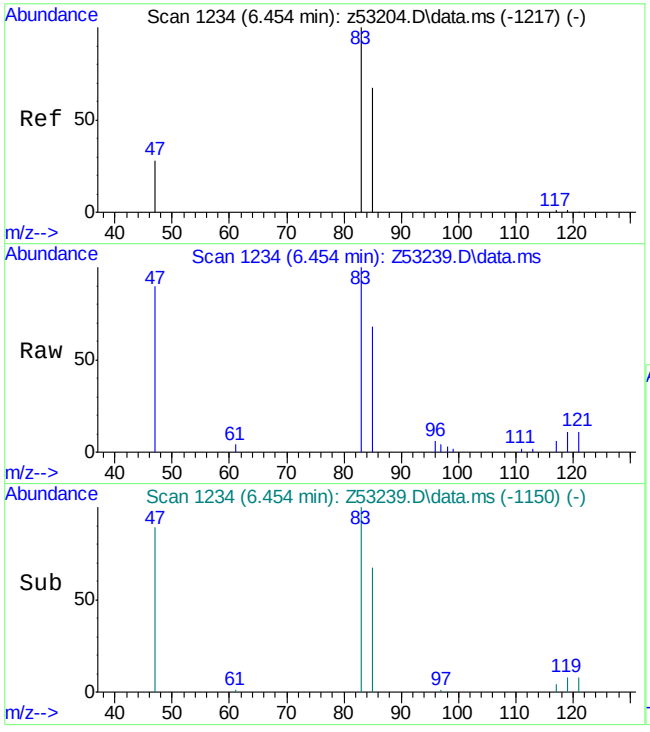
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53239.D
Acq On : 2 Aug 2018 8:49 pm
Operator : melissam
Sample : FA56349-16 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 03 07:13:06 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

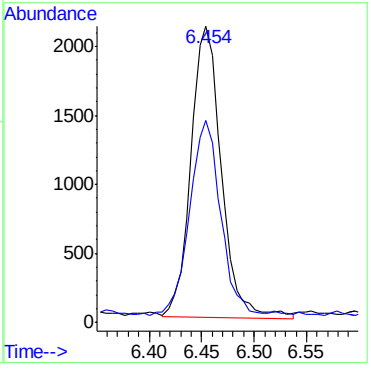




#9
Chloroform
Concen: 0.05 ppb
RT: 6.454 min Scan# 1234
Delta R.T. 0.000 min
Lab File: Z53239.D
Acq: 2 Aug 2018 8:49 pm

Tgt Ion: 83 Resp: 42640

Ion	Ratio	Lower	Upper
83	100		
85	67.1	47.6	87.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53240.D
Acq On : 2 Aug 2018 9:13 pm
Operator : melissam
Sample : FA56349-17 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 03 07:13:16 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

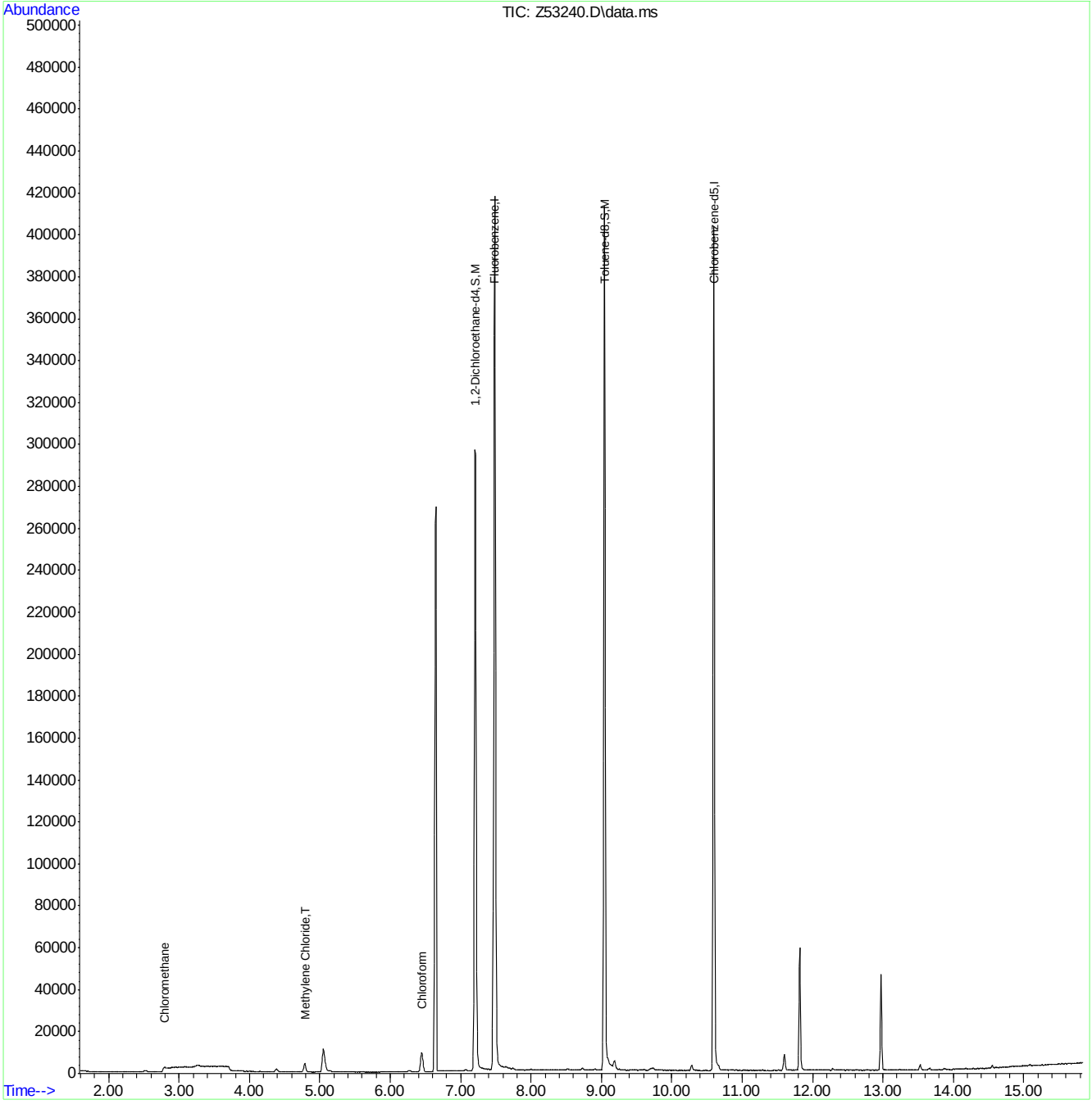
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	7.483	96	4894256	5.00 ppb	0.00
18) Chlorobenzene-d5	10.599	117	3716786	5.00 ppb	0.00
System Monitoring Compounds					
13) 1,2-Dichloroethane-d4	7.204	65	2582733	6.41 ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery	= 128.20%#	
19) Toluene-d8	9.044	98	3687800	5.03 ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery	= 100.60%	
Target Compounds					Qvalue
3) Chloromethane	2.790	50	44915	0.10 ppb	91
5) Methylene Chloride	4.788	84	28720	0.06 ppb	99
9) Chloroform	6.454	83	73695	0.09 ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

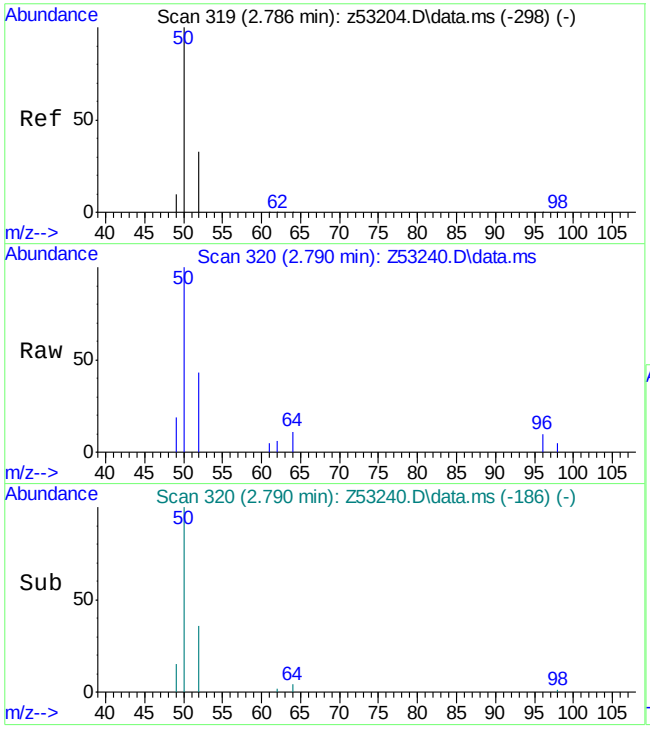
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53240.D
Acq On : 2 Aug 2018 9:13 pm
Operator : melissam
Sample : FA56349-17 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 03 07:13:16 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



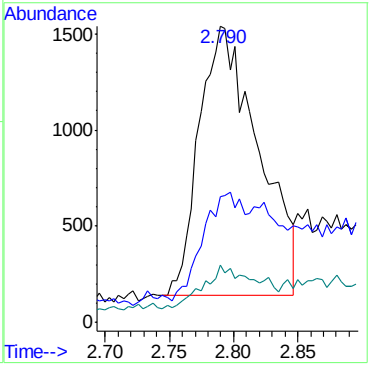
SIMCL072618.M Tue Aug 07 07:53:27 2018 Page: 2

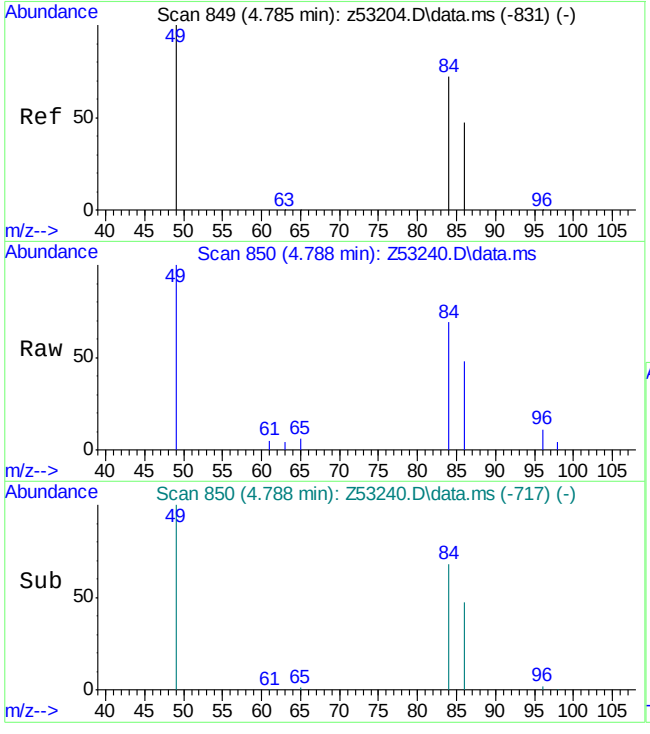


#3
Chloromethane
Concen: 0.10 ppb
RT: 2.790 min Scan# 320
Delta R.T. 0.004 min
Lab File: Z53240.D
Acq: 2 Aug 2018 9:13 pm

Tgt Ion: 50 Resp: 44915

Ion	Ratio	Lower	Upper
50	100		
52	29.0	13.8	53.8
49	14.6	0.0	30.1

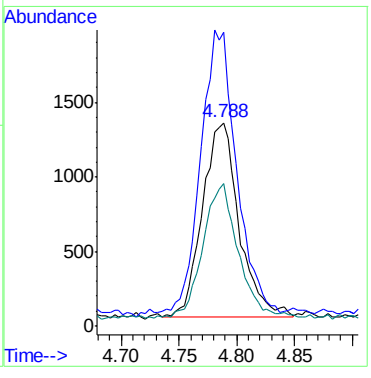


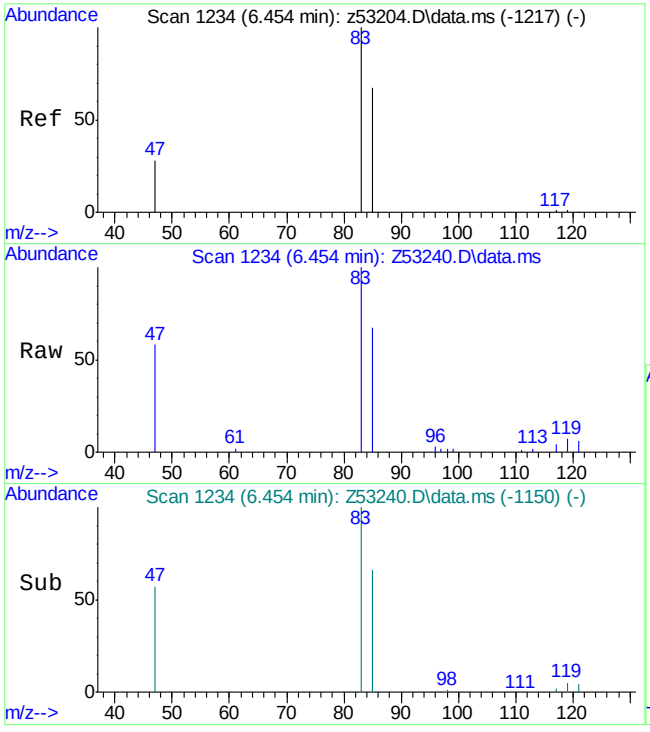


#5
Methylene Chloride
Concen: 0.06 ppb
RT: 4.788 min Scan# 850
Delta R.T. 0.003 min
Lab File: Z53240.D
Acq: 2 Aug 2018 9:13 pm

Tgt Ion: 84 Resp: 28720

Ion	Ratio	Lower	Upper
84	100		
49	140.6	121.0	161.0
86	67.4	45.7	85.7

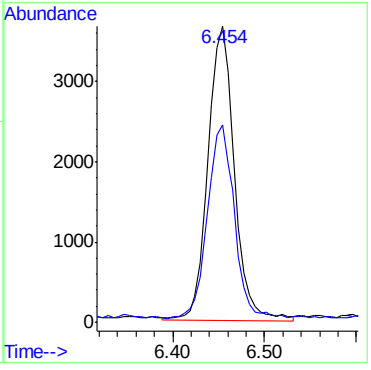




#9
Chloroform
Concen: 0.09 ppb
RT: 6.454 min Scan# 1234
Delta R.T. -0.000 min
Lab File: Z53240.D
Acq: 2 Aug 2018 9:13 pm

Tgt Ion: 83 Resp: 73695

Ion	Ratio	Lower	Upper
83	100		
85	69.6	47.6	87.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53241.D
Acq On : 2 Aug 2018 9:38 pm
Operator : melissam
Sample : FA56349-18 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 03 07:13:26 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

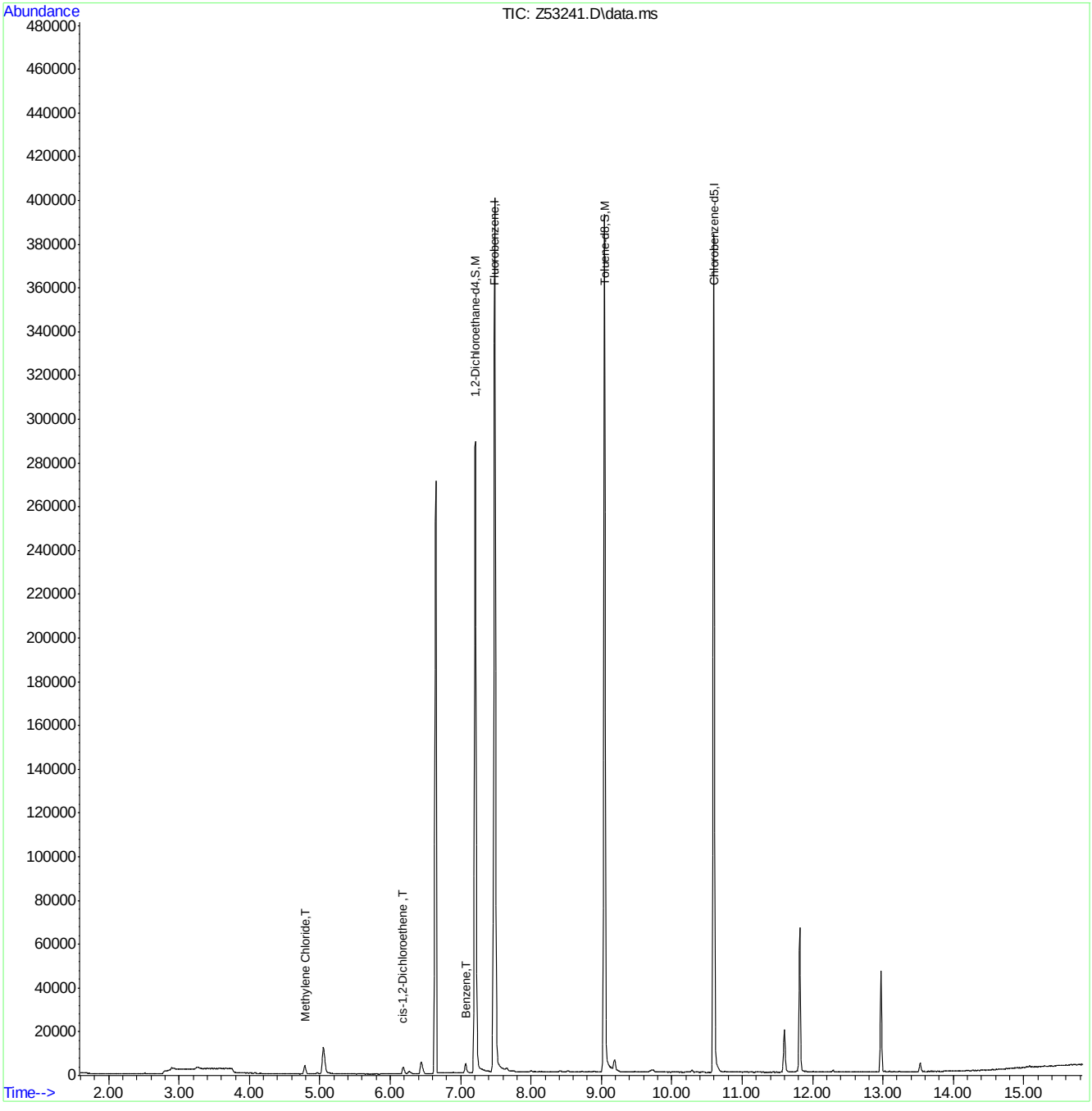
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	7.483	96	4724231	5.00 ppb	0.00
18) Chlorobenzene-d5	10.599	117	3578117	5.00 ppb	0.00
System Monitoring Compounds					
13) 1,2-Dichloroethane-d4	7.211	65	2493649	6.41 ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery	= 128.20%#	
19) Toluene-d8	9.044	98	3523569	4.99 ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery	= 99.80%	
Target Compounds					Qvalue
5) Methylene Chloride	4.788	84	26464	0.05 ppb	97
8) cis-1,2-Dichloroethene	6.181	96	18280	0.05 ppb	96
12) Benzene	7.075	78	61307	0.05 ppb	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

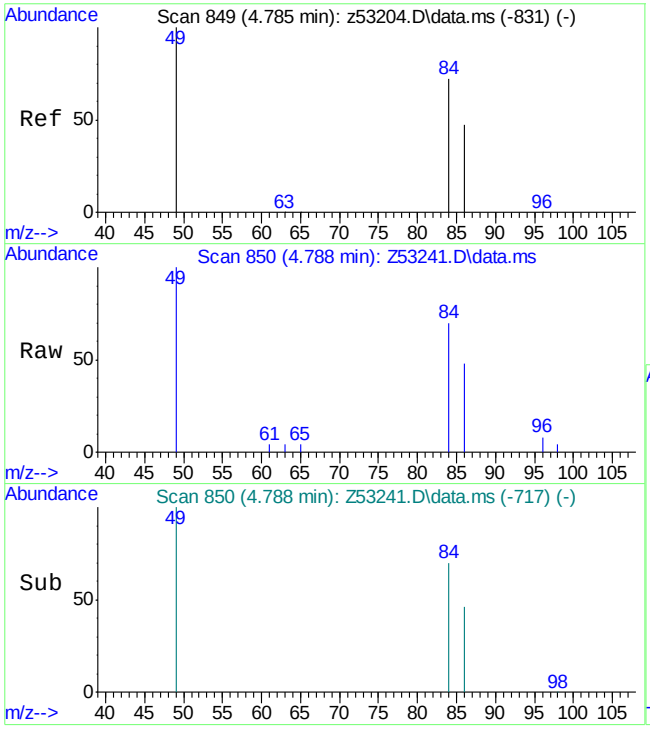
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53241.D
Acq On : 2 Aug 2018 9:38 pm
Operator : melissam
Sample : FA56349-18 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 03 07:13:26 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



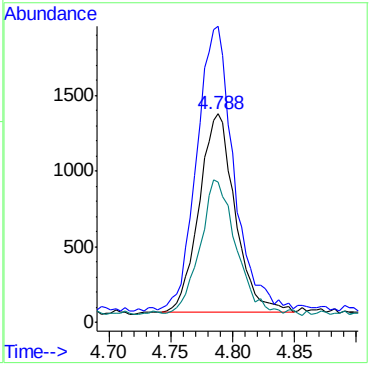
SIMCL072618.M Tue Aug 07 07:53:29 2018 Page: 2

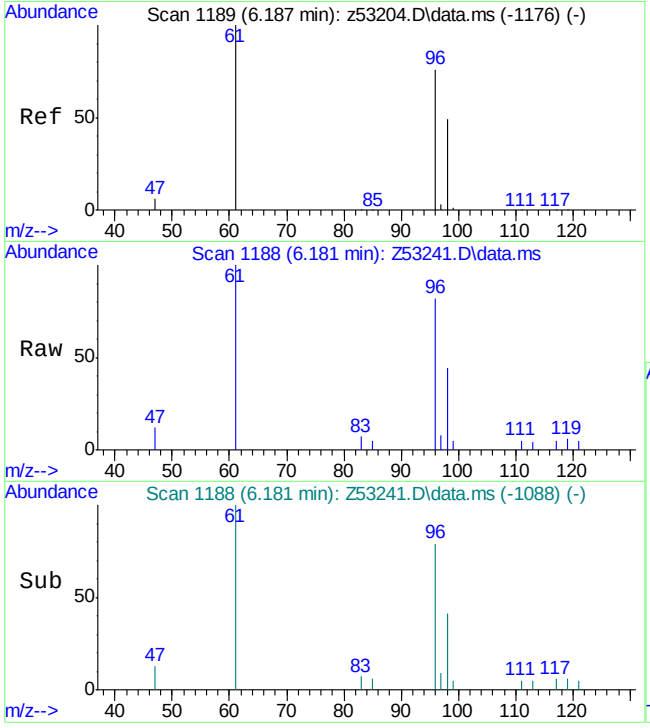


#5
Methylene Chloride
Concen: 0.05 ppb
RT: 4.788 min Scan# 850
Delta R.T. 0.003 min
Lab File: Z53241.D
Acq: 2 Aug 2018 9:38 pm

Tgt Ion: 84 Resp: 26464

Ion	Ratio	Lower	Upper
84	100		
49	145.5	121.0	161.0
86	67.7	45.7	85.7

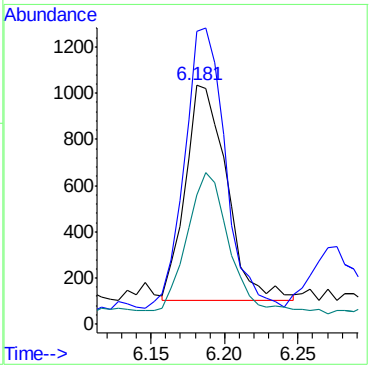


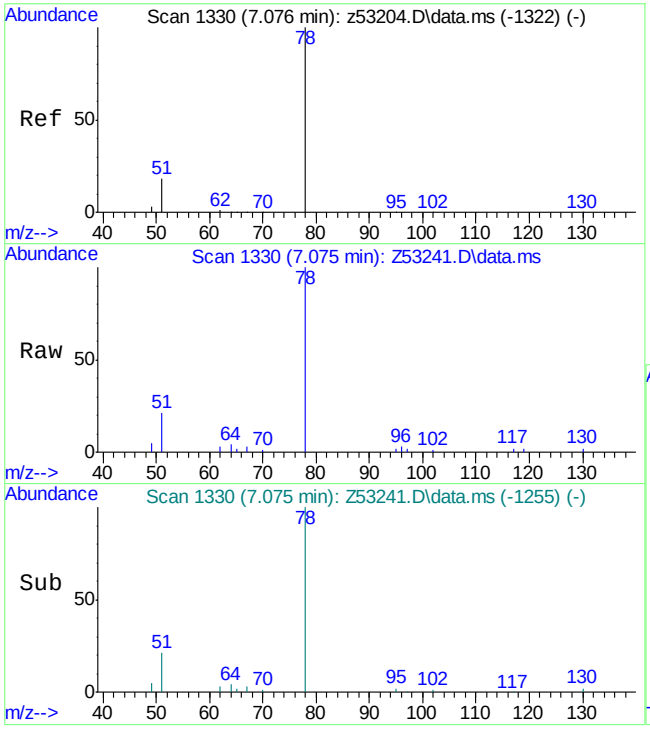


#8
cis-1,2-Dichloroethene
Concen: 0.05 ppb
RT: 6.181 min Scan# 1188
Delta R.T. -0.006 min
Lab File: Z53241.D
Acq: 2 Aug 2018 9:38 pm

Tgt Ion: 96 Resp: 18280

Ion	Ratio	Lower	Upper
96	100		
61	128.4	111.7	151.7
98	68.5	43.8	83.8

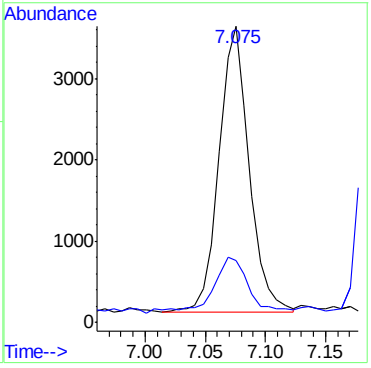




#12
Benzene
Concen: 0.05 ppb
RT: 7.075 min Scan# 1330
Delta R.T. -0.001 min
Lab File: Z53241.D
Acq: 2 Aug 2018 9:38 pm

Tgt Ion: 78 Resp: 61307

Ion	Ratio	Lower	Upper
78	100		
51	23.4	0.0	39.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53357.D
Acq On : 9 Aug 2018 4:30 pm
Operator : melissam
Sample : FA56349-19 Inst : MSVOA15
Misc : ms40952,vz2011,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 10 10:05:52 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

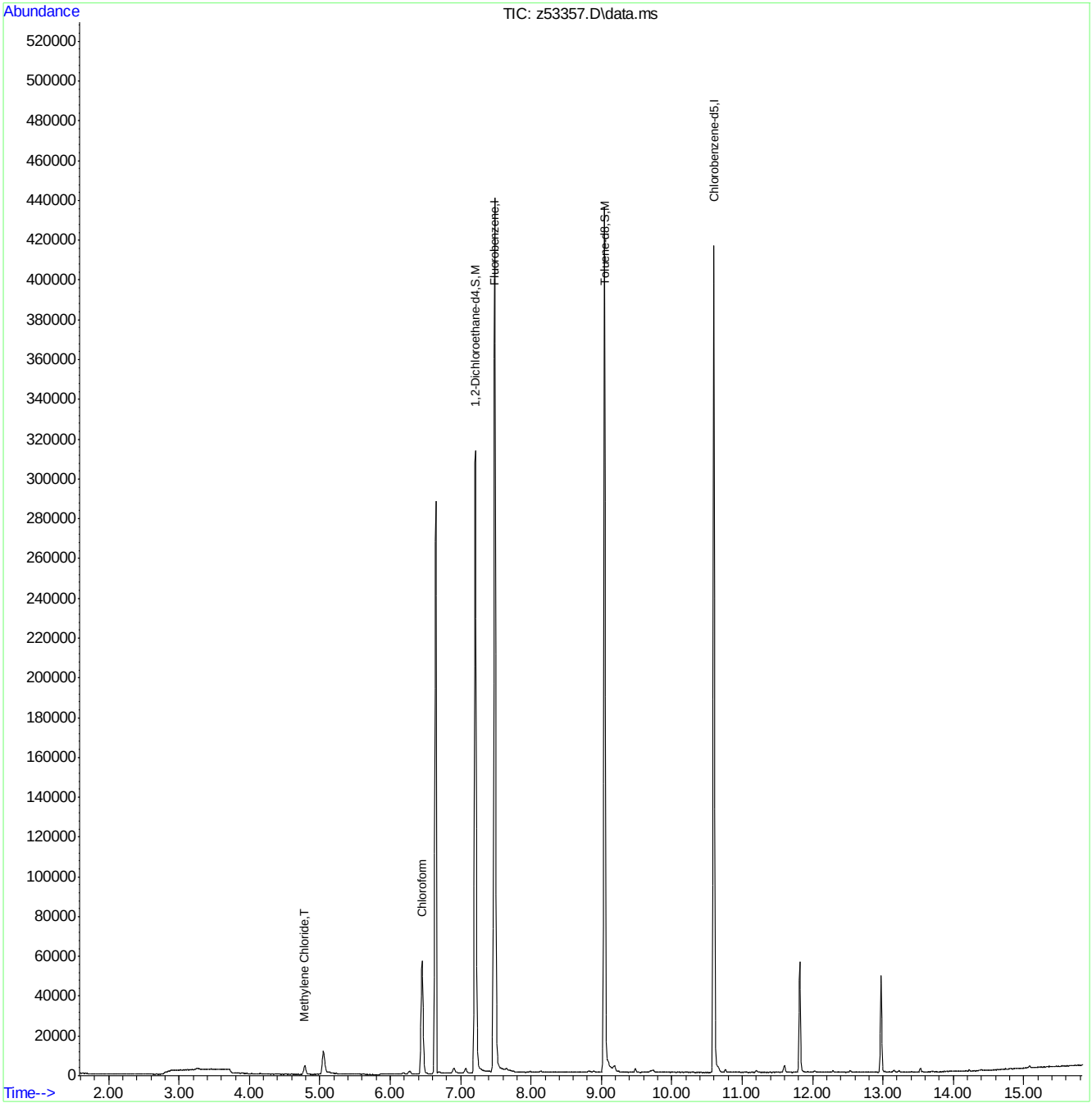
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	5170506	5.00	ppb	0.00
18) Chlorobenzene-d5	10.599	117	3845167	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.211	65	2715052	5.68	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 113.60%			
19) Toluene-d8	9.044	98	3882069	5.48	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 109.60%			
Target Compounds						Qvalue
5) Methylene Chloride	4.785	84	31997	0.05	ppb	99
9) Chloroform	6.454	83	528423	0.52	ppb	99

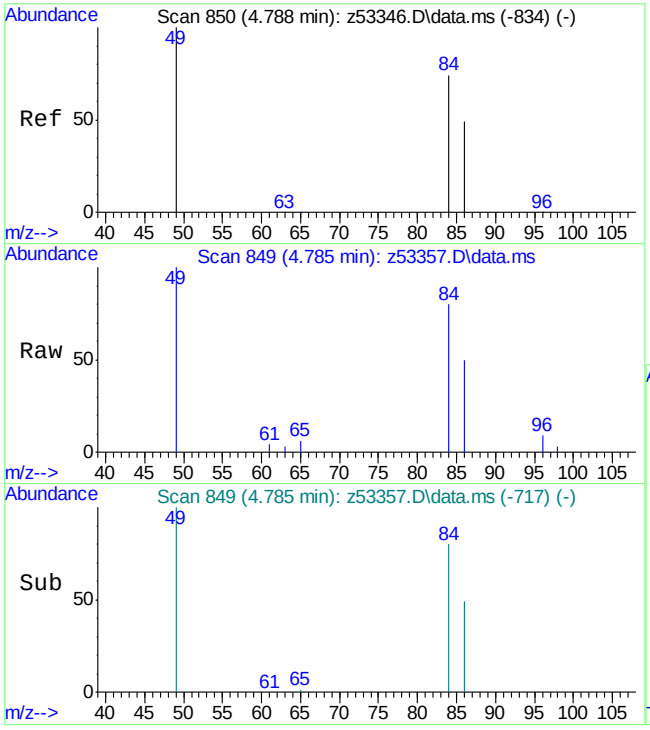
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53357.D
Acq On : 9 Aug 2018 4:30 pm
Operator : melissam
Sample : FA56349-19 Inst : MSVOA15
Misc : ms40952,vz2011,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 10 10:05:52 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

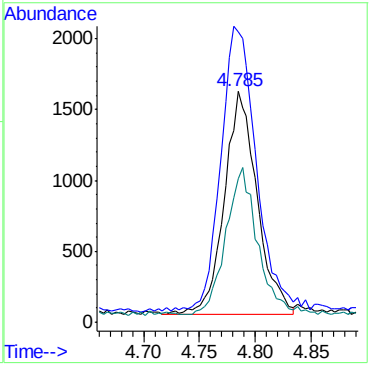


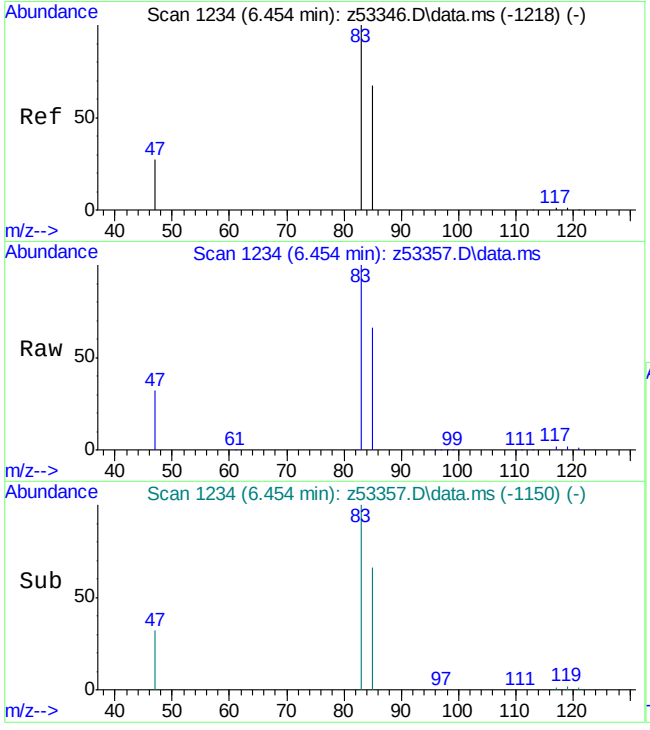


#5
Methylene Chloride
Concen: 0.05 ppb
RT: 4.785 min Scan# 849
Delta R.T. -0.003 min
Lab File: z53357.D
Acq: 9 Aug 2018 4:30 pm

Tgt Ion: 84 Resp: 31997

Ion	Ratio	Lower	Upper
84	100		
49	138.8	118.7	158.7
86	63.6	45.9	85.9

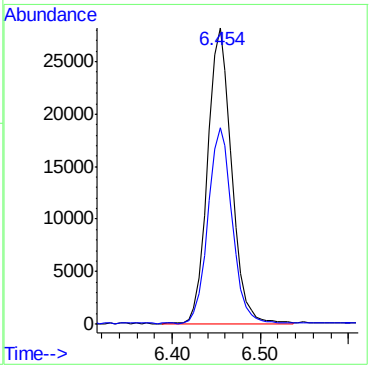




#9
Chloroform
Concen: 0.52 ppb
RT: 6.454 min Scan# 1234
Delta R.T. 0.000 min
Lab File: z53357.D
Acq: 9 Aug 2018 4:30 pm

Tgt Ion: 83 Resp: 528423

Ion	Ratio	Lower	Upper
83	100		
85	66.8	47.4	87.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56598.D
Acq On : 8 Aug 2018 9:37 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 08 10:05:40 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1128546	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	804908	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	408061	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	90318	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	294951	49.50	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.00%			
46) 1,2-Dichloroethane-d4	8.994	65	418980	52.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.00%			
57) Toluene-d8	11.152	98	1086721	48.93	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.86%			
79) 4-Bromofluorobenzene	13.353	174	316897	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
Target Compounds						Qvalue
102) Hexachlorobutadiene	15.377	225	1564	0.41	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

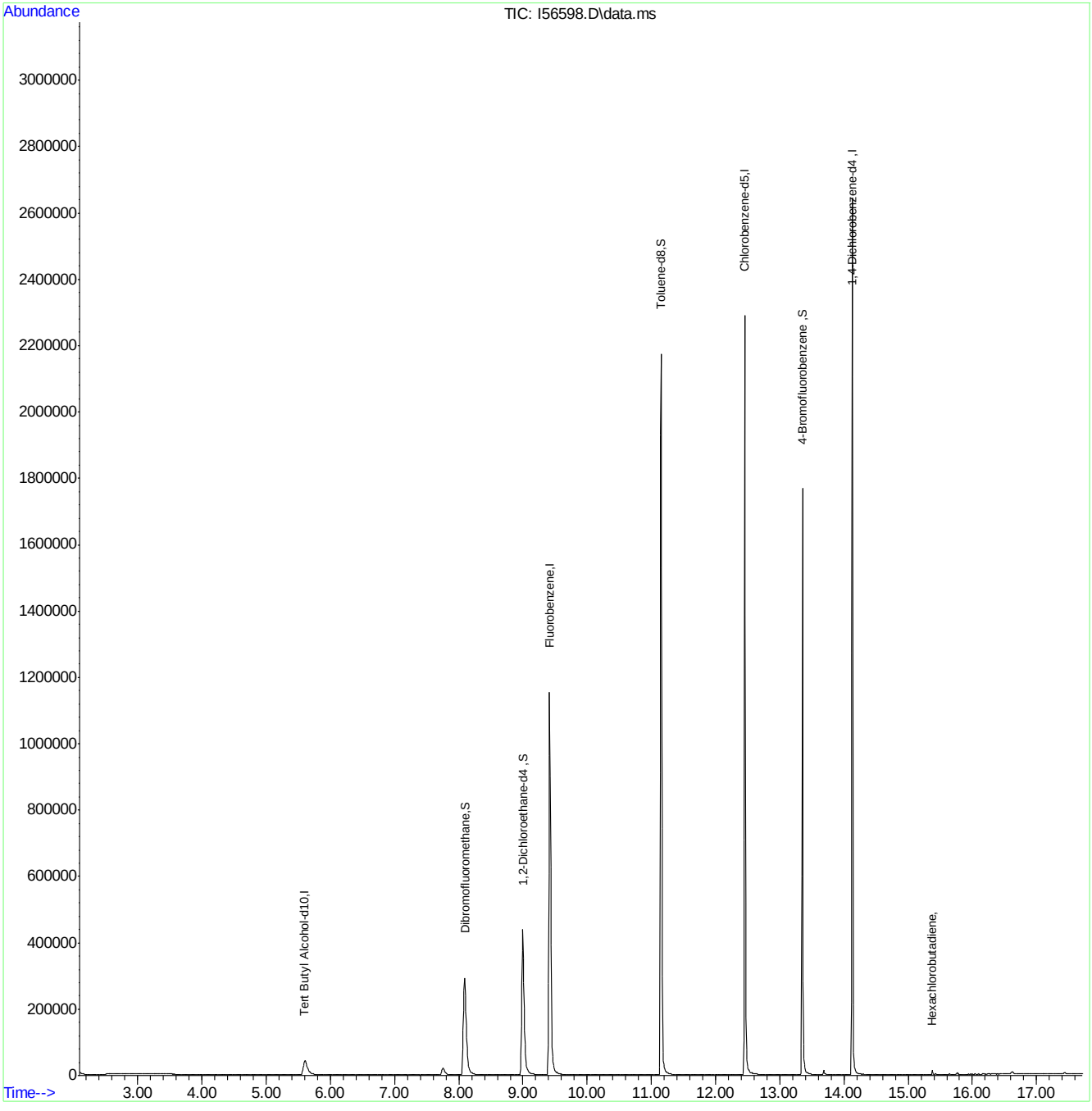
7.2.1

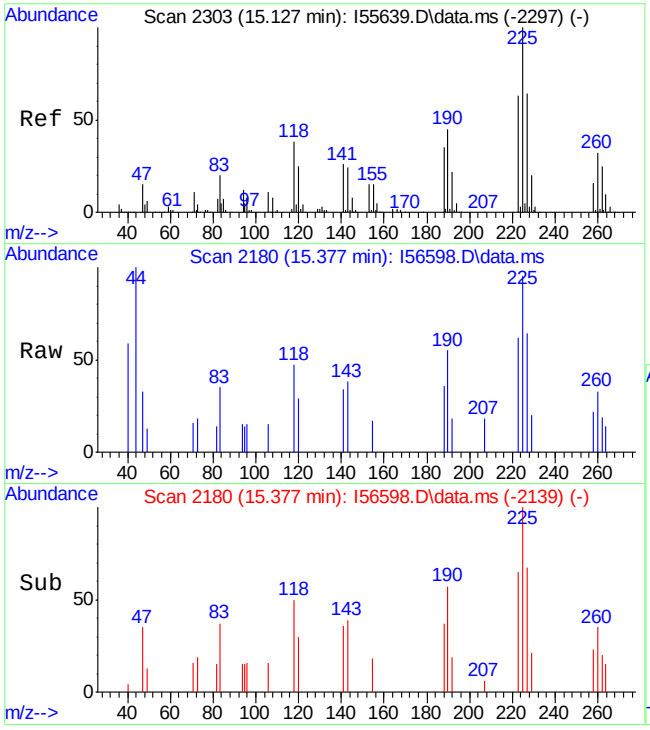
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56598.D
Acq On : 8 Aug 2018 9:37 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 08 10:05:40 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

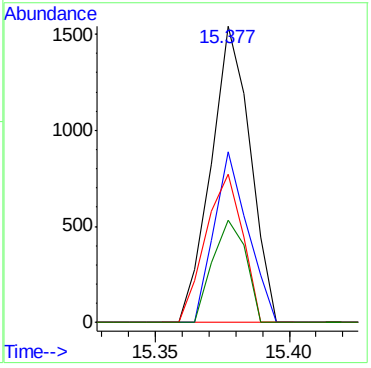




#102
Hexachlorobutadiene
Concen: 0.41 ug/L
RT: 15.377 min Scan# 2180
Delta R.T. 0.000 min
Lab File: I56598.D
Acq: 8 Aug 2018 9:37 am

Tgt Ion:225 Resp: 1564

Ion	Ratio	Lower	Upper
225	100		
190	57.5	18.6	78.6
118	50.0	15.2	75.2
260	34.7	0.0	59.9



7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56653.D
Acq On : 10 Aug 2018 9:33 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS41004,VI1696,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 09:56:33 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1077840	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	767208	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	386389	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	87103	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	281490	49.47	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.94%			
46) 1,2-Dichloroethane-d4	8.994	65	397141	51.61	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.22%			
57) Toluene-d8	11.152	98	1037005	48.98	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.96%			
79) 4-Bromofluorobenzene	13.353	174	299698	49.11	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.22%			
Target Compounds						Qvalue
102) Hexachlorobutadiene	15.377	225	1563	0.43	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

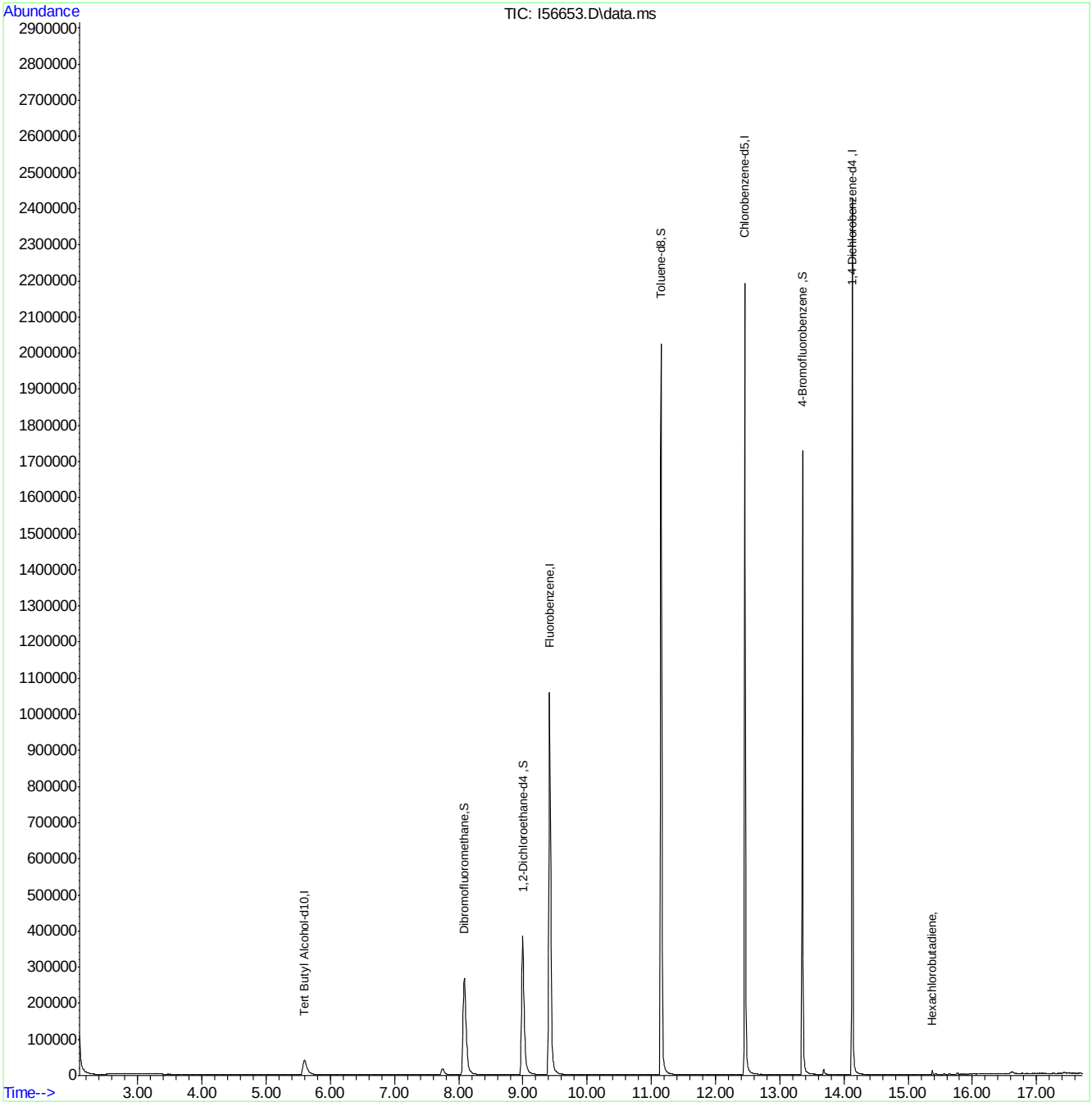
7.2.2

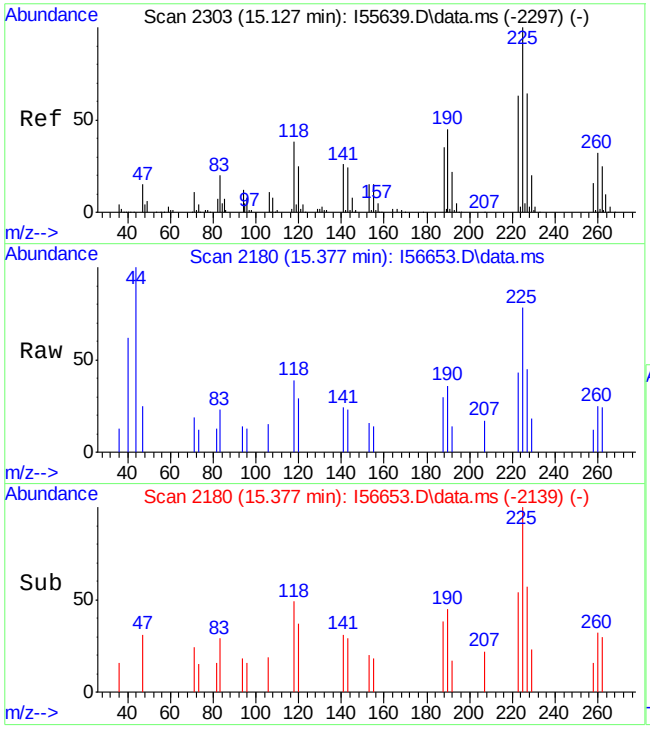
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56653.D
Acq On : 10 Aug 2018 9:33 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS41004,VI1696,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 09:56:33 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

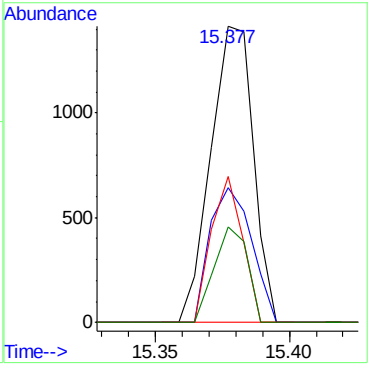




#102
Hexachlorobutadiene
Concen: 0.43 ug/L
RT: 15.377 min Scan# 2180
Delta R.T. 0.000 min
Lab File: I56653.D
Acq: 10 Aug 2018 9:33 am

Tgt Ion:225 Resp: 1563

Ion	Ratio	Lower	Upper
225	100		
190	45.4	18.6	78.6
118	49.2	15.2	75.2
260	32.2	0.0	59.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : z53229.D
Acq On : 2 Aug 2018 4:41 pm
Operator : melissam
Sample : MB Inst : MSVOA15
Misc : ms40817,vz2006,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 07:09:48 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	6559327	5.00	ppb	0.00
18) Chlorobenzene-d5	10.599	117	5033610	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.205	65	2965362	5.49	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 109.80%			
19) Toluene-d8	9.044	98	5207811	5.24	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 104.80%			
Target Compounds						Qvalue
5) Methylene Chloride	4.788	84	68088	0.10	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

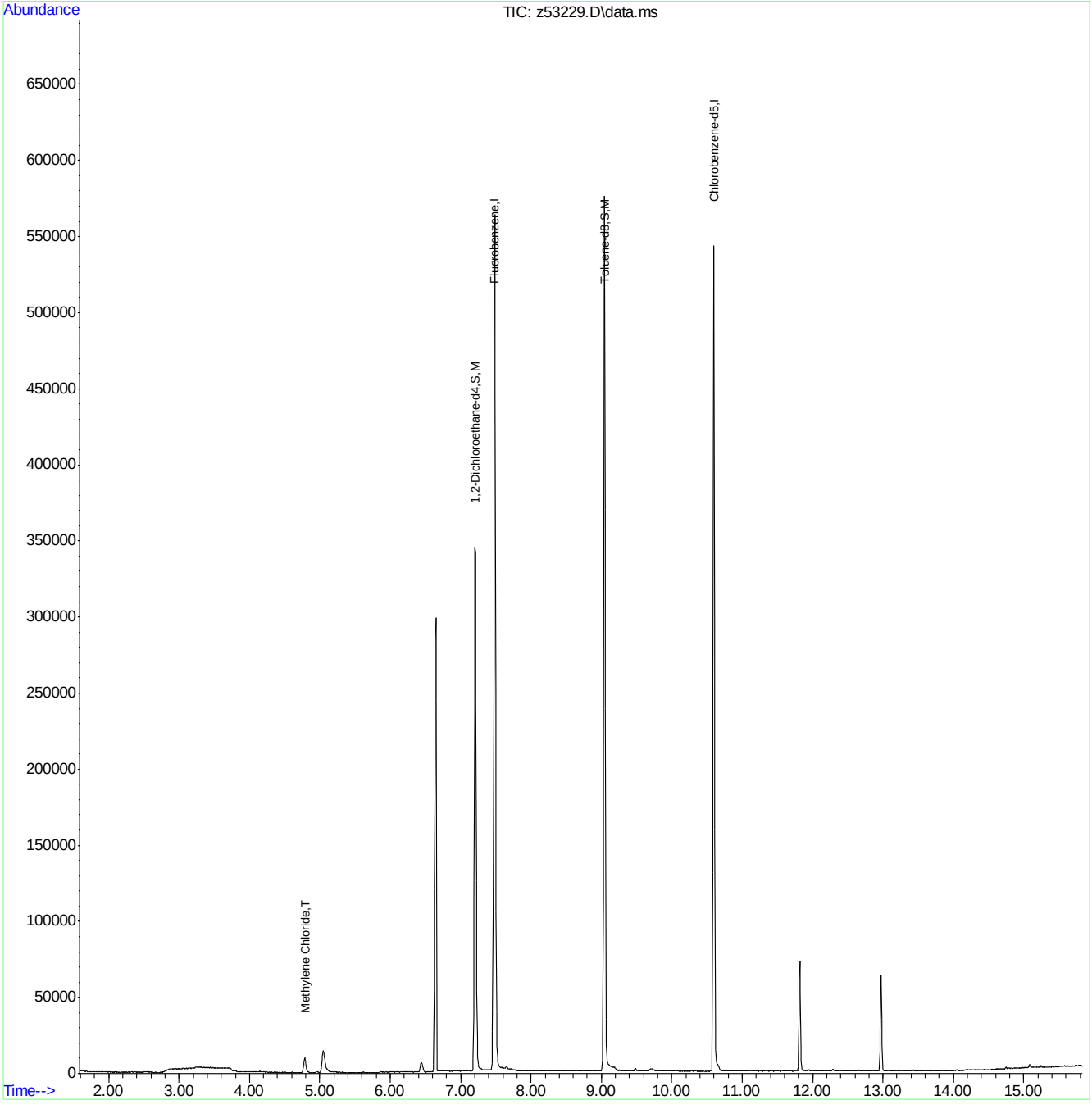
7.2.3

7

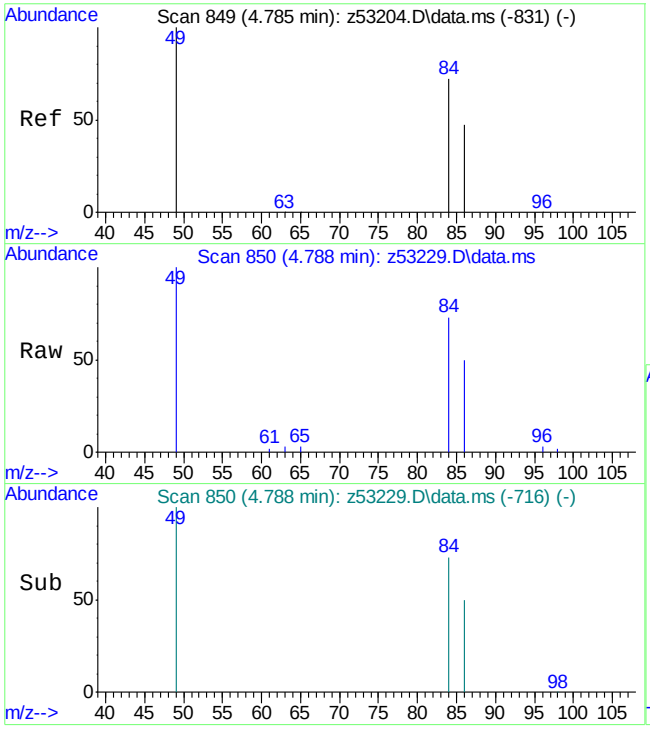
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : z53229.D
Acq On : 2 Aug 2018 4:41 pm
Operator : melissam
Sample : MB Inst : MSVOA15
Misc : ms40817,vz2006,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 07:09:48 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



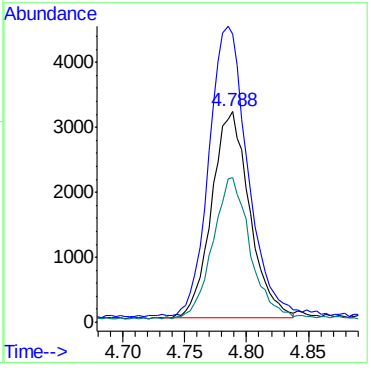
SIMCL072618.M Tue Aug 07 07:53:05 2018 Page: 2



#5
Methylene Chloride
Concen: 0.10 ppb
RT: 4.788 min Scan# 850
Delta R.T. 0.003 min
Lab File: z53229.D
Acq: 2 Aug 2018 4:41 pm

Tgt Ion: 84 Resp: 68088

Ion	Ratio	Lower	Upper
84	100		
49	141.8	121.0	161.0
86	67.4	45.7	85.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53353.D
Acq On : 9 Aug 2018 2:47 pm
Operator : melissam
Sample : MB Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 10 10:05:44 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	6554884	5.00	ppb	0.00
18) Chlorobenzene-d5	10.599	117	4800341	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.211	65	2933811	4.85	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 97.00%			
19) Toluene-d8	9.044	98	4936530	5.59	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 111.80%			
Target Compounds						Qvalue
5) Methylene Chloride	4.788	84	403094	0.55	ppb	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

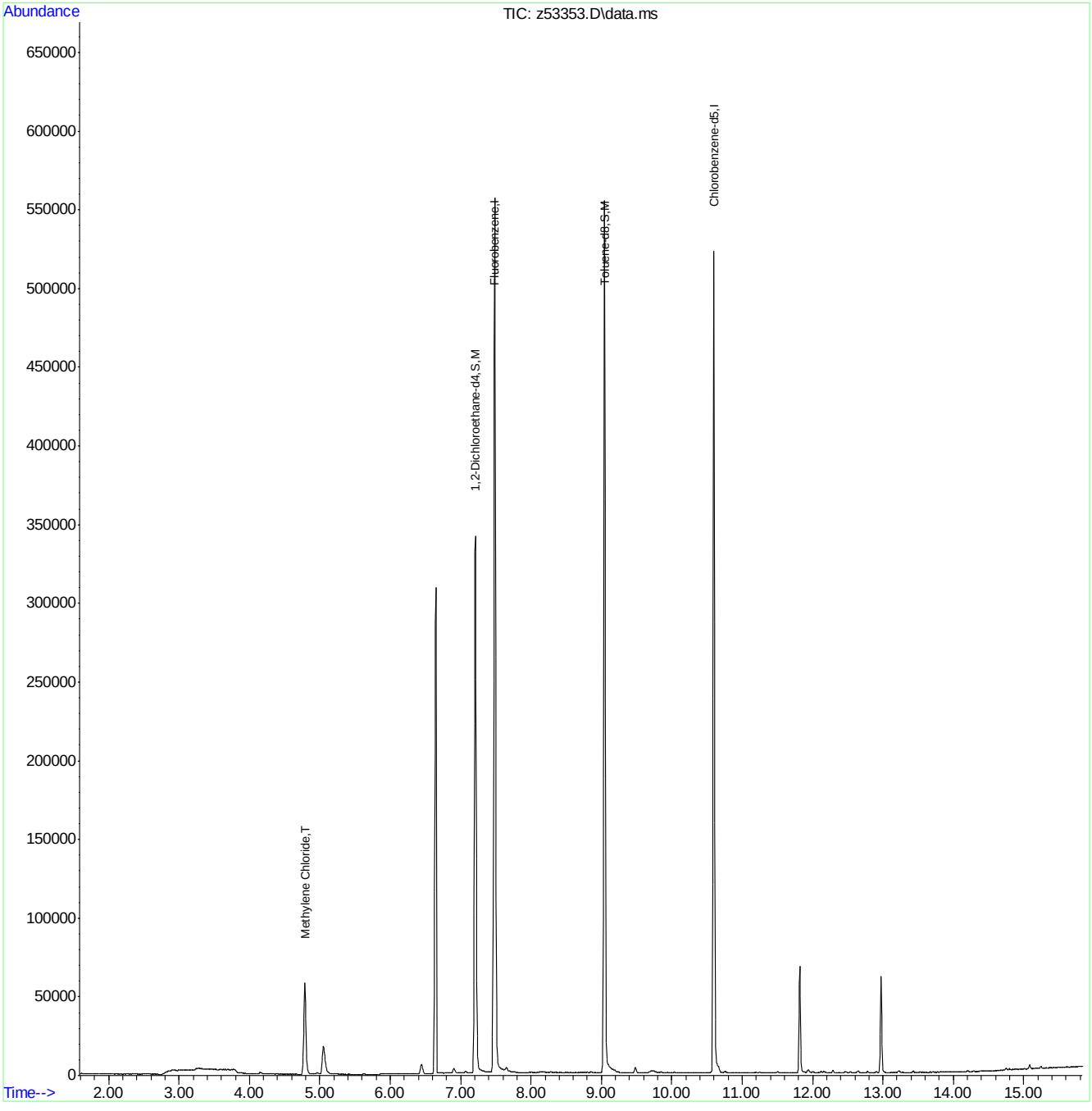
7.2.4

7

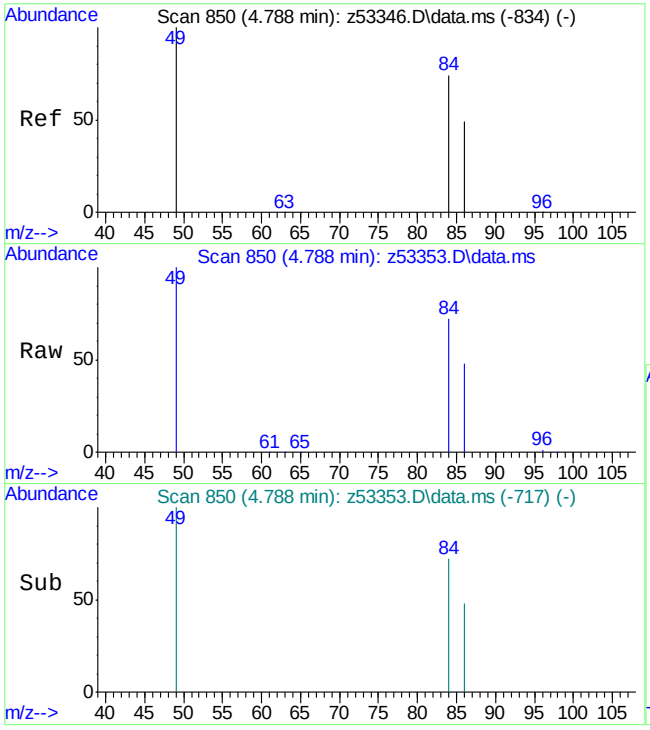
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53353.D
Acq On : 9 Aug 2018 2:47 pm
Operator : melissam
Sample : MB Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 10 10:05:44 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



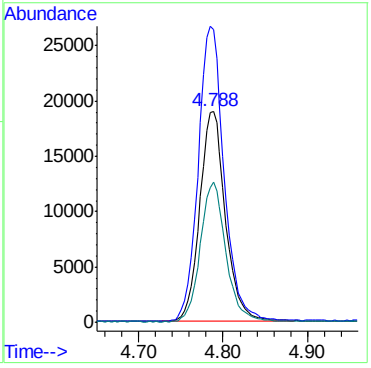
SIMCL080918.M Fri Aug 10 10:54:33 2018 Page: 2



#5
Methylene Chloride
Concen: 0.55 ppb
RT: 4.788 min Scan# 850
Delta R.T. 0.000 min
Lab File: z53353.D
Acq: 9 Aug 2018 2:47 pm

Tgt Ion: 84 Resp: 403094

Ion	Ratio	Lower	Upper
84	100		
49	141.1	118.7	158.7
86	65.7	45.9	85.9



7.2.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : z53374.D
Acq On : 10 Aug 2018 11:33 am
Operator : melissam
Sample : mb Inst : MSVOA15
Misc : ms40981,vz2012,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 11:19:25 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

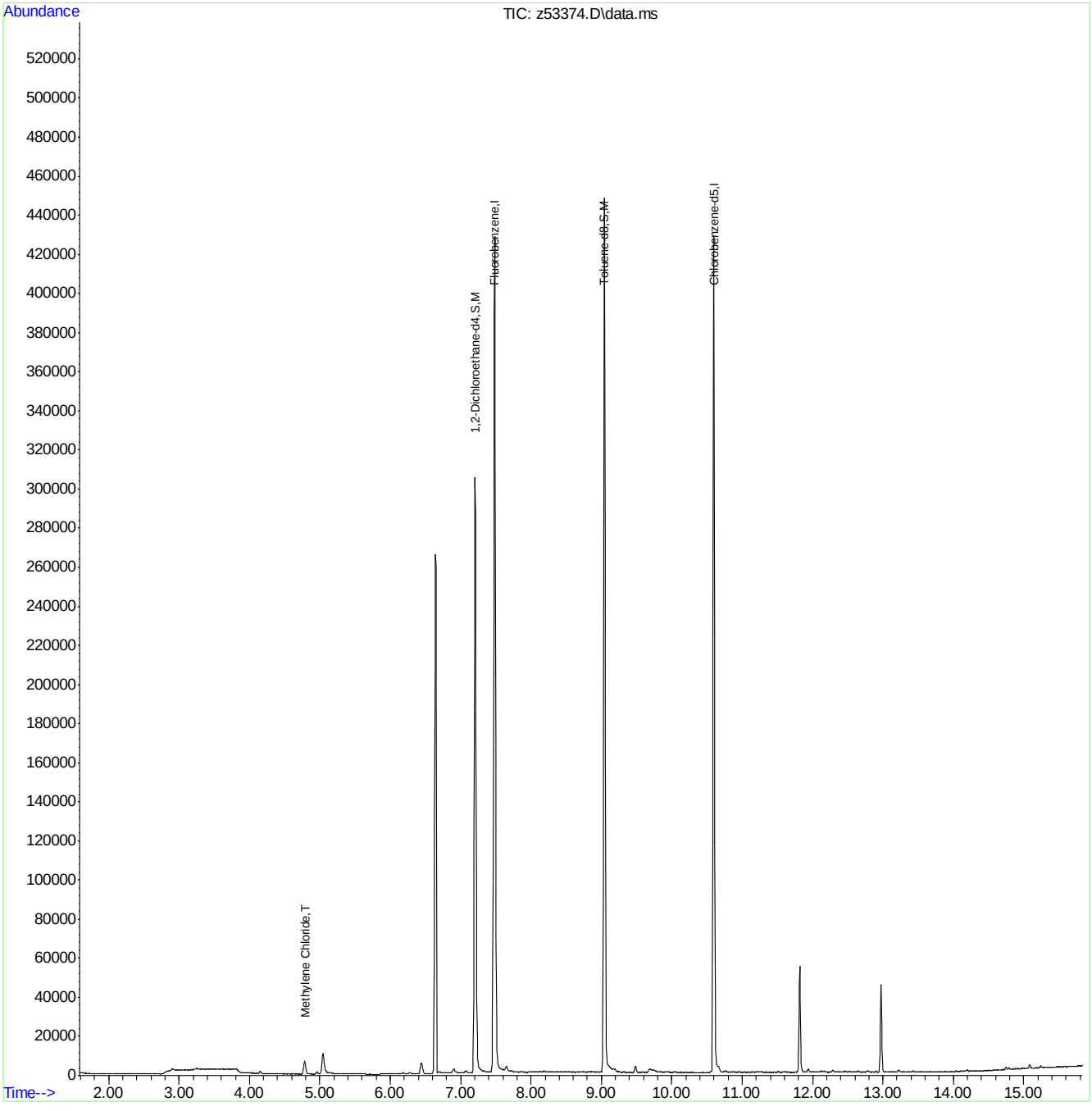
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	7.483	96	5092198	5.00	ppb	0.00
18) Chlorobenzene-d5	10.599	117	4059990	5.00	ppb	0.00
System Monitoring Compounds						
13) 1,2-Dichloroethane-d4	7.204	65	2565874	5.46	ppb	0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 109.20%			
19) Toluene-d8	9.040	98	4048814	5.42	ppb	0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 108.40%			
Target Compounds						Qvalue
5) Methylene Chloride	4.788	84	47390	0.08	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

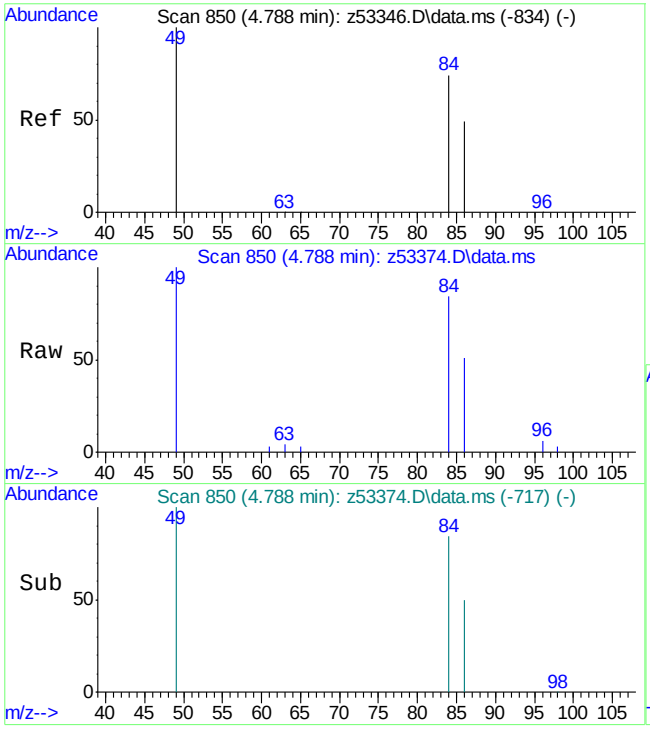
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : z53374.D
Acq On : 10 Aug 2018 11:33 am
Operator : melissam
Sample : mb Inst : MSVOA15
Misc : ms40981,vz2012,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 13 11:19:25 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



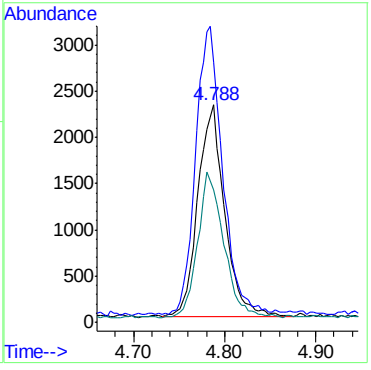
SIMCL080918.M Mon Aug 13 12:07:46 2018 Page: 2



#5
Methylene Chloride
Concen: 0.08 ppb
RT: 4.788 min Scan# 850
Delta R.T. 0.000 min
Lab File: z53374.D
Acq: 10 Aug 2018 11:33 am

Tgt Ion: 84 Resp: 47390

Ion	Ratio	Lower	Upper
84	100		
49	135.4	118.7	158.7
86	66.6	45.9	85.9



7.2.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1159021	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	826881	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	422069	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	105695	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	311778	50.95	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.90%			
46) 1,2-Dichloroethane-d4	8.994	65	422237	51.03	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.06%			
57) Toluene-d8	11.152	98	1128468	49.45	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.90%			
79) 4-Bromofluorobenzene	13.353	174	326768	49.02	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.252	85	220379	33.39	ug/L	100
3) Chloromethane	2.526	50	248511	27.42	ug/L	97
4) 1,3-Butadiene	2.642	39	148345	30.35	ug/L	99
5) Vinyl Chloride	2.660	62	216387	28.39	ug/L	99
6) Bromomethane	3.105	94	108443	27.17	ug/L	97
7) Chloroethane	3.264	64	62540	27.34	ug/L	98
8) Trichlorofluoromethane	3.507	101	254663	29.08	ug/L	100
9) Ethyl Ether	3.922	59	158018	23.40	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.233	67	207387	25.57	ug/L	98
11) 1,1-Dichloroethene	4.215	61	264834	24.43	ug/L	98
12) Freon 113	4.318	101	132199	21.83	ug/L	97
13) Carbon Disulfide	4.263	76	420686	24.48	ug/L	98
14) Iodomethane	4.422	142	202966	21.85	ug/L	99
15) Allyl chloride	4.928	41	268404	28.79	ug/L	98
16) Methylene Chloride	5.099	49	274408	25.57	ug/L	96
17) Acetone	5.166	43	237904	123.63	ug/L	100
18) Methyl acetate	5.367	43	560063	119.14	ug/L	98
19) trans-1,2-Dichloroethene	5.355	61	264700	24.77	ug/L	99
20) Hexane	5.495	56	195128	23.81	ug/L	95
21) Methyl Tert Butyl Ether	5.550	73	318560	23.97	ug/L	93
22) Acetonitrile	5.885	41	189476	286.05	ug/L	98
23) Di-isopropyl ether	6.178	45	602953	25.25	ug/L	99
24) Chloroprene	6.306	53	302572	27.54	ug/L	99
25) 1,1-Dichloroethane	6.330	63	335847	26.09	ug/L	97
26) Acrylonitrile	6.397	53	322202	116.82	ug/L	98
27) ETBE	6.793	59	520773	27.05	ug/L	99
28) Vinyl acetate	6.775	43	1774973	115.76	ug/L	100
29) cis-1,2-Dichloroethene	7.269	96	151835	24.65	ug/L	98
30) 2,2-Dichloropropane	7.458	77	179042	32.71	ug/L	100
31) Bromochloromethane	7.610	128	74455	24.80	ug/L	94
32) Cyclohexane	7.647	56	352608	24.71	ug/L	98
33) Chloroform	7.763	83	281554	25.41	ug/L	97
34) Ethyl acetate	8.000	43	781396	117.26	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	102030	25.34 ug/L	97
37) Carbon Tetrachloride	8.013	117	193229	28.98 ug/L	97
38) 1,1,1-Trichloroethane	8.128	97	233059	26.13 ug/L	98
39) 2-Butanone	8.311	43	354004	122.61 ug/L	97
40) 1,1-Dichloropropene	8.360	75	200223	25.35 ug/L	97
41) tert-Butyl formate	8.573	59	834684	341.35 ug/L #	74
42) Propionitrile	8.793	54	265390	261.92 ug/L	93
43) Methacrylonitrile	8.836	41	1069380	269.46 ug/L	99
44) Benzene	8.793	78	580159	24.58 ug/L	97
45) TAME	9.025	73	326891	25.42 ug/L	98
47) 1,2-Dichloroethane	9.098	62	248882	24.42 ug/L	98
48) Trichloroethene	9.659	95	158739	25.47 ug/L	99
49) Methylcyclohexane	9.646	83	259382	25.43 ug/L	95
50) Dibromomethane	10.146	93	96415	25.02 ug/L	97
51) 1,2-Dichloropropane	10.250	63	196528	26.06 ug/L	98
52) Bromodichloromethane	10.335	83	204155	27.28 ug/L	97
53) Methyl methacrylate	10.518	41	122866	22.99 ug/L	97
54) 2-Chloroethyl vinyl ether	10.914	63	638782	143.58 ug/L	96
55) cis-1,3-Dichloropropene	10.975	75	247205	26.29 ug/L	98
58) Toluene	11.201	91	632013	24.75 ug/L	99
59) 2-Nitropropane	11.384	41	178549	129.91 ug/L	98
60) 4-Methyl-2-pentanone	11.524	43	862116	126.27 ug/L	97
61) trans-1,3-Dichloropropene	11.926	75	13393	26.73 ug/L	90
62) Tetrachloroethene	11.555	166	170781	25.94 ug/L	98
63) Ethyl methacrylate	11.701	69	166100	22.81 ug/L	94
64) 1,1,2-Trichloroethane	11.701	83	126234	26.34 ug/L	96
65) Dibromochloromethane	11.859	129	156965	27.62 ug/L	100
66) 1,3-Dichloropropane	11.926	76	234017	24.28 ug/L	94
67) 1,2-Dibromoethane	12.055	107	134047	25.39 ug/L	98
68) 2-hexanone	12.207	43	717108	126.71 ug/L	93
69) 1-Chlorohexane	12.439	91	227510	25.96 ug/L	94
70) Ethylbenzene	12.481	91	743834	25.46 ug/L	100
71) Chlorobenzene	12.469	112	413450	24.88 ug/L	98
72) 1,1,1,2-Tetrachloroethane	12.518	131	142633	27.84 ug/L	99
73) m,p-Xylene	12.591	91	1163196	52.28 ug/L	98
74) o-Xylene	12.914	91	576229	25.83 ug/L	100
75) Styrene	12.951	104	415671	26.51 ug/L	98
76) Bromoform	12.987	173	93907	26.47 ug/L	98
77) Isopropylbenzene	13.134	105	681872	27.73 ug/L	99
80) cis-1,4-Dichloro-2-butene	13.377	53	67756	26.09 ug/L	93
81) n-Propylbenzene	13.432	91	892051	26.40 ug/L	100
82) Bromobenzene	13.438	156	167647	25.61 ug/L	97
83) 1,1,2,2-Tetrachloroethane	13.475	83	195959	26.57 ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	570438	26.79 ug/L	100
85) 2-Chlorotoluene	13.670	91	533578	25.99 ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	65062	27.05 ug/L	97
87) 1,2,3-Trichloropropane	13.579	110	49776	25.06 ug/L	99
88) Cyclohexanone	13.621	55	31757	100.33 ug/L	98
89) 4-Chlorotoluene	13.670	91	533578	25.99 ug/L	99
90) tert-Butylbenzene	13.786	91	345623	26.23 ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

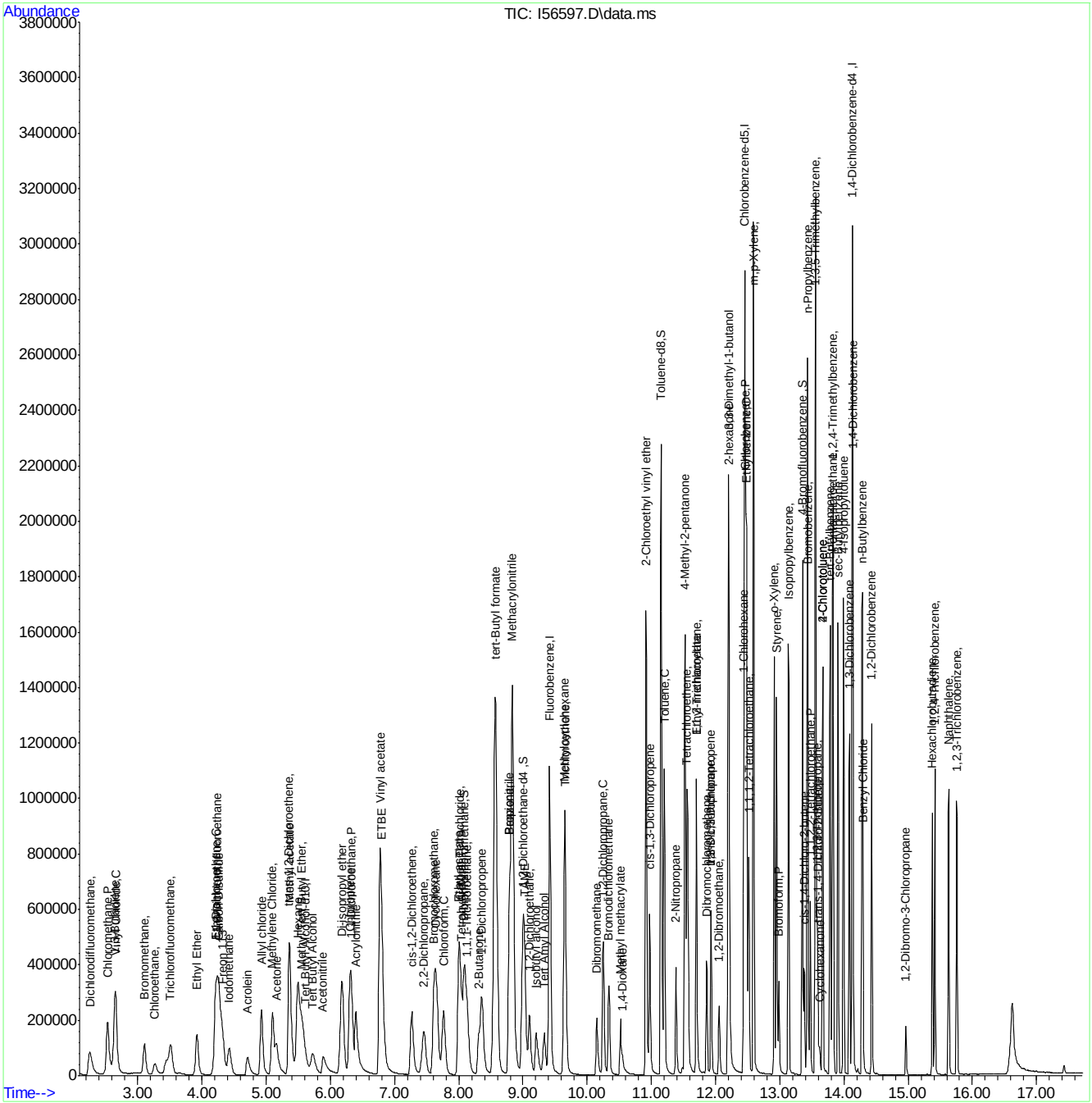
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.829	105	573380	26.04	ug/L	100
93) Pentachloroethane	13.822	167	86308	25.21	ug/L	98
94) sec-Butylbenzene	13.908	105	739036	27.18	ug/L	99
95) 4-Isopropyltoluene	13.993	119	603730	27.40	ug/L	99
96) 1,3-Dichlorobenzene	14.085	146	318701	26.22	ug/L	99
97) 1,4-Dichlorobenzene	14.139	146	331383	25.05	ug/L	99
98) n-Butylbenzene	14.280	92	366232	28.86	ug/L	92
99) Benzyl Chloride	14.298	126	53279	34.05	ug/L #	86
100) 1,2-Dichlorobenzene	14.432	146	301856	25.50	ug/L	99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	30724	25.91	ug/L	81
102) Hexachlorobutadiene	15.377	225	108846	27.68	ug/L	100
103) 1,2,4-Trichlorobenzene	15.414	180	206810	26.32	ug/L	99
104) Naphthalene	15.633	128	487802	24.29	ug/L	100
105) 1,2,3-Trichlorobenzene	15.761	180	193635	26.28	ug/L	99
107) Ethanol	4.215	45	35276	447.18	ug/L	96
108) Acrolein	4.708	56	124114	71.50	ug/L	100
109) Tert Butyl Alcohol	5.726	59	178052	262.84	ug/L	95
110) Isobutyl alcohol	9.201	43	126813	452.86	ug/L	97
111) Tert Amyl Alcohol	9.329	59	108156	245.00	ug/L	93
112) 1,4-Dioxane	10.549	88	28952	423.57	ug/L	96
113) 3,3-Dimethyl-1-butanol	12.201	57	829562	1151.09	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56652.D
Acq On : 10 Aug 2018 9:09 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS41004,VI1696,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 09:26:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1131170	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	821330	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	416767	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	102559	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	301743	50.52	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.04%			
46) 1,2-Dichloroethane-d4	8.994	65	411610	50.97	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.94%			
57) Toluene-d8	11.152	98	1112934	49.10	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.20%			
79) 4-Bromofluorobenzene	13.353	174	328952	49.97	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.94%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	209767	32.56	ug/L	99
3) Chloromethane	2.526	50	238129	26.92	ug/L	98
4) 1,3-Butadiene	2.636	39	146721	30.76	ug/L	99
5) Vinyl Chloride	2.654	62	208317	28.00	ug/L	99
6) Bromomethane	3.099	94	105830	27.17	ug/L	97
7) Chloroethane	3.257	64	62369	28.09	ug/L	95
8) Trichlorofluoromethane	3.507	101	240035	28.09	ug/L	100
9) Ethyl Ether	3.916	59	163886	24.87	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.227	67	222985	28.17	ug/L	99
11) 1,1-Dichloroethene	4.208	61	294891	27.87	ug/L	98
12) Freon 113	4.318	101	139360	23.58	ug/L	97
13) Carbon Disulfide	4.257	76	447775	26.69	ug/L	99
14) Iodomethane	4.422	142	218689	24.13	ug/L	99
15) Allyl chloride	4.922	41	252382	27.74	ug/L	96
16) Methylene Chloride	5.092	49	287725	27.48	ug/L	98
17) Acetone	5.159	43	220462	117.39	ug/L	100
18) Methyl acetate	5.367	43	576545	125.56	ug/L	98
19) trans-1,2-Dichloroethene	5.348	61	281602	27.00	ug/L	97
20) Hexane	5.495	56	204014	25.51	ug/L	98
21) Methyl Tert Butyl Ether	5.550	73	332471	25.64	ug/L	97
22) Acetonitrile	5.879	41	173690	268.68	ug/L	97
23) Di-isopropyl ether	6.178	45	619164	26.57	ug/L	99
24) Chloroprene	6.299	53	271717	25.34	ug/L	97
25) 1,1-Dichloroethane	6.330	63	343927	27.38	ug/L	99
26) Acrylonitrile	6.397	53	295676	110.03	ug/L	98
27) ETBE	6.793	59	536237	28.54	ug/L	98
28) Vinyl acetate	6.775	43	1621480	108.48	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	153896	25.60	ug/L	96
30) 2,2-Dichloropropane	7.452	77	188410	35.27	ug/L	100
31) Bromochloromethane	7.610	128	74575	25.45	ug/L	95
32) Cyclohexane	7.641	56	372524	26.75	ug/L	97
33) Chloroform	7.763	83	274795	25.41	ug/L	97
34) Ethyl acetate	8.000	43	720257	110.81	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56652.D
Acq On : 10 Aug 2018 9:09 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS41004,VI1696,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 09:26:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	94885	24.15	ug/L	97
37) Carbon Tetrachloride	8.019	117	198652	30.53	ug/L	99
38) 1,1,1-Trichloroethane	8.122	97	239105	27.47	ug/L	97
39) 2-Butanone	8.305	43	327327	116.27	ug/L	97
40) 1,1-Dichloropropene	8.354	75	206585	26.80	ug/L	94
41) tert-Butyl formate	8.567	59	807212	338.73	ug/L #	74
42) Propionitrile	8.793	54	241258	243.96	ug/L	89
43) Methacrylonitrile	8.836	41	976221	252.04	ug/L	99
44) Benzene	8.787	78	588120	25.54	ug/L	100
45) TAME	9.025	73	331778	26.43	ug/L	98
47) 1,2-Dichloroethane	9.104	62	246493	24.78	ug/L	99
48) Trichloroethene	9.652	95	158272	26.02	ug/L	96
49) Methylcyclohexane	9.646	83	267026	26.83	ug/L	95
50) Dibromomethane	10.146	93	95794	25.47	ug/L	97
51) 1,2-Dichloropropane	10.250	63	195408	26.55	ug/L	98
52) Bromodichloromethane	10.335	83	197990	27.11	ug/L	98
53) Methyl methacrylate	10.518	41	109155	20.98	ug/L	98
54) 2-Chloroethyl vinyl ether	10.914	63	610676	140.64	ug/L	96
55) cis-1,3-Dichloropropene	10.975	75	240135	26.17	ug/L	96
58) Toluene	11.201	91	631270	24.89	ug/L	99
59) 2-Nitropropane	11.384	41	172433	126.42	ug/L	99
60) 4-Methyl-2-pentanone	11.524	43	818286	120.66	ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	12772	25.67	ug/L	99
62) Tetrachloroethene	11.555	166	170369	26.06	ug/L	98
63) Ethyl methacrylate	11.701	69	150560	20.87	ug/L	93
64) 1,1,2-Trichloroethane	11.701	83	118519	24.90	ug/L	95
65) Dibromochloromethane	11.859	129	148408	26.29	ug/L	99
66) 1,3-Dichloropropane	11.926	76	226484	23.66	ug/L	95
67) 1,2-Dibromoethane	12.054	107	130123	24.81	ug/L	98
68) 2-hexanone	12.207	43	689763	122.71	ug/L	92
69) 1-Chlorohexane	12.438	91	220638	25.35	ug/L	92
70) Ethylbenzene	12.481	91	723280	24.93	ug/L	99
71) Chlorobenzene	12.469	112	394858	23.92	ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	134954	26.52	ug/L	98
73) m,p-Xylene	12.591	91	1125990	50.95	ug/L	100
74) o-Xylene	12.914	91	558915	25.22	ug/L	99
75) Styrene	12.951	104	400392	25.71	ug/L	99
76) Bromoform	12.987	173	88707	25.22	ug/L	98
77) Isopropylbenzene	13.133	105	657283	26.91	ug/L	98
80) cis-1,4-Dichloro-2-butene	13.383	53	62444	24.35	ug/L	86
81) n-Propylbenzene	13.426	91	852885	25.56	ug/L	96
82) Bromobenzene	13.438	156	161544	24.99	ug/L	99
83) 1,1,2,2-Tetrachloroethane	13.475	83	183041	25.13	ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	543274	25.84	ug/L	100
85) 2-Chlorotoluene	13.670	91	508124	25.07	ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	62762	26.43	ug/L	97
87) 1,2,3-Trichloropropane	13.579	110	47072	24.00	ug/L	99
88) Cyclohexanone	13.621	55	30037	96.11	ug/L	96
89) 4-Chlorotoluene	13.670	91	508124	25.07	ug/L	100
90) tert-Butylbenzene	13.786	91	330507	25.40	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56652.D
Acq On : 10 Aug 2018 9:09 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS41004,VI1696,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 09:26:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

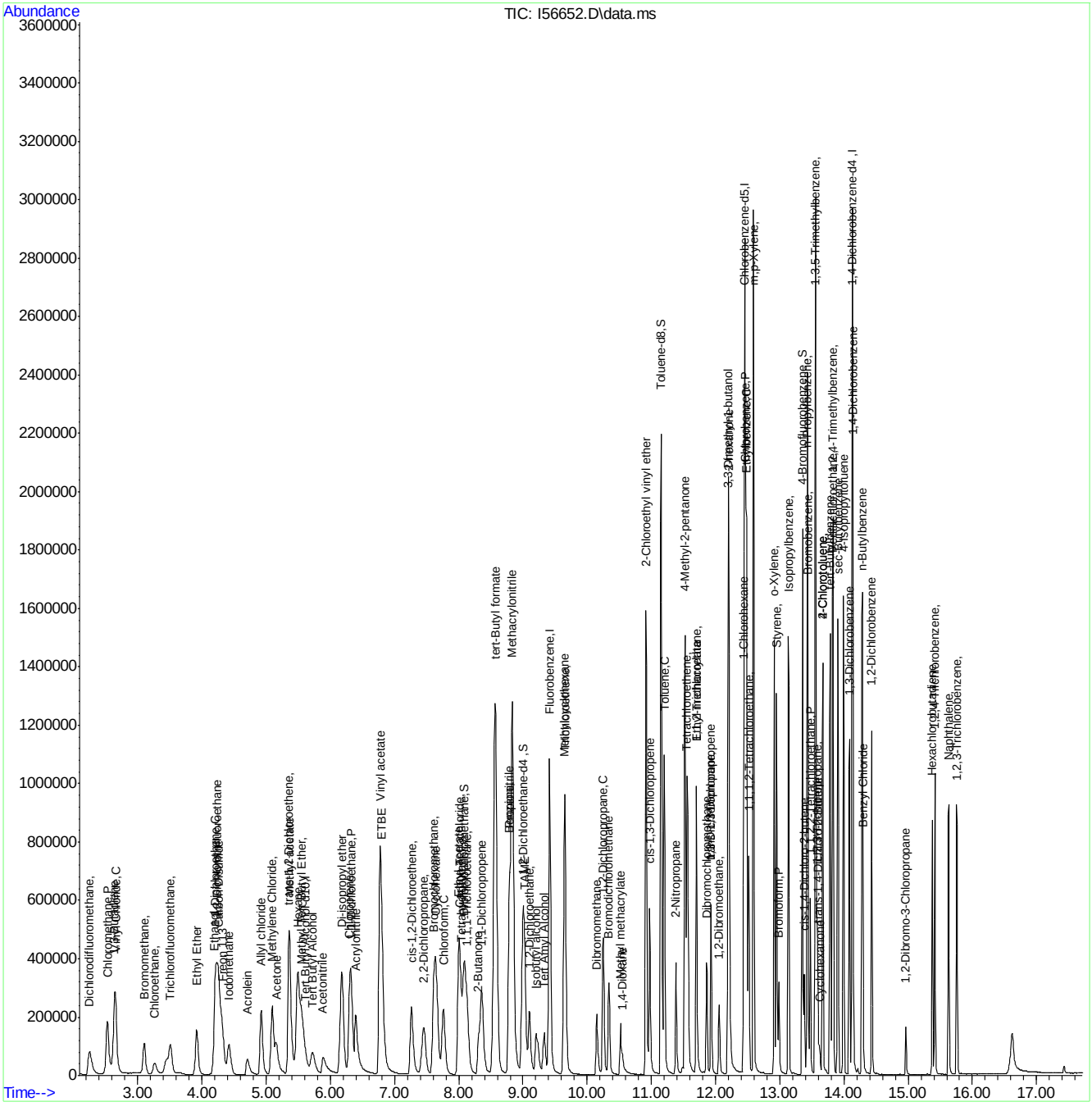
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	542616	24.95	ug/L	99
93) Pentachloroethane	13.822	167	78318	23.32	ug/L	99
94) sec-Butylbenzene	13.908	105	703207	26.19	ug/L	99
95) 4-Isopropyltoluene	13.993	119	572948	26.33	ug/L	100
96) 1,3-Dichlorobenzene	14.085	146	299603	24.96	ug/L	99
97) 1,4-Dichlorobenzene	14.139	146	312101	23.89	ug/L	99
98) n-Butylbenzene	14.280	92	343132	27.39	ug/L	93
99) Benzyl Chloride	14.298	126	50777	33.03	ug/L #	86
100) 1,2-Dichlorobenzene	14.432	146	281688	24.10	ug/L	98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	27820	23.83	ug/L	80
102) Hexachlorobutadiene	15.377	225	101218	26.07	ug/L	97
103) 1,2,4-Trichlorobenzene	15.414	180	190883	24.61	ug/L	99
104) Naphthalene	15.633	128	451116	22.78	ug/L	100
105) 1,2,3-Trichlorobenzene	15.761	180	180214	24.77	ug/L	99
107) Ethanol	4.196	45	34158	446.24	ug/L	99
108) Acrolein	4.708	56	104610	62.07	ug/L	99
109) Tert Butyl Alcohol	5.720	59	170319	259.12	ug/L	89
110) Isobutyl alcohol	9.201	43	115814	426.23	ug/L	98
111) Tert Amyl Alcohol	9.329	59	105625	246.53	ug/L	91
112) 1,4-Dioxane	10.549	88	27527	414.96	ug/L	92
113) 3,3-Dimethyl-1-butanol	12.195	57	793775	1135.11	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56652.D
Acq On : 10 Aug 2018 9:09 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS41004,VI1696,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 09:26:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : z53228.D
Acq On : 2 Aug 2018 4:09 pm
Operator : melissam
Sample : bs Inst : MSVOA15
Misc : ms40817,vz2006,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 02 16:45:58 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

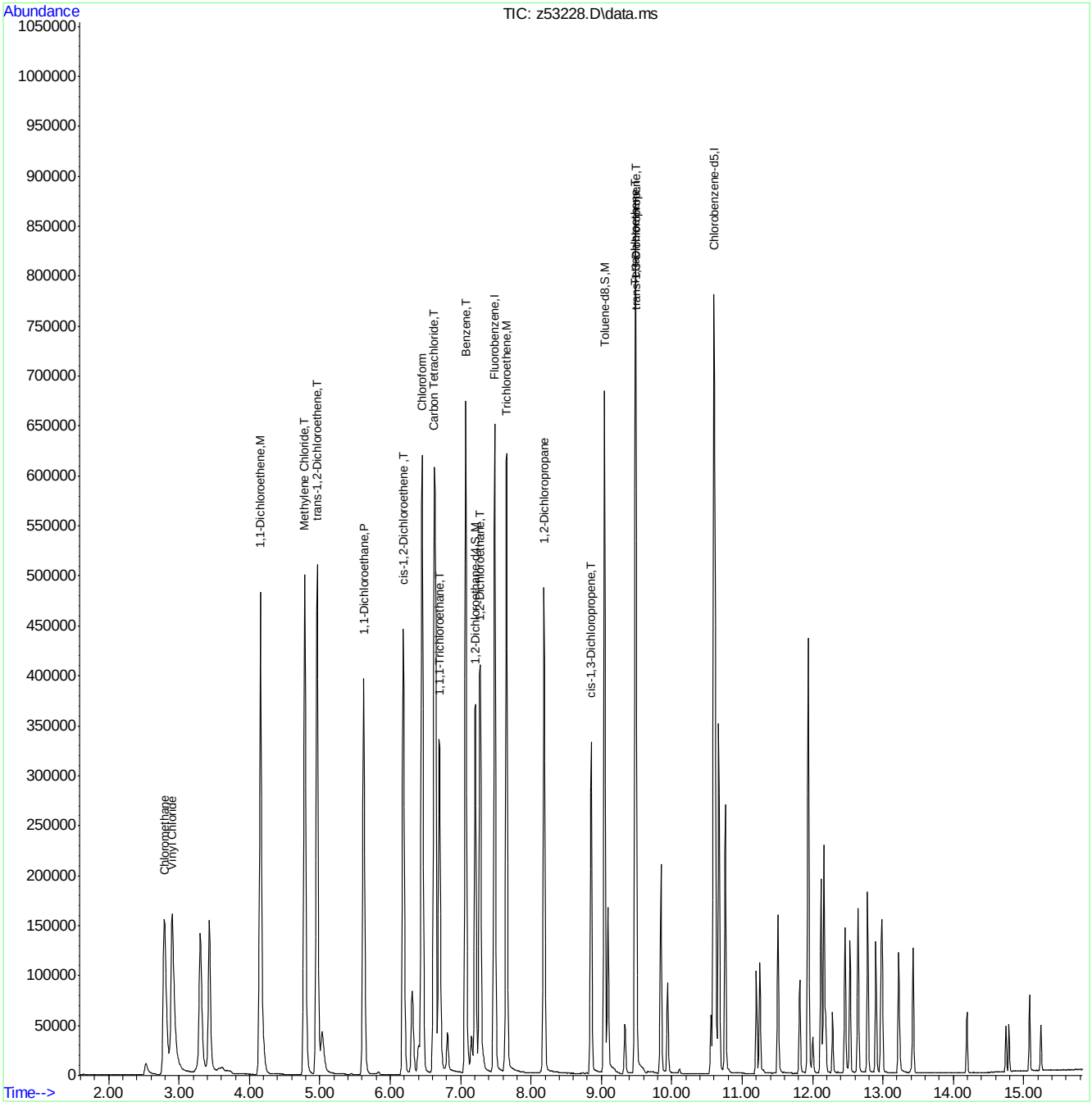
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7596060	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6476083	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	3123077	5.00	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 100.00%				
19) Toluene-d8	9.044	98	6132489	4.80	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 96.00%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	3959388	4.99	ppb		100
3) Chloromethane	2.790	50	3584353	5.15	ppb		99
4) 1,1-Dichloroethene	4.155	96	2640849	5.07	ppb		98
5) Methylene Chloride	4.785	84	3479798	4.54	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	2925108	4.96	ppb		99
7) 1,1-Dichloroethane	5.622	63	5533365	5.06	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	2763686	4.79	ppb		100
9) Chloroform	6.454	83	6164170	5.14	ppb		99
10) Carbon Tetrachloride	6.626	117	4559608	5.28	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	4873265	5.08	ppb		100
12) Benzene	7.075	78	10008134	5.21	ppb		99
14) 1,2-Dichloroethane	7.279	62	4117520	5.01	ppb		100
15) Trichloroethene	7.646	95	3023454	5.00	ppb	#	99
16) 1,2-Dichloropropane	8.184	63	2631666	5.21	ppb		100
17) cis-1,3-Dichloropropene	8.856	75	2732628	5.27	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	2624058	5.42	ppb		99
21) Tetrachloroethene	9.483	166	2815989	5.42	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : z53228.D
Acq On : 2 Aug 2018 4:09 pm
Operator : melissam
Sample : bs Inst : MSVOA15
Misc : ms40817,vz2006,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 02 16:45:58 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53352.D
Acq On : 9 Aug 2018 2:23 pm
Operator : melissam
Sample : BS Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 10 10:05:42 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

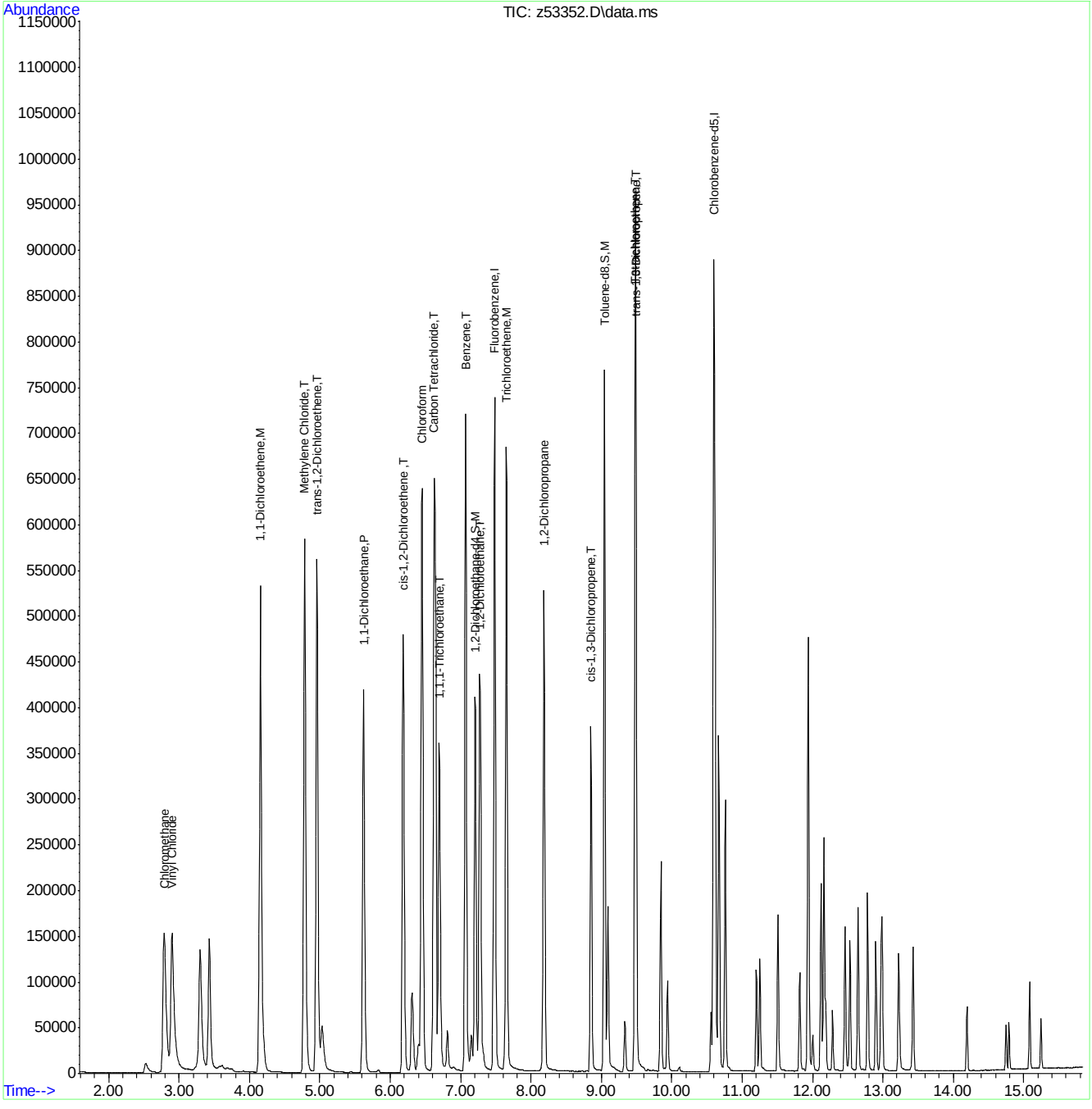
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	8530359	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	7400123	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	3402119	4.32	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 86.40%				
19) Toluene-d8	9.044	98	6998128	5.14	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 102.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	3640558	4.27	ppb		99
3) Chloromethane	2.790	50	3474882	4.29	ppb		99
4) 1,1-Dichloroethene	4.155	96	2895291	4.47	ppb		97
5) Methylene Chloride	4.785	84	4070855	4.43	ppb		100
6) trans-1,2-Dichloroethene	4.958	96	3168728	4.51	ppb		100
7) 1,1-Dichloroethane	5.622	63	5850443	4.33	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	3013763	4.57	ppb		99
9) Chloroform	6.454	83	6426812	3.96	ppb		100
10) Carbon Tetrachloride	6.626	117	4818493	4.33	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	5133303	4.32	ppb		100
12) Benzene	7.076	78	10917357	4.72	ppb		99
14) 1,2-Dichloroethane	7.272	62	4399839	4.21	ppb		99
15) Trichloroethene	7.646	95	3249437	4.46	ppb	#	99
16) 1,2-Dichloropropane	8.184	63	2855012	4.59	ppb		99
17) cis-1,3-Dichloropropene	8.852	75	3079509	5.72	ppb		99
20) trans-1,3-Dichloropropene	9.492	75	2976918	5.89	ppb		100
21) Tetrachloroethene	9.483	166	3008623	4.94	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53352.D
Acq On : 9 Aug 2018 2:23 pm
Operator : melissam
Sample : BS Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 10 10:05:42 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



SIMCL080918.M Fri Aug 10 10:50:05 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : z53373.D
Acq On : 10 Aug 2018 10:53 am
Operator : melissam
Sample : bs Inst : MSVOA15
Misc : ms40981,vz2012,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 11:21:12 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

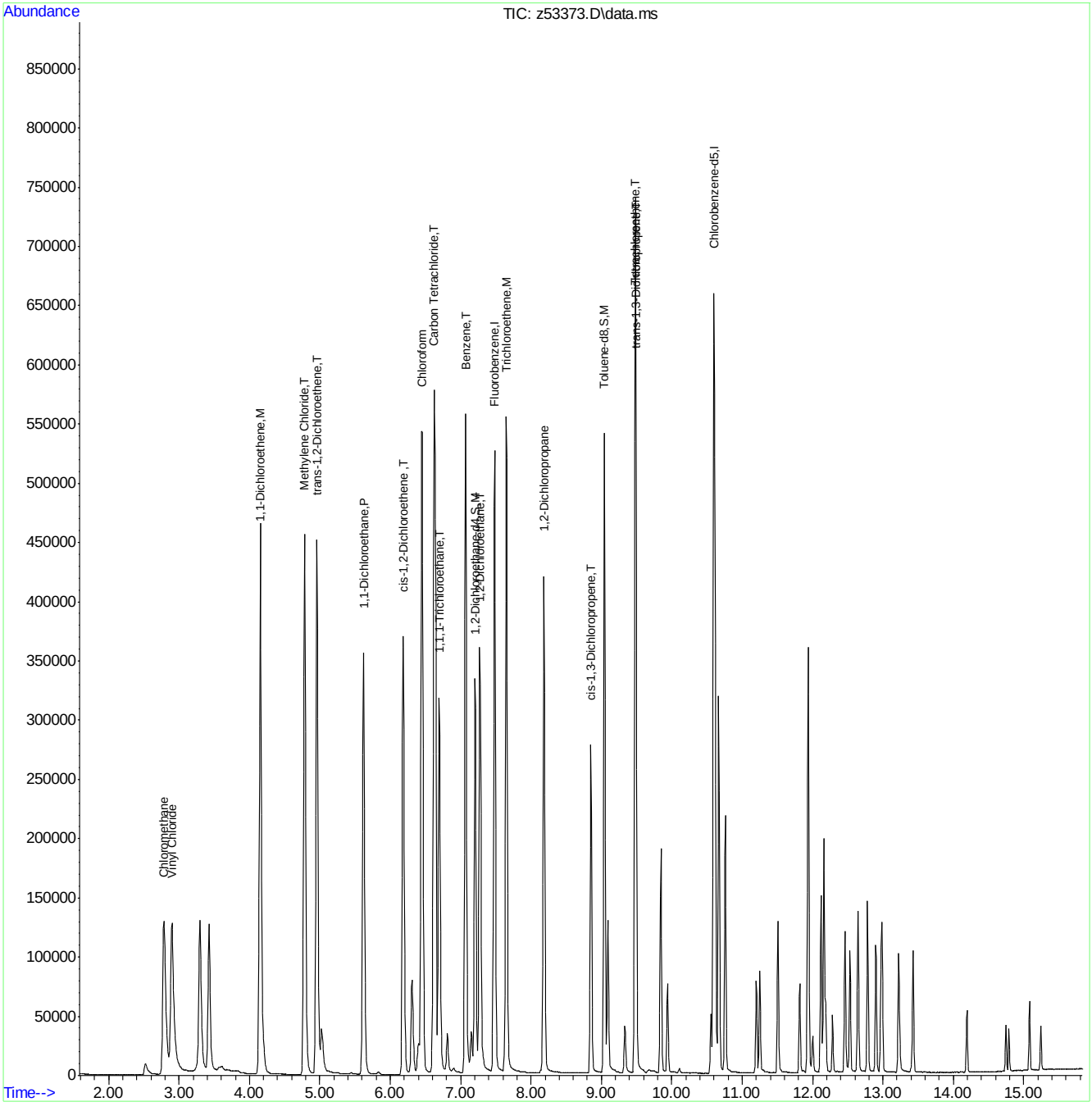
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6204193	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5490335	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2721730	4.75	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 95.00%				
19) Toluene-d8	9.041	98	4840360	4.79	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	2973476	4.83	ppb		99
3) Chloromethane	2.782	50	2874630	4.92	ppb		100
4) 1,1-Dichloroethene	4.151	96	2452943	5.21	ppb		96
5) Methylene Chloride	4.785	84	3110913	4.67	ppb		100
6) trans-1,2-Dichloroethene	4.958	96	2519104	4.93	ppb		100
7) 1,1-Dichloroethane	5.622	63	4934093	5.03	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	2307373	4.81	ppb		100
9) Chloroform	6.448	83	5507946	4.70	ppb		99
10) Carbon Tetrachloride	6.626	117	4281946	5.30	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	4429840	5.12	ppb		100
12) Benzene	7.075	78	8401130	4.99	ppb		100
14) 1,2-Dichloroethane	7.272	62	3557729	4.70	ppb		99
15) Trichloroethene	7.646	95	2602067	4.91	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	2266081	5.01	ppb		99
17) cis-1,3-Dichloropropene	8.852	75	2255972	5.75	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	2209821	5.89	ppb		99
21) Tetrachloroethene	9.483	166	2346670	5.20	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : z53373.D
Acq On : 10 Aug 2018 10:53 am
Operator : melissam
Sample : bs Inst : MSVOA15
Misc : ms40981,vz2012,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 10 11:21:12 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1068873	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	775842	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	400629	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	100608	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	291180	51.60	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.20%			
46) 1,2-Dichloroethane-d4	9.000	65	399025	52.29	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.58%			
57) Toluene-d8	11.152	98	1034241	48.31	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 96.62%			
79) 4-Bromofluorobenzene	13.353	174	304854	48.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.36%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	192668	31.65	ug/L	96
3) Chloromethane	2.538	50	210911	25.24	ug/L	99
4) 1,3-Butadiene	2.642	39	143015	31.73	ug/L	98
5) Vinyl Chloride	2.666	62	176038	25.04	ug/L	98
6) Bromomethane	3.111	94	90297	24.53	ug/L	99
7) Chloroethane	3.269	64	54764	25.66	ug/L	99
8) Trichlorofluoromethane	3.513	101	232635	28.81	ug/L	99
9) Ethyl Ether	3.928	59	133691	21.47	ug/L	95
10) 1,2-Dichlorotrifluoroe...	4.239	67	180536	24.14	ug/L	99
11) 1,1-Dichloroethene	4.227	61	215300	21.53	ug/L	99
12) Freon 113	4.318	101	114018	20.42	ug/L	96
13) Carbon Disulfide	4.281	76	298124	18.81	ug/L	95
14) Iodomethane	4.434	142	163860	19.13	ug/L	99
15) Allyl chloride	4.928	41	201244	23.41	ug/L	97
16) Methylene Chloride	5.104	49	242015	24.44	ug/L	94
17) Acetone	5.165	43	380520	214.43	ug/L	99
18) Methyl acetate	5.379	43	488382	112.75	ug/L	99
19) trans-1,2-Dichloroethene	5.361	61	224293	22.76	ug/L	99
20) Hexane	5.495	56	166034	21.97	ug/L	94
21) Methyl Tert Butyl Ether	5.556	73	265193	21.64	ug/L	93
22) Acetonitrile	5.891	41	172020	281.60	ug/L	99
23) Di-isopropyl ether	6.184	45	490681	22.28	ug/L	98
24) Chloroprene	6.312	53	259937	25.65	ug/L	99
25) 1,1-Dichloroethane	6.336	63	287872	24.25	ug/L	99
26) Acrylonitrile	6.403	53	286490	112.75	ug/L	100
27) ETBE	6.805	59	436307	24.57	ug/L	99
28) Vinyl acetate	6.781	43	1520955	107.70	ug/L	99
29) cis-1,2-Dichloroethene	7.275	96	126896	22.34	ug/L	97
30) 2,2-Dichloropropane	7.458	77	144283	28.58	ug/L	98
31) Bromochloromethane	7.616	128	63609	22.97	ug/L	91
32) Cyclohexane	7.653	56	293830	22.33	ug/L	97
33) Chloroform	7.775	83	237264	23.22	ug/L	98
34) Ethyl acetate	8.006	43	749495	121.91	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.049	42	98330	26.48 ug/L	93
37) Carbon Tetrachloride	8.025	117	161525	26.27 ug/L	99
38) 1,1,1-Trichloroethane	8.134	97	196234	23.86 ug/L	95
39) 2-Butanone	8.317	43	338302	126.97 ug/L	99
40) 1,1-Dichloropropene	8.366	75	168657	23.16 ug/L	97
41) tert-Butyl formate	8.579	59	247643	124.49 ug/L #	87
42) Propionitrile	8.799	54	253472	271.25 ug/L	97
43) Methacrylonitrile	8.842	41	1021751	279.17 ug/L	99
44) Benzene	8.799	78	502398	23.08 ug/L	97
45) TAME	9.031	73	268053	22.60 ug/L	92
47) 1,2-Dichloroethane	9.104	62	219737	23.37 ug/L	98
48) Trichloroethene	9.658	95	140538	24.45 ug/L	98
49) Methylcyclohexane	9.652	83	214017	22.75 ug/L	95
50) Dibromomethane	10.152	93	86161	24.24 ug/L	97
51) 1,2-Dichloropropane	10.250	63	170255	24.48 ug/L	97
52) Bromodichloromethane	10.341	83	174883	25.34 ug/L	98
53) Methyl methacrylate	10.518	41	104689	21.29 ug/L	95
54) 2-Chloroethyl vinyl ether	10.981	63	1333	0.32 ug/L #	42
55) cis-1,3-Dichloropropene	10.981	75	182801	21.21 ug/L	98
58) Toluene	11.201	91	551978	23.04 ug/L	99
59) 2-Nitropropane	11.384	41	158411	123.06 ug/L	97
60) 4-Methyl-2-pentanone	11.524	43	830569	129.65 ug/L	97
61) trans-1,3-Dichloropropene	11.932	75	12093	25.73 ug/L	97
62) Tetrachloroethene	11.561	166	139687	22.62 ug/L	96
63) Ethyl methacrylate	11.701	69	145859	21.39 ug/L	90
64) 1,1,2-Trichloroethane	11.707	83	112754	25.08 ug/L	97
65) Dibromochloromethane	11.865	129	133328	25.01 ug/L	99
66) 1,3-Dichloropropane	11.932	76	207873	22.99 ug/L	98
67) 1,2-Dibromoethane	12.054	107	118828	23.99 ug/L	99
68) 2-hexanone	12.213	43	707254	133.19 ug/L #	77
69) 1-Chlorohexane	12.445	91	190524	23.17 ug/L	97
70) Ethylbenzene	12.481	91	662018	24.15 ug/L	100
71) Chlorobenzene	12.469	112	367384	23.56 ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	125928	26.20 ug/L	98
73) m,p-Xylene	12.591	91	1017129	48.72 ug/L	99
74) o-Xylene	12.914	91	502139	23.99 ug/L	99
75) Styrene	12.951	104	364213	24.76 ug/L	97
76) Bromoform	12.987	173	80428	24.24 ug/L	99
77) Isopropylbenzene	13.140	105	598243	25.93 ug/L	99
80) cis-1,4-Dichloro-2-butene	13.383	53	51162	20.76 ug/L	94
81) n-Propylbenzene	13.432	91	794459	24.77 ug/L	99
82) Bromobenzene	13.438	156	151226	24.33 ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	185978	26.56 ug/L	98
84) 1,3,5-Trimethylbenzene	13.554	105	505829	25.03 ug/L	99
85) 2-Chlorotoluene	13.670	91	476287	24.44 ug/L	99
86) trans-1,4-Dichloro-2-B...	13.597	53	52000	22.78 ug/L	93
87) 1,2,3-Trichloropropane	13.578	110	47575	25.23 ug/L	95
88) Cyclohexanone	13.621	55	29538	98.32 ug/L	96
89) 4-Chlorotoluene	13.670	91	476287	24.44 ug/L	99
90) tert-Butylbenzene	13.786	91	304938	24.38 ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

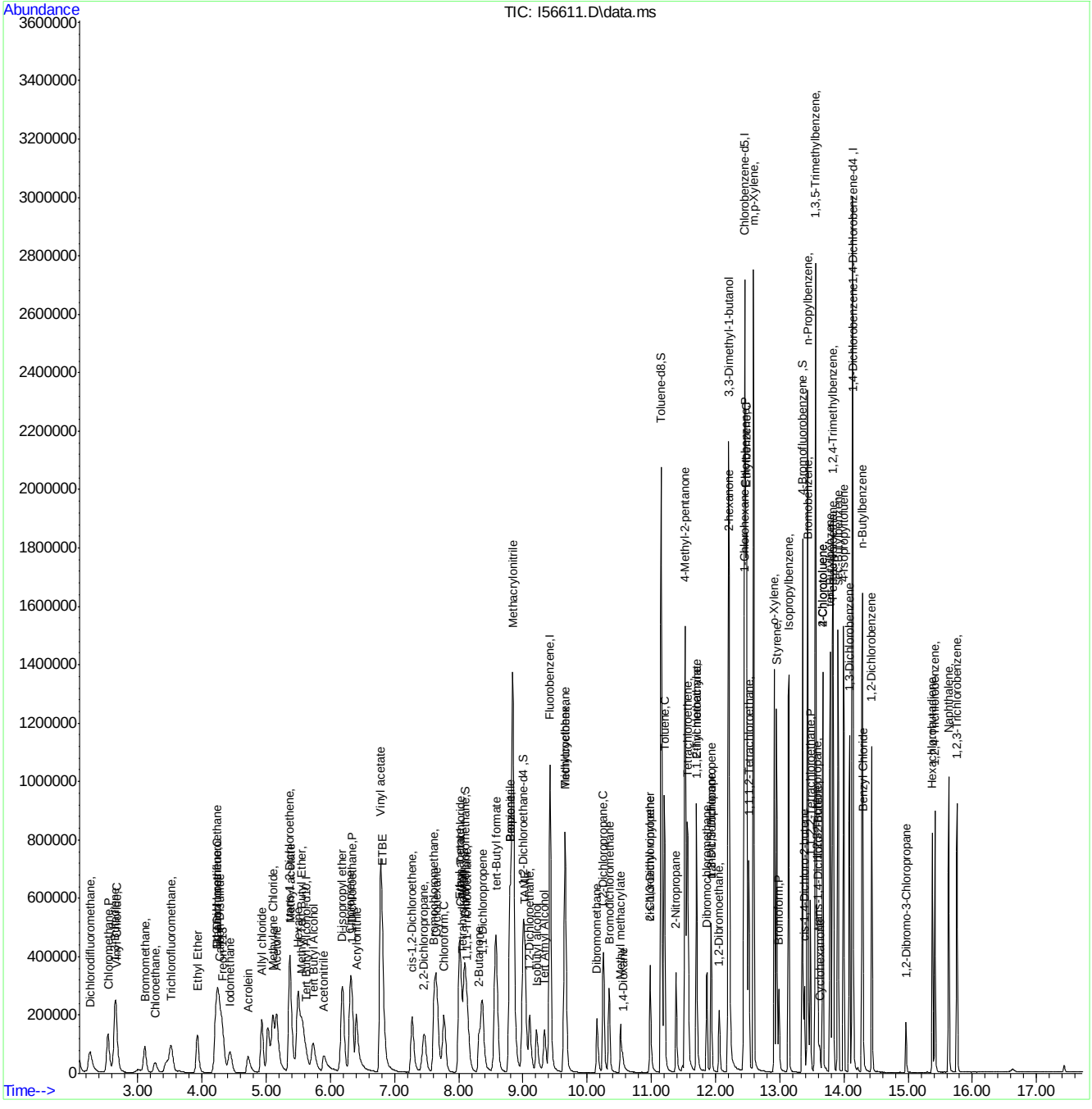
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	509588	24.38	ug/L	98
93)	Pentachloroethane	13.822	167	83504	25.66	ug/L	97
94)	sec-Butylbenzene	13.908	105	655214	25.39	ug/L	100
95)	4-Isopropyltoluene	13.993	119	534193	25.54	ug/L	100
96)	1,3-Dichlorobenzene	14.084	146	286396	24.82	ug/L	99
97)	1,4-Dichlorobenzene	14.139	146	302222	24.07	ug/L	98
98)	n-Butylbenzene	14.286	92	322110	26.74	ug/L	99
99)	Benzyl Chloride	14.298	126	45640	31.18	ug/L	98
100)	1,2-Dichlorobenzene	14.432	146	269300	23.97	ug/L	97
101)	1,2-Dibromo-3-Chloropr...	14.968	75	29300	26.03	ug/L	95
102)	Hexachlorobutadiene	15.377	225	93467	25.04	ug/L	97
103)	1,2,4-Trichlorobenzene	15.420	180	179108	24.02	ug/L	97
104)	Naphthalene	15.633	128	434876	22.84	ug/L	100
105)	1,2,3-Trichlorobenzene	15.761	180	170837	24.43	ug/L	98
107)	Ethanol	4.227	45	34901	464.95	ug/L	94
108)	Acrolein	4.720	56	110648	66.95	ug/L	99
109)	Tert Butyl Alcohol	5.732	59	197308	306.00	ug/L	97
110)	Isobutyl alcohol	9.213	43	115242	432.35	ug/L	98
111)	Tert Amyl Alcohol	9.335	59	94249	224.94	ug/L	96
112)	1,4-Dioxane	10.555	88	25320	388.88	ug/L	95
113)	3,3-Dimethyl-1-butanol	12.201	57	826613	1204.99	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/09/18 15:40

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1109107	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	795128	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	411562	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	110095	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	303723	51.87	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.74%			
46) 1,2-Dichloroethane-d4	9.000	65	413510	52.22	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.44%			
57) Toluene-d8	11.152	98	1074914	48.99	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.98%			
79) 4-Bromofluorobenzene	13.353	174	315712	48.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	204471	32.37	ug/L	100
3) Chloromethane	2.532	50	229458	26.46	ug/L	100
4) 1,3-Butadiene	2.642	39	154968	33.13	ug/L	96
5) Vinyl Chloride	2.666	62	195381	26.79	ug/L	98
6) Bromomethane	3.111	94	96782	25.34	ug/L	98
7) Chloroethane	3.269	64	55650	25.02	ug/L	97
8) Trichlorofluoromethane	3.513	101	248398	29.64	ug/L	98
9) Ethyl Ether	3.928	59	145543	22.52	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.239	67	190304	24.52	ug/L	99
11) 1,1-Dichloroethene	4.227	61	234088	22.56	ug/L	99
12) Freon 113	4.324	101	121182	20.92	ug/L	98
13) Carbon Disulfide	4.281	76	310406	18.87	ug/L	98
14) Iodomethane	4.434	142	177128	19.93	ug/L	99
15) Allyl chloride	4.934	41	222405	24.93	ug/L	96
16) Methylene Chloride	5.104	49	254612	24.79	ug/L	96
17) Acetone	5.165	43	412992	224.28	ug/L	99
18) Methyl acetate	5.379	43	535828	119.11	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	243060	23.77	ug/L	98
20) Hexane	5.495	56	176178	22.47	ug/L	93
21) Methyl Tert Butyl Ether	5.556	73	293500	23.08	ug/L	96
22) Acetonitrile	5.897	41	188975	298.13	ug/L	99
23) Di-isopropyl ether	6.190	45	543206	23.78	ug/L	98
24) Chloroprene	6.312	53	287780	27.37	ug/L	97
25) 1,1-Dichloroethane	6.336	63	311252	25.27	ug/L	98
26) Acrylonitrile	6.403	53	321838	121.78	ug/L	100
27) ETBE	6.805	59	478205	25.95	ug/L	98
28) Vinyl acetate	6.781	43	1706233	116.28	ug/L	100
29) cis-1,2-Dichloroethene	7.275	96	136818	23.21	ug/L	96
30) 2,2-Dichloropropane	7.458	77	156429	29.87	ug/L	99
31) Bromochloromethane	7.616	128	68040	23.68	ug/L	92
32) Cyclohexane	7.653	56	319788	23.42	ug/L	96
33) Chloroform	7.775	83	255482	24.10	ug/L	97
34) Ethyl acetate	8.006	43	843391	132.09	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	107426	27.88	ug/L		99
37) Carbon Tetrachloride	8.019	117	172315	27.01	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	214688	25.16	ug/L		99
39) 2-Butanone	8.317	43	370266	133.78	ug/L		95
40) 1,1-Dichloropropene	8.366	75	183132	24.23	ug/L		95
41) tert-Butyl formate	8.579	59	191941	94.72	ug/L	#	86
42) Propionitrile	8.799	54	274321	282.91	ug/L		100
43) Methacrylonitrile	8.842	41	1091069	287.30	ug/L		99
44) Benzene	8.793	78	536043	23.74	ug/L		97
45) TAME	9.031	73	293069	23.81	ug/L		93
47) 1,2-Dichloroethane	9.104	62	235740	24.17	ug/L		99
48) Trichloroethene	9.658	95	148895	24.97	ug/L		99
49) Methylcyclohexane	9.652	83	230853	23.65	ug/L		95
50) Dibromomethane	10.152	93	92117	24.98	ug/L		99
51) 1,2-Dichloropropane	10.250	63	180538	25.01	ug/L		97
52) Bromodichloromethane	10.341	83	187325	26.16	ug/L		98
53) Methyl methacrylate	10.518	41	115694	22.63	ug/L		97
54) 2-Chloroethyl vinyl ether	10.981	63	1272	0.30	ug/L	#	42
55) cis-1,3-Dichloropropene	10.981	75	196059	21.91	ug/L		97
58) Toluene	11.201	91	581198	23.67	ug/L		99
59) 2-Nitropropane	11.384	41	168566	127.62	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	896236	136.51	ug/L		97
61) trans-1,3-Dichloropropene	11.926	75	13214	27.43	ug/L		98
62) Tetrachloroethene	11.554	166	147449	23.29	ug/L		99
63) Ethyl methacrylate	11.701	69	161517	23.06	ug/L		94
64) 1,1,2-Trichloroethane	11.701	83	119966	26.04	ug/L		96
65) Dibromochloromethane	11.859	129	141147	25.83	ug/L		100
66) 1,3-Dichloropropane	11.932	76	221392	23.89	ug/L		99
67) 1,2-Dibromoethane	12.054	107	127176	25.05	ug/L		99
68) 2-hexanone	12.213	43	756088	138.94	ug/L	#	78
69) 1-Chlorohexane	12.445	91	207414	24.61	ug/L		99
70) Ethylbenzene	12.481	91	703141	25.03	ug/L		100
71) Chlorobenzene	12.469	112	388170	24.29	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	133657	27.13	ug/L		99
73) m,p-Xylene	12.591	91	1086744	50.79	ug/L		100
74) o-Xylene	12.914	91	537748	25.06	ug/L		100
75) Styrene	12.951	104	387534	25.70	ug/L		98
76) Bromoform	12.987	173	84644	24.87	ug/L		98
77) Isopropylbenzene	13.140	105	637486	26.96	ug/L		98
80) cis-1,4-Dichloro-2-butene	13.383	53	54726	21.61	ug/L		89
81) n-Propylbenzene	13.432	91	839468	25.48	ug/L		98
82) Bromobenzene	13.438	156	158635	24.85	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	196176	27.28	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	536958	25.86	ug/L		98
85) 2-Chlorotoluene	13.670	91	503470	25.15	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	53629	22.87	ug/L		91
87) 1,2,3-Trichloropropane	13.578	110	49591	25.60	ug/L		96
88) Cyclohexanone	13.621	55	33048	107.08	ug/L		97
89) 4-Chlorotoluene	13.670	91	503470	25.15	ug/L		99
90) tert-Butylbenzene	13.786	91	326895	25.44	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

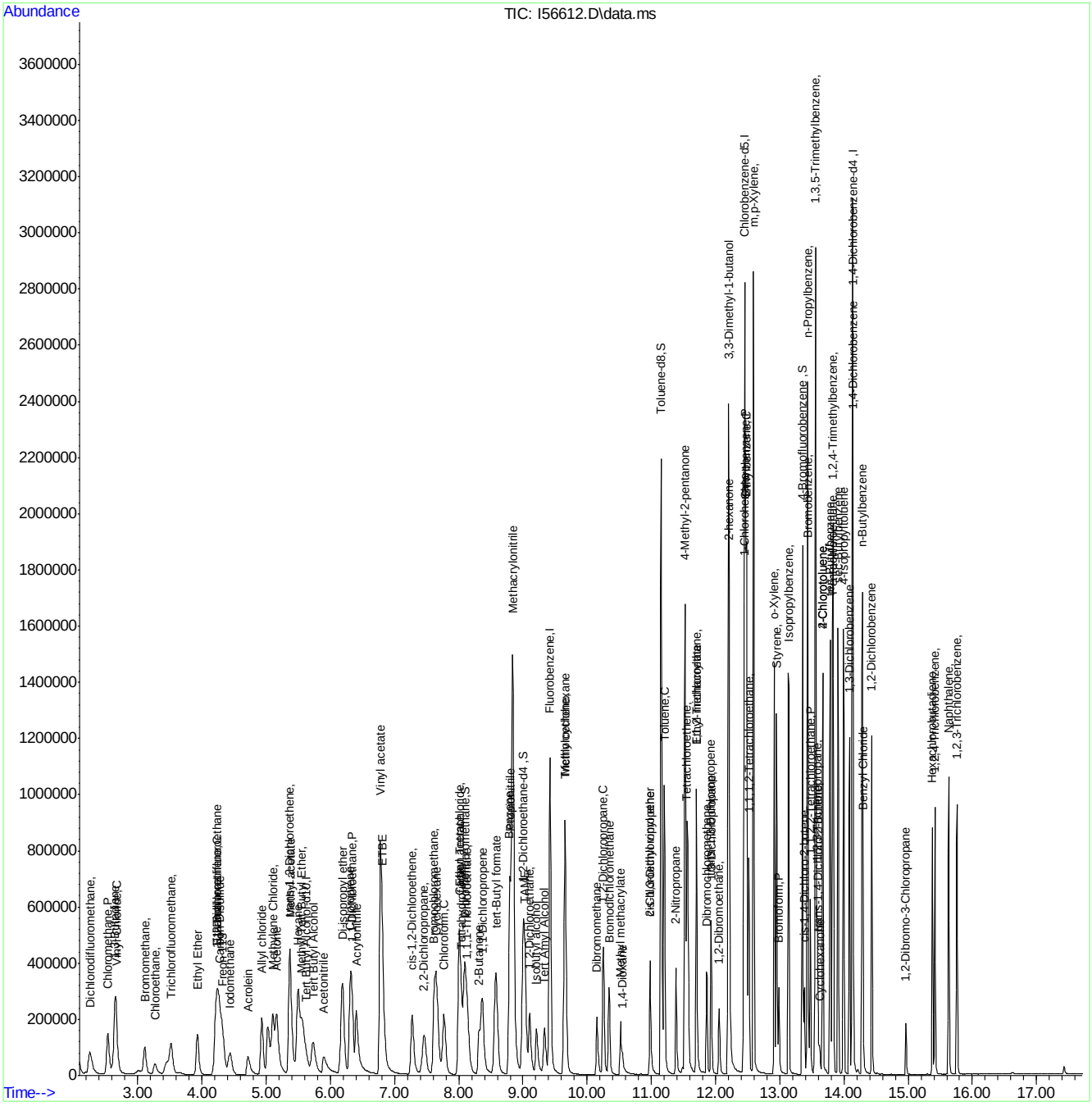
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	538025	25.05	ug/L	99
93) Pentachloroethane	13.822	167	87917	26.25	ug/L	95
94) sec-Butylbenzene	13.908	105	693265	26.15	ug/L	99
95) 4-Isopropyltoluene	13.993	119	566114	26.34	ug/L	100
96) 1,3-Dichlorobenzene	14.084	146	300082	25.32	ug/L	99
97) 1,4-Dichlorobenzene	14.139	146	314730	24.40	ug/L	99
98) n-Butylbenzene	14.286	92	340180	27.49	ug/L	98
99) Benzyl Chloride	14.298	126	49153	32.47	ug/L	98
100) 1,2-Dichlorobenzene	14.432	146	285484	24.73	ug/L	98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	31112	26.87	ug/L	75
102) Hexachlorobutadiene	15.377	225	98924	25.80	ug/L	97
103) 1,2,4-Trichlorobenzene	15.420	180	190669	24.89	ug/L	96
104) Naphthalene	15.633	128	469287	23.97	ug/L	98
105) 1,2,3-Trichlorobenzene	15.761	180	182032	25.34	ug/L	99
107) Ethanol	4.233	45	39456m	480.48	ug/L	
108) Acrolein	4.714	56	125321	69.30	ug/L	100
109) Tert Butyl Alcohol	5.732	59	236123	334.64	ug/L	98
110) Isobutyl alcohol	9.207	43	127927	438.58	ug/L	97
111) Tert Amyl Alcohol	9.335	59	110883	241.27	ug/L	98
112) 1,4-Dioxane	10.549	88	28799	404.33	ug/L	88
113) 3,3-Dimethyl-1-butanol	12.201	57	897059	1195.00	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integration Approval Summary

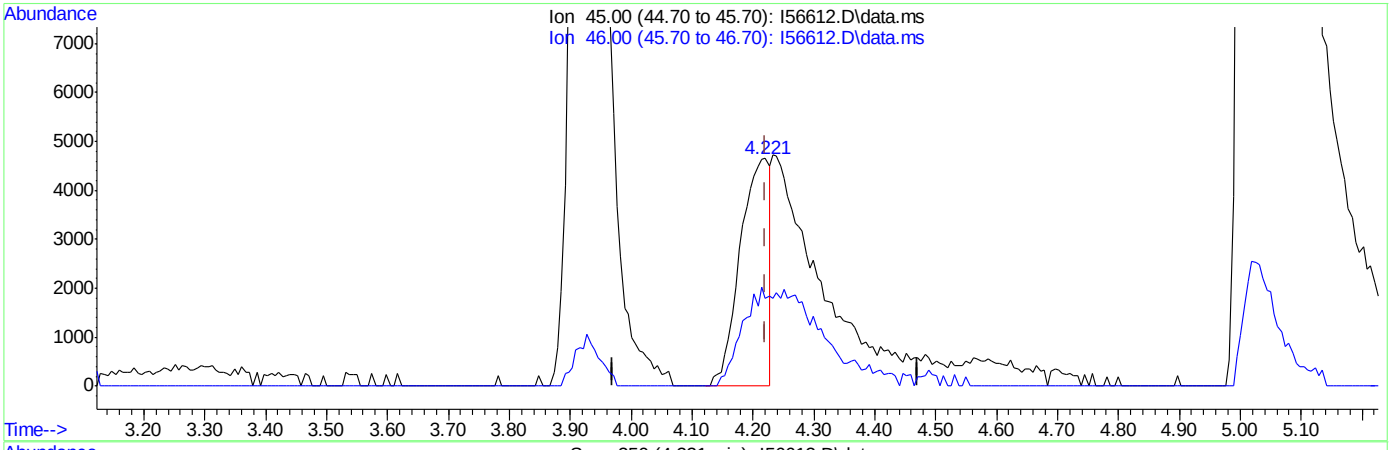
Sample Number:	FA56349-1MSD	**Method:**	SW846 8260C
Lab FileID:	I56612.D	**Analyst approved:**	08/09/18 11:20 Ana Jimenez
Injection Time:	08/08/18 15:43	**Supervisor approved:**	08/09/18 15:40 Melissa Mangual

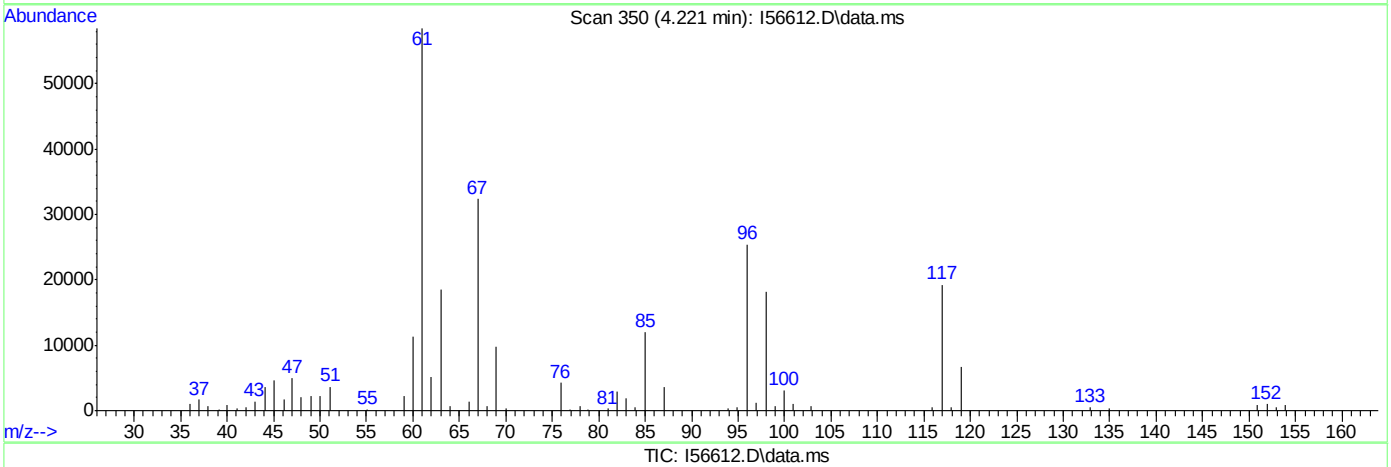
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.23	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:00 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56612.D\data.ms

(107) Ethanol

4.221min (+0.000) 187.18ug/L

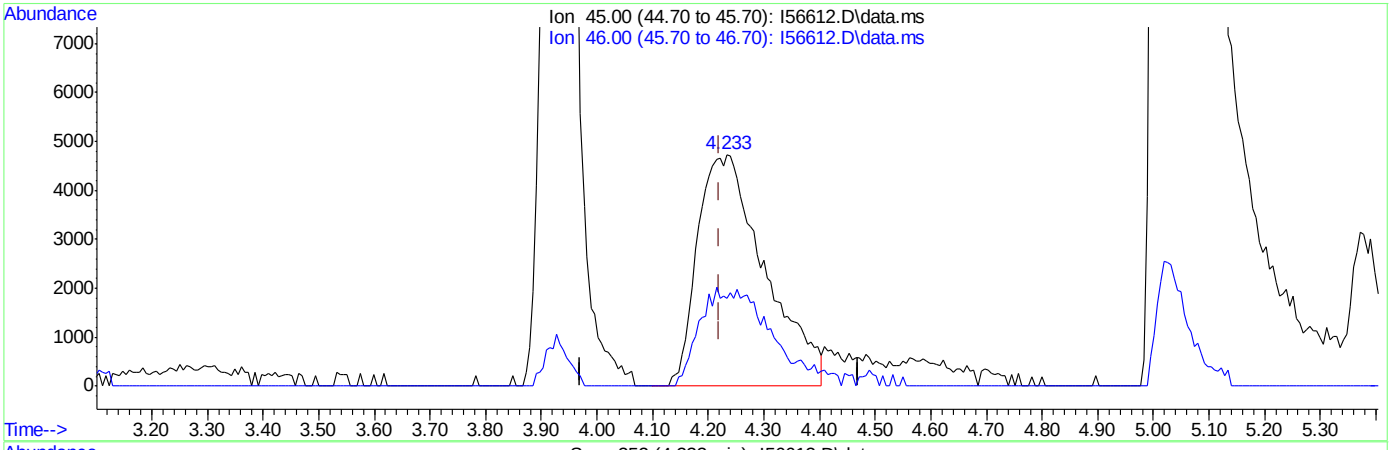
response 15456

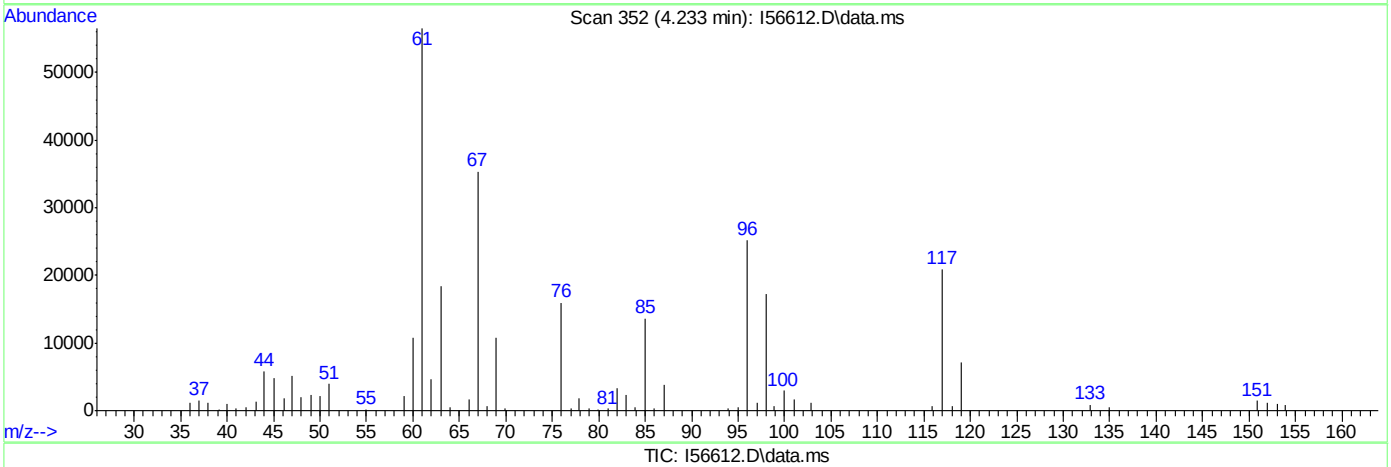
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	38.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56612.D\data.ms

(107) Ethanol

4.233min (+0.012) 480.48ug/L m

response 39456

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	38.13
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/13/18 15:35

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 08:15:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1072952	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	783960	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	405093	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	89294	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	292355	51.61	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.22%			
46) 1,2-Dichloroethane-d4	8.994	65	393916	51.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.84%			
57) Toluene-d8	11.152	98	1038808	48.02	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 96.04%			
79) 4-Bromofluorobenzene	13.353	174	309685	48.40	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	189540	31.02	ug/L	98
3) Chloromethane	2.526	50	219821	26.20	ug/L	98
4) 1,3-Butadiene	2.636	39	132376	29.26	ug/L	96
5) Vinyl Chloride	2.660	62	184444	26.14	ug/L	98
6) Bromomethane	3.105	94	94057	25.46	ug/L	97
7) Chloroethane	3.263	64	56035	26.27	ug/L	96
8) Trichlorofluoromethane	3.513	101	251539	31.03	ug/L	98
9) Ethyl Ether	3.922	59	104763	16.76	ug/L	94
10) 1,2-Dichlorotrifluoroe...	4.227	67	164131	21.86	ug/L	98
11) 1,1-Dichloroethene	4.215	61	183775	18.31	ug/L	98
12) Freon 113	4.318	101	94845	16.92	ug/L	96
13) Carbon Disulfide	4.263	76	262827	16.52	ug/L	97
14) Iodomethane	4.422	142	138117	16.06	ug/L	99
15) Allyl chloride	4.928	41	221663	25.68	ug/L	95
16) Methylene Chloride	5.098	49	213947	21.51	ug/L	95
17) Acetone	5.172	43	195439	109.71	ug/L	98
18) Methyl acetate	5.373	43	403892	93.13	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	198780	20.10	ug/L	98
20) Hexane	5.501	56	146618	19.33	ug/L	94
21) Methyl Tert Butyl Ether	5.556	73	227071	18.46	ug/L	95
22) Acetonitrile	5.897	41	159589	260.26	ug/L	99
23) Di-isopropyl ether	6.184	45	453931	20.54	ug/L	98
24) Chloroprene	6.312	53	248321	24.41	ug/L	97
25) 1,1-Dichloroethane	6.336	63	262377	22.02	ug/L	98
26) Acrylonitrile	6.403	53	257097	101.10	ug/L	98
27) ETBE	6.799	59	404894	22.72	ug/L	98
28) Vinyl acetate	6.775	43	1435841	101.39	ug/L	99
29) cis-1,2-Dichloroethene	7.275	96	116062	20.35	ug/L	96
30) 2,2-Dichloropropane	7.458	77	136621	26.96	ug/L	98
31) Bromochloromethane	7.616	128	59335	21.35	ug/L	90
32) Cyclohexane	7.653	56	258993	19.61	ug/L	97
33) Chloroform	7.769	83	228373	22.27	ug/L	98
34) Ethyl acetate	8.000	43	626636	101.72	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 08:15:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	81725m	21.93	ug/L		
37) Carbon Tetrachloride	8.019	117	150659	24.41	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	185232	22.44	ug/L		98
39) 2-Butanone	8.305	43	293695	110.09	ug/L		95
40) 1,1-Dichloropropene	8.360	75	152715	20.89	ug/L		95
41) tert-Butyl formate	8.573	59	413367	198.03	ug/L	#	81
42) Propionitrile	8.793	54	226894	241.89	ug/L		96
43) Methacrylonitrile	8.836	41	915792	249.27	ug/L		99
44) Benzene	8.793	78	461118	21.11	ug/L		97
45) TAME	9.025	73	255025	21.42	ug/L		90
47) 1,2-Dichloroethane	9.104	62	208456	22.09	ug/L		98
48) Trichloroethene	9.659	95	131108	22.72	ug/L		98
49) Methylcyclohexane	9.652	83	196812	20.84	ug/L		94
50) Dibromomethane	10.146	93	82091	23.01	ug/L		95
51) 1,2-Dichloropropane	10.250	63	163807	23.46	ug/L		97
52) Bromodichloromethane	10.335	83	174942	25.25	ug/L		98
53) Methyl methacrylate	10.518	41	89022	18.12	ug/L		96
54) 2-Chloroethyl vinyl ether	10.975	63	1284	0.31	ug/L	#	45
55) cis-1,3-Dichloropropene	10.975	75	184452	21.32	ug/L		95
58) Toluene	11.201	91	531044	21.93	ug/L		99
59) 2-Nitropropane	11.384	41	149869	115.45	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	771998	119.26	ug/L		97
61) trans-1,3-Dichloropropene	11.926	75	12555	26.43	ug/L	#	89
62) Tetrachloroethene	11.555	166	136695	21.90	ug/L		99
63) Ethyl methacrylate	11.701	69	129404	18.84	ug/L		90
64) 1,1,2-Trichloroethane	11.701	83	115284	25.38	ug/L		94
65) Dibromochloromethane	11.859	129	134131	24.90	ug/L		99
66) 1,3-Dichloropropane	11.926	76	205273	22.46	ug/L		94
67) 1,2-Dibromoethane	12.054	107	115226	23.02	ug/L		99
68) 2-hexanone	12.207	43	646803	120.55	ug/L		92
69) 1-Chlorohexane	12.439	91	196001	23.59	ug/L		89
70) Ethylbenzene	12.481	91	670886	24.22	ug/L		100
71) Chlorobenzene	12.469	112	375487	23.83	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	130441	26.86	ug/L		99
73) m,p-Xylene	12.591	91	1042762	49.43	ug/L		99
74) o-Xylene	12.914	91	510587	24.14	ug/L		99
75) Styrene	12.951	104	365918	24.62	ug/L		99
76) Bromoform	12.987	173	81063	24.18	ug/L		98
77) Isopropylbenzene	13.134	105	624116	26.77	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	56520	22.68	ug/L		90
81) n-Propylbenzene	13.426	91	831221	25.63	ug/L		95
82) Bromobenzene	13.438	156	157787	25.11	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	189228	26.73	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	521743	25.53	ug/L		99
85) 2-Chlorotoluene	13.670	91	499624	25.36	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	59422	25.74	ug/L		98
87) 1,2,3-Trichloropropane	13.579	110	47325	24.82	ug/L		97
88) Cyclohexanone	13.621	55	26615	87.61	ug/L		96
89) 4-Chlorotoluene	13.670	91	499624	25.36	ug/L		100
90) tert-Butylbenzene	13.786	91	325084	25.70	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 08:15:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

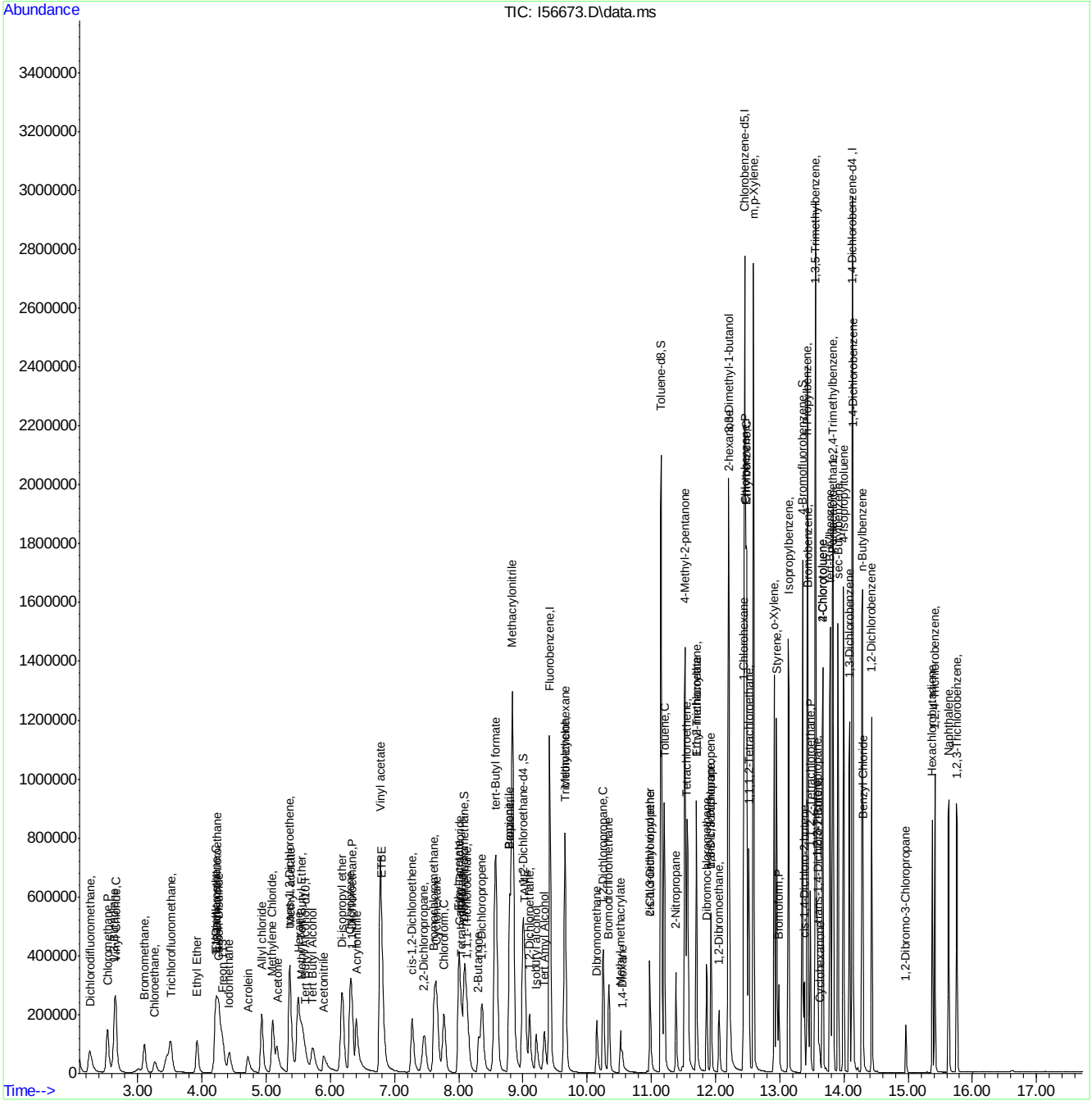
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.829	105	527367	24.95	ug/L		99
93)	Pentachloroethane	13.822	167	82136	25.01	ug/L		99
94)	sec-Butylbenzene	13.908	105	693546	26.58	ug/L		100
95)	4-Isopropyltoluene	13.993	119	563229	26.63	ug/L		99
96)	1,3-Dichlorobenzene	14.085	146	300002	25.72	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	316246	24.91	ug/L		99
98)	n-Butylbenzene	14.280	92	339138	27.85	ug/L		92
99)	Benzyl Chloride	14.298	126	49753	33.26	ug/L	#	88
100)	1,2-Dichlorobenzene	14.432	146	285981	25.17	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	28832	25.35	ug/L		77
102)	Hexachlorobutadiene	15.377	225	97267	25.77	ug/L		100
103)	1,2,4-Trichlorobenzene	15.414	180	185110	24.55	ug/L		100
104)	Naphthalene	15.633	128	439465	22.83	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	178484	25.24	ug/L		99
107)	Ethanol	4.221	45	31663m	475.36	ug/L		
108)	Acrolein	4.714	56	101144	68.96	ug/L		96
109)	Tert Butyl Alcohol	5.726	59	169243	295.73	ug/L		94
110)	Isobutyl alcohol	9.207	43	99038	418.64	ug/L		96
111)	Tert Amyl Alcohol	9.329	59	92732	248.52	ug/L		99
112)	1,4-Dioxane	10.549	88	24633	426.60	ug/L		99
113)	3,3-Dimethyl-1-butanol	12.201	57	737310	1210.99	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 08:15:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

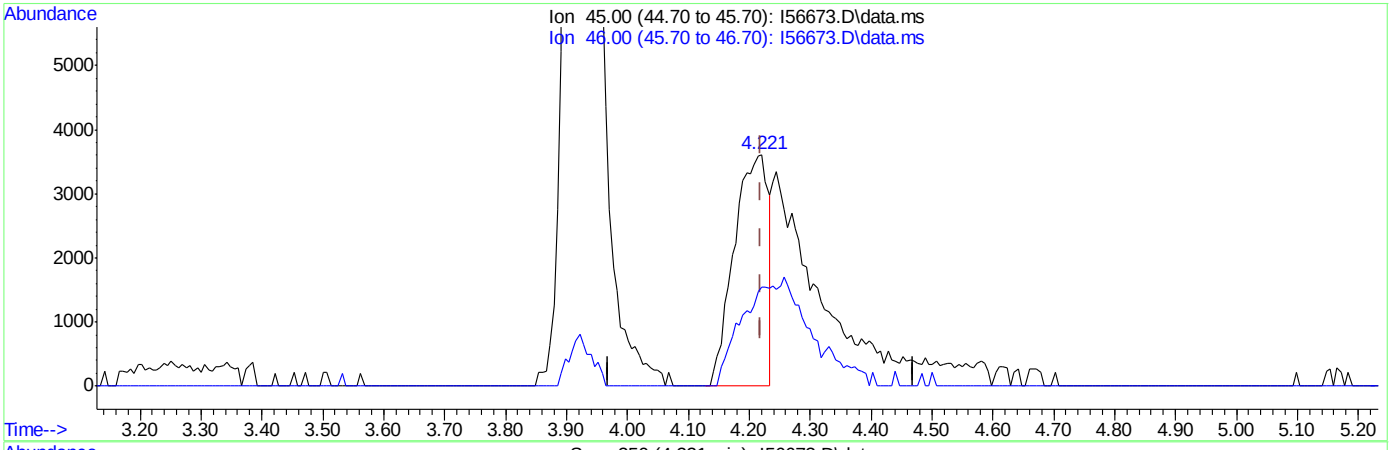
Sample Number:	FA56349-13MS	**Method:**	SW846 8260C
Lab FileID:	I56673.D	**Analyst approved:**	08/13/18 08:25 Ana Jimenez
Injection Time:	08/10/18 18:51	**Supervisor approved:**	08/13/18 15:35 Melissa Mangual

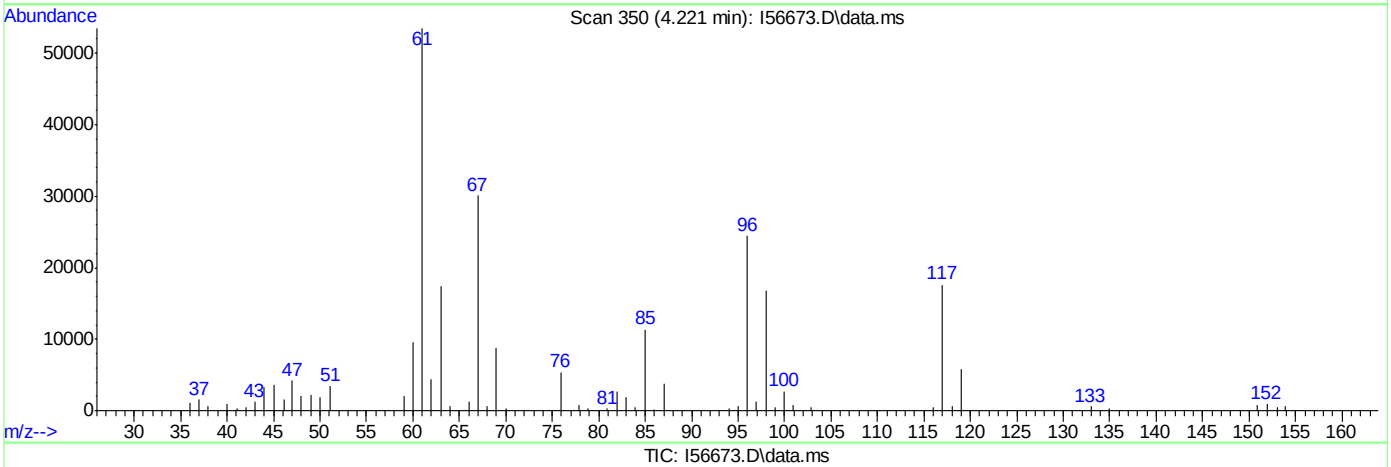
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration
Tetrahydrofuran	109-99-9		8.04	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 07:35:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56673.D\data.ms

(107) Ethanol

4.221min (+0.000) 207.48ug/L

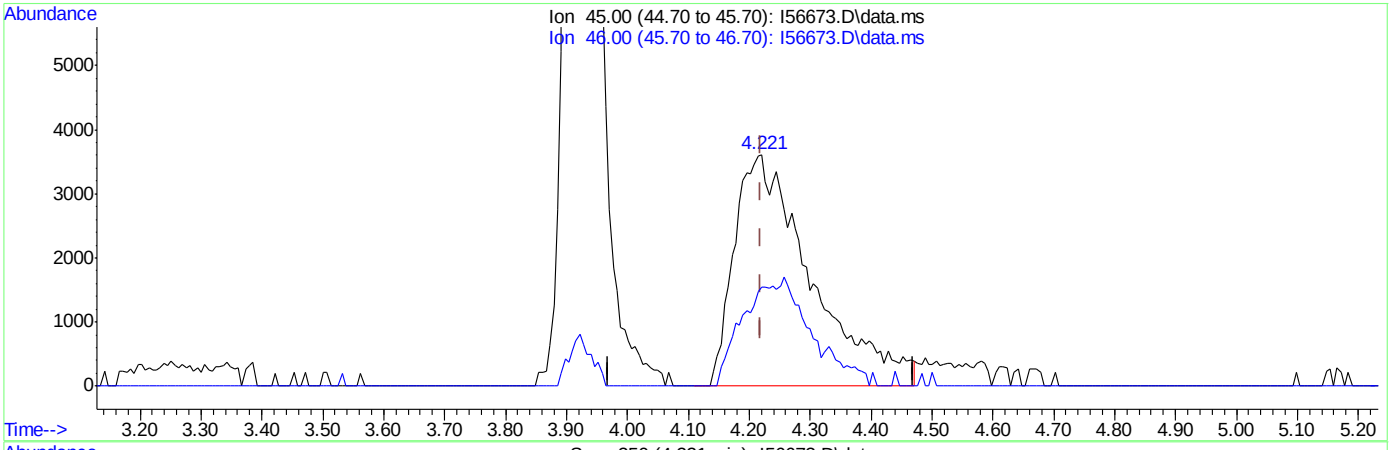
response 13890

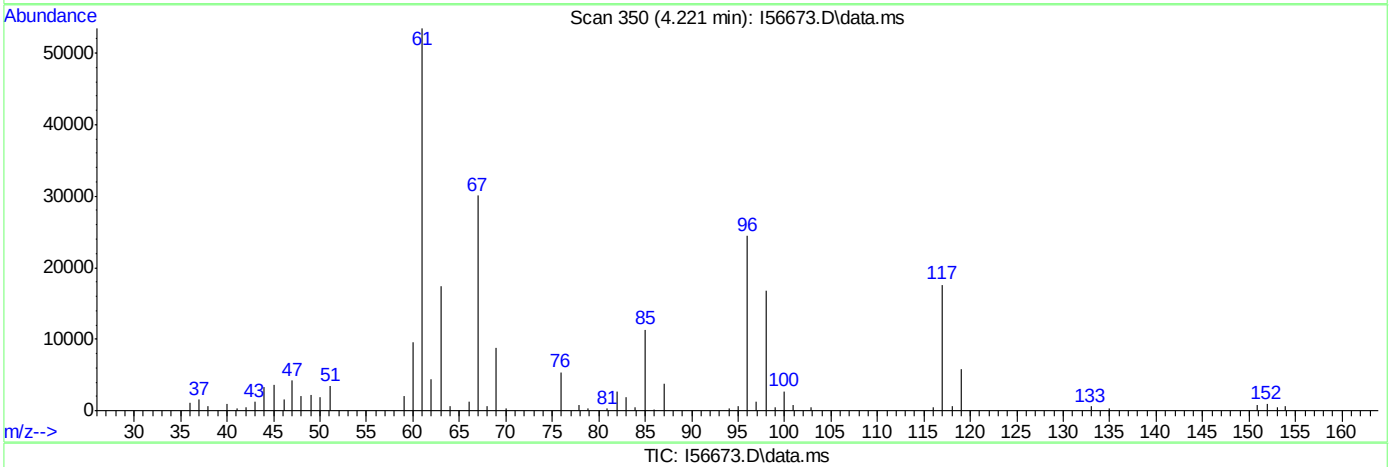
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	42.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 07:35:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56673.D\data.ms

(107) Ethanol

4.221min (+0.000) 475.36ug/L m

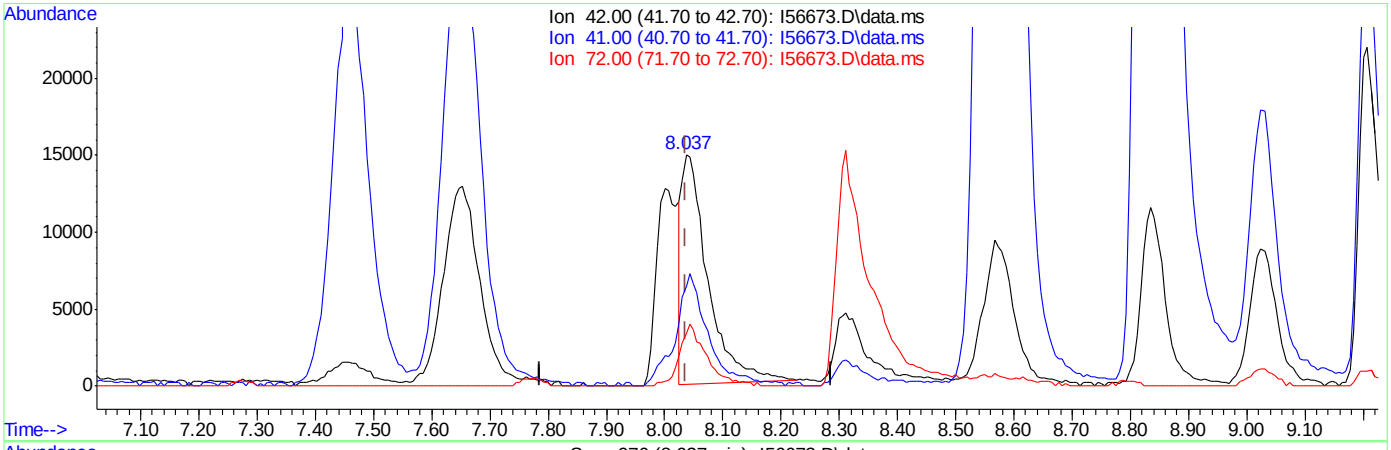
response 31663

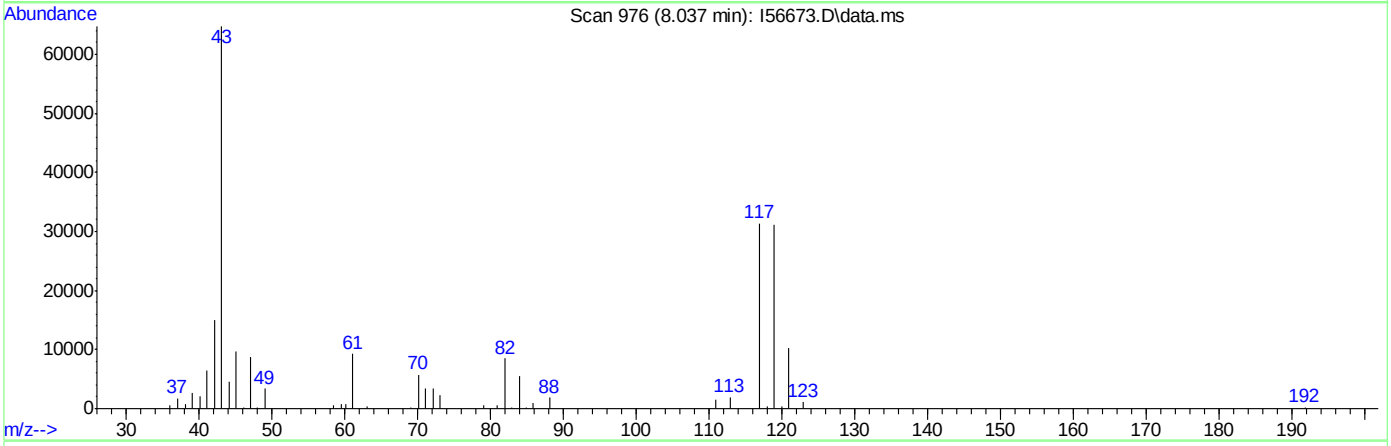
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	42.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 07:35:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56673.D\data.ms

(35) Tetrahydrofuran

8.037min (-0.000) 12.35ug/L

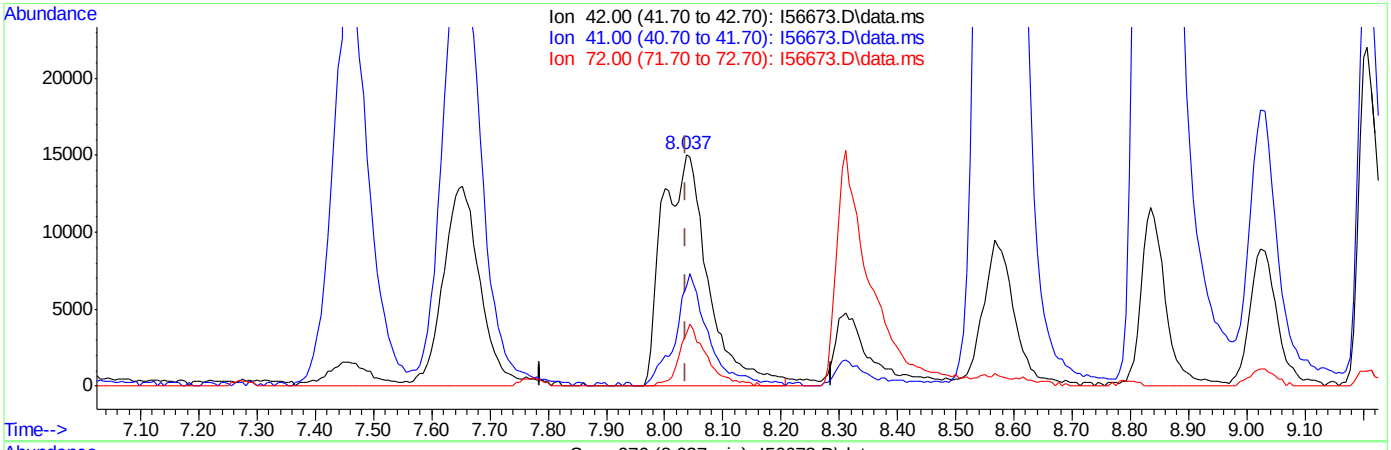
response 46048

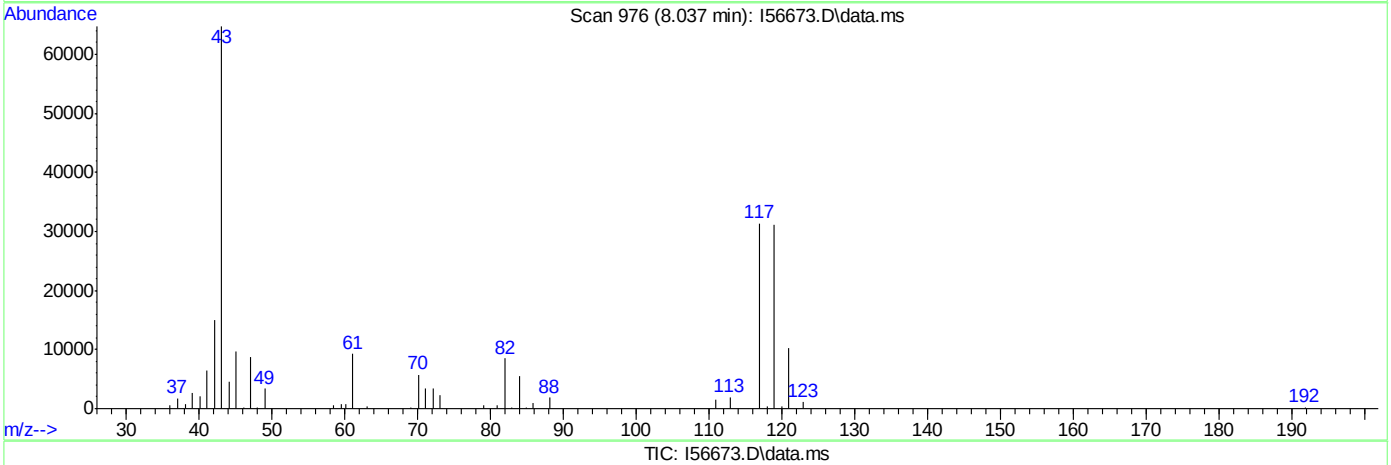
Ion	Exp%	Act%
42.00	100	100
41.00	40.40	42.40
72.00	23.50	23.33
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56673.D
Acq On : 10 Aug 2018 6:51 pm
Operator : ANAJ
Sample : FA56349-13ms MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 07:35:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56673.D\data.ms

(35) Tetrahydrofuran

8.037min (-0.000) 21.93ug/L m

response 81725

Ion	Exp%	Act%
42.00	100	100
41.00	40.40	43.10
72.00	23.50	22.72
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56674.D
Acq On : 10 Aug 2018 7:15 pm
Operator : ANAJ
Sample : FA56349-13msd MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 13 08:15:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1106485	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	797967	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	404820	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	96505	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	301031	51.53	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.06%			
46) 1,2-Dichloroethane-d4	8.994	65	409674	51.86	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.72%			
57) Toluene-d8	11.152	98	1068393	48.52	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.04%			
79) 4-Bromofluorobenzene	13.353	174	313273	49.00	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	199758	31.70	ug/L	96
3) Chloromethane	2.526	50	228738	26.44	ug/L	100
4) 1,3-Butadiene	2.636	39	140371	30.08	ug/L	100
5) Vinyl Chloride	2.654	62	197606	27.16	ug/L	98
6) Bromomethane	3.099	94	99480	26.11	ug/L	98
7) Chloroethane	3.263	64	59716	27.35	ug/L	93
8) Trichlorofluoromethane	3.507	101	248799	29.76	ug/L	100
9) Ethyl Ether	3.922	59	113939	17.67	ug/L	97
10) 1,2-Dichlorotrifluoroe...	4.227	67	169319	21.87	ug/L	97
11) 1,1-Dichloroethene	4.214	61	192145	18.56	ug/L	99
12) Freon 113	4.312	101	100643	17.41	ug/L	96
13) Carbon Disulfide	4.257	76	269545	16.43	ug/L	95
14) Iodomethane	4.422	142	145938	16.46	ug/L	99
15) Allyl chloride	4.928	41	236317	26.55	ug/L	95
16) Methylene Chloride	5.098	49	217799	21.23	ug/L	96
17) Acetone	5.165	43	203051	110.53	ug/L	100
18) Methyl acetate	5.373	43	420021	93.91	ug/L	98
19) trans-1,2-Dichloroethene	5.354	61	206347	20.23	ug/L	97
20) Hexane	5.495	56	147197	18.82	ug/L	93
21) Methyl Tert Butyl Ether	5.556	73	243809	19.22	ug/L	93
22) Acetonitrile	5.891	41	167585	265.02	ug/L	97
23) Di-isopropyl ether	6.184	45	478893	21.01	ug/L	99
24) Chloroprene	6.306	53	260016	24.79	ug/L	97
25) 1,1-Dichloroethane	6.336	63	269841	21.96	ug/L	98
26) Acrylonitrile	6.397	53	276452	105.30	ug/L	97
27) ETBE	6.799	59	426883	23.22	ug/L	99
28) Vinyl acetate	6.775	43	1531496	104.81	ug/L	99
29) cis-1,2-Dichloroethene	7.275	96	121359	20.63	ug/L	97
30) 2,2-Dichloropropane	7.458	77	143981	27.55	ug/L	99
31) Bromochloromethane	7.616	128	60259	21.02	ug/L	96
32) Cyclohexane	7.647	56	272298	19.99	ug/L	96
33) Chloroform	7.769	83	235253	22.24	ug/L	97
34) Ethyl acetate	8.006	43	671741	105.70	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56674.D
Acq On : 10 Aug 2018 7:15 pm
Operator : ANAJ
Sample : FA56349-13msd MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 13 08:15:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35)	Tetrahydrofuran	8.037	42	86641	22.54	ug/L		95
37)	Carbon Tetrachloride	8.019	117	154680	24.30	ug/L		97
38)	1,1,1-Trichloroethane	8.128	97	190890	22.42	ug/L		97
39)	2-Butanone	8.311	43	307921	111.90	ug/L		95
40)	1,1-Dichloropropene	8.360	75	158969	21.08	ug/L		96
41)	tert-Butyl formate	8.573	59	357778	169.09	ug/L	#	80
42)	Propionitrile	8.793	54	240404	248.52	ug/L		97
43)	Methacrylonitrile	8.836	41	964592	254.59	ug/L		99
44)	Benzene	8.793	78	474323	21.05	ug/L		96
45)	TAME	9.024	73	269811	21.97	ug/L		93
47)	1,2-Dichloroethane	9.104	62	210222	21.60	ug/L		98
48)	Trichloroethene	9.659	95	135103	22.71	ug/L		97
49)	Methylcyclohexane	9.652	83	203104	20.86	ug/L		95
50)	Dibromomethane	10.152	93	84681	23.02	ug/L		97
51)	1,2-Dichloropropane	10.250	63	169933	23.60	ug/L		97
52)	Bromodichloromethane	10.341	83	178482	24.98	ug/L		99
53)	Methyl methacrylate	10.518	41	101009	19.88	ug/L		96
54)	2-Chloroethyl vinyl ether	10.975	63	1211	0.29	ug/L	#	35
55)	cis-1,3-Dichloropropene	10.981	75	194632	21.80	ug/L		97
58)	Toluene	11.201	91	546529	22.18	ug/L		98
59)	2-Nitropropane	11.384	41	156423	118.29	ug/L		96
60)	4-Methyl-2-pentanone	11.524	43	799492	121.34	ug/L		97
61)	trans-1,3-Dichloropropene	11.926	75	11275	23.32	ug/L	#	91
62)	Tetrachloroethene	11.555	166	137651	21.67	ug/L		98
63)	Ethyl methacrylate	11.701	69	139743	19.96	ug/L		90
64)	1,1,2-Trichloroethane	11.701	83	116652	25.23	ug/L		94
65)	Dibromochloromethane	11.859	129	137354	25.05	ug/L		100
66)	1,3-Dichloropropane	11.926	76	212917	22.89	ug/L		93
67)	1,2-Dibromoethane	12.054	107	118662	23.29	ug/L		99
68)	2-hexanone	12.213	43	679806	124.48	ug/L	#	75
69)	1-Chlorohexane	12.445	91	199725	23.62	ug/L		99
70)	Ethylbenzene	12.481	91	683909	24.26	ug/L		100
71)	Chlorobenzene	12.469	112	379184	23.65	ug/L		97
72)	1,1,1,2-Tetrachloroethane	12.518	131	134470	27.20	ug/L		99
73)	m,p-Xylene	12.591	91	1057245	49.24	ug/L		99
74)	o-Xylene	12.914	91	524783	24.37	ug/L		100
75)	Styrene	12.951	104	361654	23.90	ug/L		97
76)	Bromoform	12.987	173	82138	24.08	ug/L		98
77)	Isopropylbenzene	13.133	105	630447	26.57	ug/L		98
80)	cis-1,4-Dichloro-2-butene	13.383	53	56718	22.77	ug/L		88
81)	n-Propylbenzene	13.432	91	830450	25.62	ug/L		99
82)	Bromobenzene	13.438	156	157924	25.15	ug/L		98
83)	1,1,2,2-Tetrachloroethane	13.475	83	192136	27.16	ug/L		100
84)	1,3,5-Trimethylbenzene	13.554	105	517342	25.33	ug/L		99
85)	2-Chlorotoluene	13.670	91	499865	25.39	ug/L		100
86)	trans-1,4-Dichloro-2-B...	13.597	53	60603	26.27	ug/L		94
87)	1,2,3-Trichloropropane	13.579	110	48103	25.24	ug/L		98
88)	Cyclohexanone	13.621	55	27165	89.48	ug/L		97
89)	4-Chlorotoluene	13.670	91	499865	25.39	ug/L		100
90)	tert-Butylbenzene	13.786	91	325139	25.72	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56674.D
Acq On : 10 Aug 2018 7:15 pm
Operator : ANAJ
Sample : FA56349-13msd MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 13 08:15:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

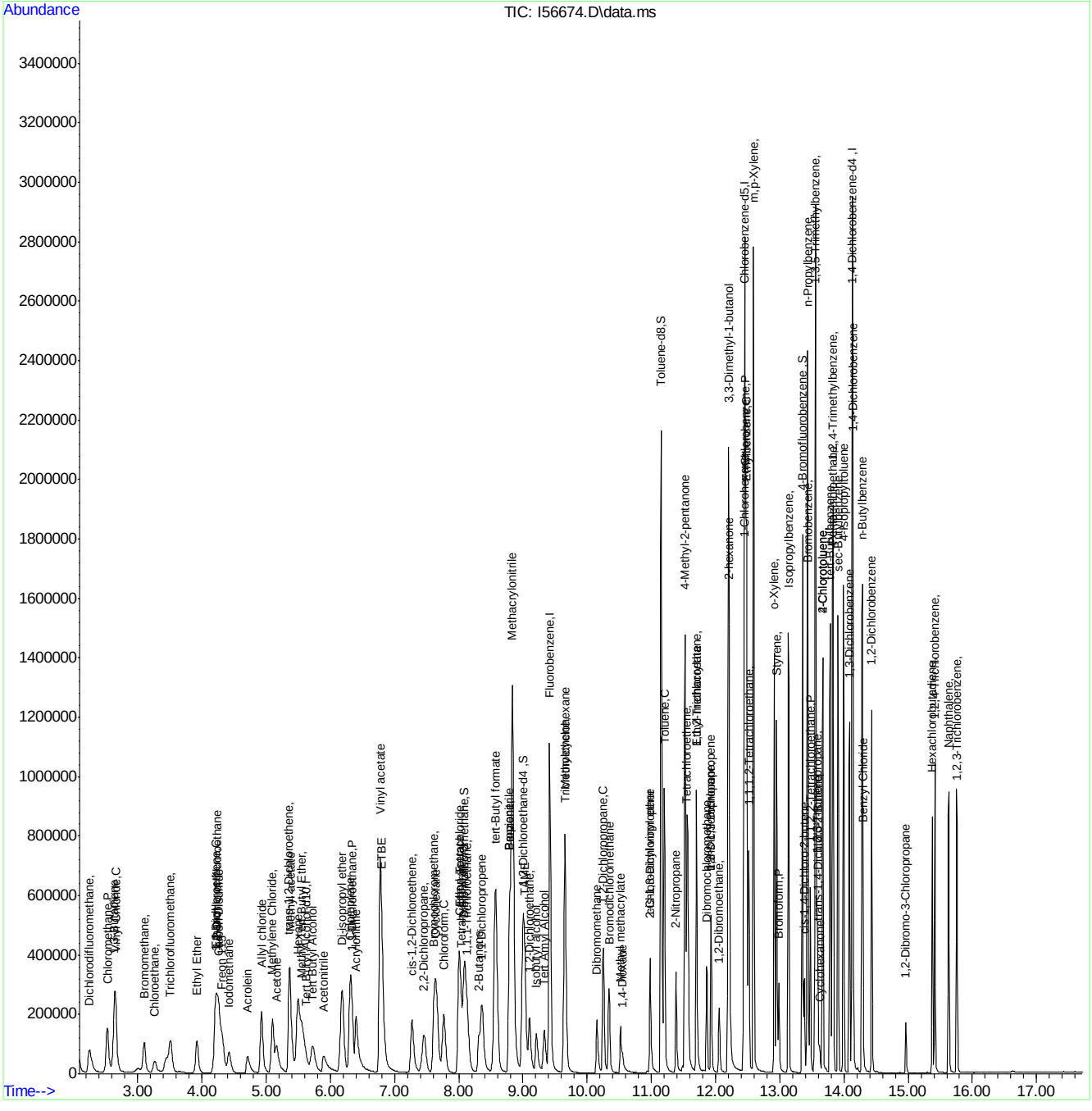
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	523987	24.81	ug/L		100
93)	Pentachloroethane	13.822	167	83444	25.40	ug/L		98
94)	sec-Butylbenzene	13.908	105	689167	26.43	ug/L		100
95)	4-Isopropyltoluene	13.993	119	563322	26.65	ug/L		100
96)	1,3-Dichlorobenzene	14.085	146	299105	25.66	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	317773	25.04	ug/L		100
98)	n-Butylbenzene	14.286	92	340450	27.97	ug/L		95
99)	Benzyl Chloride	14.298	126	50229	33.55	ug/L	#	85
100)	1,2-Dichlorobenzene	14.432	146	286935	25.27	ug/L		98
101)	1,2-Dibromo-3-Chloropr...	14.962	75	29339	25.80	ug/L		80
102)	Hexachlorobutadiene	15.377	225	99759	26.45	ug/L		98
103)	1,2,4-Trichlorobenzene	15.414	180	189620	25.16	ug/L		99
104)	Naphthalene	15.633	128	452374	23.50	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	181580	25.70	ug/L		98
107)	Ethanol	4.221	45	32222	447.37	ug/L		98
108)	Acrolein	4.708	56	108590	68.50	ug/L		98
109)	Tert Butyl Alcohol	5.726	59	197864	319.91	ug/L		96
110)	Isobutyl alcohol	9.207	43	105663	413.27	ug/L		96
111)	Tert Amyl Alcohol	9.329	59	100432	249.03	ug/L		98
112)	1,4-Dioxane	10.549	88	24921	399.11	ug/L		92
113)	3,3-Dimethyl-1-butanol	12.201	57	811018	1232.52	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56674.D
Acq On : 10 Aug 2018 7:15 pm
Operator : ANAJ
Sample : FA56349-13msd MA Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 13 08:15:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53245.D
Acq On : 2 Aug 2018 11:17 pm
Operator : melissam
Sample : FA56349-13MS Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 03 06:51:57 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

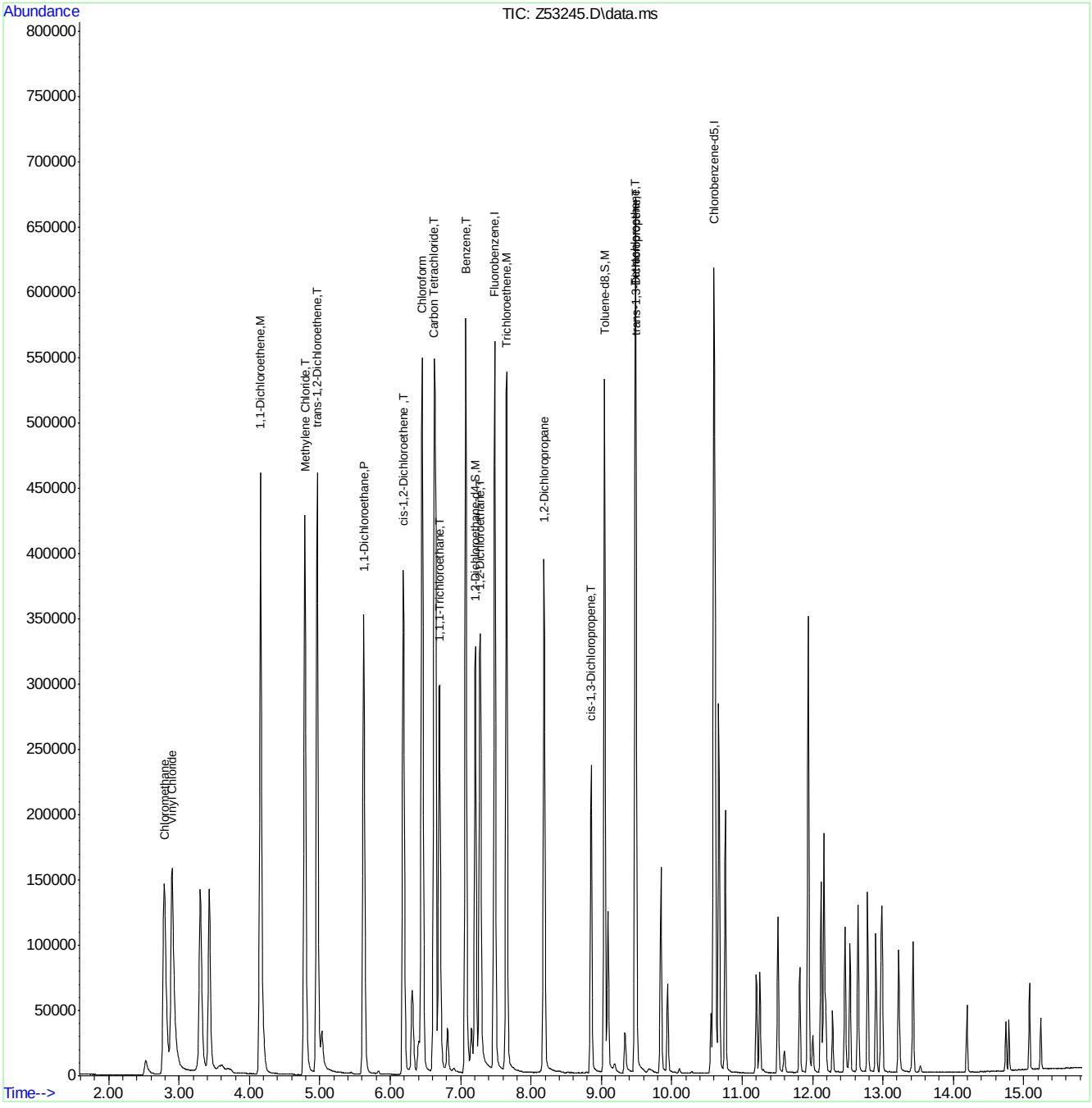
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6501891	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5131065	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2712190	5.07	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 101.40%				
19) Toluene-d8	9.044	98	4770765	4.71	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	3668668	5.42	ppb		99
3) Chloromethane	2.790	50	3272159	5.51	ppb		100
4) 1,1-Dichloroethene	4.155	96	2413410	5.41	ppb		97
5) Methylene Chloride	4.788	84	2917826	4.45	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	2498976	4.95	ppb		99
7) 1,1-Dichloroethane	5.622	63	4856934	5.19	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	2371827	4.80	ppb		99
9) Chloroform	6.454	83	5422920	5.29	ppb		99
10) Carbon Tetrachloride	6.626	117	3996670	5.41	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	4260521	5.19	ppb		100
12) Benzene	7.075	78	8501900	5.17	ppb		99
14) 1,2-Dichloroethane	7.279	62	3446992	4.90	ppb		100
15) Trichloroethene	7.646	95	2547120	4.92	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	2139600	4.95	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	1905365	4.33	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	1849172	4.84	ppb		99
21) Tetrachloroethene	9.483	166	2181296	5.30	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53245.D
Acq On : 2 Aug 2018 11:17 pm
Operator : melissam
Sample : FA56349-13MS Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 03 06:51:57 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL072618.M Tue Aug 07 08:01:04 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53246.D
Acq On : 2 Aug 2018 11:42 pm
Operator : melissam
Sample : FA56349-13MSD Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 03 06:51:59 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

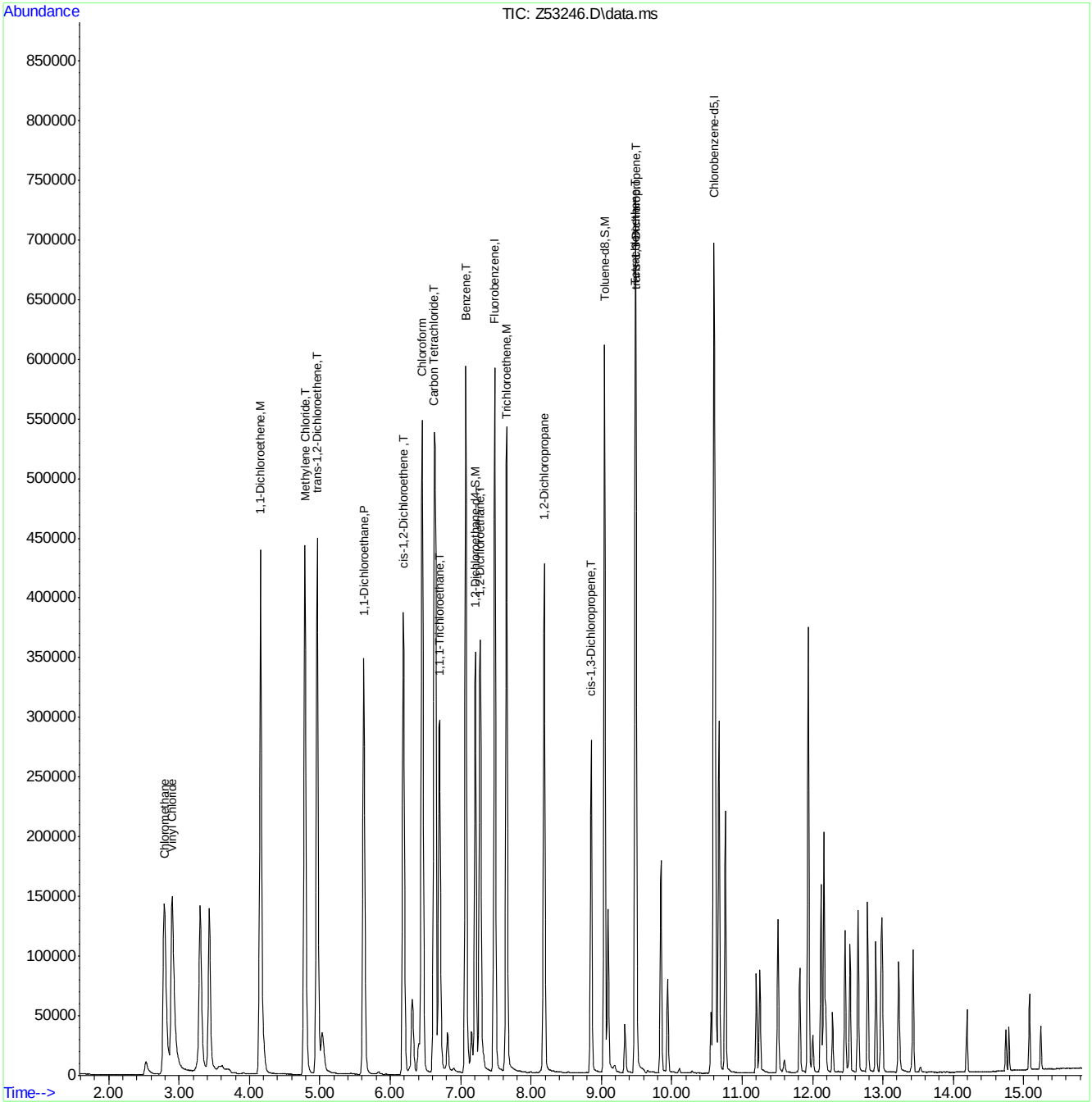
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6848154	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5788328	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2865909	5.09	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 101.80%				
19) Toluene-d8	9.044	98	5413475	4.74	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	3569381	4.99	ppb		99
3) Chloromethane	2.790	50	3172372	5.06	ppb		100
4) 1,1-Dichloroethene	4.159	96	2329676	4.96	ppb		97
5) Methylene Chloride	4.788	84	3024420	4.37	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	2518992	4.74	ppb		100
7) 1,1-Dichloroethane	5.622	63	4861429	4.93	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	2386949	4.59	ppb		100
9) Chloroform	6.454	83	5401285	5.00	ppb		99
10) Carbon Tetrachloride	6.626	117	3972163	5.10	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	4286786	4.96	ppb		100
12) Benzene	7.075	78	8676809	5.01	ppb		99
14) 1,2-Dichloroethane	7.279	62	3585488	4.84	ppb		100
15) Trichloroethene	7.646	95	2592452	4.75	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	2283470	5.01	ppb		100
17) cis-1,3-Dichloropropene	8.856	75	2204099	4.74	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	2162748	5.01	ppb		99
21) Tetrachloroethene	9.483	166	2356988	5.08	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53246.D
Acq On : 2 Aug 2018 11:42 pm
Operator : melissam
Sample : FA56349-13MSD Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 03 06:51:59 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL080618.M Tue Aug 07 07:42:23 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53366.D
Acq On : 9 Aug 2018 8:09 pm
Operator : melissam
Sample : FA56505-3MS Inst : MSVOA15
Misc : ms41007,vz2011,,,,,
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 10 10:06:10 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

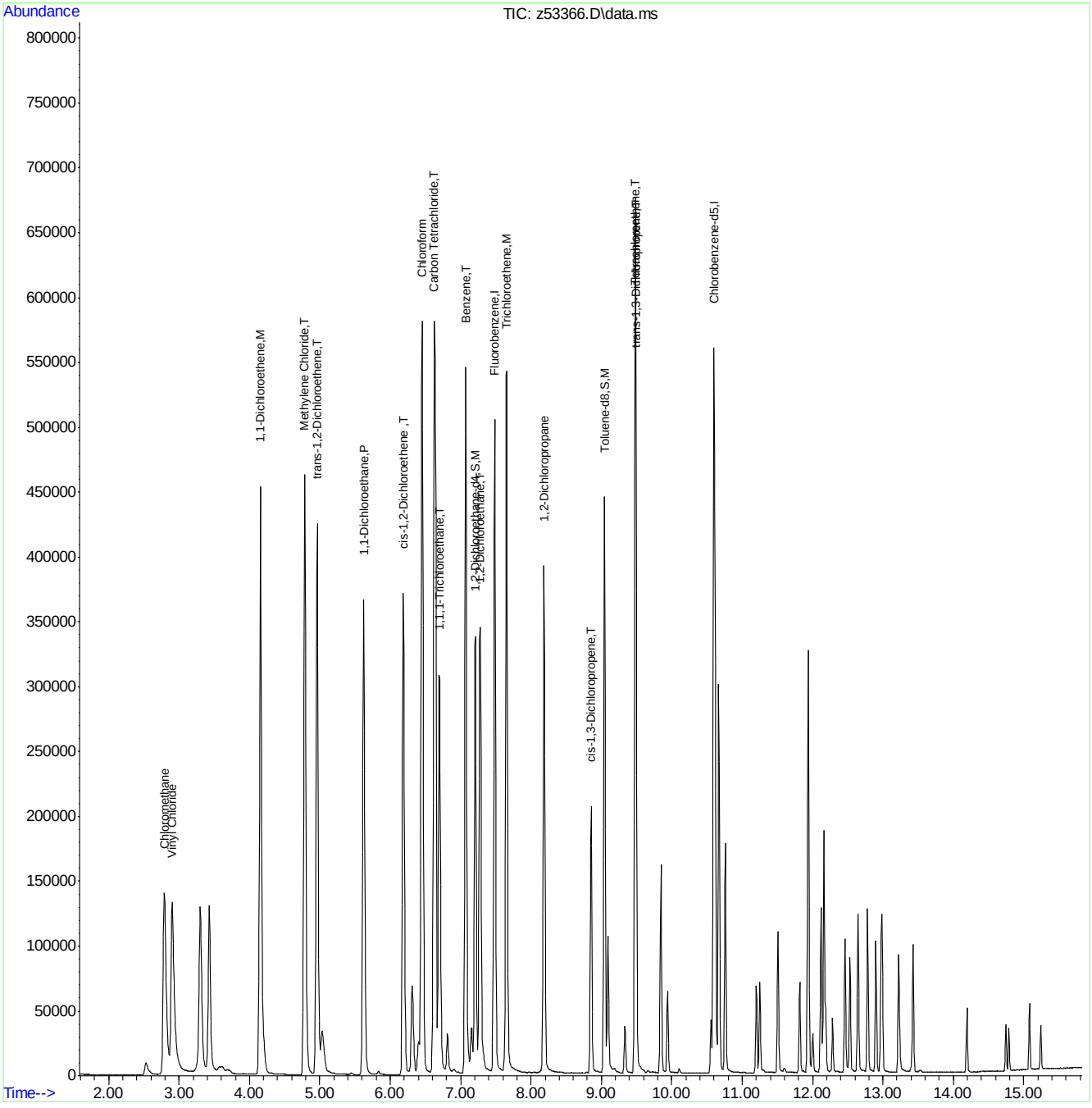
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	5801660	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	4647207	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2789172	5.20	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 104.00%				
19) Toluene-d8	9.044	98	4062859	4.75	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.00%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	3099663	5.42	ppb		99
3) Chloromethane	2.790	50	3055393	5.65	ppb		100
4) 1,1-Dichloroethene	4.155	96	2352576	5.34	ppb		98
5) Methylene Chloride	4.785	84	3143110	5.07	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	2396184	5.02	ppb		99
7) 1,1-Dichloroethane	5.622	63	5044531	5.49	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	2290223	5.10	ppb		100
9) Chloroform	6.454	83	5752115	5.29	ppb		99
10) Carbon Tetrachloride	6.626	117	4270859	5.65	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	4471517	5.53	ppb		100
12) Benzene	7.075	78	8047493	5.11	ppb		100
14) 1,2-Dichloroethane	7.279	62	3483285	4.93	ppb		99
15) Trichloroethene	7.646	95	2641942	5.33	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	2098171	4.96	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	1657439	4.65	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	1606977	5.15	ppb		98
21) Tetrachloroethene	9.483	166	2308409	6.07	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53366.D
Acq On : 9 Aug 2018 8:09 pm
Operator : melissam
Sample : FA56505-3MS Inst : MSVOA15
Misc : ms41007,vz2011,,,,,
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 10 10:06:10 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



SIMCL080918.M Fri Aug 10 10:50:07 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53367.D
Acq On : 9 Aug 2018 8:34 pm
Operator : melissam
Sample : FA56505-3MSD Inst : MSVOA15
Misc : ms41007,vz2011,,,,,
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 10 10:06:12 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

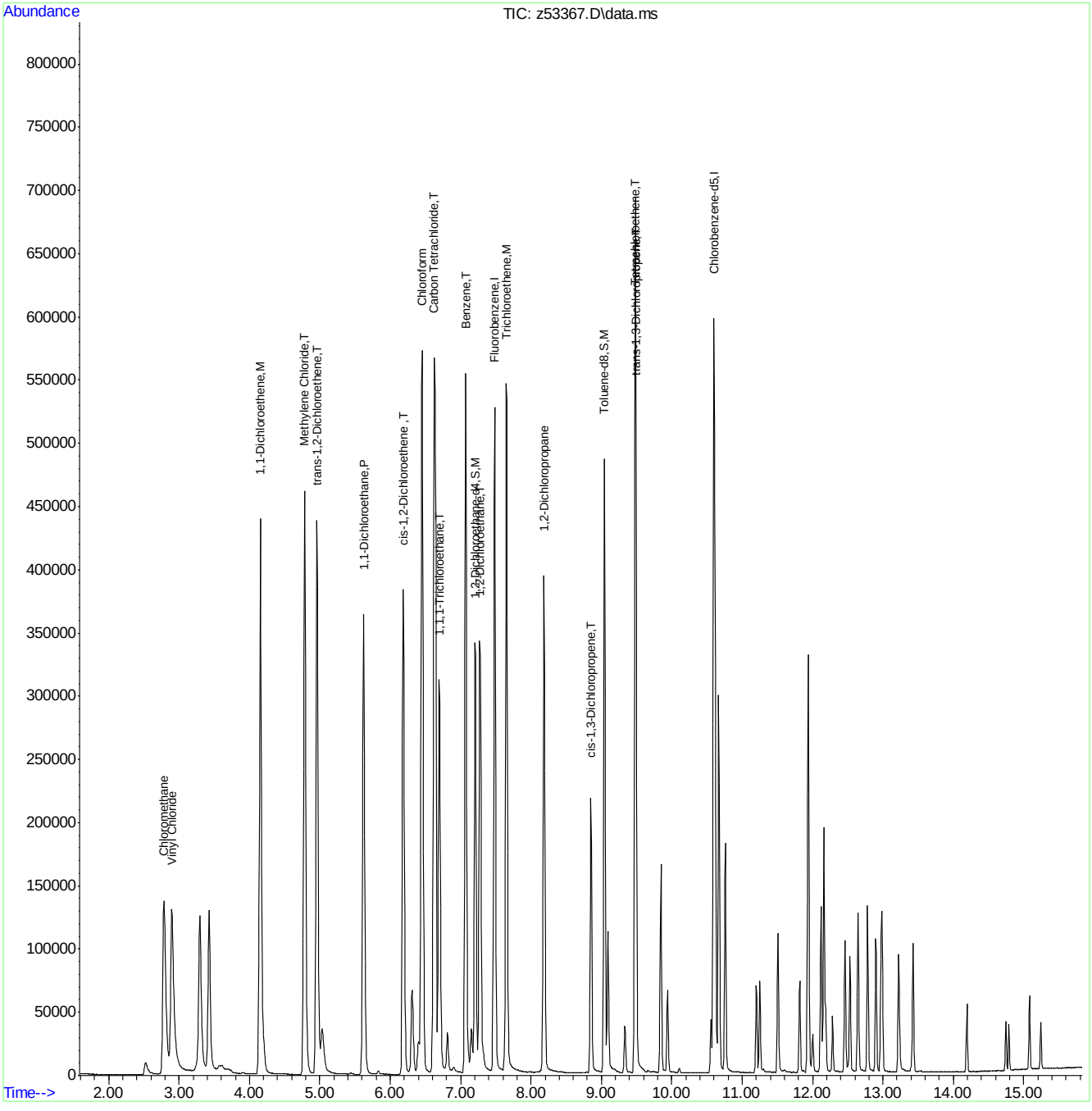
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6117033	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	4971350	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2809892	4.97	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 99.40%				
19) Toluene-d8	9.040	98	4436237	4.85	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.00%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	3053192	5.04	ppb		99
3) Chloromethane	2.786	50	3010162	5.25	ppb		99
4) 1,1-Dichloroethene	4.155	96	2295652	4.95	ppb		98
5) Methylene Chloride	4.785	84	3147733	4.80	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	2475730	4.92	ppb		100
7) 1,1-Dichloroethane	5.622	63	5048073	5.22	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	2380109	5.03	ppb		100
9) Chloroform	6.454	83	5687907	4.94	ppb		99
10) Carbon Tetrachloride	6.626	117	4144700	5.20	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	4386213	5.15	ppb	#	100
12) Benzene	7.075	78	8193235	4.94	ppb		99
14) 1,2-Dichloroethane	7.272	62	3456075	4.63	ppb		99
15) Trichloroethene	7.646	95	2649902	5.07	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	2124301	4.77	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	1777064	4.72	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	1682736	5.05	ppb		99
21) Tetrachloroethene	9.483	166	2336578	5.74	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53367.D
Acq On : 9 Aug 2018 8:34 pm
Operator : melissam
Sample : FA56505-3MSD Inst : MSVOA15
Misc : ms41007,vz2011,,,,,
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 10 10:06:12 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53387.D
Acq On : 10 Aug 2018 5:07 pm
Operator : melissam
Sample : FA56394-12MS Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 13 11:19:51 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	5091111	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	4150860	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2531992	5.38	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 107.60%				
19) Toluene-d8	9.041	98	3643127	4.77	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.40%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	2705114	5.39	ppb		99
3) Chloromethane	2.790	50	2750040	5.80	ppb		100
4) 1,1-Dichloroethene	4.155	96	2061420	5.34	ppb		97
5) Methylene Chloride	4.785	84	2840803	5.23	ppb		99
6) trans-1,2-Dichloroethene	4.958	96	2107842	5.03	ppb		99
7) 1,1-Dichloroethane	5.622	63	4541006	5.64	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	1936162	4.91	ppb		100
9) Chloroform	6.454	83	5187137	5.44	ppb		99
10) Carbon Tetrachloride	6.626	117	3852860	5.81	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	3995244	5.63	ppb		100
12) Benzene	7.075	78	7172113	5.19	ppb		100
14) 1,2-Dichloroethane	7.272	62	3189758	5.16	ppb		99
15) Trichloroethene	7.646	95	2249173	5.17	ppb	#	98
16) 1,2-Dichloropropane	8.184	63	1917531	5.17	ppb		98
17) cis-1,3-Dichloropropene	8.856	75	1548642	4.92	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	1473044	5.27	ppb		99
21) Tetrachloroethene	9.483	166	1862965	5.47	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

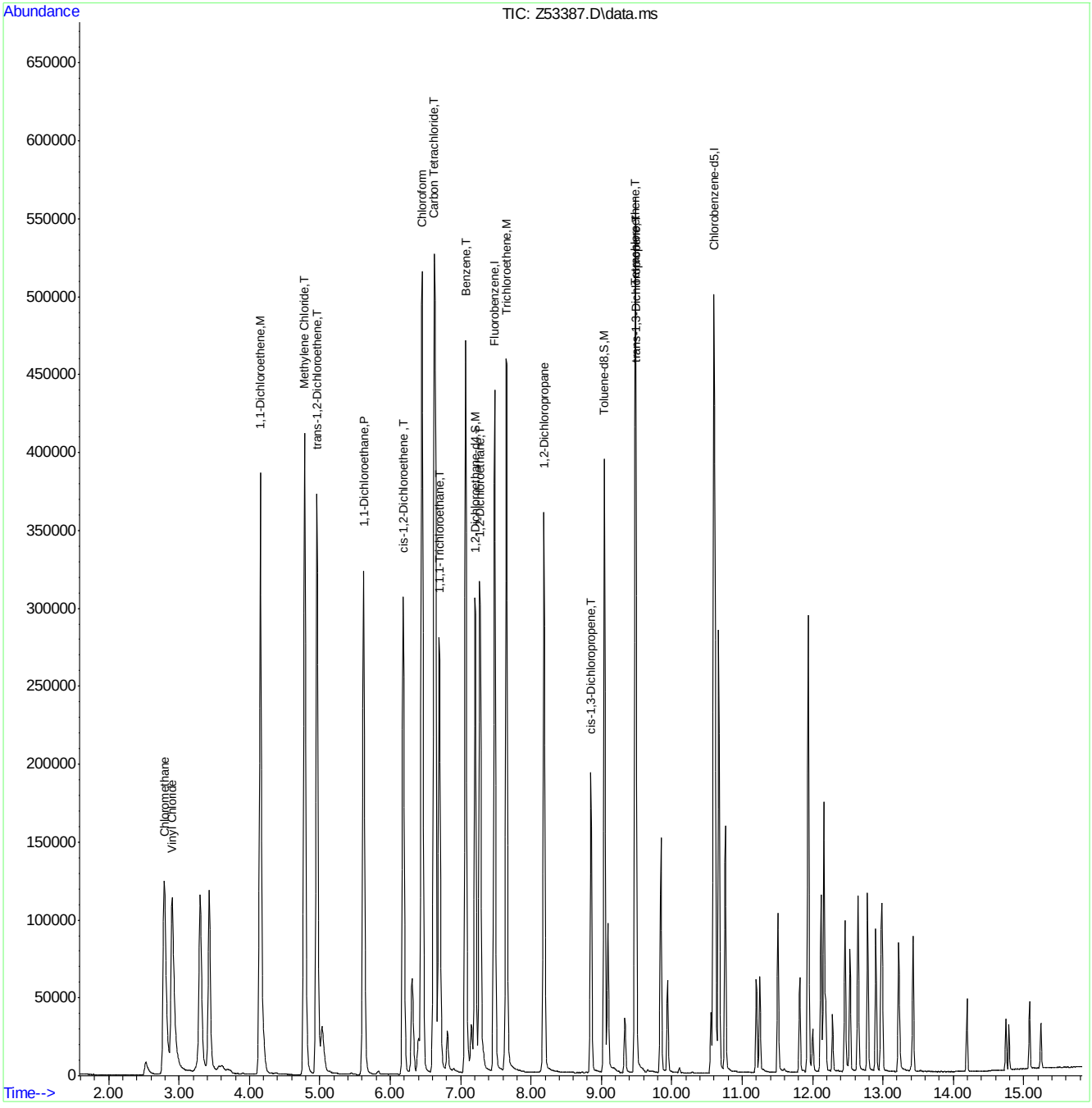
7.4.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53387.D
Acq On : 10 Aug 2018 5:07 pm
Operator : melissam
Sample : FA56394-12MS Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 13 11:19:51 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53388.D
Acq On : 10 Aug 2018 5:32 pm
Operator : melissam
Sample : FA56394-12MSD Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 13 11:19:53 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	5441997	5.00	ppb		0.00
18) Chlorobenzene-d5	10.595	117	4452782	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2579496	5.13	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 102.60%				
19) Toluene-d8	9.044	98	3926080	4.79	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 95.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	2756827	5.12	ppb		99
3) Chloromethane	2.790	50	2775884	5.45	ppb		100
4) 1,1-Dichloroethene	4.155	96	2196927	5.32	ppb		98
5) Methylene Chloride	4.784	84	2910844	5.00	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	2238849	5.00	ppb		99
7) 1,1-Dichloroethane	5.622	63	4631695	5.38	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	2079723	4.94	ppb		99
9) Chloroform	6.454	83	5250702	5.14	ppb		99
10) Carbon Tetrachloride	6.626	117	3885415	5.48	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	4077318	5.38	ppb		100
12) Benzene	7.075	78	7435718	5.04	ppb		100
14) 1,2-Dichloroethane	7.272	62	3231448	4.88	ppb		98
15) Trichloroethene	7.646	95	2243031	4.83	ppb	#	99
16) 1,2-Dichloropropane	8.184	63	1949431	4.92	ppb		98
17) cis-1,3-Dichloropropene	8.852	75	1636677	4.87	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	1566586	5.23	ppb		99
21) Tetrachloroethene	9.483	166	1905102	5.21	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

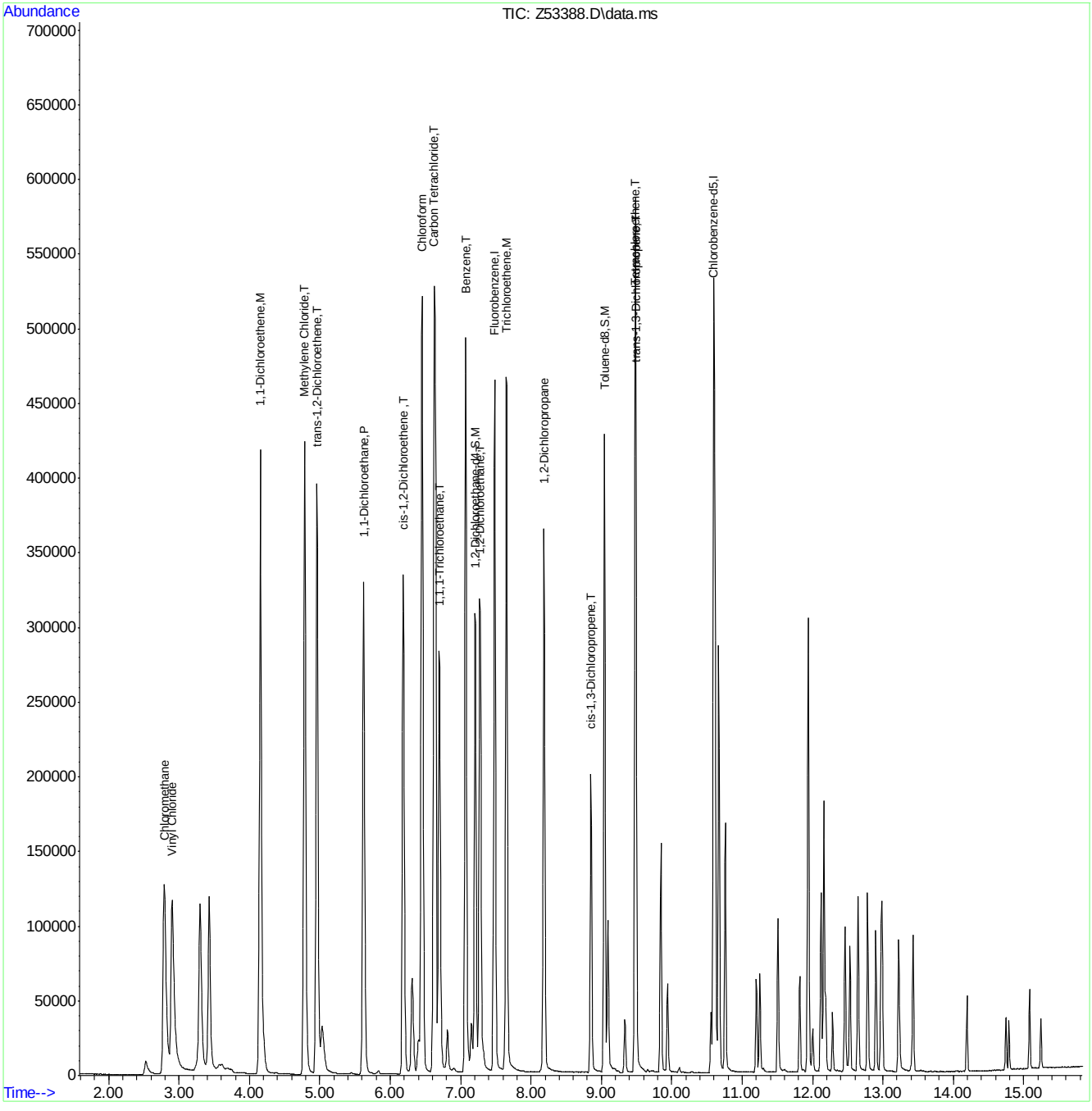
7.4.10

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53388.D
Acq On : 10 Aug 2018 5:32 pm
Operator : melissam
Sample : FA56394-12MSD Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 16 Sample Multiplier: 1

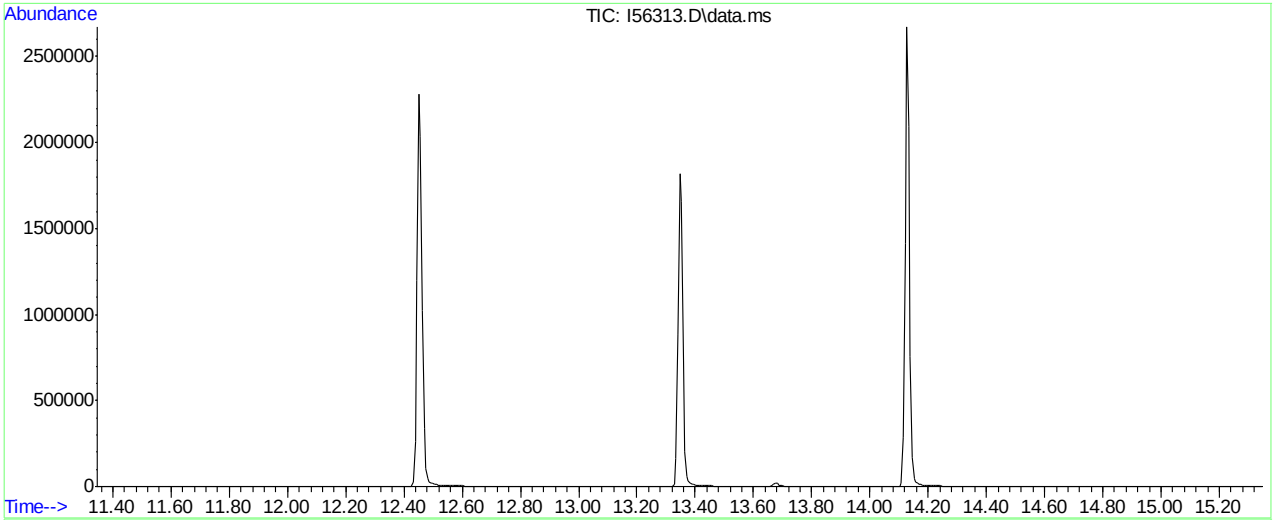
Quant Time: Aug 13 11:19:53 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\072518\I56313.D Vial: 1
Acq On : 25 Jul 2018 2:36 pm Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

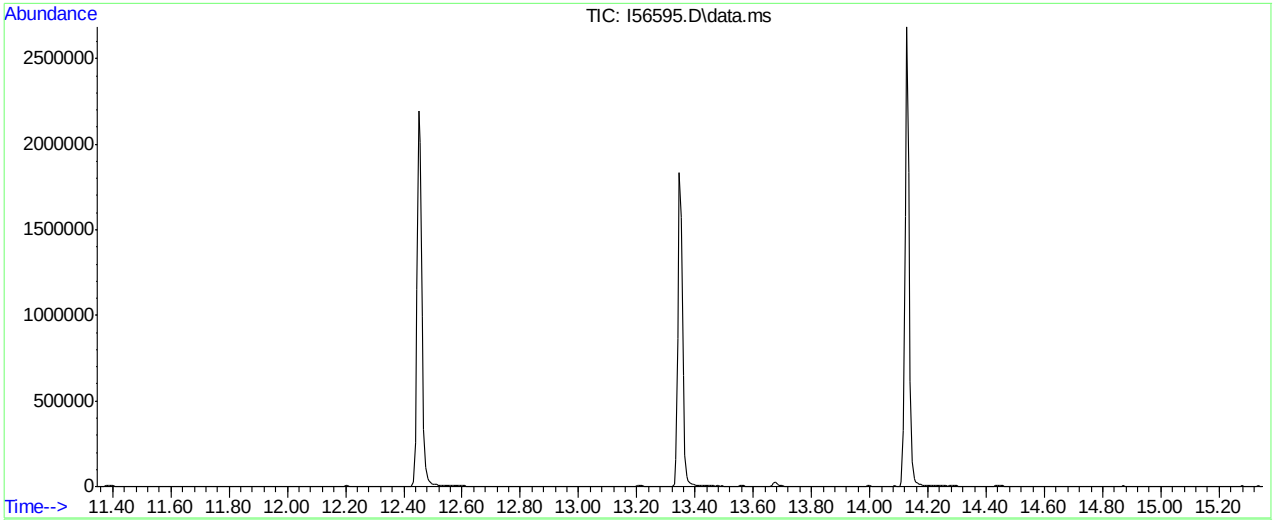
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.9	74779	PASS
75	95	30	60	50.4	151371	PASS
95	95	100	100	100.0	300437	PASS
96	95	5	9	7.1	21401	PASS
173	174	0.00	2	0.8	1809	PASS
174	95	50	100	71.9	215941	PASS
175	174	5	9	7.2	15559	PASS
176	174	95	101	96.1	207501	PASS
177	176	5	9	6.6	13778	PASS

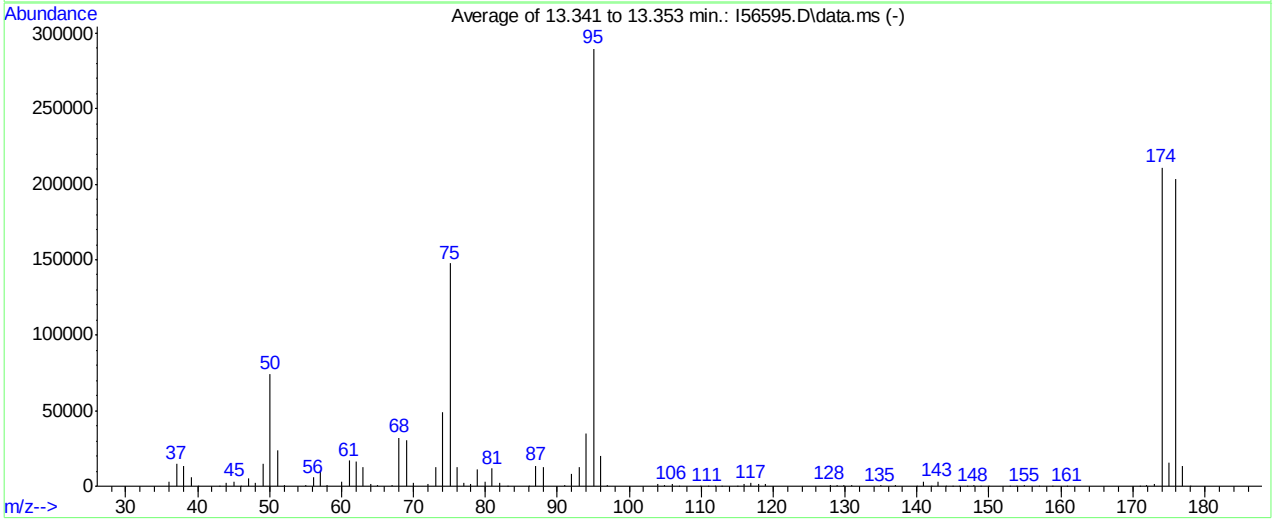
I56313.D I-July2518.M Thu Jul 26 07:51:42 2018

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\080818\I56595.D Vial: 1
Acq On : 8 Aug 2018 8:17 am Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40961,VI1694,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B





AutoFind: Scans 1846, 1847, 1848; Background Corrected with Scan 1841

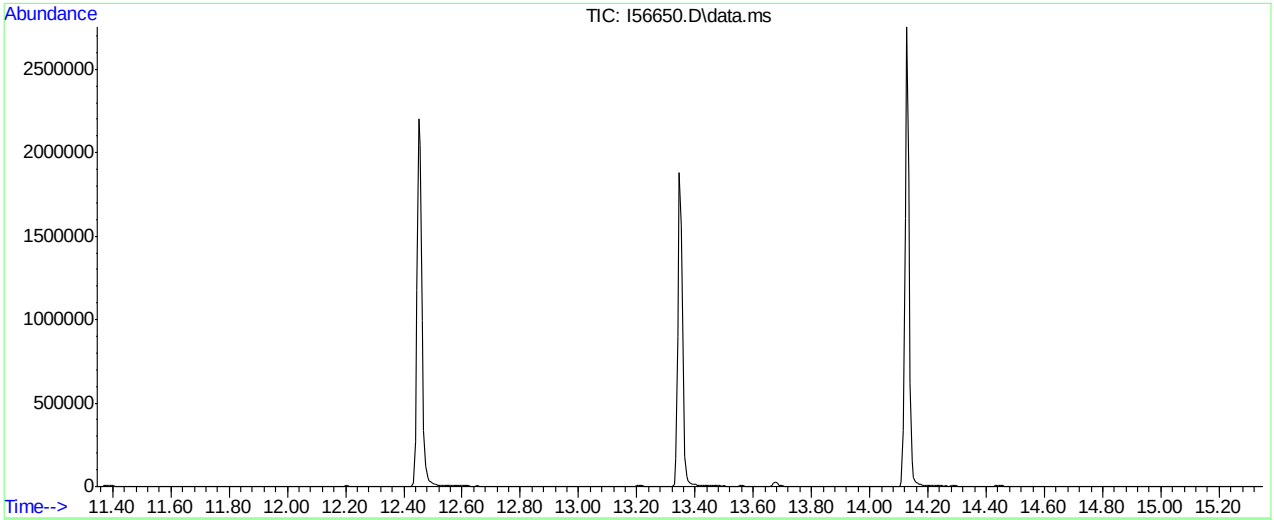
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.7	74563	PASS
75	95	30	60	50.9	147696	PASS
95	95	100	100	100.0	289920	PASS
96	95	5	9	6.8	19783	PASS
173	174	0.00	2	0.9	1808	PASS
174	95	50	100	72.8	211013	PASS
175	174	5	9	7.4	15554	PASS
176	174	95	101	96.5	203589	PASS
177	176	5	9	6.5	13319	PASS

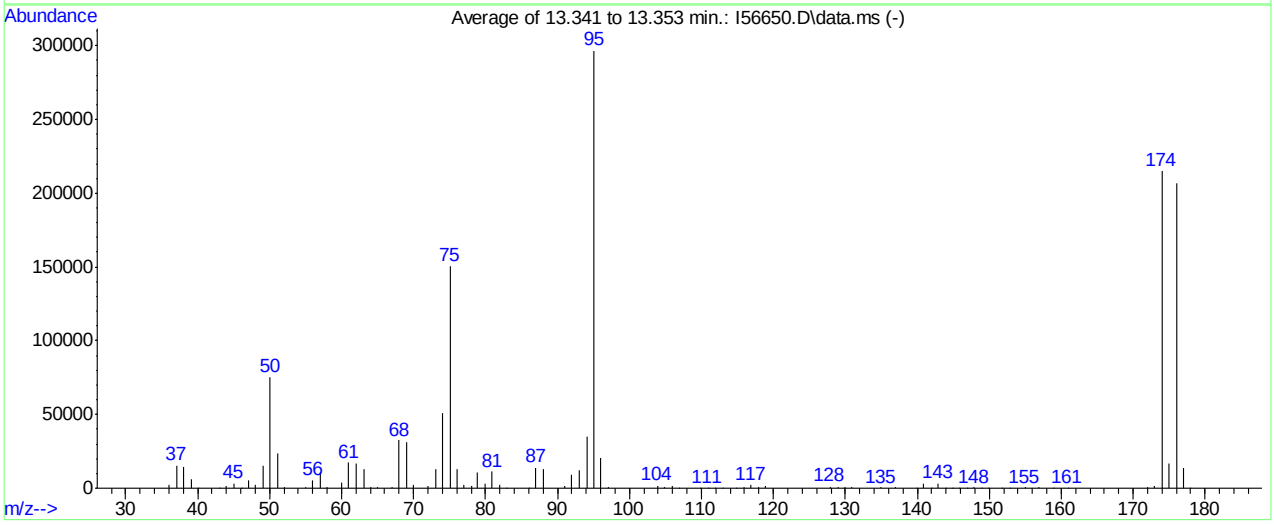
I56595.D I-July2518.M Wed Aug 08 08:37:23 2018

Methods: SW-846 8260B

```
Data File : C:\msdchem\2\DATA\081018\I56650.D            Vial: 1
Acq On    : 10 Aug 2018   8:12 am                    Operator: ANAJ
Sample    : BFB                                      Inst    : MSVOA16
Misc      : MS41007,VI1696,,,,,                      Multiplr: 1.00
MS Integration Params: med.p

Method    : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title     : SW-846 Method 5035A/8260B
```





AutoFind: Scans 1846, 1847, 1848; Background Corrected with Scan 1841

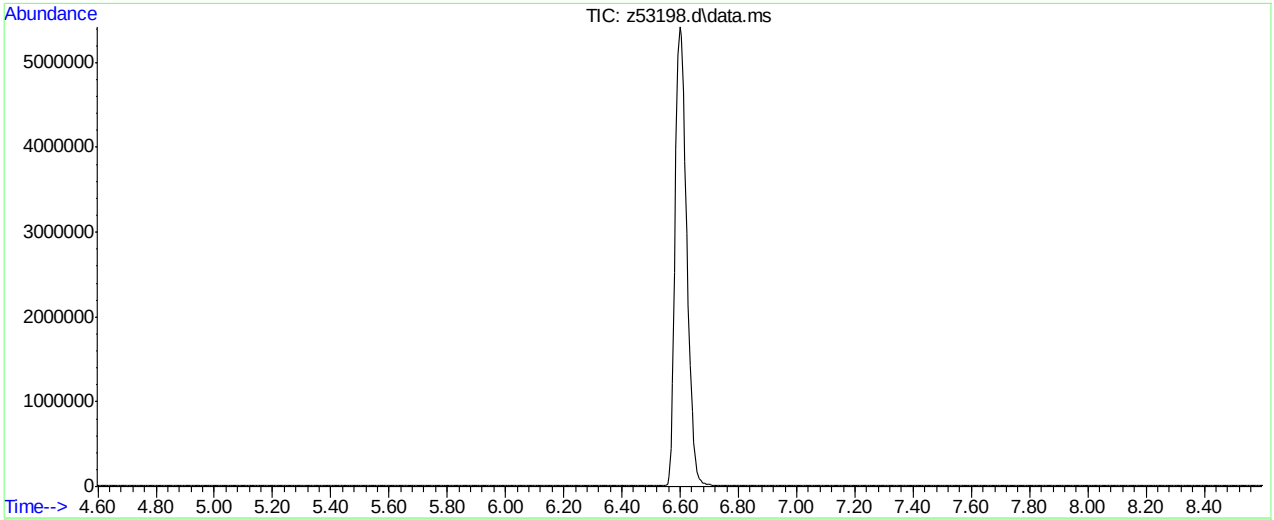
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.5	75635	PASS
75	95	30	60	50.8	150648	PASS
95	95	100	100	100.0	296747	PASS
96	95	5	9	7.0	20880	PASS
173	174	0.00	2	0.9	1849	PASS
174	95	50	100	72.4	214861	PASS
175	174	5	9	7.6	16399	PASS
176	174	95	101	96.1	206520	PASS
177	176	5	9	6.7	13910	PASS

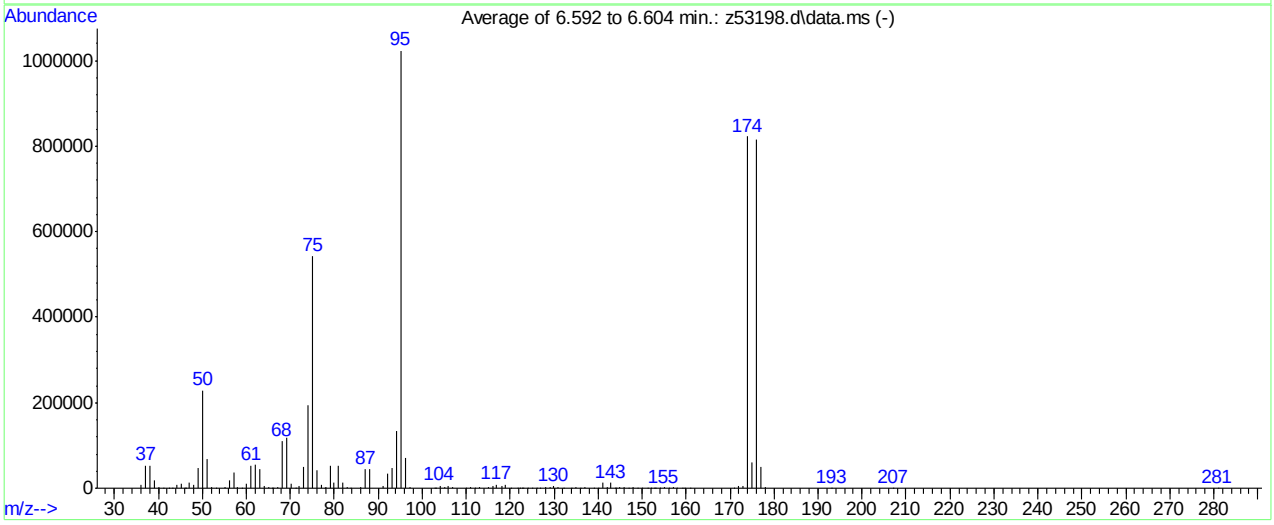
I56650.D I-July2518.M Fri Aug 10 08:45:25 2018

Methods: SW-846 8260B

Data File : C:\MSDCHEM\1\DATA\072618\z53198.d Vial: 100
Acq On : 26 Jul 2018 8:24 am Operator: melissam
Sample : bfb Inst : MSVOA15
Misc : ms40817,vz2005,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :





AutoFind: Scans 493, 494, 495; Background Corrected with Scan 484

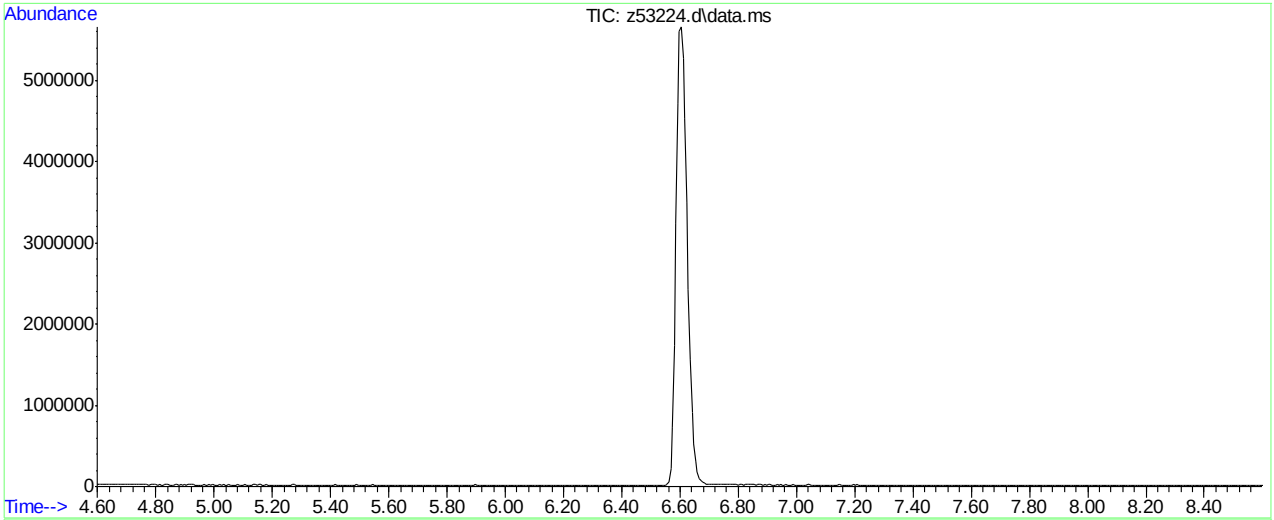
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.4	229120	PASS
75	95	30	60	53.1	543744	PASS
95	95	100	100	100.0	1023957	PASS
96	95	5	9	7.0	71643	PASS
173	174	0.00	2	0.6	5142	PASS
174	95	50	100	80.4	822805	PASS
175	174	5	9	7.2	59429	PASS
176	174	95	101	99.0	814805	PASS
177	176	5	9	6.3	51251	PASS

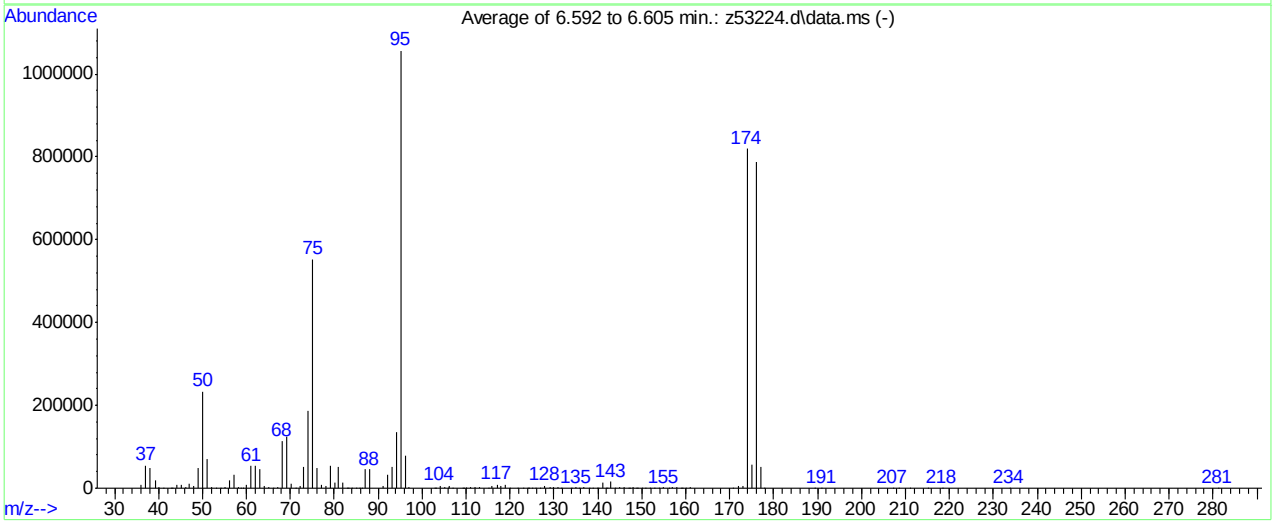
z53198.d BFB.M Thu Jul 26 08:33:49 2018

Methods: SW-846 8260B

Data File : C:\MSDCHEM\1\DATA\080218\z53224.d Vial: 100
Acq On : 2 Aug 2018 2:03 pm Operator: melissam
Sample : bfb Inst : MSVOA15
Misc : ms40817,vz2006,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :





AutoFind: Scans 493, 494, 495; Background Corrected with Scan 484

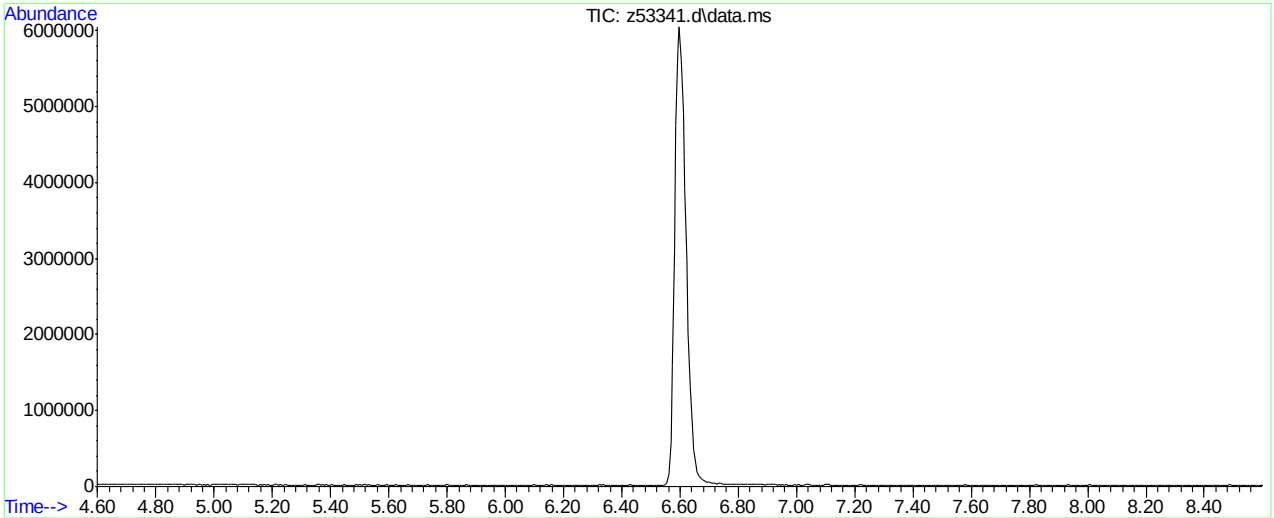
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	233301	PASS
75	95	30	60	52.3	552363	PASS
95	95	100	100	100.0	1056747	PASS
96	95	5	9	7.4	78421	PASS
173	174	0.00	2	0.6	4566	PASS
174	95	50	100	77.6	819627	PASS
175	174	5	9	6.9	56163	PASS
176	174	95	101	96.0	786987	PASS
177	176	5	9	6.5	51232	PASS

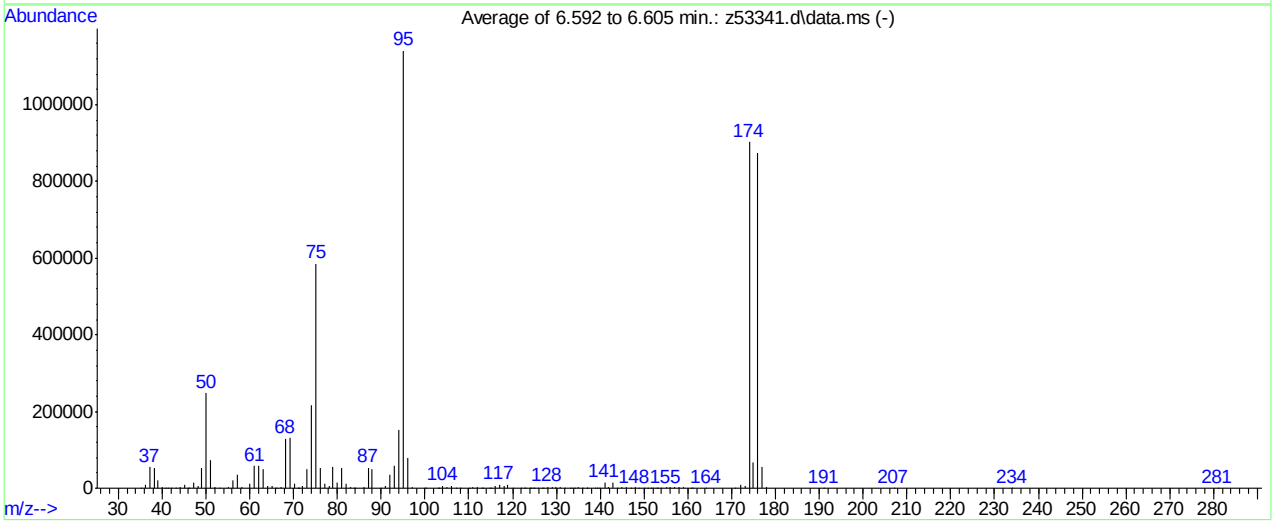
z53224.d BFB.M Thu Aug 02 14:13:10 2018

Methods: SW-846 8260B

Data File : C:\MSDCHEM\1\DATA\080918\z53341.d Vial: 100
Acq On : 9 Aug 2018 8:55 am Operator: melissam
Sample : bfb Inst : MSVOA15
Misc : ms40981,vz2011,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :





AutoFind: Scans 493, 494, 495; Background Corrected with Scan 483

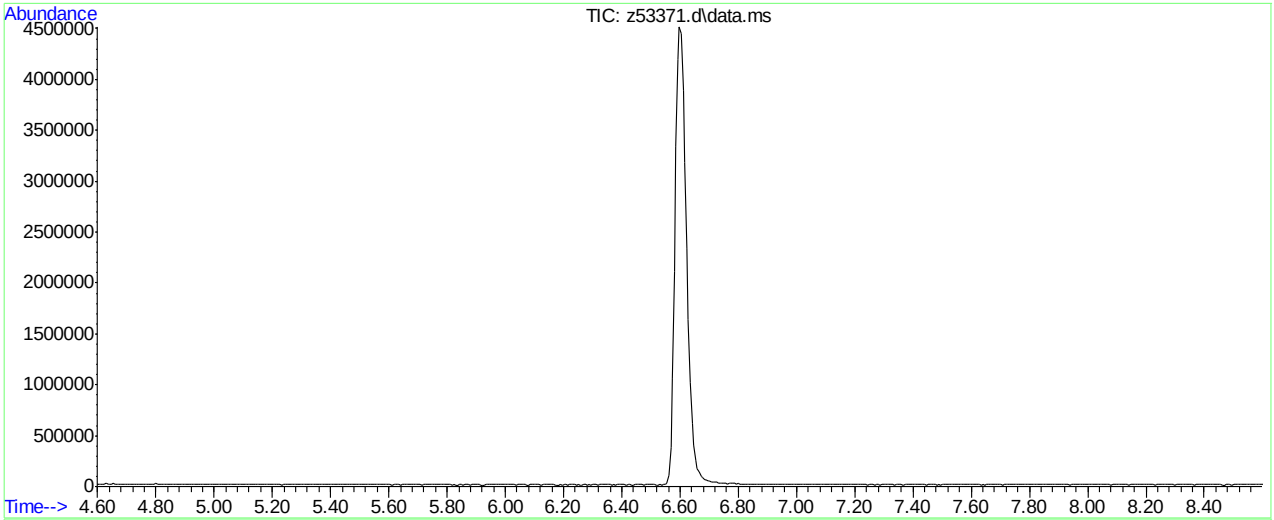
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	247594	PASS
75	95	30	60	51.3	585749	PASS
95	95	100	100	100.0	1141760	PASS
96	95	5	9	6.9	79035	PASS
173	174	0.00	2	0.7	6650	PASS
174	95	50	100	79.1	902656	PASS
175	174	5	9	7.4	66992	PASS
176	174	95	101	96.7	873109	PASS
177	176	5	9	6.3	55163	PASS

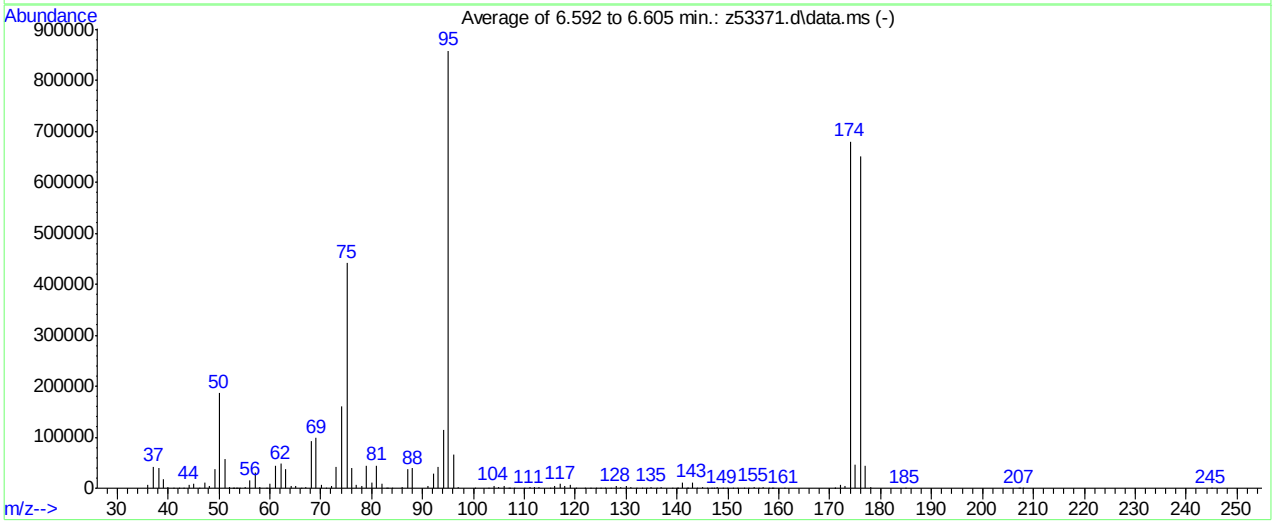
z53341.d BFB.M Thu Aug 09 09:05:33 2018

Methods: SW-846 8260B

Data File : C:\MSDCHEM\1\DATA\081018\z53371.d Vial: 100
Acq On : 10 Aug 2018 9:43 am Operator: melissam
Sample : bfb Inst : MSVOA15
Misc : ms40981,vz2012,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title :





AutoFind: Scans 493, 494, 495; Background Corrected with Scan 483

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	186524	PASS
75	95	30	60	51.4	440917	PASS
95	95	100	100	100.0	858304	PASS
96	95	5	9	7.7	65723	PASS
173	174	0.00	2	0.7	4438	PASS
174	95	50	100	79.2	680000	PASS
175	174	5	9	7.0	47317	PASS
176	174	95	101	95.8	651264	PASS
177	176	5	9	6.8	44053	PASS

z53371.d BFB.M Fri Aug 10 09:53:08 2018

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1178758	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	823712	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	417514	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	81030	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.079	113	303832	47.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.36%			
46) 1,2-Dichloroethane-d4	8.994	65	423388	51.55	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.10%			
57) Toluene-d8	11.152	98	1135661	50.58	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.16%			
79) 4-Bromofluorobenzene	13.353	174	321741	46.88	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.76%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.263	85	6470	1.01	ug/L	91
3) Chloromethane	2.538	50	10356	1.77	ug/L	89
4) 1,3-Butadiene	2.647	39	5718	1.40	ug/L	84
5) Vinyl Chloride	2.666	62	8002	1.41	ug/L	93
6) Bromomethane	3.111	94	5059	1.52	ug/L	86
7) Chloroethane	3.275	64	4608	2.20	ug/L	89
8) Trichlorofluoromethane	3.519	101	9819m	1.29	ug/L	
9) Ethyl Ether	3.928	59	6761	1.16	ug/L	92
10) 1,2-Dichlorotrifluoroe...	4.232	67	8233	1.05	ug/L	92
11) 1,1-Dichloroethene	4.214	61	11083	1.06	ug/L	98
12) Freon 113	4.318	101	6220	0.98	ug/L	91
13) Carbon Disulfide	4.275	76	16288	0.95	ug/L	96
14) Iodomethane	4.428	142	9590	0.95	ug/L	98
15) Allyl chloride	4.927	41	8131	1.15	ug/L	92
16) Methylene Chloride	5.104	49	16395	1.69	ug/L	93
17) Acetone	5.202	43	9056	4.83	ug/L	94
18) Methyl acetate	5.409	43	12443	2.65	ug/L	97
19) trans-1,2-Dichloroethene	5.372	61	10229	1.00	ug/L	95
20) Hexane	5.494	56	8830	1.28	ug/L #	84
21) Methyl Tert Butyl Ether	5.561	73	12273	0.88	ug/L	90
23) Di-isopropyl ether	6.177	45	22633	1.14	ug/L	92
24) Chloroprene	6.311	53	9155	0.84	ug/L	91
25) 1,1-Dichloroethane	6.336	63	13170	1.08	ug/L	100
26) Acrylonitrile	6.500	53	2477	0.94	ug/L	80
27) ETBE	6.811	59	16309	0.85	ug/L	94
28) Vinyl acetate	6.817	43	42549	8.47	ug/L	88
29) cis-1,2-Dichloroethene	7.287	96	5482	0.87	ug/L	86
30) 2,2-Dichloropropane	7.457	77	4643	1.37	ug/L	88
31) Bromochloromethane	7.640	128	2625	0.83	ug/L	93
32) Cyclohexane	7.653	56	13529	1.07	ug/L	97
33) Chloroform	7.768	83	12358	1.13	ug/L	78
34) Ethyl acetate	8.037	43	15723	2.64	ug/L	98
35) Tetrahydrofuran	8.067	42	3178	0.83	ug/L #	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Carbon Tetrachloride	8.024	117	6369	0.86	ug/L		87
38) 1,1,1-Trichloroethane	8.128	97	8558	0.91	ug/L		92
39) 2-Butanone	8.366	43	8037	3.00	ug/L		94
40) 1,1-Dichloropropene	8.366	75	7136	0.91	ug/L		92
41) tert-Butyl formate	8.573	59	16754	14.35	ug/L	#	17
42) Propionitrile	8.829	54	7933	10.70	ug/L	#	1
43) Methacrylonitrile	8.854	41	36482	11.52	ug/L		87
44) Benzene	8.805	78	24872	1.09	ug/L		89
45) TAME	9.024	73	10724	0.79	ug/L	#	65
47) 1,2-Dichloroethane	9.116	62	10596	1.07	ug/L		95
48) Trichloroethene	9.664	95	6279	0.97	ug/L		96
49) Methylcyclohexane	9.646	83	10061	1.05	ug/L		94
50) Dibromomethane	10.164	93	3576	0.89	ug/L		96
51) 1,2-Dichloropropane	10.256	63	7237	1.01	ug/L		88
52) Bromodichloromethane	10.341	83	6682	0.89	ug/L		97
53) Methyl methacrylate	10.548	41	2970	0.61	ug/L	#	86
54) 2-Chloroethyl vinyl ether	10.932	63	16313	3.06	ug/L		96
55) cis-1,3-Dichloropropene	10.987	75	6614	0.76	ug/L		92
58) Toluene	11.201	91	26702	1.08	ug/L		97
59) 2-Nitropropane	11.384	41	4288	3.95	ug/L		88
60) 4-Methyl-2-pentanone	11.530	43	34107	6.52	ug/L		95
62) Tetrachloroethene	11.560	166	6197	0.67	ug/L		95
63) Ethyl methacrylate	11.713	69	3966	0.58	ug/L	#	77
64) 1,1,2-Trichloroethane	11.707	83	4441	0.92	ug/L		89
65) Dibromochloromethane	11.865	129	4260	0.72	ug/L		97
66) 1,3-Dichloropropane	11.932	76	9210	0.98	ug/L		96
67) 1,2-Dibromoethane	12.066	107	4403	0.79	ug/L		95
68) 2-hexanone	12.219	43	28428	6.33	ug/L		77
69) 1-Chlorohexane	12.444	91	8783	1.07	ug/L	#	53
70) Ethylbenzene	12.481	91	29467	1.01	ug/L		98
71) Chlorobenzene	12.469	112	18043	1.09	ug/L		96
72) 1,1,1,2-Tetrachloroethane	12.517	131	4460	0.83	ug/L		83
73) m,p-Xylene	12.591	91	41920	1.97	ug/L		100
74) o-Xylene	12.914	91	19271	0.88	ug/L		98
75) Styrene	12.956	104	11657	0.72	ug/L		96
76) Bromoform	12.993	173	2477	0.70	ug/L		95
77) Isopropylbenzene	13.139	105	20667	0.85	ug/L		94
80) cis-1,4-Dichloro-2-butene	13.383	53	2223	1.15	ug/L	#	65
81) n-Propylbenzene	13.432	91	31826	1.04	ug/L		98
82) Bromobenzene	13.438	156	6239	0.96	ug/L		92
83) 1,1,2,2-Tetrachloroethane	13.475	83	7208	1.01	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	18018	0.90	ug/L		97
85) 2-Chlorotoluene	13.670	91	19216	0.94	ug/L		96
86) trans-1,4-Dichloro-2-B...	13.603	53	1852	0.98	ug/L	#	50
87) 1,2,3-Trichloropropane	13.578	110	1743	0.87	ug/L		95
88) Cyclohexanone	13.621	55	1169	4.81	ug/L		84
89) 4-Chlorotoluene	13.670	91	19216	0.99	ug/L		96
90) tert-Butylbenzene	13.785	91	11910	0.97	ug/L		92
92) 1,2,4-Trimethylbenzene	13.828	105	18251	0.88	ug/L		94
93) Pentachloroethane	13.822	167	2770	0.71	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

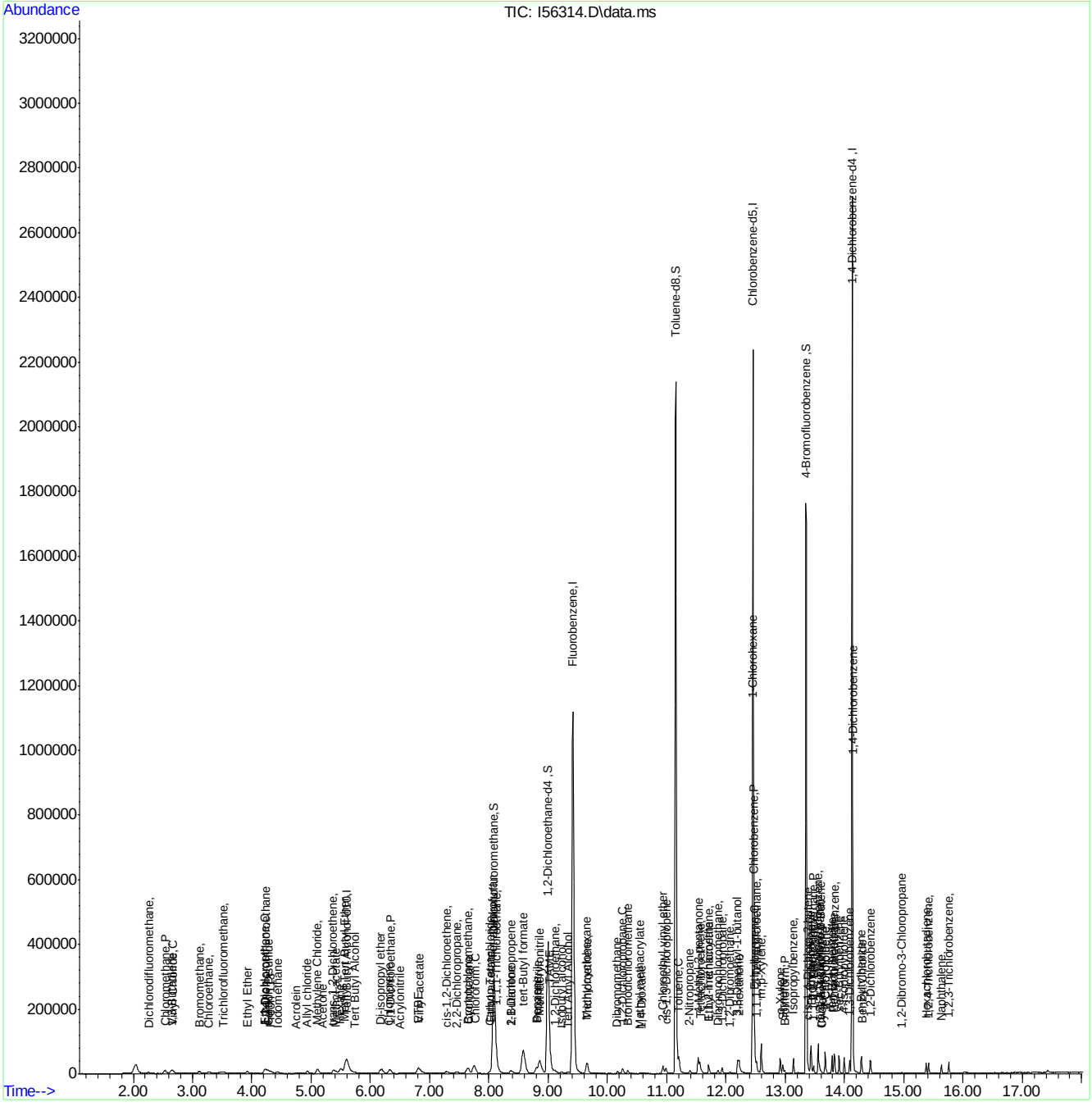
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94)	sec-Butylbenzene	13.907	105	24167	0.96	ug/L		99
95)	4-Isopropyltoluene	13.993	119	18302	0.89	ug/L		99
96)	1,3-Dichlorobenzene	14.084	146	11857	0.99	ug/L		94
97)	1,4-Dichlorobenzene	14.139	146	14115m	1.10	ug/L		
98)	n-Butylbenzene	14.285	92	10587	0.91	ug/L		99
99)	Benzyl Chloride	14.298	126	504	0.74	ug/L	#	85
100)	1,2-Dichlorobenzene	14.438	146	11416	0.96	ug/L		95
101)	1,2-Dibromo-3-Chloropr...	14.962	75	806	0.69	ug/L		77
102)	Hexachlorobutadiene	15.377	225	3778	0.95	ug/L		97
103)	1,2,4-Trichlorobenzene	15.419	180	6838	0.84	ug/L		95
104)	Naphthalene	15.633	128	12522	0.61	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	6652	0.84	ug/L		99
107)	Ethanol	4.214	45	312m	6.57	ug/L		
108)	Acrolein	4.738	56	1981	2.15	ug/L		88
109)	Tert Butyl Alcohol	5.738	59	5186	9.77	ug/L	#	57
110)	Isobutyl alcohol	9.231	43	4204	25.03	ug/L		89
111)	Tert Amyl Alcohol	9.341	59	2488	7.90	ug/L		86
112)	1,4-Dioxane	10.579	88	386m	7.69	ug/L		
113)	3,3-Dimethyl-1-butanol	12.194	57	26739	59.13	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

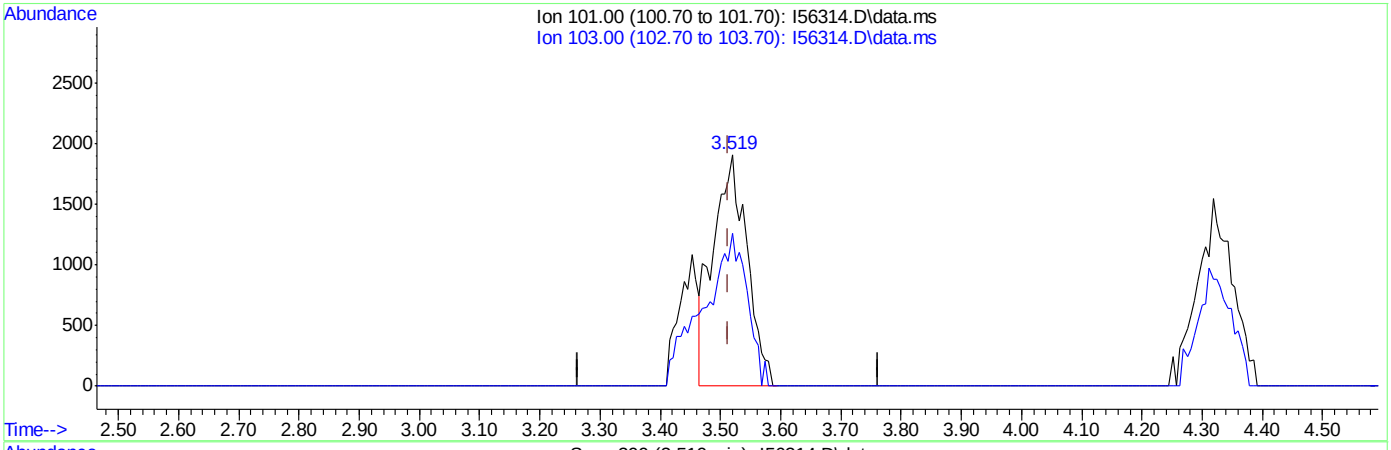
Sample Number:	VI1683-IC1683	**Method:**	SW846 8260B
Lab FileID:	I56314.D	**Analyst approved:**	07/26/18 08:26 Ana Jimenez
Injection Time:	07/25/18 15:14	**Supervisor approved:**	07/31/18 15:11 Melissa Mangual

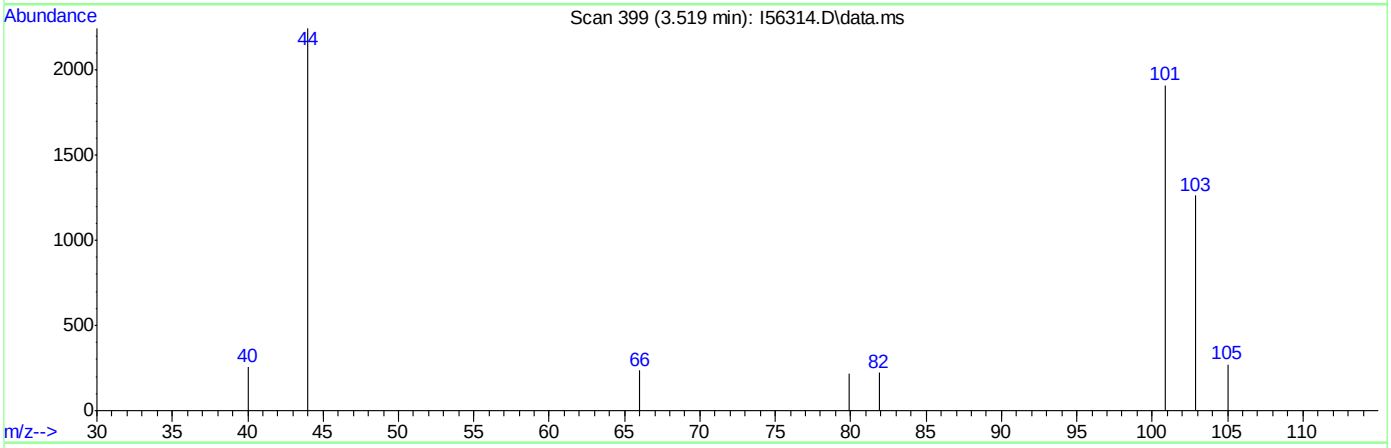
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.52	Split peak
Ethyl Alcohol	64-17-5		4.21	Missed peak
1,4-Dioxane	123-91-1		10.58	Missed peak
1,4-Dichlorobenzene	106-46-7		14.14	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 0.98ug/L

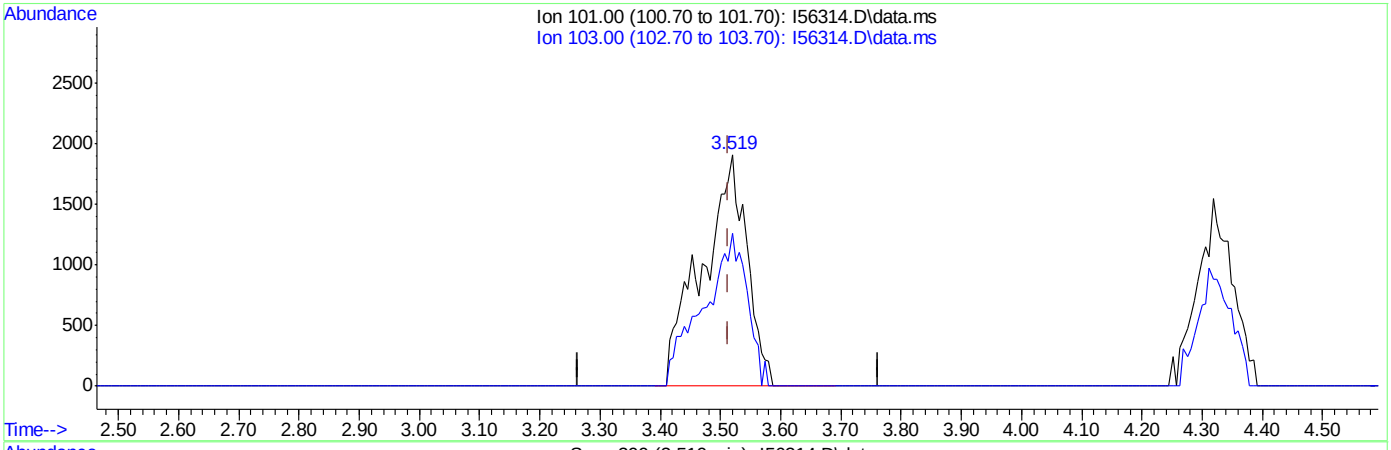
response 7458

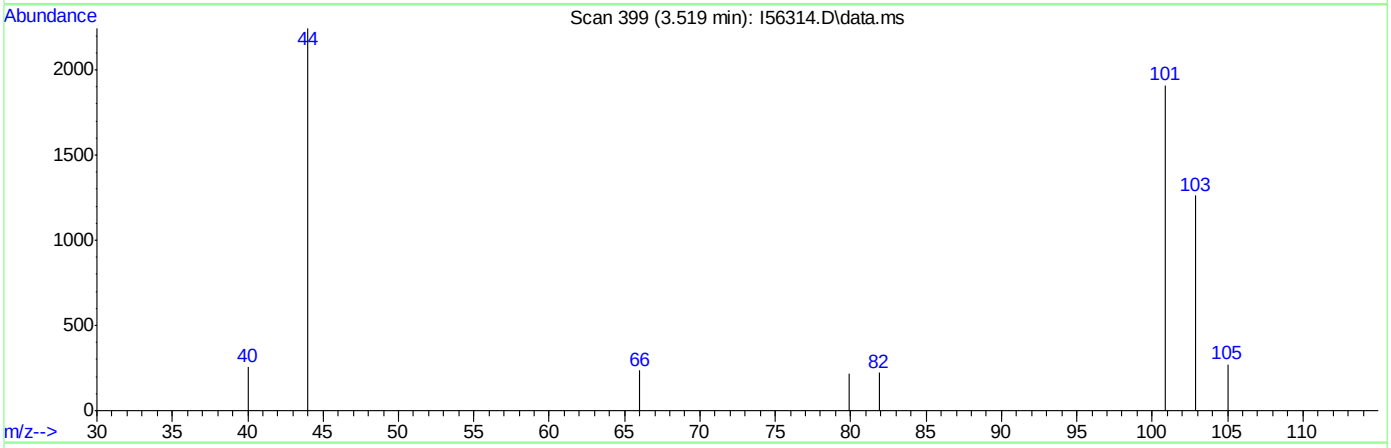
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 1.29ug/L m

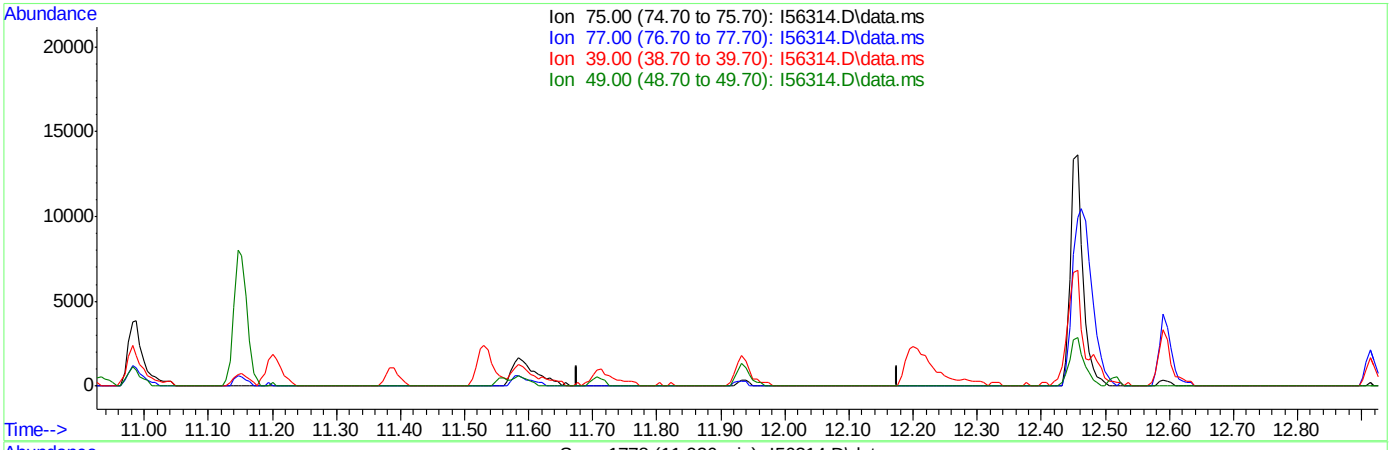
response 9819

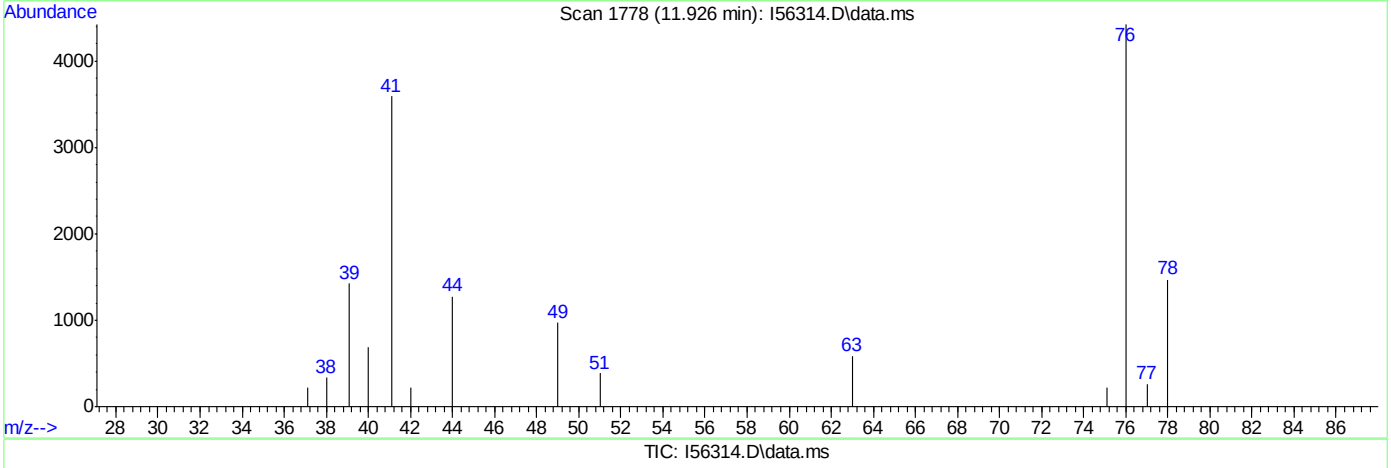
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.926min (-11.926) 0.00ug/L

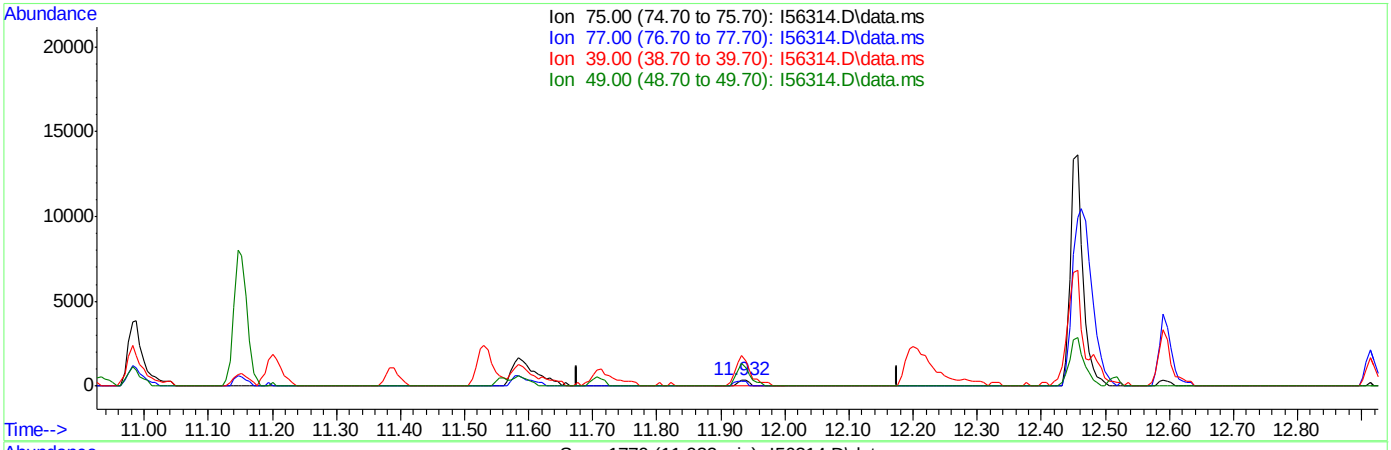
response 0

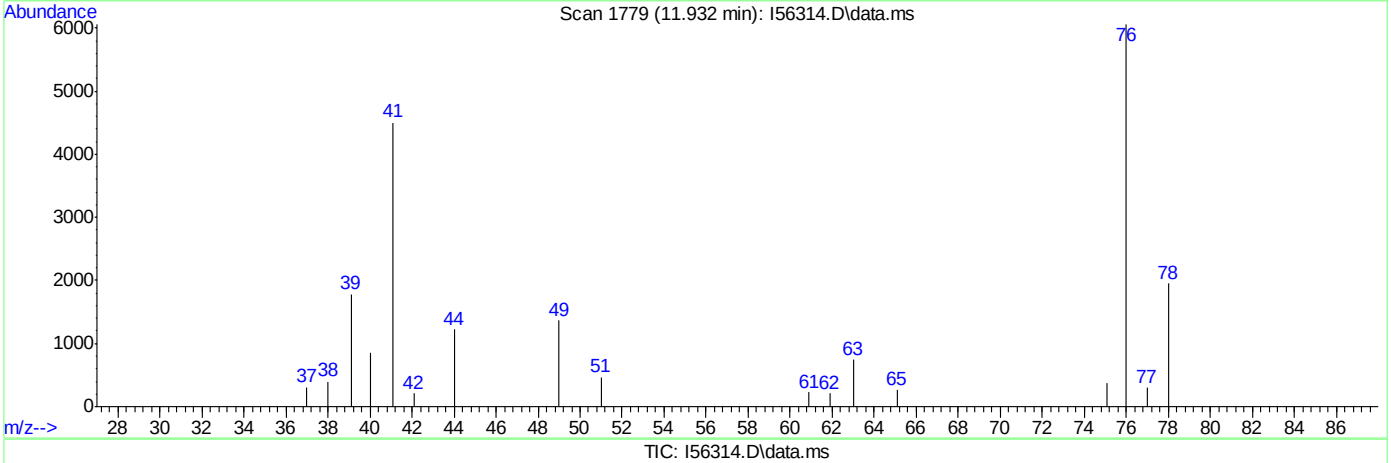
Ion	Exp%	Act%
75.00	100	0.00
77.00	103.00	0.00#
39.00	522.70	0.00#
49.00	420.40	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.932min (+0.006) 0.16ug/L m

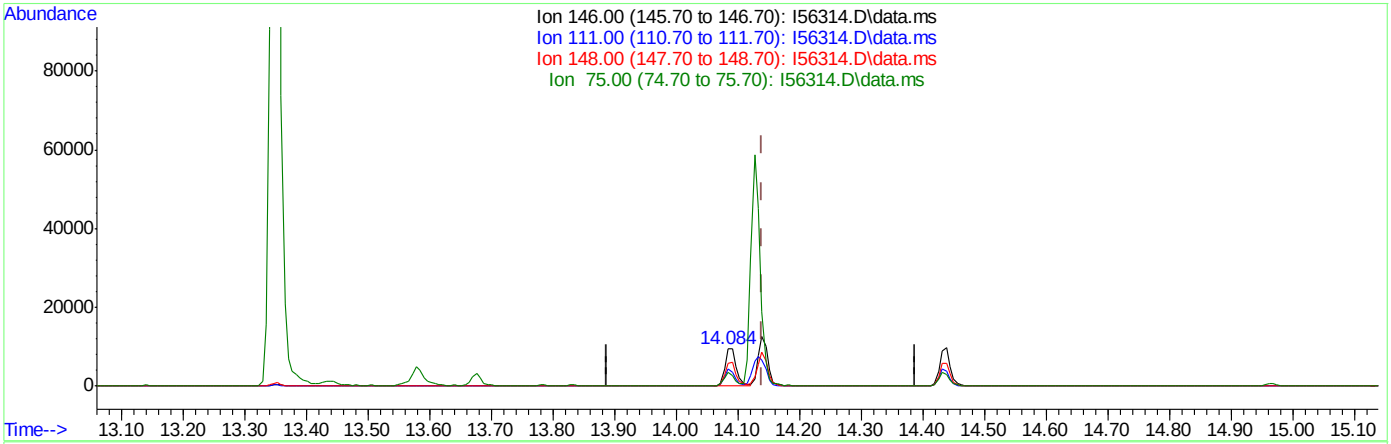
response 428

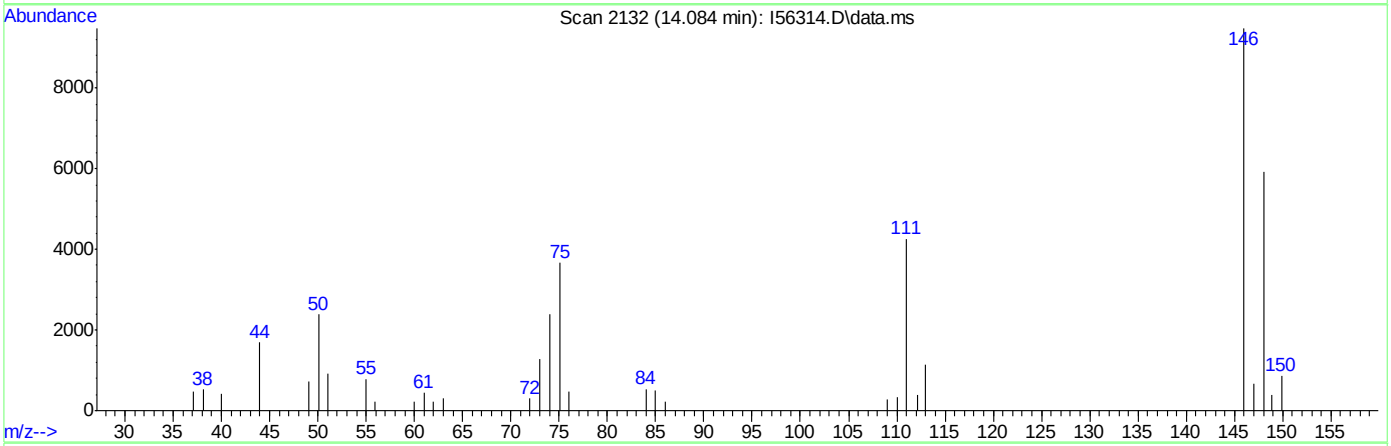
Ion	Exp%	Act%
75.00	100	100
77.00	103.00	78.25
39.00	522.70	472.94#
49.00	420.40	362.07#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.084min (-0.055) 0.92ug/L

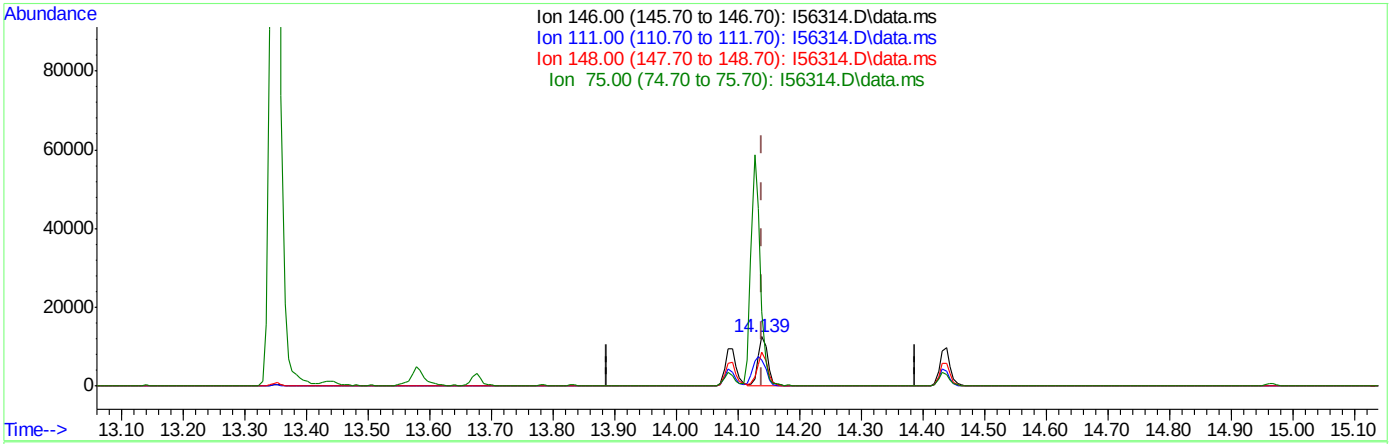
response 11857

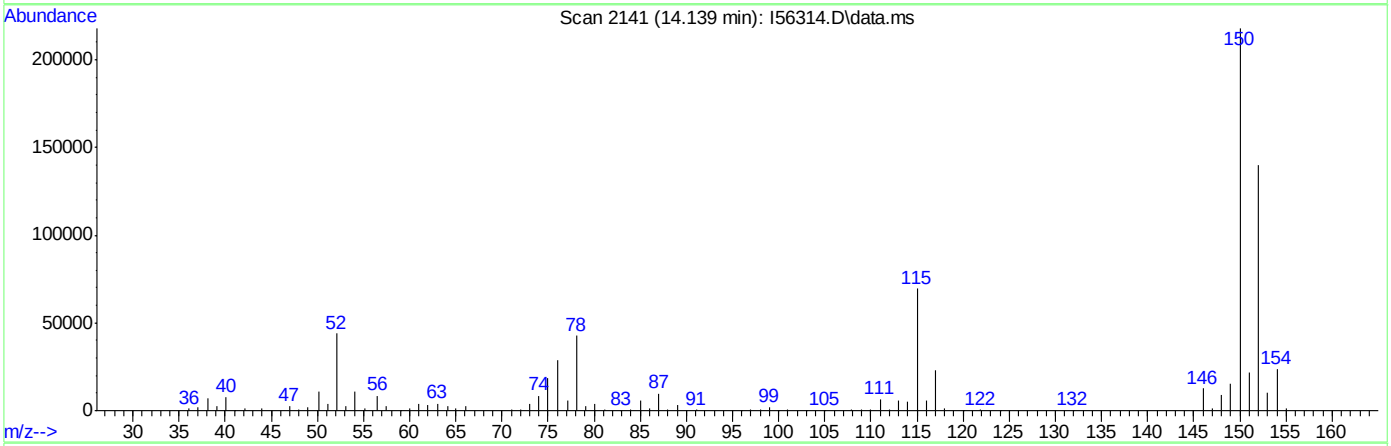
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	44.88
148.00	63.00	62.35
75.00	35.90	38.59

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.139min (+0.000) 1.10ug/L m

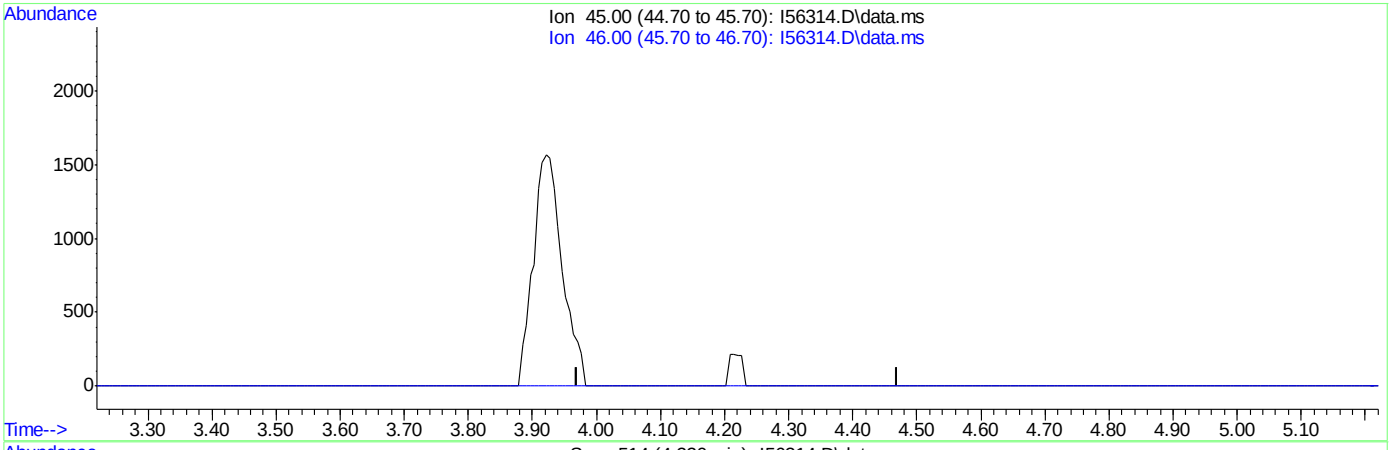
response 14115

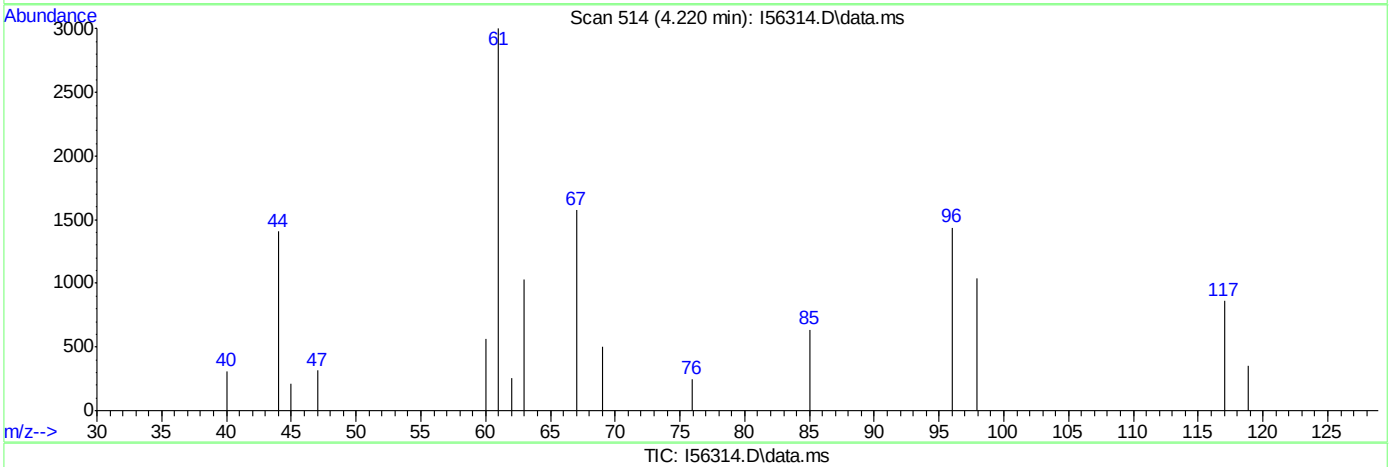
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	52.06
148.00	63.00	69.44
75.00	35.90	150.46#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.220min (-4.220) 0.00ug/L

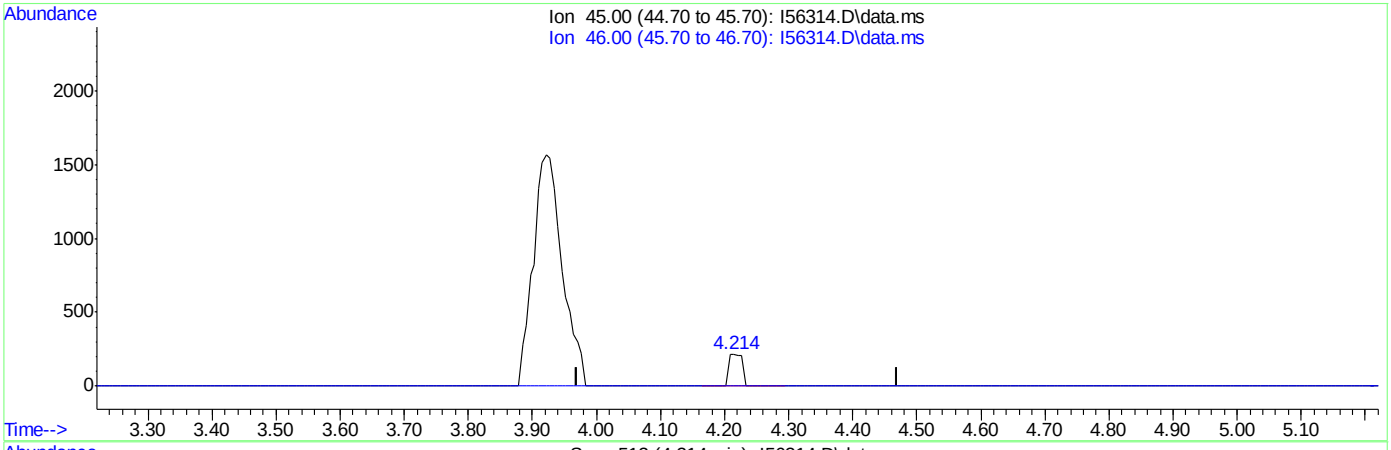
response 0

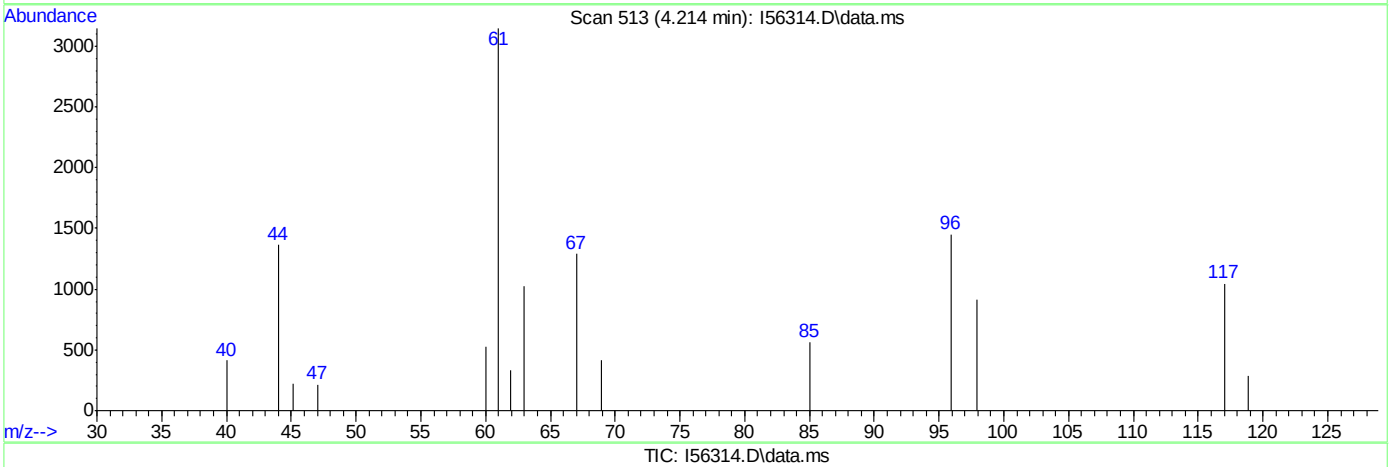
Ion	Exp%	Act%
45.00	100	0.00
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.214min (-0.006) 6.57ug/L m

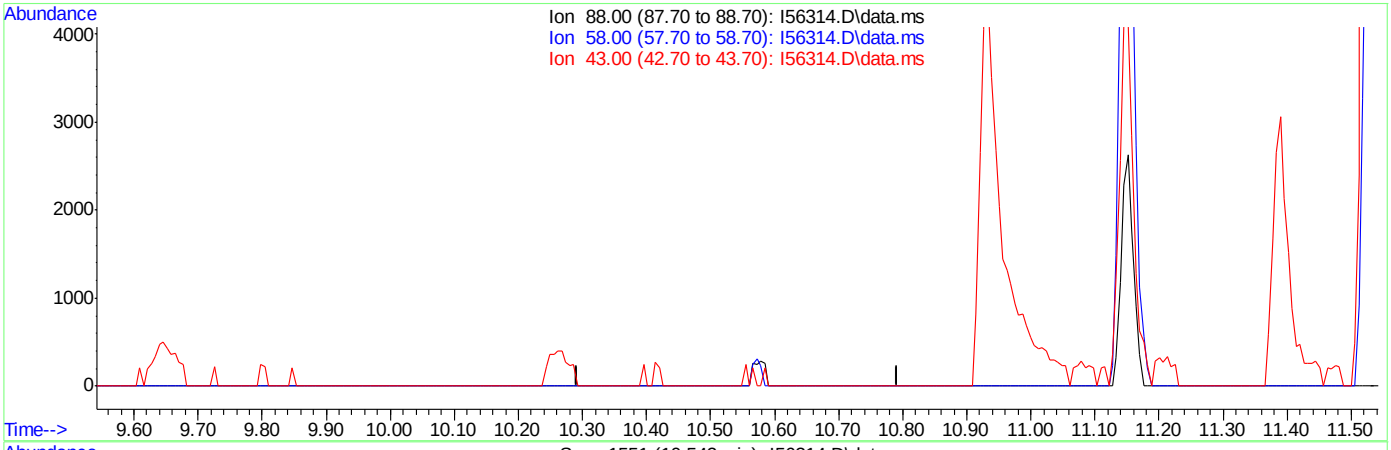
response 312

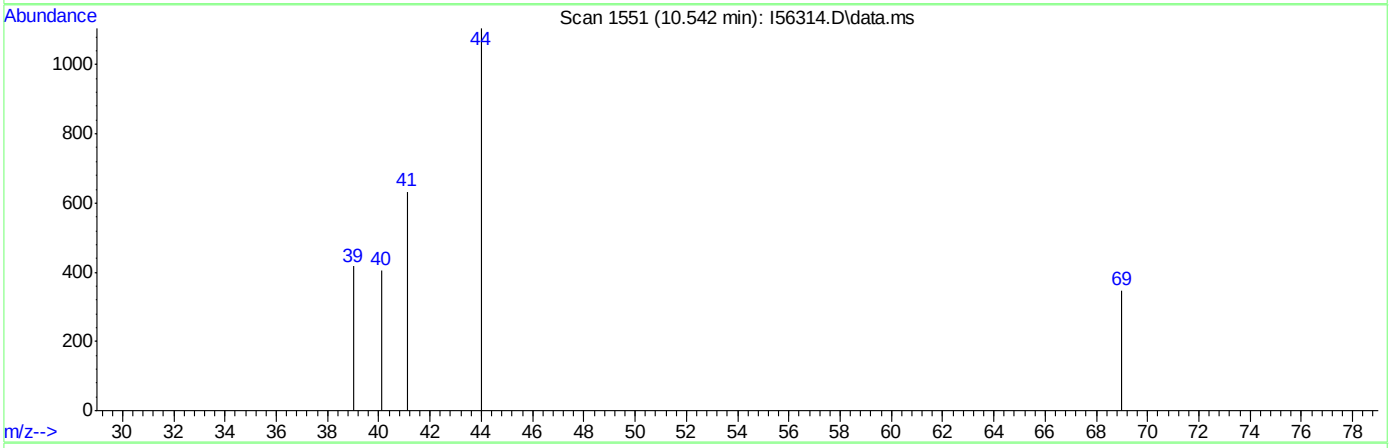
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.542min (-10.542) 0.00ug/L

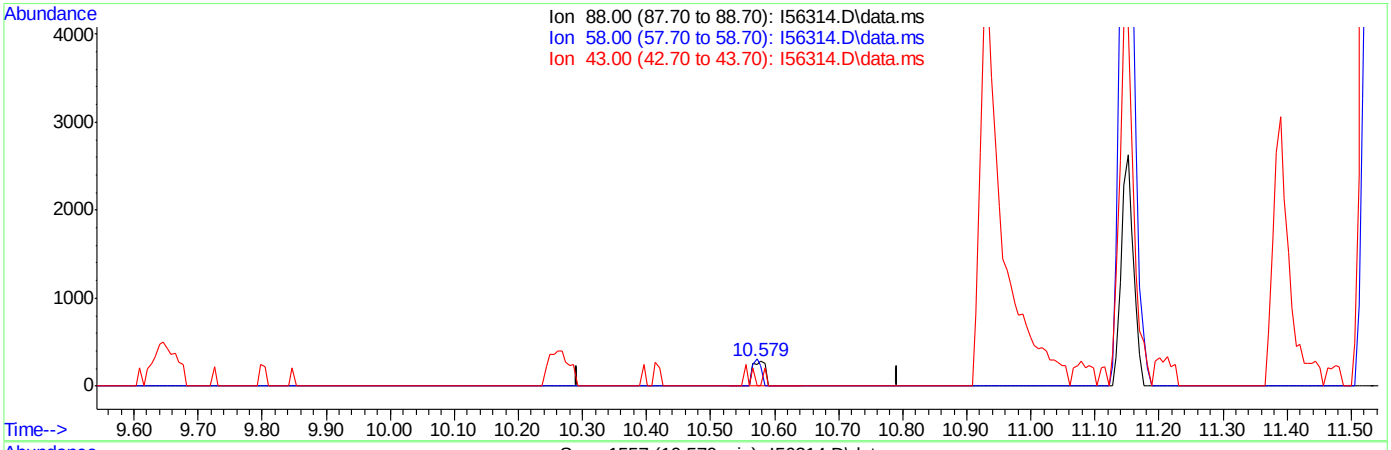
response 0

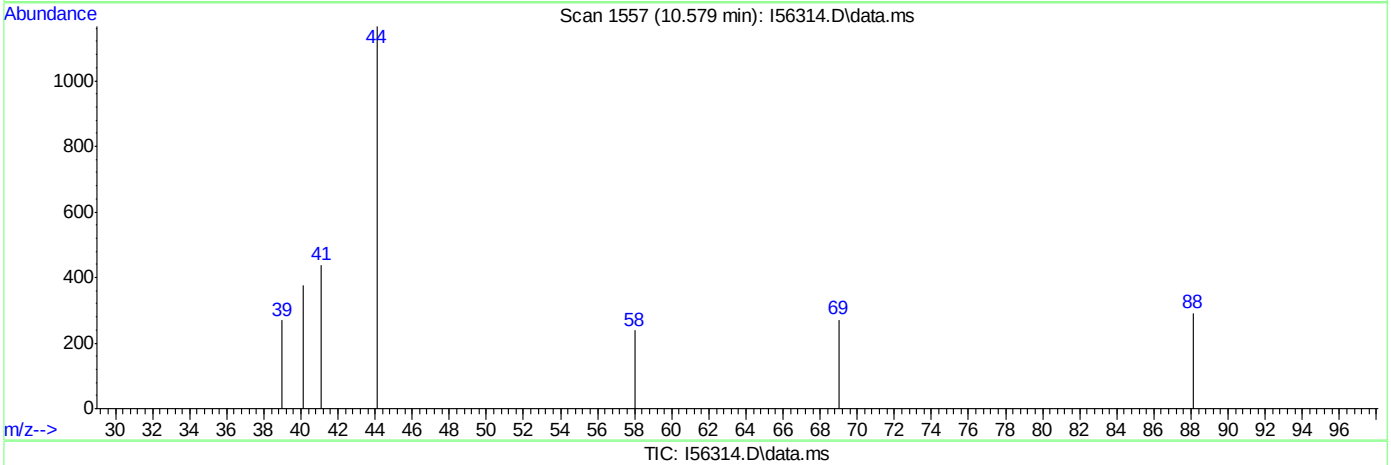
Ion	Exp%	Act%
88.00	100	0.00
58.00	90.10	0.00#
43.00	34.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.579min (+0.037) 7.69ug/L m

response 386

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	82.13
43.00	34.60	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1174301	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	820971	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	420628	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	87673	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	302635	47.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.34%			
46) 1,2-Dichloroethane-d4	8.994	65	423232	51.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.44%			
57) Toluene-d8	11.152	98	1128905	50.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.88%			
79) 4-Bromofluorobenzene	13.353	174	326886	47.27	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.54%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	36189	5.66	ug/L	97
3) Chloromethane	2.525	50	49045	8.44	ug/L	98
4) 1,3-Butadiene	2.641	39	23478	5.78	ug/L	97
5) Vinyl Chloride	2.654	62	38854	6.87	ug/L	97
6) Bromomethane	3.105	94	21605	6.51	ug/L	95
7) Chloroethane	3.263	64	19183	9.42	ug/L	96
8) Trichlorofluoromethane	3.507	101	49582m	6.53	ug/L	
9) Ethyl Ether	3.922	59	33369	5.72	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	42909	5.47	ug/L	98
11) 1,1-Dichloroethene	4.220	61	53914	5.17	ug/L	97
12) Freon 113	4.318	101	32228	5.11	ug/L	93
13) Carbon Disulfide	4.263	76	83280	4.85	ug/L	97
14) Iodomethane	4.428	142	46277	4.60	ug/L	97
15) Allyl chloride	4.927	41	45160	6.40	ug/L	99
16) Methylene Chloride	5.098	49	59817	6.19	ug/L	97
17) Acetone	5.171	43	46414	24.97	ug/L	100
18) Methyl acetate	5.385	43	89659	19.26	ug/L	97
19) trans-1,2-Dichloroethene	5.360	61	52638	5.15	ug/L	97
20) Hexane	5.501	56	43867	6.40	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	63365	4.55	ug/L	95
22) Acetonitrile	5.927	41	27632	41.56	ug/L	99
23) Di-isopropyl ether	6.183	45	114930	5.79	ug/L	100
24) Chloroprene	6.311	53	51892	4.79	ug/L	97
25) 1,1-Dichloroethane	6.336	63	65042	5.37	ug/L	99
26) Acrylonitrile	6.427	53	46411	17.70	ug/L	96
27) ETBE	6.799	59	90663	4.73	ug/L	97
28) Vinyl acetate	6.787	43	309659	54.66	ug/L	85
29) cis-1,2-Dichloroethene	7.281	96	30784	4.91	ug/L	96
30) 2,2-Dichloropropane	7.457	77	24335	6.75	ug/L	98
31) Bromochloromethane	7.622	128	14916	4.72	ug/L	93
32) Cyclohexane	7.646	56	72666	5.78	ug/L	97
33) Chloroform	7.768	83	56462	5.20	ug/L	96
34) Ethyl acetate	8.012	43	140470	23.78	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	19250	5.09	ug/L		92
37) Carbon Tetrachloride	8.018	117	33200	4.50	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	43324	4.63	ug/L		98
39) 2-Butanone	8.329	43	56839	21.38	ug/L		97
40) 1,1-Dichloropropene	8.366	75	38852	4.95	ug/L		96
41) tert-Butyl formate	8.573	59	86111	66.05	ug/L	#	77
42) Propionitrile	8.805	54	48038	65.05	ug/L	#	1
43) Methacrylonitrile	8.841	41	205491	65.16	ug/L		98
44) Benzene	8.793	78	120244	5.28	ug/L		92
45) TAME	9.030	73	59527	4.41	ug/L		87
47) 1,2-Dichloroethane	9.103	62	52471	5.29	ug/L		99
48) Trichloroethene	9.658	95	31438	4.86	ug/L		98
49) Methylcyclohexane	9.652	83	50753	5.30	ug/L		96
50) Dibromomethane	10.158	93	18826	4.68	ug/L		96
51) 1,2-Dichloropropane	10.250	63	37354	5.24	ug/L		94
52) Bromodichloromethane	10.341	83	35181	4.72	ug/L		97
53) Methyl methacrylate	10.524	41	18906	3.89	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	103489	19.65	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	39389	4.50	ug/L		95
58) Toluene	11.201	91	125814	5.12	ug/L		98
59) 2-Nitropropane	11.384	41	24476	22.45	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	163864	31.44	ug/L		96
61) trans-1,3-Dichloropropene	11.926	75	2346	0.88	ug/L		93
62) Tetrachloroethene	11.554	166	32804	3.59	ug/L		97
63) Ethyl methacrylate	11.701	69	28466	4.15	ug/L	#	81
64) 1,1,2-Trichloroethane	11.701	83	23759	4.91	ug/L		95
65) Dibromochloromethane	11.865	129	26229	4.39	ug/L		99
66) 1,3-Dichloropropane	11.932	76	47108	5.05	ug/L		97
67) 1,2-Dibromoethane	12.060	107	24427	4.41	ug/L		98
68) 2-hexanone	12.213	43	136039	30.40	ug/L		84
69) 1-Chlorohexane	12.438	91	42077	5.14	ug/L		91
70) Ethylbenzene	12.481	91	145187	5.01	ug/L		99
71) Chlorobenzene	12.469	112	84152	5.09	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	24290	4.51	ug/L		100
73) m,p-Xylene	12.591	91	222431	10.48	ug/L		100
74) o-Xylene	12.914	91	106558	4.86	ug/L		99
75) Styrene	12.950	104	73864	4.55	ug/L		96
76) Bromoform	12.987	173	14480	4.05	ug/L		98
77) Isopropylbenzene	13.139	105	119732	4.92	ug/L		98
80) cis-1,4-Dichloro-2-butene	13.383	53	11645	5.89	ug/L		80
81) n-Propylbenzene	13.432	91	166867	5.39	ug/L		99
82) Bromobenzene	13.438	156	32353	4.94	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	37069	5.15	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	103578	5.15	ug/L		99
85) 2-Chlorotoluene	13.670	91	100346	4.88	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	10530	5.49	ug/L	#	40
87) 1,2,3-Trichloropropane	13.578	110	10362	5.13	ug/L		97
88) Cyclohexanone	13.621	55	7399	30.23	ug/L		96
89) 4-Chlorotoluene	13.670	91	100346	5.16	ug/L		99
90) tert-Butylbenzene	13.785	91	63472	5.11	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

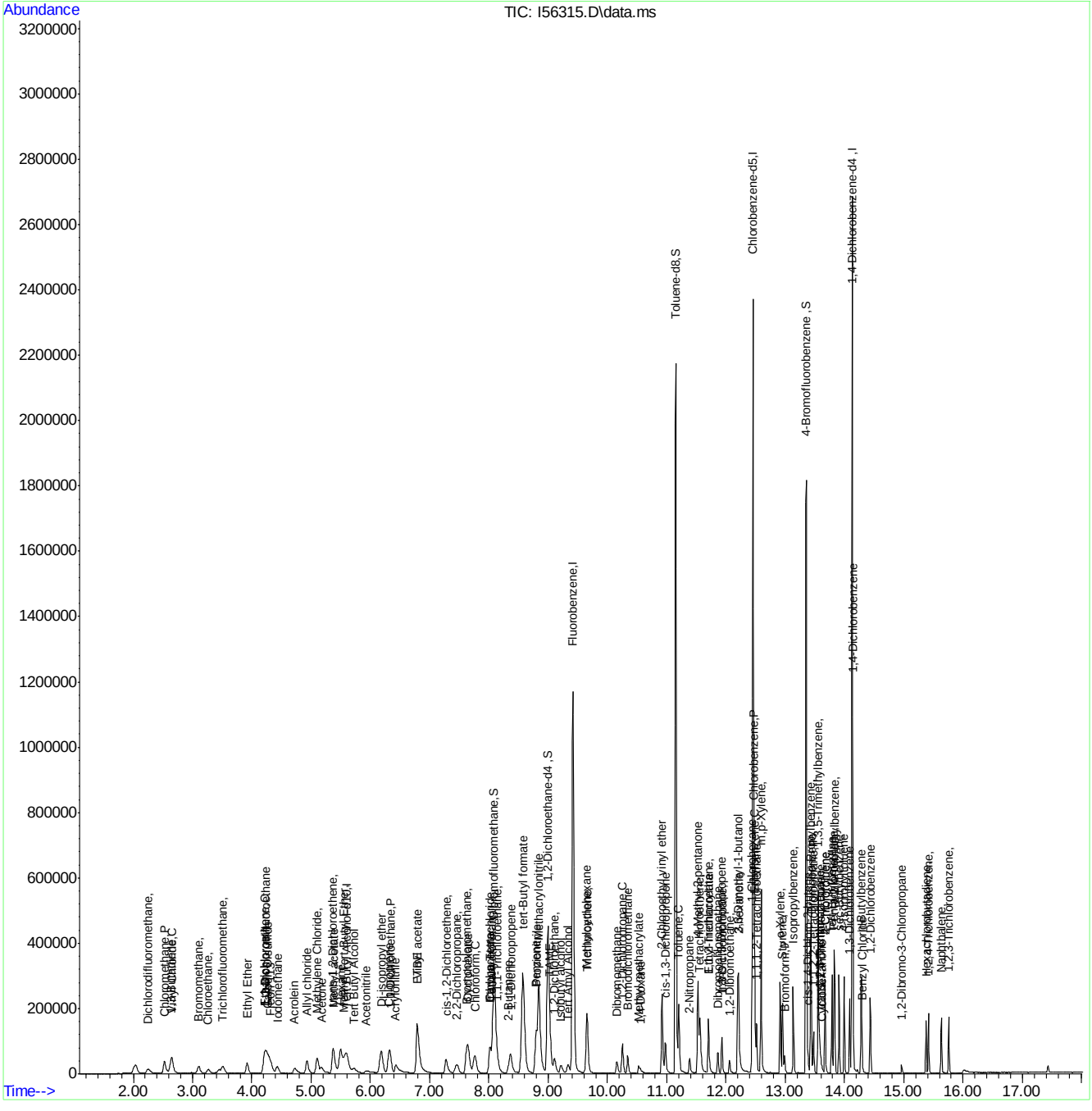
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	107541	5.15	ug/L	96
93)	Pentachloroethane	13.822	167	15492	3.96	ug/L	87
94)	sec-Butylbenzene	13.907	105	133807	5.29	ug/L	99
95)	4-Isopropyltoluene	13.993	119	105730	5.08	ug/L	99
96)	1,3-Dichlorobenzene	14.084	146	58728	4.87	ug/L	98
97)	1,4-Dichlorobenzene	14.139	146	66431	5.13	ug/L	89
98)	n-Butylbenzene	14.285	92	59516	5.08	ug/L	95
99)	Benzyl Chloride	14.298	126	4194	5.44	ug/L #	43
100)	1,2-Dichlorobenzene	14.432	146	57770	4.81	ug/L	97
101)	1,2-Dibromo-3-Chloropr...	14.968	75	4634	3.90	ug/L	88
102)	Hexachlorobutadiene	15.377	225	18366	4.56	ug/L	97
103)	1,2,4-Trichlorobenzene	15.419	180	35906	4.36	ug/L	95
104)	Naphthalene	15.633	128	80065	3.85	ug/L	99
105)	1,2,3-Trichlorobenzene	15.761	180	34036	4.25	ug/L	98
107)	Ethanol	4.220	45	6295m	122.47	ug/L	
108)	Acrolein	4.714	56	32275	32.38	ug/L	94
109)	Tert Butyl Alcohol	5.720	59	26996	47.00	ug/L	92
110)	Isobutyl alcohol	9.213	43	19745	108.64	ug/L	95
111)	Tert Amyl Alcohol	9.335	59	14861	43.64	ug/L #	78
112)	1,4-Dioxane	10.554	88	4632	85.44	ug/L	95
113)	3,3-Dimethyl-1-butanol	12.200	57	139946	286.02	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

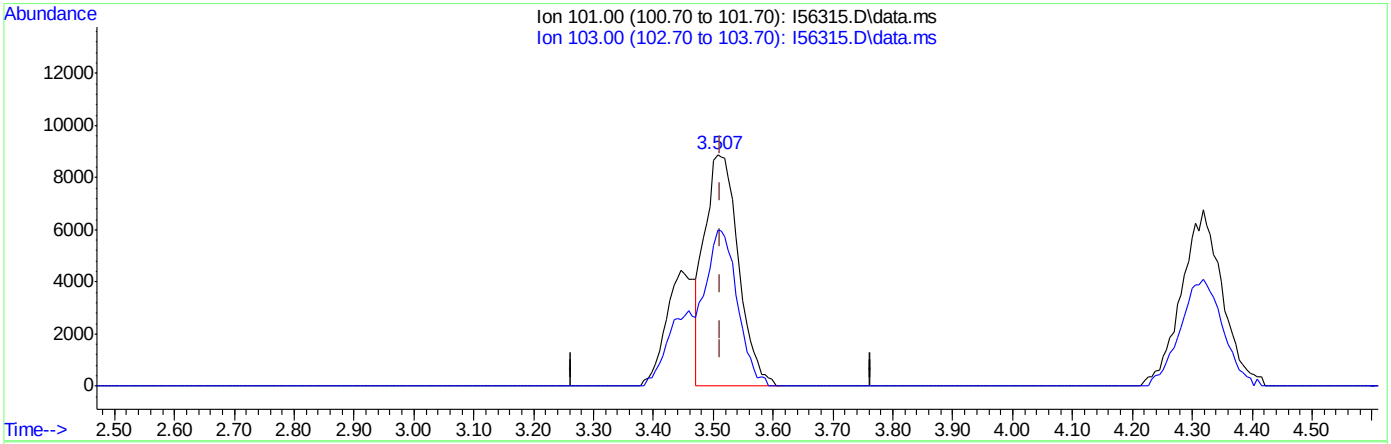
Sample Number:	VI1683-IC1683	**Method:**	SW846 8260B
Lab FileID:	I56315.D	**Analyst approved:**	07/26/18 08:26 Ana Jimenez
Injection Time:	07/25/18 15:37	**Supervisor approved:**	07/31/18 15:11 Melissa Mangual

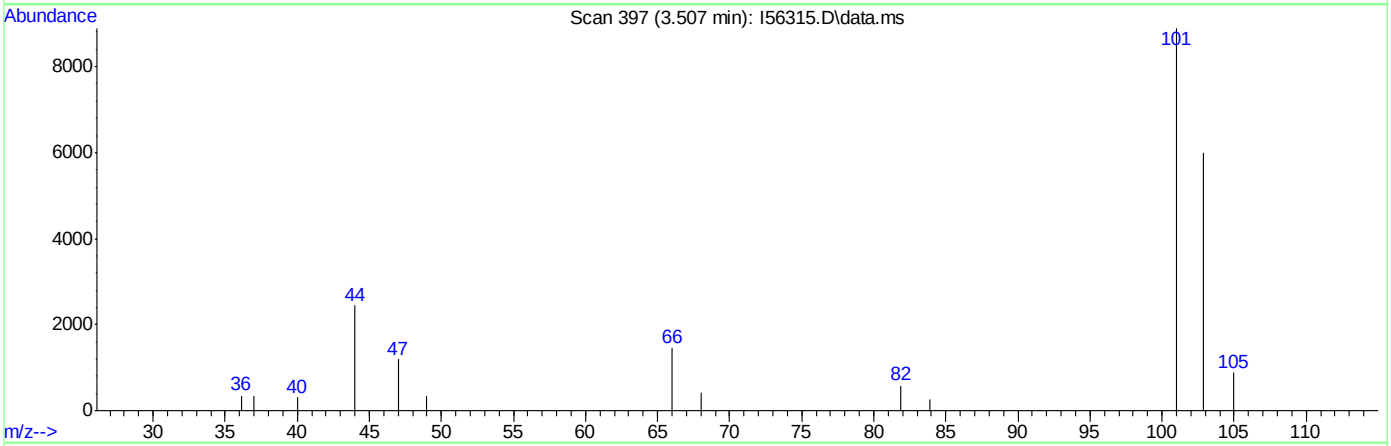
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.51	Split peak
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 4.59ug/L

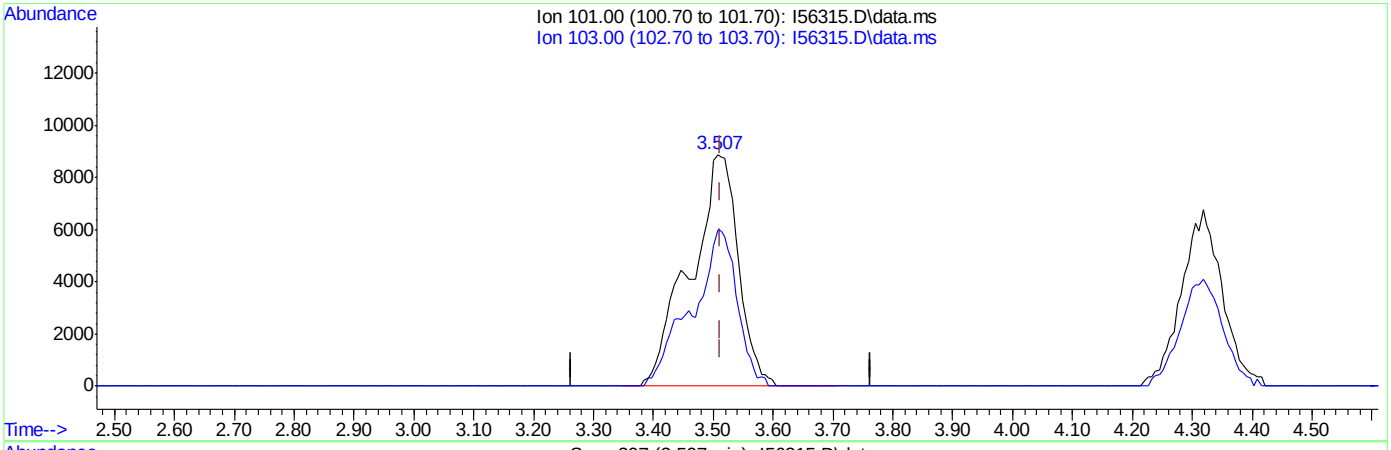
response 34888

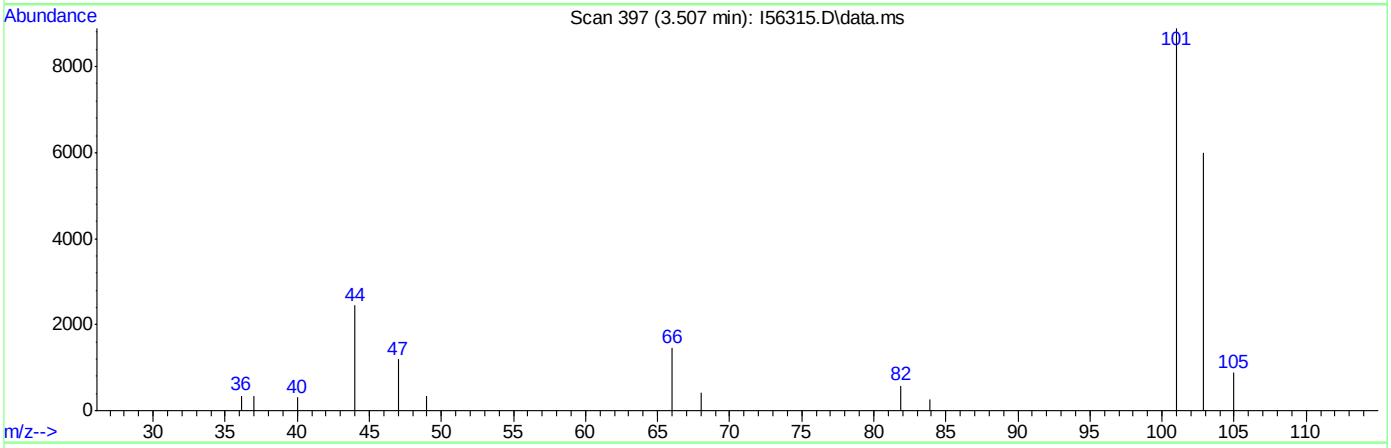
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 6.53ug/L m

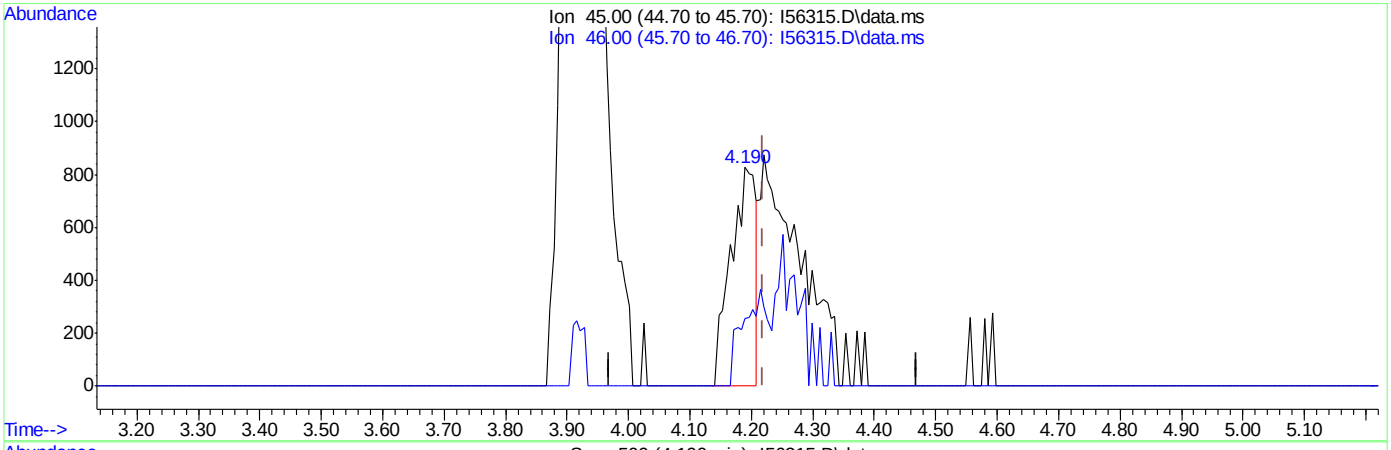
response 49582

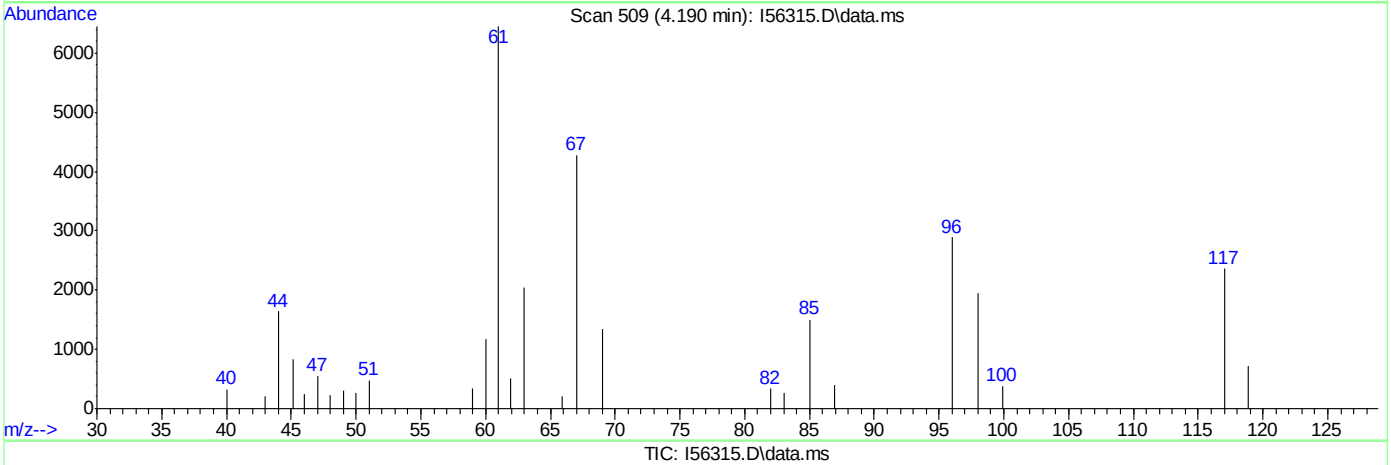
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.190min (-0.030) 45.47ug/L

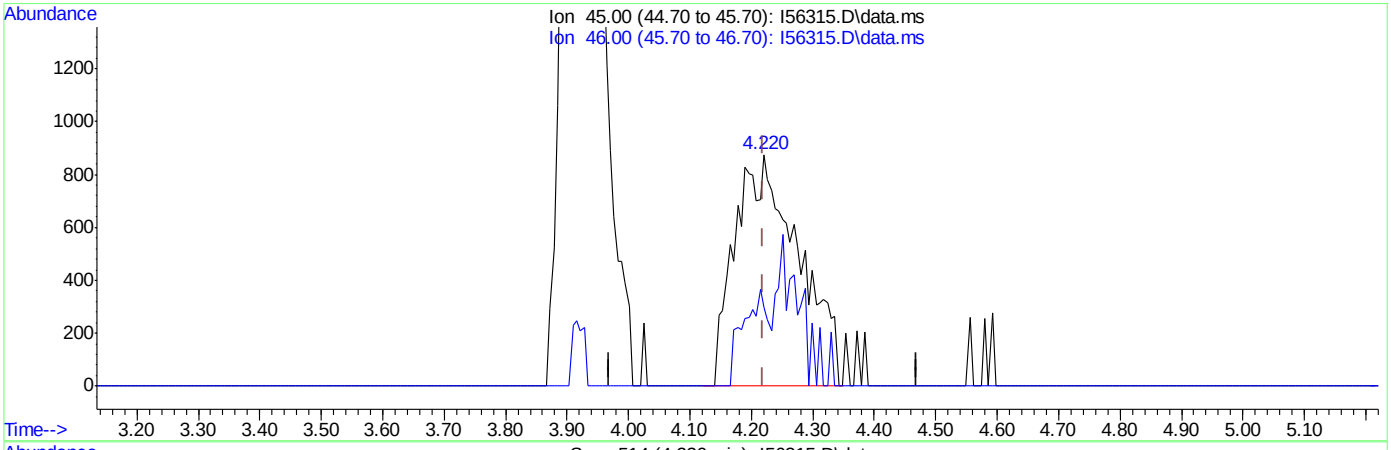
response 2337

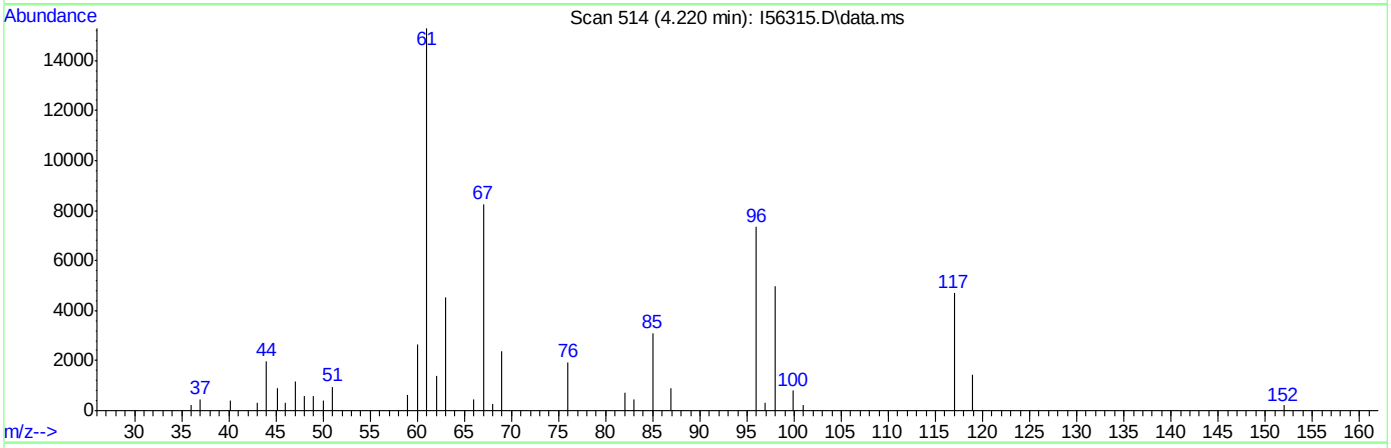
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	30.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.220min (+0.000) 122.47ug/L m

response 6295

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	34.13
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1188171	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	827532	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	421155	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	93674	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	311075	47.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.84%			
46) 1,2-Dichloroethane-d4	8.994	65	425687	51.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.84%			
57) Toluene-d8	11.152	98	1146655	50.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.66%			
79) 4-Bromofluorobenzene	13.353	174	329891	47.65	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.30%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	65368	10.09	ug/L	94
3) Chloromethane	2.526	50	92568	15.74	ug/L	99
4) 1,3-Butadiene	2.635	39	42842	10.44	ug/L	96
5) Vinyl Chloride	2.660	62	72171	12.61	ug/L	98
6) Bromomethane	3.105	94	41522	12.37	ug/L	97
7) Chloroethane	3.269	64	32912	16.38	ug/L	95
8) Trichlorofluoromethane	3.513	101	88783	11.55	ug/L	99
9) Ethyl Ether	3.916	59	68894	11.68	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.227	67	79625	10.04	ug/L	93
11) 1,1-Dichloroethene	4.214	61	104999	9.95	ug/L	96
12) Freon 113	4.318	101	59534	9.33	ug/L	97
13) Carbon Disulfide	4.269	76	162464	9.27	ug/L	98
14) Iodomethane	4.428	142	89357	8.78	ug/L	99
15) Allyl chloride	4.928	41	89012	12.48	ug/L	98
16) Methylene Chloride	5.098	49	115428	11.80	ug/L	97
17) Acetone	5.165	43	95675	51.23	ug/L	100
18) Methyl acetate	5.373	43	212277	45.41	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	104902	10.15	ug/L	99
20) Hexane	5.495	56	82394	11.88	ug/L	99
21) Methyl Tert Butyl Ether	5.556	73	129199	9.17	ug/L	97
22) Acetonitrile	5.909	41	58883	88.49	ug/L	96
23) Di-isopropyl ether	6.184	45	232647	11.58	ug/L	99
24) Chloroprene	6.305	53	104050	9.52	ug/L	97
25) 1,1-Dichloroethane	6.336	63	127861	10.43	ug/L	99
26) Acrylonitrile	6.415	53	116807	44.09	ug/L	99
27) ETBE	6.799	59	189060	9.75	ug/L	99
28) Vinyl acetate	6.781	43	702335	108.00	ug/L	83
29) cis-1,2-Dichloroethene	7.275	96	61351	9.67	ug/L	99
30) 2,2-Dichloropropane	7.458	77	48978	12.54	ug/L	97
31) Bromochloromethane	7.622	128	29943	9.37	ug/L	96
32) Cyclohexane	7.641	56	140021	11.00	ug/L	95
33) Chloroform	7.769	83	108530	9.89	ug/L	97
34) Ethyl acetate	8.012	43	312124	52.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35)	Tetrahydrofuran	8.049	42	42685	11.23	ug/L		96
37)	Carbon Tetrachloride	8.019	117	63111	8.45	ug/L		98
38)	1,1,1-Trichloroethane	8.134	97	85033	8.97	ug/L		97
39)	2-Butanone	8.317	43	132290	49.51	ug/L		97
40)	1,1-Dichloropropene	8.366	75	76533	9.61	ug/L		98
41)	tert-Butyl formate	8.573	59	191740	128.56	ug/L		91
42)	Propionitrile	8.805	54	104197	139.45	ug/L	#	1
43)	Methacrylonitrile	8.842	41	412253	129.19	ug/L		100
44)	Benzene	8.793	78	234317	10.18	ug/L		96
45)	TAME	9.024	73	123033	9.01	ug/L		93
47)	1,2-Dichloroethane	9.104	62	102766	10.25	ug/L		99
48)	Trichloroethene	9.658	95	61269	9.37	ug/L		98
49)	Methylcyclohexane	9.646	83	99174	10.23	ug/L		96
50)	Dibromomethane	10.152	93	38503	9.47	ug/L		97
51)	1,2-Dichloropropane	10.250	63	74627	10.35	ug/L		96
52)	Bromodichloromethane	10.341	83	72742	9.64	ug/L		97
53)	Methyl methacrylate	10.524	41	45204	9.21	ug/L		96
54)	2-Chloroethyl vinyl ether	10.920	63	226330	42.92	ug/L		96
55)	cis-1,3-Dichloropropene	10.975	75	83293	9.32	ug/L		96
58)	Toluene	11.201	91	246293	9.94	ug/L		99
59)	2-Nitropropane	11.384	41	57350	51.64	ug/L		93
60)	4-Methyl-2-pentanone	11.524	43	340691	64.85	ug/L		98
61)	trans-1,3-Dichloropropene	11.926	75	5255	1.91	ug/L	#	91
62)	Tetrachloroethene	11.554	166	64653	7.07	ug/L		98
63)	Ethyl methacrylate	11.701	69	61488	8.84	ug/L		91
64)	1,1,2-Trichloroethane	11.707	83	48277	9.90	ug/L		95
65)	Dibromochloromethane	11.865	129	54367	8.95	ug/L		97
66)	1,3-Dichloropropane	11.932	76	94499	10.06	ug/L		99
67)	1,2-Dibromoethane	12.060	107	51606	9.25	ug/L		97
68)	2-hexanone	12.213	43	283655	62.89	ug/L		85
69)	1-Chlorohexane	12.444	91	82389	9.98	ug/L		96
70)	Ethylbenzene	12.481	91	281342	9.64	ug/L		99
71)	Chlorobenzene	12.469	112	160825	9.65	ug/L		99
72)	1,1,1,2-Tetrachloroethane	12.518	131	48327	8.91	ug/L		97
73)	m,p-Xylene	12.591	91	431764	20.18	ug/L		99
74)	o-Xylene	12.914	91	215543	9.76	ug/L		99
75)	Styrene	12.950	104	149578	9.10	ug/L		97
76)	Bromoform	12.987	173	30841	8.44	ug/L		98
77)	Isopropylbenzene	13.139	105	237557	9.64	ug/L		100
80)	cis-1,4-Dichloro-2-butene	13.383	53	22995	11.45	ug/L		86
81)	n-Propylbenzene	13.432	91	325205	10.50	ug/L		98
82)	Bromobenzene	13.438	156	62714	9.57	ug/L		100
83)	1,1,2,2-Tetrachloroethane	13.475	83	71819	9.96	ug/L		98
84)	1,3,5-Trimethylbenzene	13.554	105	206149	10.23	ug/L		99
85)	2-Chlorotoluene	13.670	91	195726	9.50	ug/L		98
86)	trans-1,4-Dichloro-2-B...	13.597	53	22971	11.78	ug/L	#	55
87)	1,2,3-Trichloropropane	13.578	110	19202	9.50	ug/L		94
88)	Cyclohexanone	13.621	55	15216	62.08	ug/L		97
89)	4-Chlorotoluene	13.670	91	195726	10.05	ug/L		99
90)	tert-Butylbenzene	13.786	91	125125	10.06	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	a-Methyl styrene	13.133	118	1605	20.99	ug/L #	1
92)	1,2,4-Trimethylbenzene	13.828	105	214701	10.26	ug/L	97
93)	Pentachloroethane	13.822	167	30638	7.83	ug/L	90
94)	sec-Butylbenzene	13.908	105	261171	10.31	ug/L	99
95)	4-Isopropyltoluene	13.993	119	211670	10.15	ug/L	98
96)	1,3-Dichlorobenzene	14.084	146	116318	9.63	ug/L	98
97)	1,4-Dichlorobenzene	14.139	146	128277	9.89	ug/L	94
98)	n-Butylbenzene	14.286	92	119746	10.22	ug/L	94
99)	Benzyl Chloride	14.298	126	9746	11.10	ug/L #	47
100)	1,2-Dichlorobenzene	14.432	146	112915	9.40	ug/L	98
101)	1,2-Dibromo-3-Chloropr...	14.968	75	9836	8.20	ug/L	86
102)	Hexachlorobutadiene	15.377	225	35925	8.92	ug/L	96
103)	1,2,4-Trichlorobenzene	15.420	180	73365	8.91	ug/L	95
104)	Naphthalene	15.633	128	174701	8.40	ug/L	99
105)	1,2,3-Trichlorobenzene	15.761	180	70673	8.82	ug/L	98
107)	Ethanol	4.202	45	14189m	258.36	ug/L	
108)	Acrolein	4.708	56	71951	67.56	ug/L	99
109)	Tert Butyl Alcohol	5.726	59	59835	97.50	ug/L	92
110)	Isobutyl alcohol	9.213	43	44980	231.62	ug/L	99
111)	Tert Amyl Alcohol	9.329	59	34243	94.11	ug/L	90
112)	1,4-Dioxane	10.555	88	10606	183.47	ug/L	91
113)	3,3-Dimethyl-1-butanol	12.201	57	298636	571.24	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

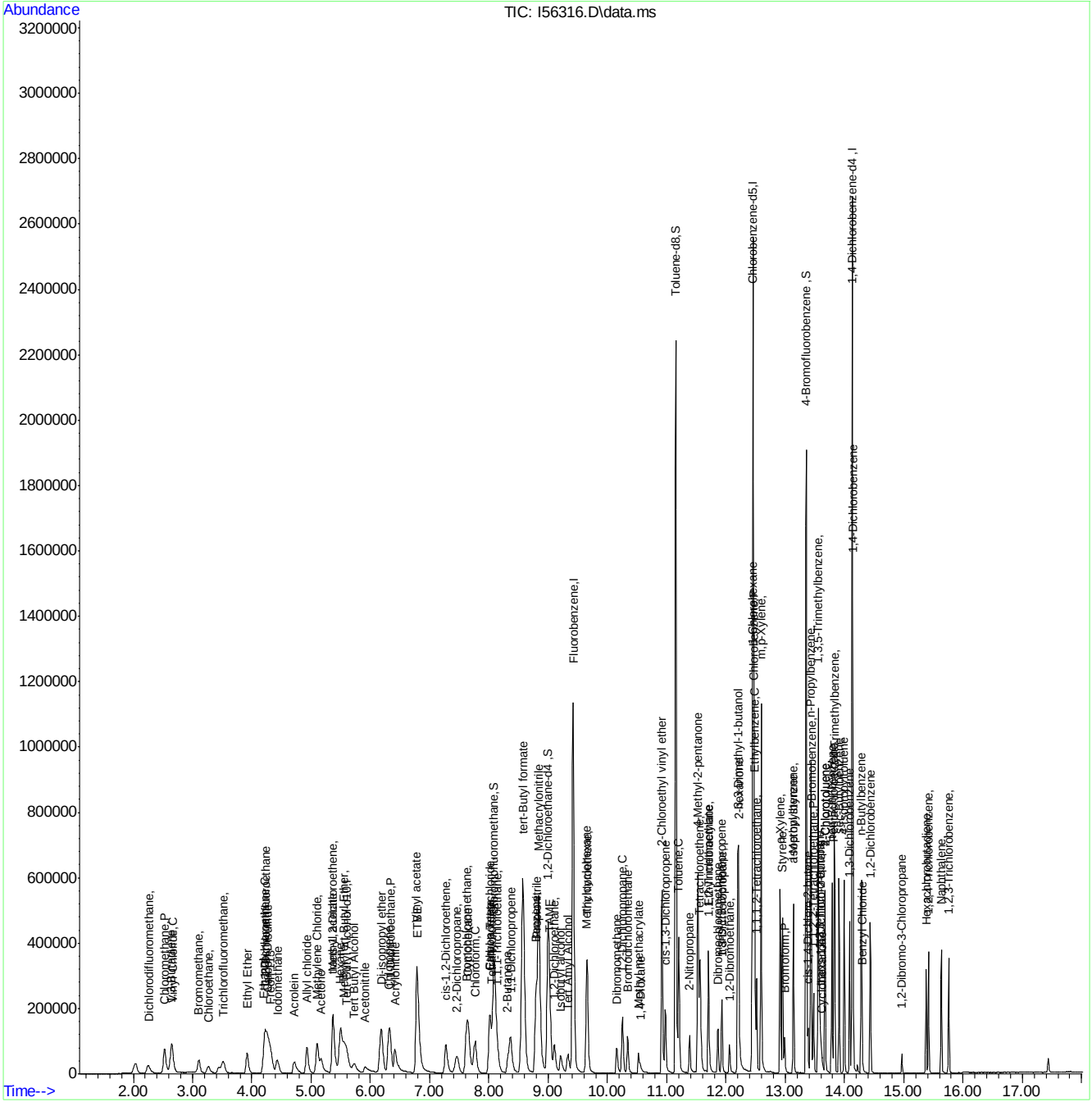
7.6.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

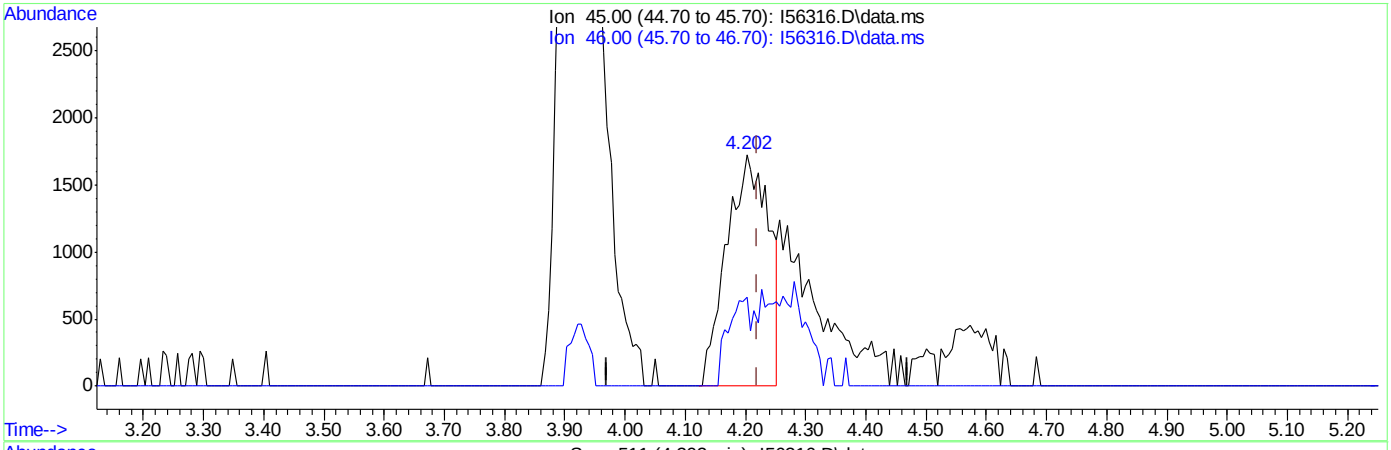
Sample Number:	VI1683-IC1683	**Method:**	SW846 8260B
Lab FileID:	I56316.D	**Analyst approved:**	07/26/18 08:26 Ana Jimenez
Injection Time:	07/25/18 16:01	**Supervisor approved:**	07/31/18 15:11 Melissa Mangual

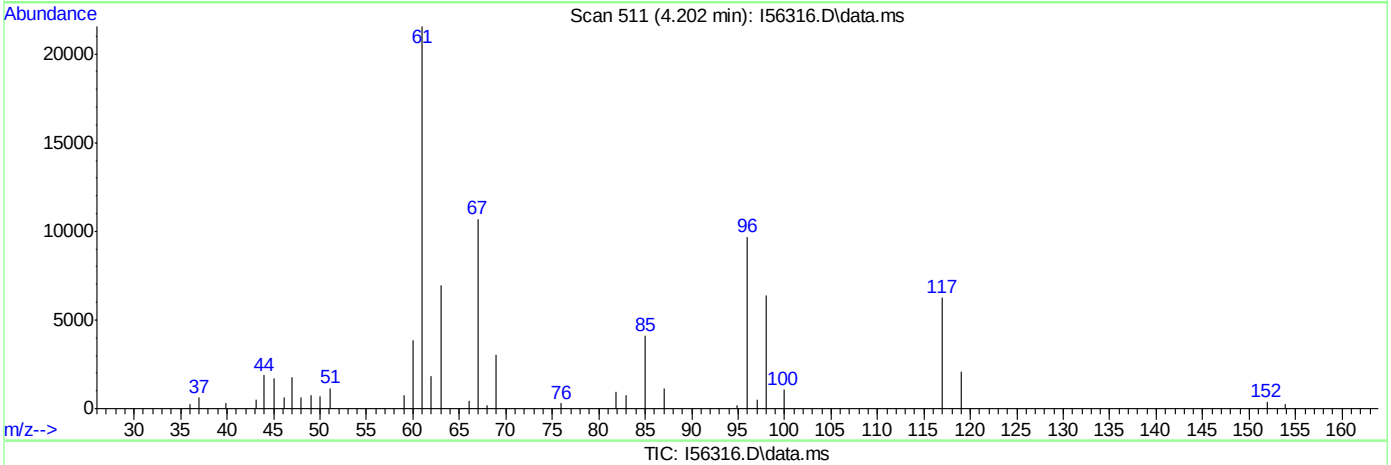
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.20	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 151.55ug/L

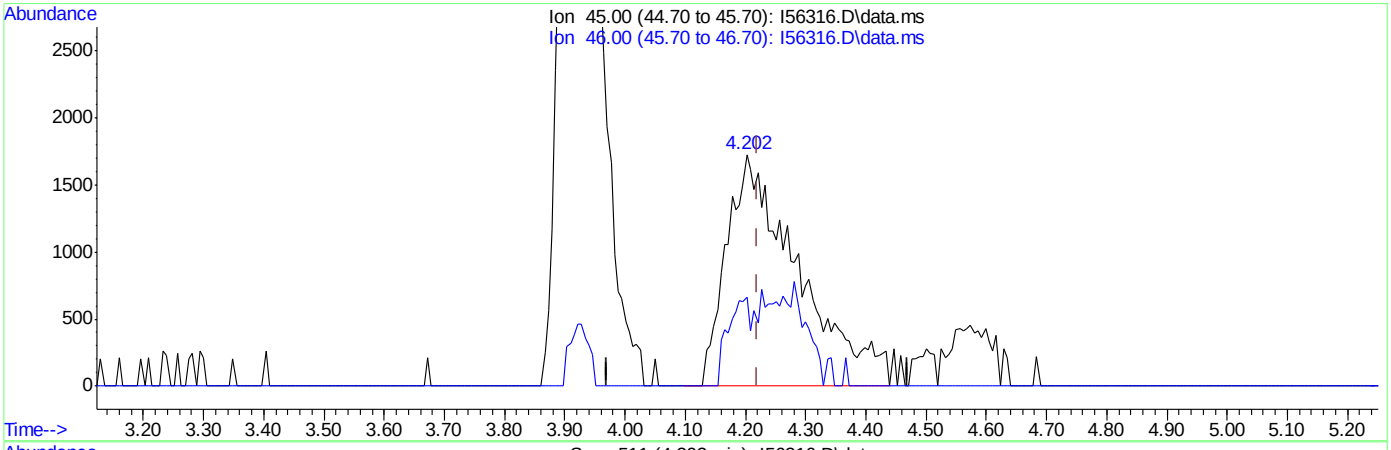
response 8323

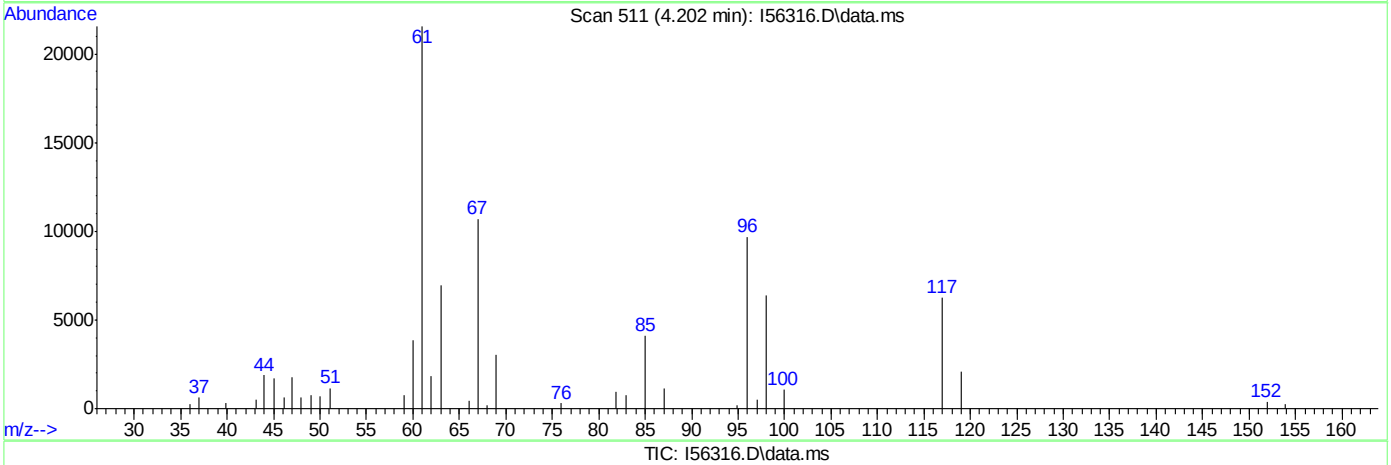
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 258.36ug/L m

response 14189

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1187789	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	833915	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	422900	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	95487	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	315544	48.62	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.24%			
46) 1,2-Dichloroethane-d4	8.994	65	423727	51.20	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.40%			
57) Toluene-d8	11.152	98	1144174	50.33	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.66%			
79) 4-Bromofluorobenzene	13.353	174	336250	48.37	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.74%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	171014	26.32	ug/L	95
3) Chloromethane	2.532	50	228004	38.77	ug/L	100
4) 1,3-Butadiene	2.641	39	118335	29.08	ug/L	96
5) Vinyl Chloride	2.666	62	194288	33.96	ug/L	100
6) Bromomethane	3.105	94	96545	28.76	ug/L	99
7) Chloroethane	3.269	64	60507	32.00	ug/L	97
8) Trichlorofluoromethane	3.513	101	236325	30.75	ug/L	98
9) Ethyl Ether	3.922	59	175010	29.67	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.239	67	210096	26.49	ug/L	99
11) 1,1-Dichloroethene	4.220	61	279025	26.44	ug/L	97
12) Freon 113	4.318	101	155288	24.36	ug/L	98
13) Carbon Disulfide	4.269	76	444363	24.70	ug/L	98
14) Iodomethane	4.434	142	238944	23.49	ug/L	99
15) Allyl chloride	4.928	41	244771	34.32	ug/L	98
16) Methylene Chloride	5.104	49	278989	28.54	ug/L	100
17) Acetone	5.165	43	252625	138.61	ug/L	100
18) Methyl acetate	5.373	43	607770	133.42	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	277830	26.88	ug/L	99
20) Hexane	5.495	56	214757	30.98	ug/L	98
21) Methyl Tert Butyl Ether	5.555	73	347014	24.65	ug/L	98
22) Acetonitrile	5.891	41	179052	282.01	ug/L	100
23) Di-isopropyl ether	6.183	45	630130	31.36	ug/L	98
24) Chloroprene	6.305	53	295165	27.39	ug/L	99
25) 1,1-Dichloroethane	6.336	63	329776	26.91	ug/L	99
26) Acrylonitrile	6.397	53	350191	132.74	ug/L	99
27) ETBE	6.805	59	514679	26.55	ug/L	99
28) Vinyl acetate	6.775	43	1973067	236.24	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	161786	25.51	ug/L	95
30) 2,2-Dichloropropane	7.458	77	142755	30.38	ug/L	98
31) Bromochloromethane	7.610	128	78826	24.66	ug/L	97
32) Cyclohexane	7.653	56	377491	29.66	ug/L	100
33) Chloroform	7.768	83	278697	25.40	ug/L	98
34) Ethyl acetate	8.000	43	864970	150.14	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	110528m	29.77 ug/L	
37) Carbon Tetrachloride	8.024	117	172593	23.10 ug/L	99
38) 1,1,1-Trichloroethane	8.134	97	231376	24.43 ug/L	97
39) 2-Butanone	8.311	43	368463	141.13 ug/L	100
40) 1,1-Dichloropropene	8.360	75	210697	26.16 ug/L	99
41) tert-Butyl formate	8.579	59	573132	294.26 ug/L #	80
42) Propionitrile	8.793	54	278427m	372.74 ug/L	
43) Methacrylonitrile	8.835	41	1072501	336.21 ug/L	99
44) Benzene	8.793	78	606413	26.35 ug/L	100
45) TAME	9.030	73	342268	25.08 ug/L	97
47) 1,2-Dichloroethane	9.104	62	262623	26.20 ug/L	99
48) Trichloroethene	9.658	95	161835	24.75 ug/L	99
49) Methylcyclohexane	9.652	83	266657	27.51 ug/L	98
50) Dibromomethane	10.146	93	101719	25.02 ug/L	99
51) 1,2-Dichloropropane	10.250	63	198340	27.51 ug/L	98
52) Bromodichloromethane	10.341	83	198642	26.35 ug/L	99
53) Methyl methacrylate	10.512	41	132963	27.38 ug/L	98
54) 2-Chloroethyl vinyl ether	10.914	63	613040	120.50 ug/L	97
55) cis-1,3-Dichloropropene	10.975	75	241610	26.22 ug/L	99
58) Toluene	11.201	91	644416	25.80 ug/L	100
59) 2-Nitropropane	11.384	41	173832	150.08 ug/L	98
60) 4-Methyl-2-pentanone	11.524	43	891306	168.36 ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	13809	4.65 ug/L	97
62) Tetrachloroethene	11.554	166	173745	19.40 ug/L	99
63) Ethyl methacrylate	11.701	69	181372	25.40 ug/L	90
64) 1,1,2-Trichloroethane	11.701	83	125040	25.45 ug/L	97
65) Dibromochloromethane	11.859	129	151361	24.08 ug/L	98
66) 1,3-Dichloropropane	11.926	76	249441	26.35 ug/L	97
67) 1,2-Dibromoethane	12.054	107	140147	24.93 ug/L	97
68) 2-hexanone	12.207	43	749583	164.91 ug/L	97
69) 1-Chlorohexane	12.438	91	217455	26.14 ug/L	99
70) Ethylbenzene	12.481	91	748561	25.44 ug/L	99
71) Chlorobenzene	12.469	112	415841	24.76 ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	133450	24.41 ug/L	99
73) m,p-Xylene	12.591	91	1155600	53.60 ug/L	100
74) o-Xylene	12.914	91	588232	26.42 ug/L	99
75) Styrene	12.950	104	420727	25.04 ug/L	99
76) Bromoform	12.987	173	89793	23.35 ug/L	99
77) Isopropylbenzene	13.133	105	649513	25.78 ug/L	99
80) cis-1,4-Dichloro-2-butene	13.377	53	67861	31.92 ug/L	85
81) n-Propylbenzene	13.432	91	879177	28.26 ug/L	99
82) Bromobenzene	13.438	156	166446	25.30 ug/L	99
83) 1,1,2,2-Tetrachloroethane	13.475	83	189353	26.15 ug/L	100
84) 1,3,5-Trimethylbenzene	13.554	105	560790	27.72 ug/L	100
85) 2-Chlorotoluene	13.670	91	524217	25.35 ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	65548	31.94 ug/L #	65
87) 1,2,3-Trichloropropane	13.578	110	51940	25.58 ug/L	97
88) Cyclohexanone	13.621	55	43986	178.72 ug/L	98
89) 4-Chlorotoluene	13.670	91	524217	26.80 ug/L	100
90) tert-Butylbenzene	13.786	91	339960	27.22 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	577530	27.49	ug/L	97
93) Pentachloroethane	13.822	167	86505	22.08	ug/L	87
94) sec-Butylbenzene	13.908	105	708570	27.84	ug/L	100
95) 4-Isopropyltoluene	13.993	119	580069	27.71	ug/L	100
96) 1,3-Dichlorobenzene	14.084	146	309758	25.53	ug/L	99
97) 1,4-Dichlorobenzene	14.139	146	331259	25.44	ug/L	99
98) n-Butylbenzene	14.285	92	333353	28.33	ug/L	92
99) Benzyl Chloride	14.298	126	36846	29.89	ug/L #	25
100) 1,2-Dichlorobenzene	14.432	146	302159	25.04	ug/L	98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	29930	24.11	ug/L	88
102) Hexachlorobutadiene	15.377	225	99788	24.67	ug/L	99
103) 1,2,4-Trichlorobenzene	15.413	180	203788	24.63	ug/L	99
104) Naphthalene	15.633	128	506198	24.23	ug/L	100
105) 1,2,3-Trichlorobenzene	15.761	180	188794	23.46	ug/L	97
107) Ethanol	4.208	45	35828	639.98	ug/L	92
108) Acrolein	4.708	56	195542	180.13	ug/L	99
109) Tert Butyl Alcohol	5.732	59	158363	253.14	ug/L	88
110) Isobutyl alcohol	9.207	43	134984	681.90	ug/L	97
111) Tert Amyl Alcohol	9.329	59	104219	280.99	ug/L	99
112) 1,4-Dioxane	10.548	88	32745	559.90	ug/L	94
113) 3,3-Dimethyl-1-butanol	12.201	57	854393	1603.28	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

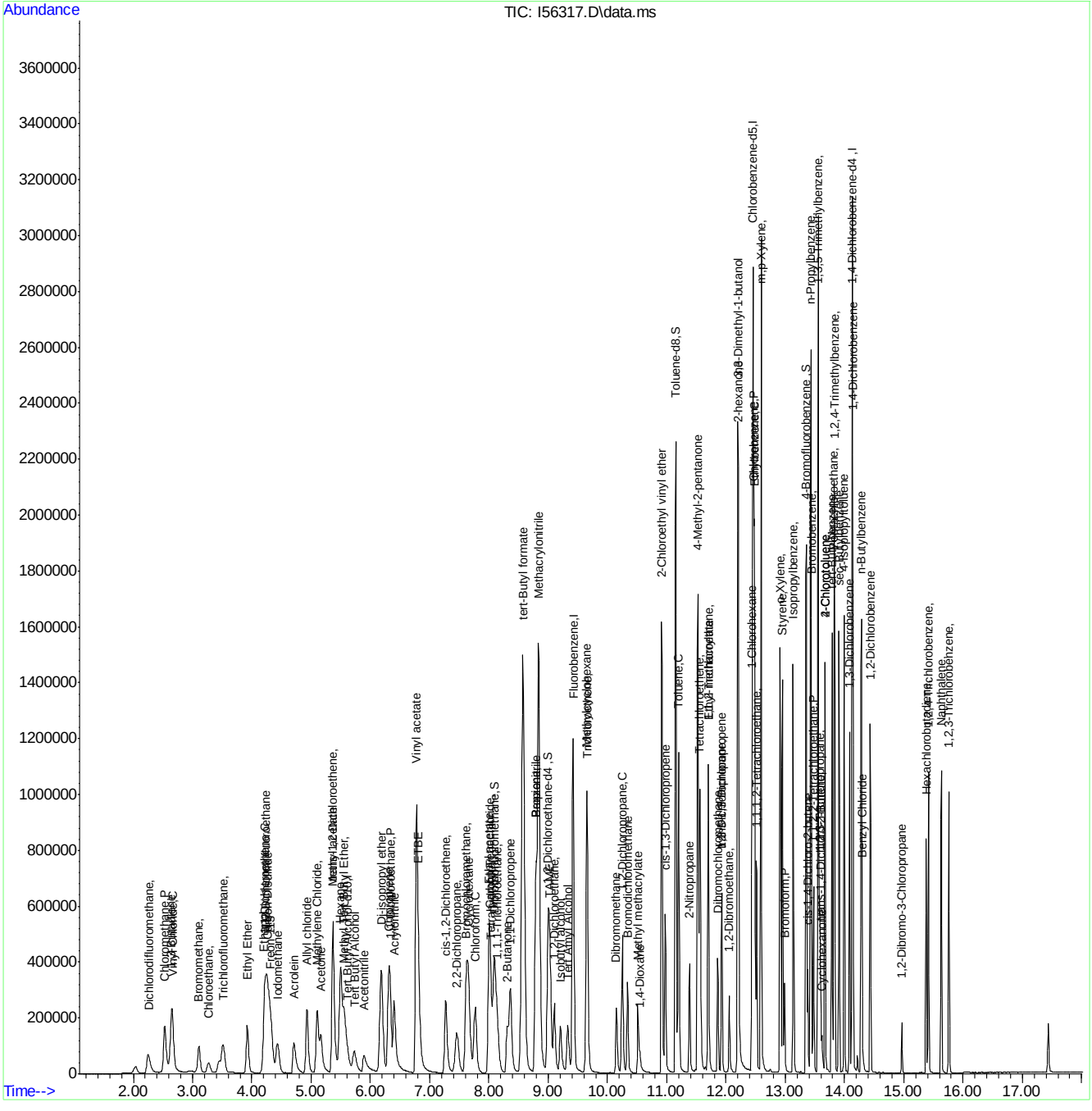
7.6.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

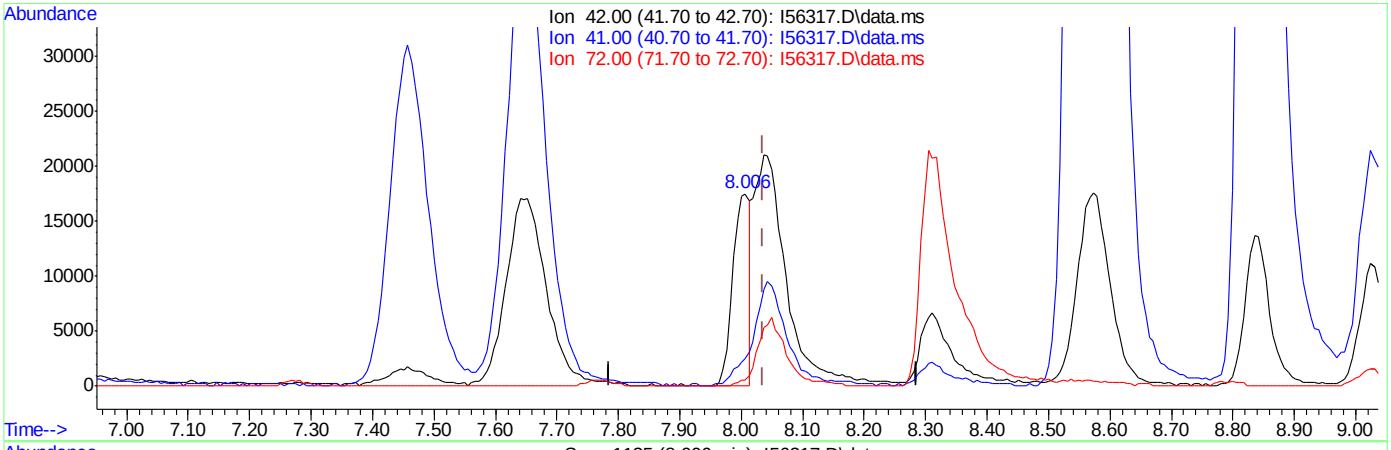
Sample Number:	VI1683-IC1683	**Method:**	SW846 8260B
Lab FileID:	I56317.D	**Analyst approved:**	07/26/18 08:26 Ana Jimenez
Injection Time:	07/25/18 16:25	**Supervisor approved:**	07/31/18 15:11 Melissa Mangual

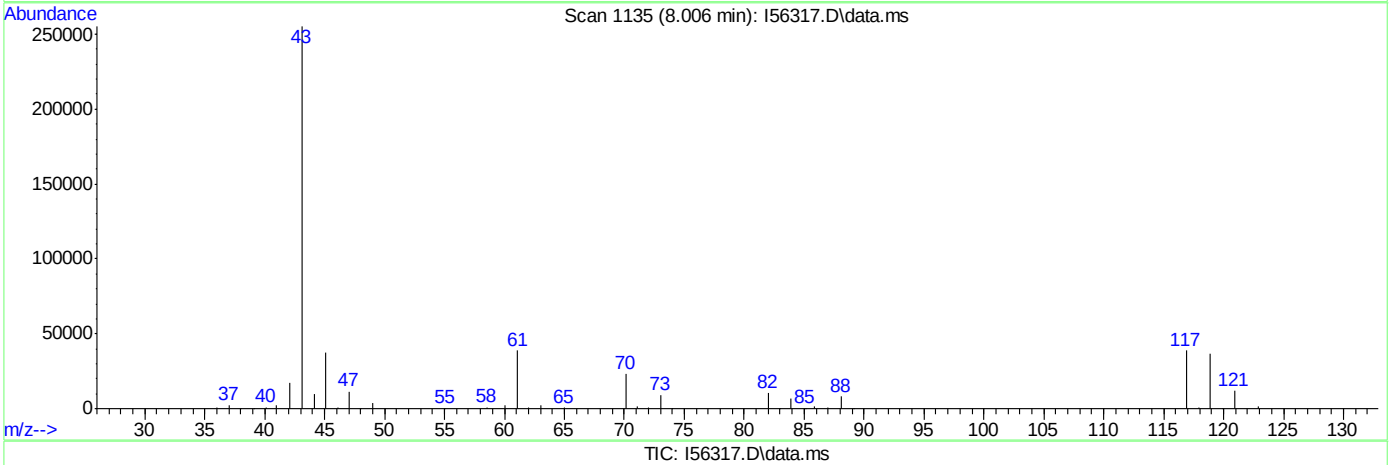
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.04	Missed peak
Propionitrile	107-12-0		8.79	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.006min (-0.030) 8.74ug/L

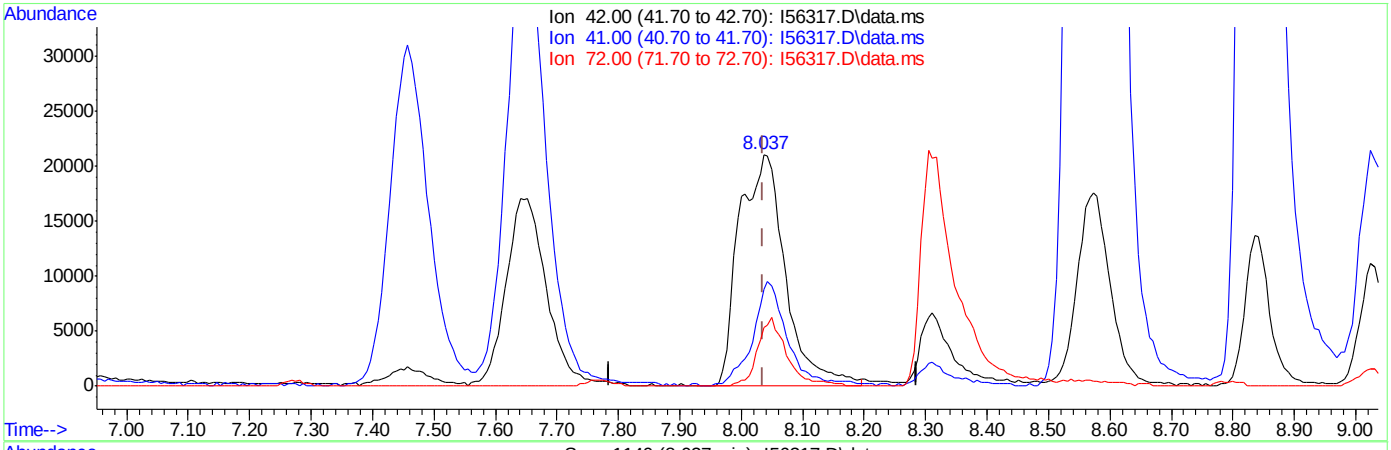
response 33296

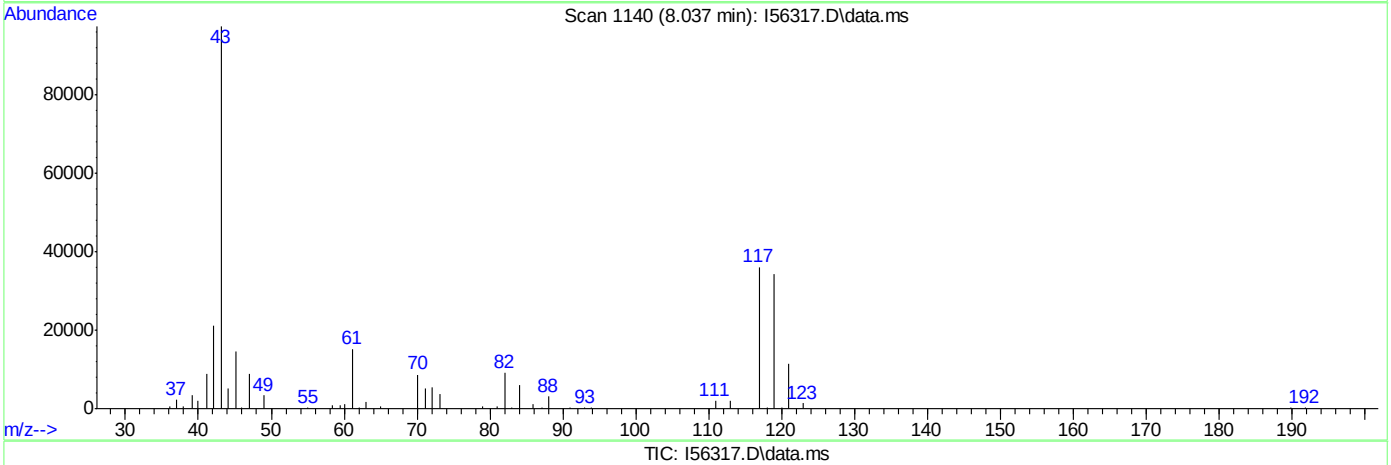
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	14.08#
72.00	26.50	2.93#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.037min (+0.000) 29.77ug/L m

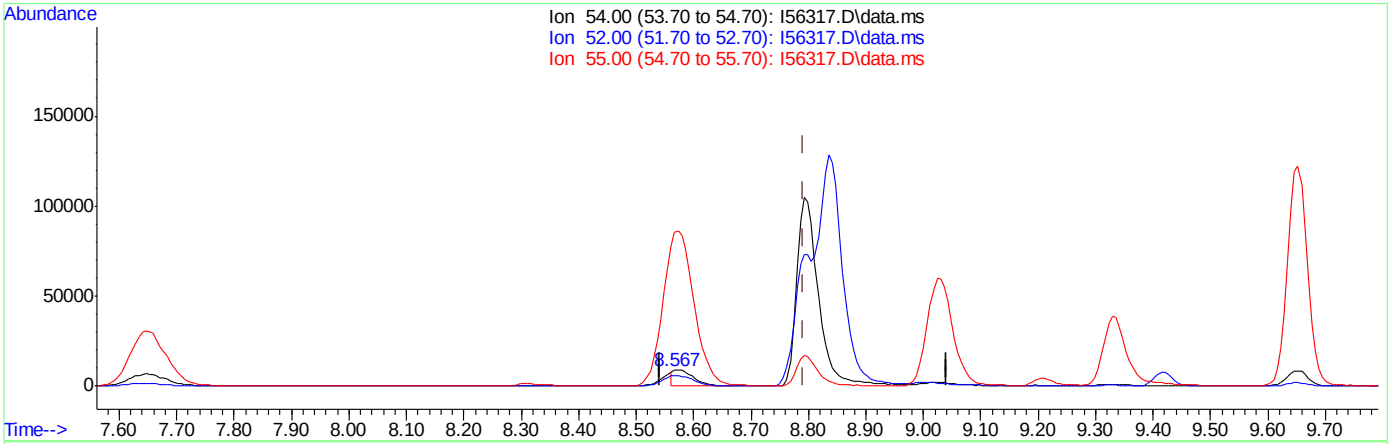
response 110528

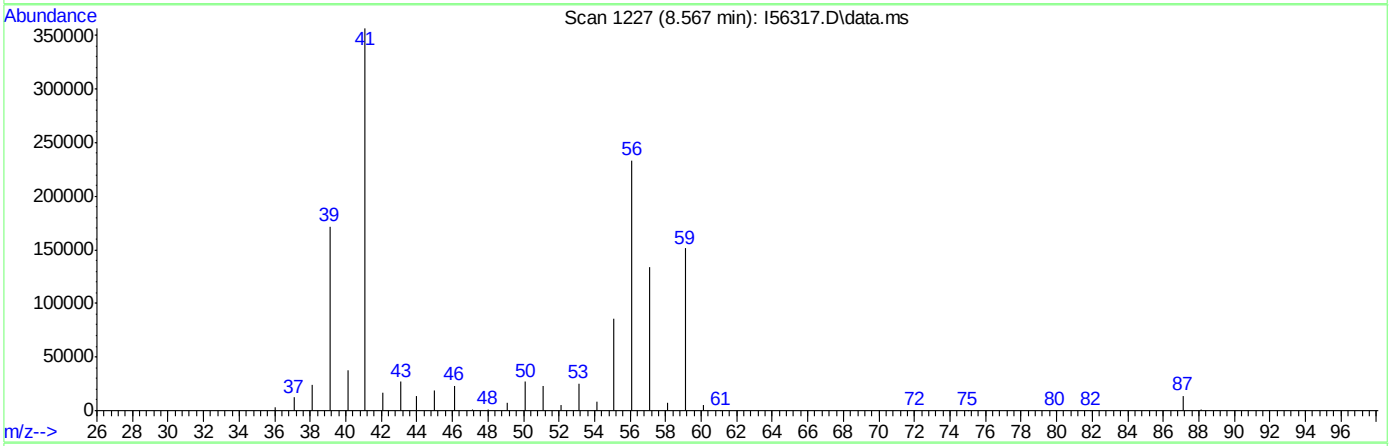
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	41.79
72.00	26.50	25.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.567min (-0.225) 28.82ug/L

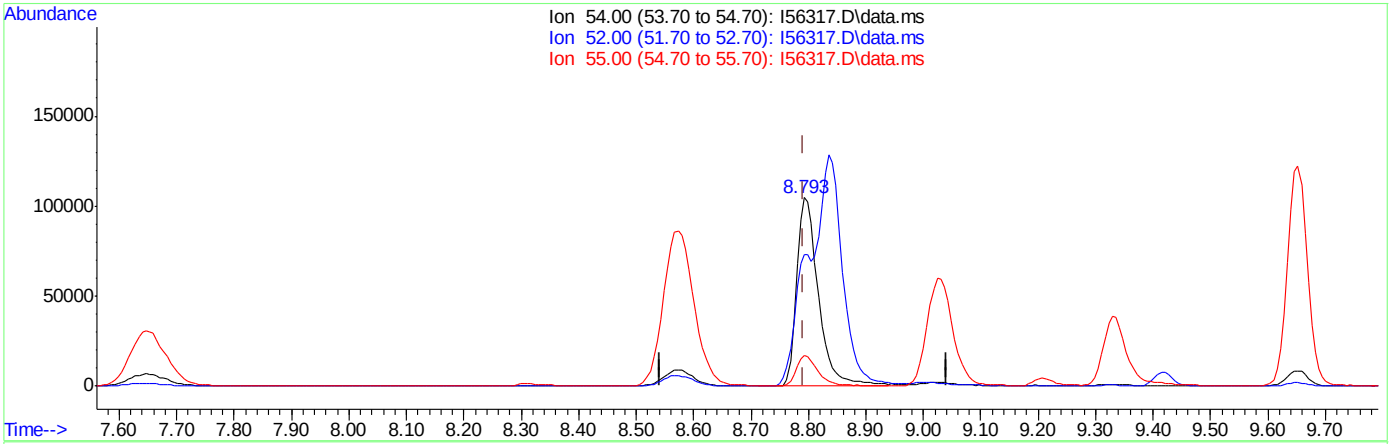
response 21529

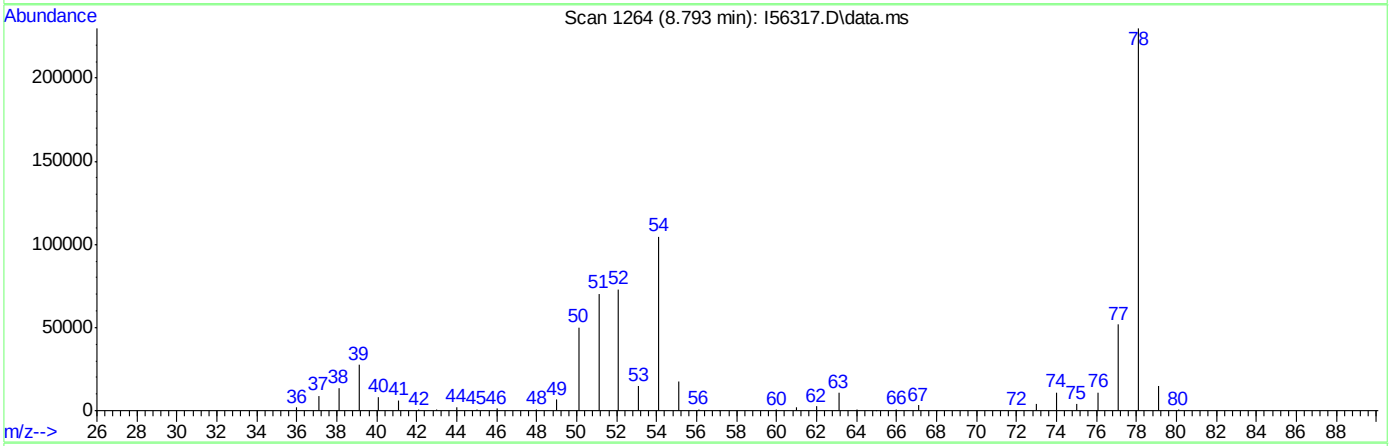
Ion	Exp%	Act%
54.00	100	100
52.00	72.00	62.57
55.00	936.40	944.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.793min (+0.001) 372.74ug/L m

response 278427

Ion	Exp%	Act%
54.00	100	100
52.00	72.00	69.88
55.00	936.40	16.59#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1197770	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	847395	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	427469	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	101391	250.00	ug/L	0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	320406	48.96	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.92%			
46) 1,2-Dichloroethane-d4	9.000	65	426438	51.10	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.20%			
57) Toluene-d8	11.152	98	1161852	50.30	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.60%			
79) 4-Bromofluorobenzene	13.353	174	339161	48.26	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	269748	41.02	ug/L	99
3) Chloromethane	2.538	50	349931	59.01	ug/L	100
4) 1,3-Butadiene	2.647	39	207338	51.00	ug/L	94
5) Vinyl Chloride	2.672	62	316050	54.79	ug/L	99
6) Bromomethane	3.111	94	152715	45.12	ug/L	98
7) Chloroethane	3.275	64	80260	44.26	ug/L	95
8) Trichlorofluoromethane	3.519	101	341564	44.07	ug/L	100
9) Ethyl Ether	3.928	59	282284	47.46	ug/L	100
10) 1,2-Dichlorotrifluoroe...	4.239	67	333047	41.64	ug/L	99
11) 1,1-Dichloroethene	4.226	61	455426	42.79	ug/L	98
12) Freon 113	4.324	101	251148	39.06	ug/L	99
13) Carbon Disulfide	4.275	76	737059	39.62	ug/L	98
14) Iodomethane	4.434	142	385865	37.61	ug/L	99
15) Allyl chloride	4.934	41	406190	56.48	ug/L	100
16) Methylene Chloride	5.104	49	443311	44.97	ug/L	98
17) Acetone	5.165	43	426831	238.88	ug/L	99
18) Methyl acetate	5.372	43	1005514	224.94	ug/L	100
19) trans-1,2-Dichloroethene	5.360	61	453662	43.53	ug/L	99
20) Hexane	5.500	56	334136	47.80	ug/L	97
21) Methyl Tert Butyl Ether	5.561	73	571827	40.28	ug/L	95
22) Acetonitrile	5.885	41	302092	498.44	ug/L	98
23) Di-isopropyl ether	6.183	45	1019299	50.31	ug/L	100
24) Chloroprene	6.311	53	483479	45.10	ug/L	98
25) 1,1-Dichloroethane	6.336	63	532201	43.07	ug/L	100
26) Acrylonitrile	6.397	53	598041	225.71	ug/L	99
27) ETBE	6.799	59	843810	43.17	ug/L	99
28) Vinyl acetate	6.775	43	3172433	326.06	ug/L	82
29) cis-1,2-Dichloroethene	7.275	96	260142	40.68	ug/L	99
30) 2,2-Dichloropropane	7.464	77	238030	44.35	ug/L	97
31) Bromochloromethane	7.616	128	127605	39.59	ug/L	96
32) Cyclohexane	7.646	56	606813	47.29	ug/L	98
33) Chloroform	7.774	83	447448	40.43	ug/L	98
34) Ethyl acetate	8.000	43	1401056	248.30	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	178761	48.90	ug/L		95
37) Carbon Tetrachloride	8.024	117	282742	37.53	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	381586	39.95	ug/L		99
39) 2-Butanone	8.311	43	618739	241.07	ug/L		99
40) 1,1-Dichloropropene	8.366	75	339085	41.32	ug/L		99
41) tert-Butyl formate	8.579	59	1052189	442.70	ug/L	#	70
42) Propionitrile	8.793	54	460083	610.80	ug/L	#	1
43) Methacrylonitrile	8.841	41	1714141	532.88	ug/L		99
44) Benzene	8.793	78	962873	41.49	ug/L		99
45) TAME	9.030	73	565392	41.09	ug/L		95
47) 1,2-Dichloroethane	9.103	62	415956	41.15	ug/L		99
48) Trichloroethene	9.658	95	258338	39.18	ug/L		99
49) Methylcyclohexane	9.652	83	431420	44.14	ug/L		97
50) Dibromomethane	10.146	93	162965	39.75	ug/L		99
51) 1,2-Dichloropropane	10.250	63	317247	43.64	ug/L		99
52) Bromodichloromethane	10.341	83	321893	42.34	ug/L		99
53) Methyl methacrylate	10.512	41	229558	47.41	ug/L		100
54) 2-Chloroethyl vinyl ether	10.914	63	1009003	204.72	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	398548	41.74	ug/L		99
58) Toluene	11.201	91	1020914	40.22	ug/L		99
59) 2-Nitropropane	11.383	41	289107	238.42	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1439325	267.56	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	21044	6.65	ug/L		98
62) Tetrachloroethene	11.554	166	292334	33.20	ug/L		97
63) Ethyl methacrylate	11.701	69	307851	41.67	ug/L		91
64) 1,1,2-Trichloroethane	11.701	83	195905	39.24	ug/L		99
65) Dibromochloromethane	11.859	129	248456	37.99	ug/L		99
66) 1,3-Dichloropropane	11.926	76	397819	41.36	ug/L		98
67) 1,2-Dibromoethane	12.054	107	226316	39.62	ug/L		100
68) 2-hexanone	12.207	43	1224604	265.13	ug/L		88
69) 1-Chlorohexane	12.438	91	366183	43.33	ug/L		99
70) Ethylbenzene	12.481	91	1182795	39.56	ug/L		99
71) Chlorobenzene	12.469	112	655881	38.43	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	216200	38.92	ug/L		99
73) m,p-Xylene	12.591	91	1846344	84.27	ug/L		100
74) o-Xylene	12.914	91	942734	41.67	ug/L		99
75) Styrene	12.950	104	683982	39.55	ug/L		99
76) Bromoform	12.987	173	149177	36.75	ug/L		99
77) Isopropylbenzene	13.133	105	1043689	40.25	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	113292	50.37	ug/L		91
81) n-Propylbenzene	13.432	91	1393875	44.32	ug/L		100
82) Bromobenzene	13.438	156	268764	40.42	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	300838	41.11	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	899266	43.97	ug/L		99
85) 2-Chlorotoluene	13.670	91	847092	40.52	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	106216	49.25	ug/L	#	67
87) 1,2,3-Trichloropropane	13.578	110	82561	40.23	ug/L		98
88) Cyclohexanone	13.621	55	71672	288.10	ug/L		99
89) 4-Chlorotoluene	13.670	91	847092	42.84	ug/L		100
90) tert-Butylbenzene	13.785	91	552121	43.73	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

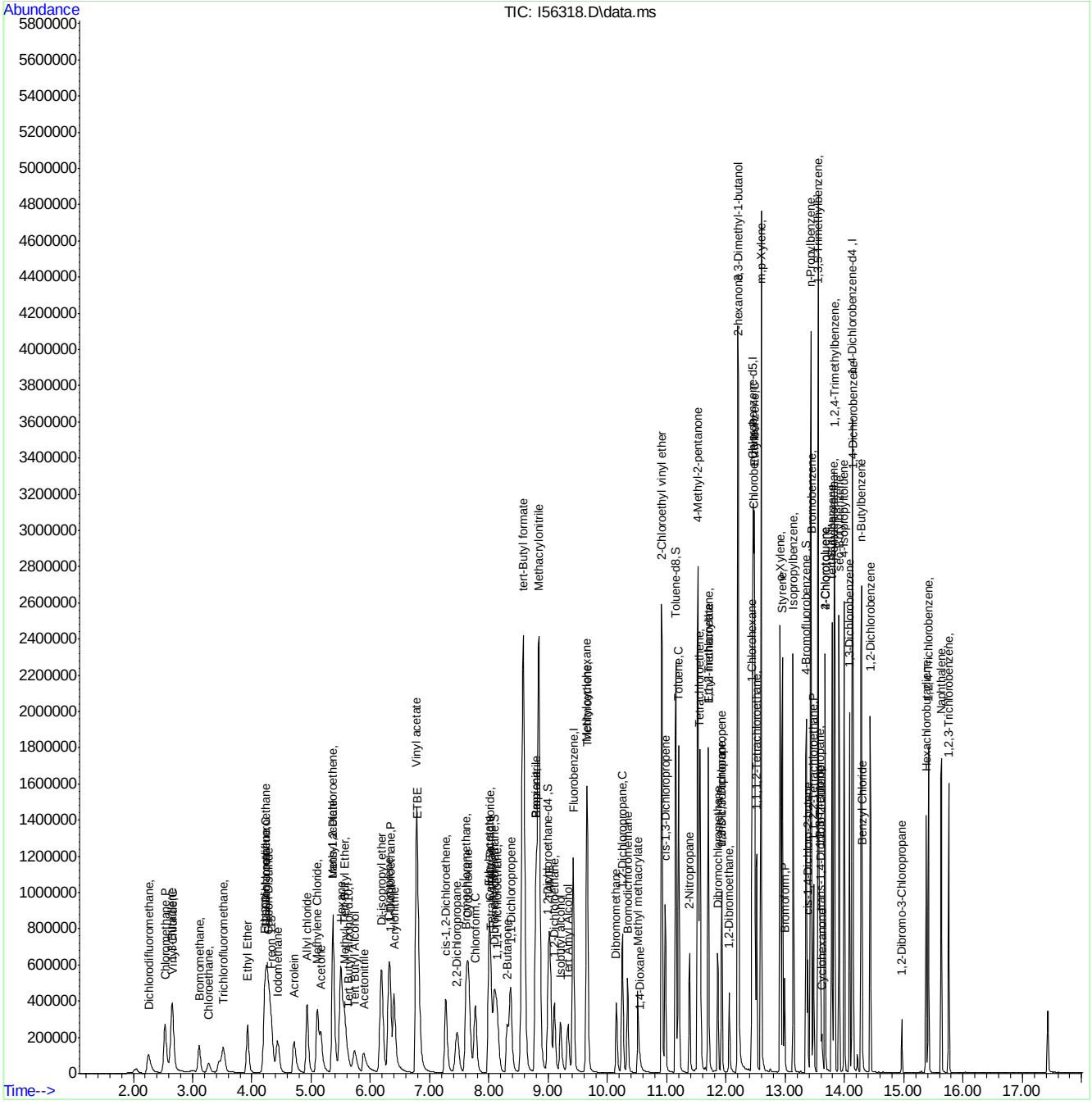
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	929216	43.76	ug/L	96
93)	Pentachloroethane	13.822	167	132556	33.57	ug/L #	86
94)	sec-Butylbenzene	13.907	105	1137301	44.21	ug/L	99
95)	4-Isopropyltoluene	13.993	119	936301	44.25	ug/L	100
96)	1,3-Dichlorobenzene	14.084	146	495696	40.42	ug/L	99
97)	1,4-Dichlorobenzene	14.139	146	518535	39.40	ug/L	98
98)	n-Butylbenzene	14.285	92	541621	45.53	ug/L	91
99)	Benzyl Chloride	14.298	126	63928	42.86	ug/L #	23
100)	1,2-Dichlorobenzene	14.432	146	485102	39.77	ug/L	99
101)	1,2-Dibromo-3-Chloropr...	14.968	75	49793	38.65	ug/L	86
102)	Hexachlorobutadiene	15.377	225	163234	39.92	ug/L	99
103)	1,2,4-Trichlorobenzene	15.413	180	334178	39.96	ug/L	99
104)	Naphthalene	15.633	128	836749	39.62	ug/L	100
105)	1,2,3-Trichlorobenzene	15.761	180	310052	38.11	ug/L	99
107)	Ethanol	4.220	45	61069m	1027.33	ug/L	
108)	Acrolein	4.708	56	327318	283.97	ug/L	99
109)	Tert Butyl Alcohol	5.732	59	262125	394.61	ug/L	89
110)	Isobutyl alcohol	9.207	43	227223	1081.02	ug/L	98
111)	Tert Amyl Alcohol	9.335	59	174704	443.60	ug/L	92
112)	1,4-Dioxane	10.548	88	51803	838.89	ug/L	100
113)	3,3-Dimethyl-1-butanol	12.200	57	1518899	2684.27	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

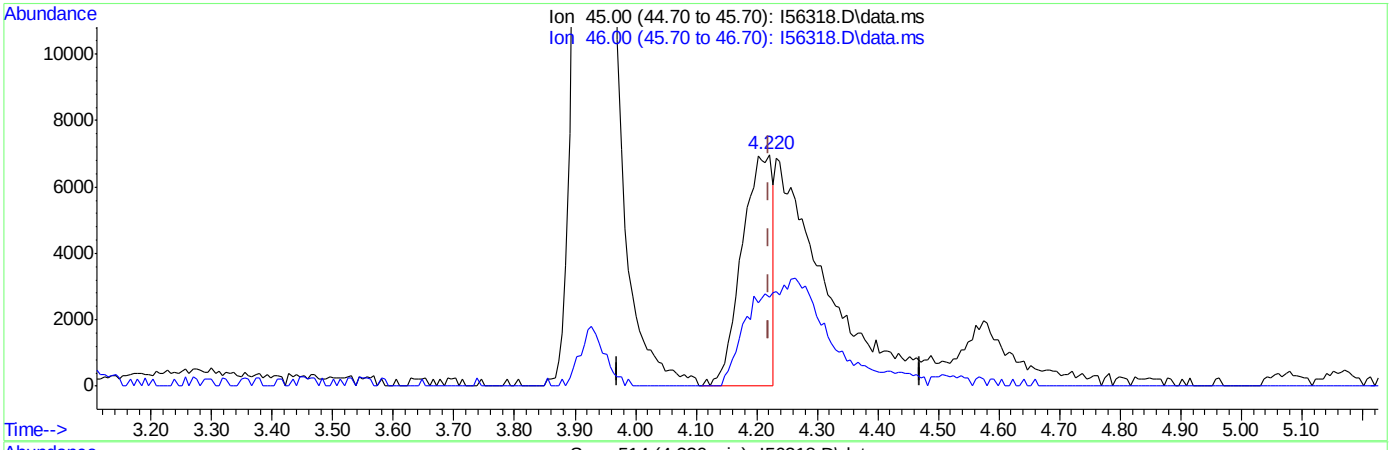
Sample Number:	VI1683-ICC1683	**Method:**	SW846 8260B
Lab FileID:	I56318.D	**Analyst approved:**	07/26/18 08:26 Ana Jimenez
Injection Time:	07/25/18 16:49	**Supervisor approved:**	07/31/18 15:11 Melissa Mangual

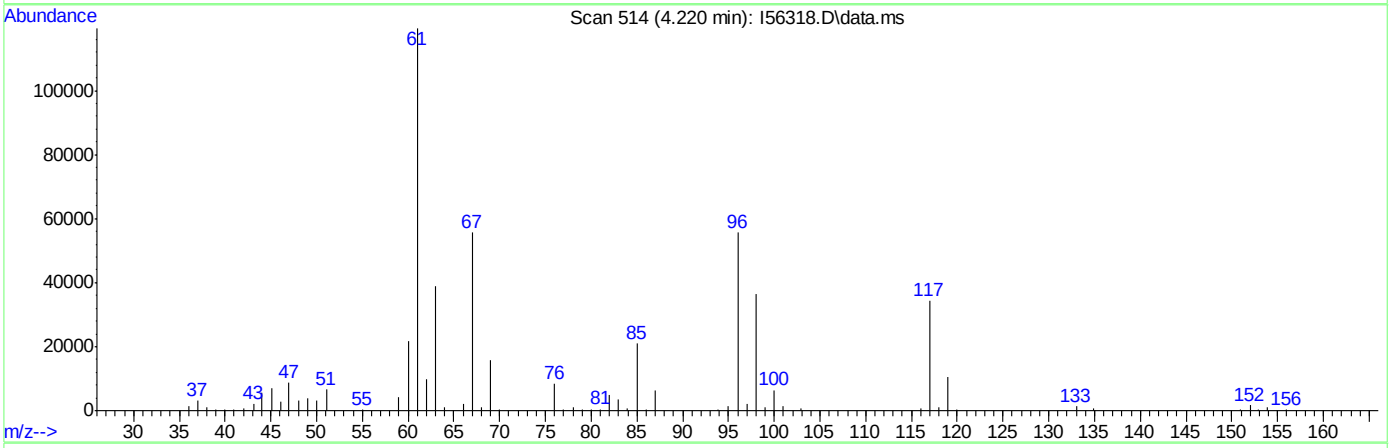
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 408.87ug/L

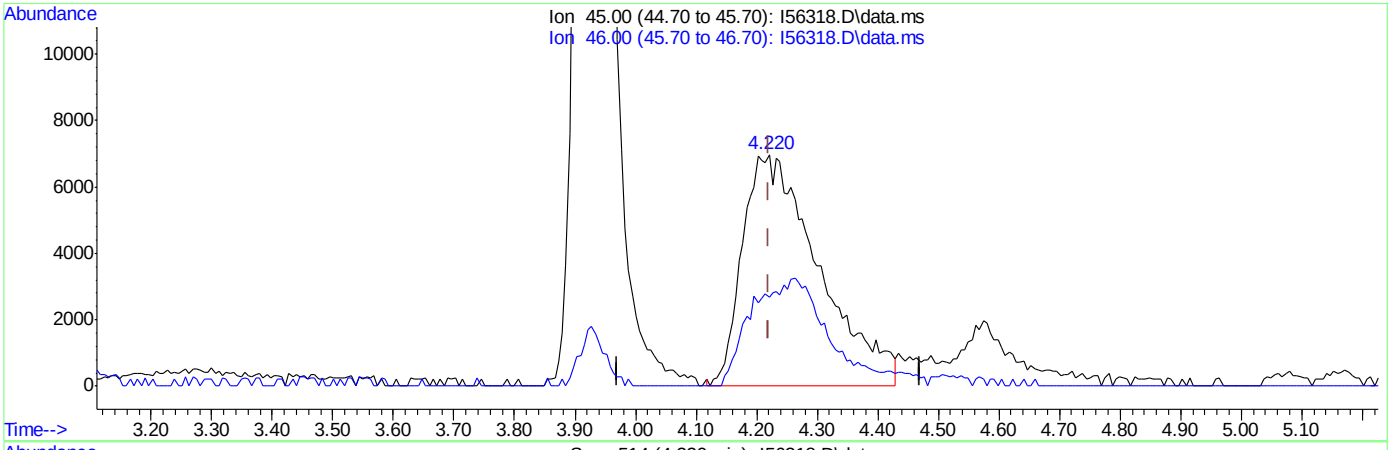
response 24305

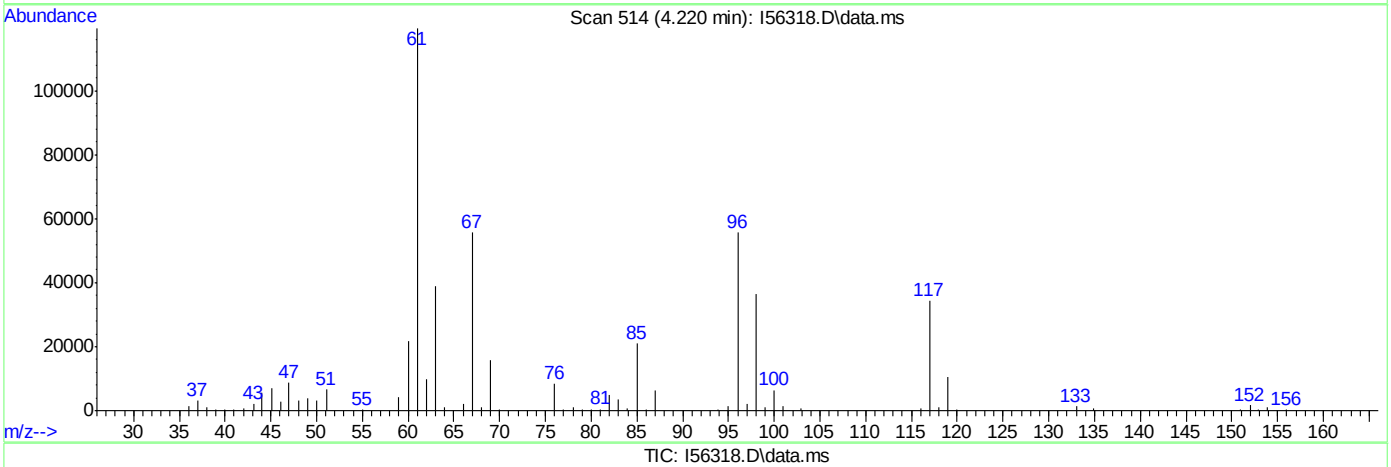
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 1027.33ug/L m

response 61069

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1224599	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	846332	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	431455	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.629	65	104360	250.00	ug/L	0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	328966	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
46) 1,2-Dichloroethane-d4	9.000	65	433000	50.75	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.50%			
57) Toluene-d8	11.152	98	1178592	51.09	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.18%			
79) 4-Bromofluorobenzene	13.353	174	346477	48.85	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	478777	70.72	ug/L	99
3) Chloromethane	2.525	50	638582	105.32	ug/L	99
4) 1,3-Butadiene	2.635	39	365929	89.53	ug/L	92
5) Vinyl Chloride	2.654	62	563354	95.52	ug/L	99
6) Bromomethane	3.099	94	269900	78.00	ug/L	98
7) Chloroethane	3.263	64	120640	74.48	ug/L	99
8) Trichlorofluoromethane	3.507	101	603719	76.20	ug/L	98
9) Ethyl Ether	3.928	59	499406	82.13	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	593249	72.55	ug/L	100
11) 1,1-Dichloroethene	4.214	61	810388	74.47	ug/L	99
12) Freon 113	4.312	101	437798	66.60	ug/L	98
13) Carbon Disulfide	4.263	76	1336507	67.19	ug/L	97
14) Iodomethane	4.428	142	694313	66.20	ug/L	99
15) Allyl chloride	4.927	41	742762	101.01	ug/L	98
16) Methylene Chloride	5.098	49	775679	76.96	ug/L	99
17) Acetone	5.159	43	724826	418.16	ug/L	99
18) Methyl acetate	5.372	43	1778172	412.37	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	814355	76.42	ug/L	100
20) Hexane	5.488	56	575133	80.47	ug/L	97
21) Methyl Tert Butyl Ether	5.555	73	1031337	71.06	ug/L	93
22) Acetonitrile	5.872	41	524607	963.28	ug/L	98
23) Di-isopropyl ether	6.183	45	1842203	88.94	ug/L	99
24) Chloroprene	6.305	53	894794	84.19	ug/L	99
25) 1,1-Dichloroethane	6.336	63	955250	75.61	ug/L	99
26) Acrylonitrile	6.391	53	1081784	402.45	ug/L	99
27) ETBE	6.799	59	1527729	76.45	ug/L	99
28) Vinyl acetate	6.769	43	5972626	485.03	ug/L	82
29) cis-1,2-Dichloroethene	7.262	96	474654	72.60	ug/L	97
30) 2,2-Dichloropropane	7.457	77	461854	69.51	ug/L	97
31) Bromochloromethane	7.610	128	234260	71.10	ug/L	97
32) Cyclohexane	7.646	56	1066819	81.31	ug/L	98
33) Chloroform	7.768	83	804052	71.06	ug/L	99
34) Ethyl acetate	8.000	43	2508134	465.20	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.031	42	312046	87.84 ug/L	97
37) Carbon Tetrachloride	8.018	117	513266	66.64 ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	687462	70.40 ug/L	99
39) 2-Butanone	8.305	43	1099000	441.64 ug/L	100
40) 1,1-Dichloropropene	8.360	75	612051	71.45 ug/L	100
41) tert-Butyl formate	8.579	59	2186678	694.91 ug/L #	59
42) Propionitrile	8.793	54	792266	1028.75 ug/L #	1
43) Methacrylonitrile	8.841	41	2903377	882.81 ug/L	100
44) Benzene	8.793	78	1730232	72.92 ug/L	98
45) TAME	9.030	73	1038671	73.83 ug/L	92
47) 1,2-Dichloroethane	9.097	62	746020	72.19 ug/L	100
48) Trichloroethene	9.652	95	466943	69.26 ug/L	99
49) Methylcyclohexane	9.652	83	765287	76.59 ug/L	98
50) Dibromomethane	10.146	93	295867	70.59 ug/L	99
51) 1,2-Dichloropropane	10.250	63	574917	77.35 ug/L	98
52) Bromodichloromethane	10.335	83	594004	76.41 ug/L	99
53) Methyl methacrylate	10.512	41	427905	88.49 ug/L	99
54) 2-Chloroethyl vinyl ether	10.914	63	1820584	398.95 ug/L	99
55) cis-1,3-Dichloropropene	10.975	75	736071	71.67 ug/L	99
58) Toluene	11.201	91	1838665	72.53 ug/L	99
59) 2-Nitropropane	11.384	41	524282	409.61 ug/L	100
60) 4-Methyl-2-pentanone	11.524	43	2434277	453.08 ug/L	99
61) trans-1,3-Dichloropropene	11.926	75	35835	10.44 ug/L	94
62) Tetrachloroethene	11.554	166	455454	54.62 ug/L	99
63) Ethyl methacrylate	11.694	69	557630	73.07 ug/L	98
64) 1,1,2-Trichloroethane	11.701	83	348360	69.86 ug/L	97
65) Dibromochloromethane	11.859	129	450988	65.95 ug/L	99
66) 1,3-Dichloropropane	11.926	76	702765	73.15 ug/L	99
67) 1,2-Dibromoethane	12.054	107	402856	70.62 ug/L	100
68) 2-hexanone	12.207	43	1991904	431.79 ug/L	86
69) 1-Chlorohexane	12.438	91	639739	75.79 ug/L	97
70) Ethylbenzene	12.481	91	2127699	71.25 ug/L	100
71) Chlorobenzene	12.469	112	1167793	68.50 ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.517	131	392553	70.76 ug/L	99
73) m,p-Xylene	12.591	91	3263546	149.15 ug/L	100
74) o-Xylene	12.914	91	1691717	74.87 ug/L	100
75) Styrene	12.950	104	1239350	69.89 ug/L	100
76) Bromoform	12.987	173	272167	62.63 ug/L	99
77) Isopropylbenzene	13.133	105	1871091	70.38 ug/L	99
80) cis-1,4-Dichloro-2-butene	13.377	53	206019	83.96 ug/L	98
81) n-Propylbenzene	13.432	91	2463023	77.60 ug/L	100
82) Bromobenzene	13.438	156	480641	71.61 ug/L	100
83) 1,1,2,2-Tetrachloroethane	13.475	83	524113	70.95 ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	1604360	77.73 ug/L	99
85) 2-Chlorotoluene	13.670	91	1520360	72.06 ug/L	100
86) trans-1,4-Dichloro-2-B...	13.596	53	188173	80.85 ug/L #	71
87) 1,2,3-Trichloropropane	13.578	110	143737	69.39 ug/L	99
88) Cyclohexanone	13.621	55	122017	485.94 ug/L	99
89) 4-Chlorotoluene	13.670	91	1520360	76.18 ug/L	100
90) tert-Butylbenzene	13.785	91	987701	77.52 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

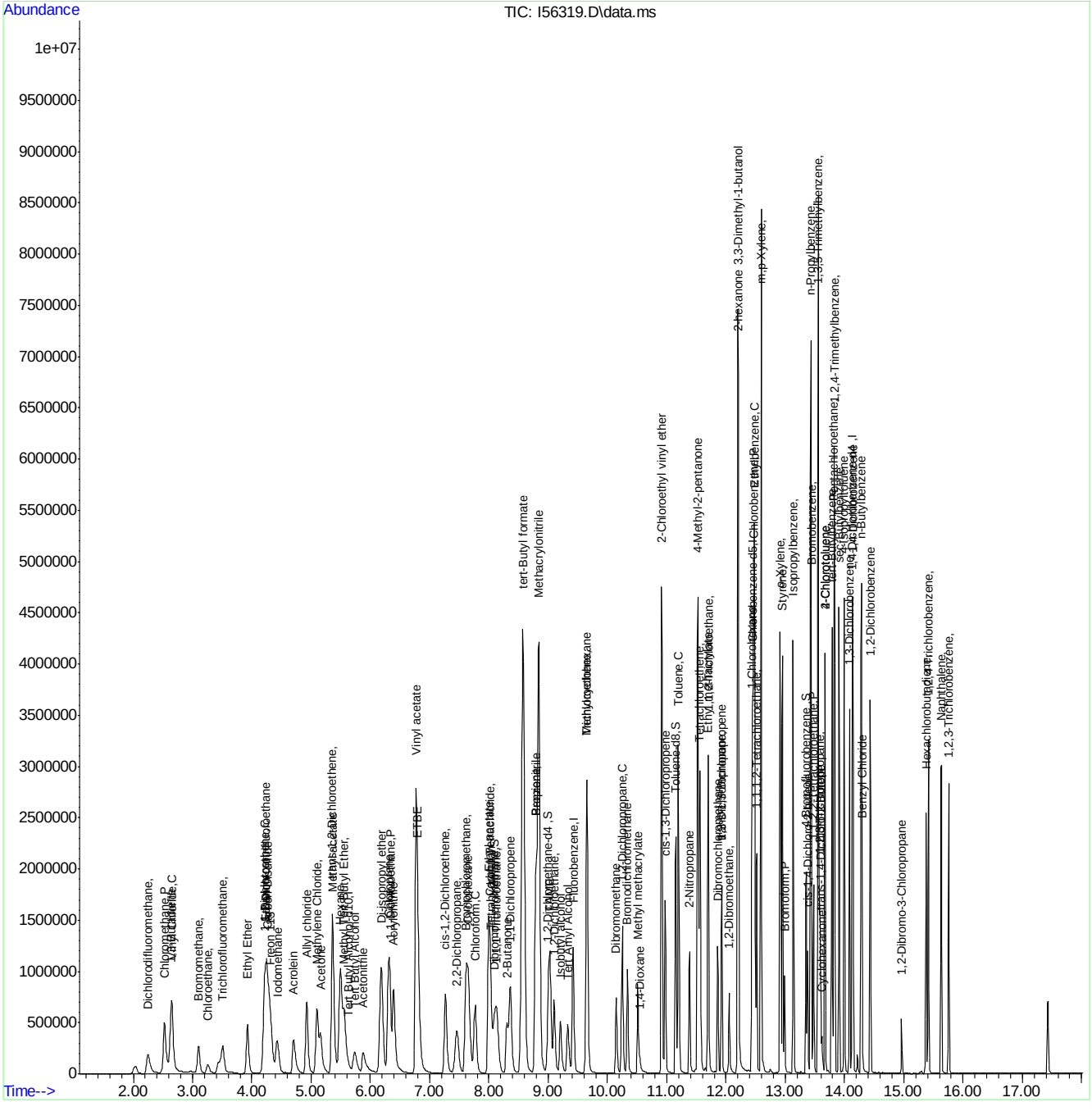
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	1661547	77.53	ug/L		95
93)	Pentachloroethane	13.822	167	296615	75.14	ug/L		90
94)	sec-Butylbenzene	13.907	105	2010682	77.45	ug/L		100
95)	4-Isopropyltoluene	13.993	119	1669243	78.16	ug/L		100
96)	1,3-Dichlorobenzene	14.084	146	889902	71.90	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	929666	69.98	ug/L		100
98)	n-Butylbenzene	14.285	92	972263	80.98	ug/L		89
99)	Benzyl Chloride	14.298	126	136916	68.59	ug/L	#	14
100)	1,2-Dichlorobenzene	14.432	146	866226	70.36	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	90286	66.16	ug/L		98
102)	Hexachlorobutadiene	15.377	225	293701	71.16	ug/L		98
103)	1,2,4-Trichlorobenzene	15.413	180	603152	71.47	ug/L		99
104)	Naphthalene	15.633	128	1489773	69.90	ug/L		99
105)	1,2,3-Trichlorobenzene	15.761	180	553877	67.45	ug/L		98
107)	Ethanol	4.226	45	105813	1729.38	ug/L		84
108)	Acrolein	4.702	56	597961	504.01	ug/L		99
109)	Tert Butyl Alcohol	5.732	59	462996	677.17	ug/L		91
110)	Isobutyl alcohol	9.207	43	413139	1909.61	ug/L		99
111)	Tert Amyl Alcohol	9.329	59	321485	793.08	ug/L		87
112)	1,4-Dioxane	10.542	88	92069	1467.19	ug/L		98
113)	3,3-Dimethyl-1-butanol	12.200	57	2553858	4384.89	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1232467	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	858751	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	436199	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.641	65	108370	250.00	ug/L	0.03
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	331321	49.21	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.42%			
46) 1,2-Dichloroethane-d4	9.000	65	436917	50.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.76%			
57) Toluene-d8	11.152	98	1187898	50.75	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.50%			
79) 4-Bromofluorobenzene	13.353	174	351289	48.99	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	707171	103.00	ug/L	97
3) Chloromethane	2.532	50	908453	148.88	ug/L	100
4) 1,3-Butadiene	2.648	39	552419	137.16	ug/L	93
5) Vinyl Chloride	2.666	62	843597	142.12	ug/L	100
6) Bromomethane	3.111	94	375809	107.91	ug/L	99
7) Chloroethane	3.263	64	169374	Below Cal		98
8) Trichlorofluoromethane	3.507	101	802507	100.64	ug/L	99
9) Ethyl Ether	3.934	59	734158	119.96	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.245	67	867100	105.36	ug/L	99
11) 1,1-Dichloroethene	4.227	61	1196010	109.21	ug/L	99
12) Freon 113	4.318	101	642357	97.10	ug/L	99
13) Carbon Disulfide	4.269	76	1995351	95.40	ug/L	98
14) Iodomethane	4.434	142	1029666	97.55	ug/L	99
15) Allyl chloride	4.928	41	1089264	147.19	ug/L	99
16) Methylene Chloride	5.104	49	1122934	110.70	ug/L	99
17) Acetone	5.171	43	1059505	653.63	ug/L	100
18) Methyl acetate	5.379	43	2628095	656.91	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	1200134	111.90	ug/L	99
20) Hexane	5.495	56	823054	114.43	ug/L	97
21) Methyl Tert Butyl Ether	5.562	73	1543794	105.68	ug/L	88
22) Acetonitrile	5.879	41	760844	2031.60	ug/L	97
23) Di-isopropyl ether	6.190	45	2693986	129.23	ug/L	99
24) Chloroprene	6.305	53	1298270	125.52	ug/L	99
25) 1,1-Dichloroethane	6.342	63	1400311	110.13	ug/L	99
26) Acrylonitrile	6.397	53	1608693	599.88	ug/L	99
27) ETBE	6.805	59	2259030	112.33	ug/L	99
28) Vinyl acetate	6.775	43	8609915	606.07	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	706773	107.42	ug/L	98
30) 2,2-Dichloropropane	7.464	77	701077	91.18	ug/L	99
31) Bromochloromethane	7.610	128	344761	103.97	ug/L	97
32) Cyclohexane	7.653	56	1566277	118.62	ug/L	98
33) Chloroform	7.769	83	1179958	103.62	ug/L	98
34) Ethyl acetate	8.006	43	3663144	741.04	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	450535	134.38	ug/L		95
37) Carbon Tetrachloride	8.025	117	764304	98.60	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	1021781	103.97	ug/L		98
39) 2-Butanone	8.305	43	1624568	697.10	ug/L		100
40) 1,1-Dichloropropene	8.360	75	896617	101.90	ug/L		99
41) tert-Butyl formate	8.585	59	3518374	921.93	ug/L	#	51
42) Propionitrile	8.799	54	1145494	1477.92	ug/L	#	1
43) Methacrylonitrile	8.848	41	4101548	1239.16	ug/L		100
44) Benzene	8.799	78	2529606	105.92	ug/L		99
45) TAME	9.030	73	1558344	110.07	ug/L		89
47) 1,2-Dichloroethane	9.104	62	1079954	103.83	ug/L		100
48) Trichloroethene	9.658	95	679644	100.17	ug/L		100
49) Methylcyclohexane	9.652	83	1129016	112.27	ug/L		100
50) Dibromomethane	10.146	93	433432	102.75	ug/L		98
51) 1,2-Dichloropropane	10.250	63	833327	111.40	ug/L		99
52) Bromodichloromethane	10.341	83	872487	111.52	ug/L		99
53) Methyl methacrylate	10.512	41	628034	132.38	ug/L		98
54) 2-Chloroethyl vinyl ether	10.920	63	2574820	646.50	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	1091557	100.76	ug/L		100
58) Toluene	11.201	91	2687927	104.49	ug/L		99
59) 2-Nitropropane	11.384	41	781511	572.43	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	3451137	633.05	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	53831	14.30	ug/L		98
62) Tetrachloroethene	11.554	166	665687	85.38	ug/L		99
63) Ethyl methacrylate	11.695	69	826075	103.37	ug/L		95
64) 1,1,2-Trichloroethane	11.701	83	506205	100.05	ug/L		98
65) Dibromochloromethane	11.859	129	667147	92.25	ug/L		98
66) 1,3-Dichloropropane	11.926	76	1026474	105.30	ug/L		99
67) 1,2-Dibromoethane	12.054	107	598015	103.31	ug/L		99
68) 2-hexanone	12.207	43	2739987	585.37	ug/L	#	75
69) 1-Chlorohexane	12.444	91	968975	113.13	ug/L		87
70) Ethylbenzene	12.481	91	3042980	100.43	ug/L		100
71) Chlorobenzene	12.469	112	1702800	98.44	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	582940	103.56	ug/L		99
73) m,p-Xylene	12.591	91	4678317	210.71	ug/L		99
74) o-Xylene	12.914	91	2481112	108.22	ug/L		99
75) Styrene	12.950	104	1823224	98.88	ug/L		99
76) Bromoform	12.987	173	409499	87.29	ug/L		98
77) Isopropylbenzene	13.133	105	2718592	98.41	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	299940	113.46	ug/L		98
81) n-Propylbenzene	13.432	91	3550764	110.65	ug/L		100
82) Bromobenzene	13.438	156	697657	102.82	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	764362	102.35	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	2313858	110.88	ug/L		99
85) 2-Chlorotoluene	13.670	91	2215879	103.88	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	277072	110.92	ug/L	#	72
87) 1,2,3-Trichloropropane	13.578	110	208803	99.70	ug/L		99
88) Cyclohexanone	13.621	55	171147	674.19	ug/L		98
89) 4-Chlorotoluene	13.670	91	2215879	109.82	ug/L		100
90) tert-Butylbenzene	13.786	91	1439893	111.78	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

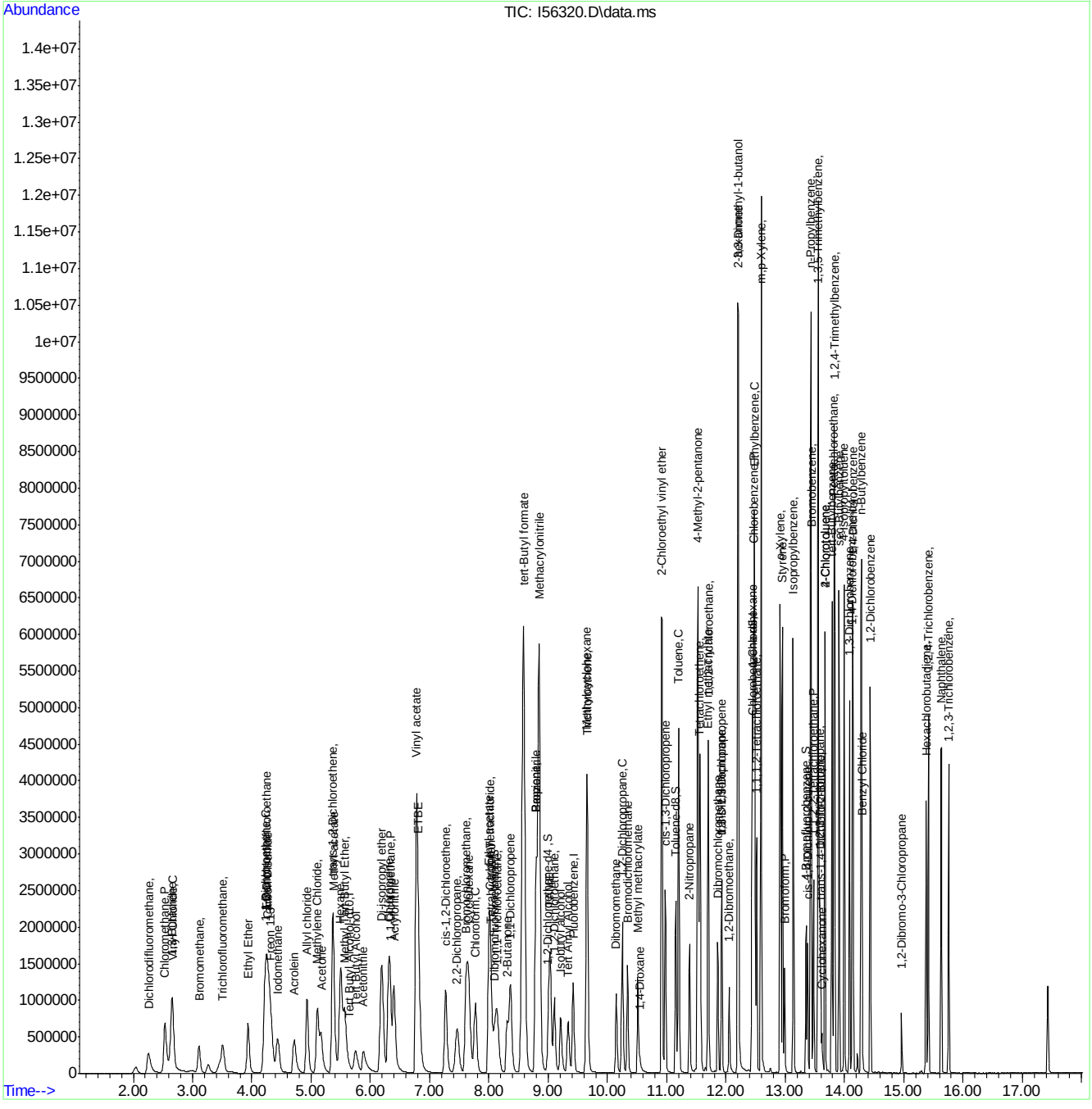
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	2418470	111.63	ug/L	95
93)	Pentachloroethane	13.822	167	436498	110.27	ug/L	91
94)	sec-Butylbenzene	13.908	105	2934202	111.79	ug/L	100
95)	4-Isopropyltoluene	13.993	119	2452650	113.59	ug/L	99
96)	1,3-Dichlorobenzene	14.084	146	1304168	104.22	ug/L	99
97)	1,4-Dichlorobenzene	14.139	146	1357681	101.09	ug/L	99
98)	n-Butylbenzene	14.286	92	1437223	118.41	ug/L	86
99)	Benzyl Chloride	14.298	126	214134	88.88	ug/L #	11
100)	1,2-Dichlorobenzene	14.432	146	1268430	101.90	ug/L	99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	135864	94.00	ug/L	97
102)	Hexachlorobutadiene	15.377	225	444555	106.54	ug/L	97
103)	1,2,4-Trichlorobenzene	15.413	180	900091	105.49	ug/L	99
104)	Naphthalene	15.633	128	2206265	102.39	ug/L	99
105)	1,2,3-Trichlorobenzene	15.761	180	827018	99.62	ug/L	99
107)	Ethanol	4.251	45	157460	2478.27	ug/L	76
108)	Acrolein	4.714	56	865143	702.23	ug/L	99
109)	Tert Butyl Alcohol	5.751	59	702491	989.44	ug/L	87
110)	Isobutyl alcohol	9.207	43	616018	2741.99	ug/L	98
111)	Tert Amyl Alcohol	9.335	59	502512	1193.79	ug/L	82
112)	1,4-Dioxane	10.542	88	135779	2111.55	ug/L	96
113)	3,3-Dimethyl-1-butanol	12.201	57	3645623	6027.80	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration


Abundance
TIC: I56320.D\data.ms
Time-->
Dichlorodifluoromethane,
Chloromethane,P
Vinyl chloride,C
Bromomethane,
Trichlorofluoromethane,
Ethyl Ether
Freon 113
Iodomethane
Acrolein
Allyl chloride
Acetone
Methylene Chloride,
Methyl Acetate
Tert Butyl Alcohol
Acetonitrile
Acrylonitrile
Diisopropyl ether
Vinyl acetate
ETBE
cis-1,2-Dichloroethene,
2,2-Dichloropropane,
Propionitrile
Methyl Ethyl Ketone
Chloroform,C
Bromochloromethane,
Tetrahydrofuran
2-Butanone
1,1,1-Trichloroethane,
Carbon tetrachloride,
1,1-Dichloropropene
Methyl Acrylate
Isopropyl Alcohol
Benzene,C
Tert Amyl Methyl Ether
1,2-Dichloroethane,
Methylcyclohexane
Dibromomethane
Dichloropropane,C
Bromodichloromethane
Methyl methacrylate
1,4-Dioxane
tert-Butyl formate
Methacrylonitrile
2-Chloroethyl vinyl ether
cis-1,3-Dichloropropene
Toluene-d8,S
Toluene,C
2-Nitropropane
4-Methyl-2-pentanone
Tetrachloroethene
Ethyl methacrylate
Dibromochloromethane,
1,2-Dibromoethane,
Chlorobenzene-d5,S
Chlorobenzene,C
Ethylbenzene,C
m,p-Xylene,
o-Xylene,
Styrene
Isopropylbenzene,
Bromoform,P
Bromobenzene,
n-Propylbenzene
1,3,5-Trimethylbenzene,
1,2,4-Trimethylbenzene,
1,2-Dichlorobenzene
n-Butylbenzene
Benzyl Chloride
1,2-Dibromo-3-Chloropropane
Hexachlorobutadiene
1,2,4-Trichlorobenzene,
Naphthalene
1,2,3-Trichlorobenzene,
1,4-Dichlorobenzene-d4,S
1,4-Dichlorobenzene,C
1,2-Dichlorobenzene-d4,S
1,2-Dichlorobenzene,C
1,2-Dichlorobenzene,P
1,2-Dichlorobenzene,I
1,1,1,2-Tetrachloroethane,
Chlorobenzene,P
1,1,2,2-Tetrachloroethane,
1,2,3-Trichlorobenzene,
1,2-Dibromo-3-Chloropropane,
1,2,4-Trichlorobenzene,
Naphthalene,
1,2,3-Trichlorobenzene,
1,4-Dichlorobenzene,
1,2-Dichlorobenzene,
1,3-D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1242489	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	877903	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	445362	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	107505	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	327577	49.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.88%			
46) 1,2-Dichloroethane-d4	8.994	65	438822	49.47	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 98.94%			
57) Toluene-d8	11.152	98	1207197	49.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.66%			
79) 4-Bromofluorobenzene	13.353	174	355689	50.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	294585	41.63	ug/L	98
3) Chloromethane	2.526	50	348861	35.91	ug/L	99
4) 1,3-Butadiene	2.635	39	178528	34.07	ug/L	100
5) Vinyl Chloride	2.660	62	317837	38.90	ug/L	100
6) Bromomethane	3.099	94	170621	39.88	ug/L	99
7) Chloroethane	3.257	64	76077	32.09	ug/L	96
8) Trichlorofluoromethane	3.507	101	386725	41.20	ug/L	100
9) Ethyl Ether	3.922	59	295338	40.80	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.233	67	351269	40.41	ug/L	98
11) 1,1-Dichloroethene	4.214	61	487365	41.93	ug/L	99
12) Freon 113	4.312	101	234919	36.19	ug/L	98
13) Carbon Disulfide	4.257	76	812538	44.10	ug/L	100
14) Iodomethane	4.422	142	406797	40.86	ug/L	99
15) Allyl chloride	4.922	41	400834	40.11	ug/L	99
16) Methylene Chloride	5.098	49	476113	41.56	ug/L	99
17) Acetone	5.159	43	417475	202.38	ug/L	99
18) Methyl acetate	5.367	43	1054675	206.88	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	473951	41.38	ug/L	100
20) Hexane	5.495	56	337981	38.47	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	618137	43.39	ug/L	98
22) Acetonitrile	5.885	41	313270	441.17	ug/L	97
23) Di-isopropyl ether	6.177	45	1092178	42.67	ug/L	99
24) Chloroprene	6.305	53	481281	40.86	ug/L	98
25) 1,1-Dichloroethane	6.336	63	580119	42.05	ug/L	98
26) Acrylonitrile	6.391	53	621391	205.47	ug/L	100
27) ETBE	6.799	59	924736	44.80	ug/L	99
28) Vinyl acetate	6.769	43	3241476	194.77	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	277497	42.02	ug/L	100
30) 2,2-Dichloropropane	7.452	77	257056	43.81	ug/L	98
31) Bromochloromethane	7.610	128	134427	41.76	ug/L	94
32) Cyclohexane	7.647	56	628227	41.07	ug/L	99
33) Chloroform	7.762	83	471687	39.71	ug/L	99
34) Ethyl acetate	8.000	43	1453732	202.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.031	42	185588	43.00 ug/L	97
37) Carbon Tetrachloride	8.018	117	275699	38.57 ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	384959	40.27 ug/L	99
39) 2-Butanone	8.305	43	658339	209.89 ug/L	100
40) 1,1-Dichloropropene	8.360	75	355841	42.03 ug/L	98
41) tert-Butyl formate	8.573	59	757194	296.14 ug/L	96
42) Propionitrile	8.793	54	463846	427.02 ug/L	95
43) Methacrylonitrile	8.835	41	1750209	411.39 ug/L	100
44) Benzene	8.793	78	1023642	40.46 ug/L	99
45) TAME	9.024	73	604203	43.82 ug/L	98
47) 1,2-Dichloroethane	9.104	62	438151	40.09 ug/L	99
48) Trichloroethene	9.658	95	271719	40.67 ug/L	98
49) Methylcyclohexane	9.652	83	457891	41.88 ug/L	99
50) Dibromomethane	10.146	93	173646	42.03 ug/L	99
51) 1,2-Dichloropropane	10.250	63	339735	42.02 ug/L	99
52) Bromodichloromethane	10.335	83	343984	42.88 ug/L	99
53) Methyl methacrylate	10.512	41	234100	39.89 ug/L	99
54) 2-Chloroethyl vinyl ether	10.914	63	1125015	235.89 ug/L	100
55) cis-1,3-Dichloropropene	10.975	75	405251	39.54 ug/L	99
58) Toluene	11.201	91	1090858	40.23 ug/L	100
59) 2-Nitropropane	11.384	41	264269	178.79 ug/L	100
60) 4-Methyl-2-pentanone	11.524	43	1525686	210.48 ug/L	99
61) trans-1,3-Dichloropropene	11.926	75	22728	42.73 ug/L	96
62) Tetrachloroethene	11.554	166	273646	39.15 ug/L	98
63) Ethyl methacrylate	11.701	69	326019	41.23 ug/L	99
64) 1,1,2-Trichloroethane	11.701	83	213172	41.90 ug/L	99
65) Dibromochloromethane	11.859	129	263760	43.72 ug/L	100
66) 1,3-Dichloropropane	11.926	76	412281	40.29 ug/L	99
67) 1,2-Dibromoethane	12.054	107	239989	42.81 ug/L	100
68) 2-hexanone	12.207	43	1254491	208.79 ug/L	95
69) 1-Chlorohexane	12.438	91	385550	41.44 ug/L	98
70) Ethylbenzene	12.481	91	1257384	40.54 ug/L	99
71) Chlorobenzene	12.469	112	700795	39.72 ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	224787	41.33 ug/L	99
73) m,p-Xylene	12.591	91	1968051	83.31 ug/L	100
74) o-Xylene	12.914	91	1012204	42.73 ug/L	99
75) Styrene	12.950	104	742335	44.59 ug/L	99
76) Bromoform	12.987	173	156265	40.60 ug/L	99
77) Isopropylbenzene	13.133	105	1167078	44.71 ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	108376	39.56 ug/L	96
81) n-Propylbenzene	13.432	91	1477044	41.43 ug/L	100
82) Bromobenzene	13.438	156	288838	41.81 ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	332841	42.77 ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	971531	43.24 ug/L	100
85) 2-Chlorotoluene	13.670	91	909011	41.96 ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	101595	40.03 ug/L	100
87) 1,2,3-Trichloropropane	13.578	110	88474	42.21 ug/L	98
88) Cyclohexanone	13.621	55	57595	172.45 ug/L	98
89) 4-Chlorotoluene	13.670	91	909011	41.96 ug/L	99
90) tert-Butylbenzene	13.786	91	581012	41.78 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	970686	41.77	ug/L	100
93)	Pentachloroethane	13.822	167	151026	39.86	ug/L	98
94)	sec-Butylbenzene	13.908	105	1207326	42.09	ug/L	99
95)	4-Isopropyltoluene	13.993	119	1012141	43.53	ug/L	99
96)	1,3-Dichlorobenzene	14.084	146	542908	42.33	ug/L	100
97)	1,4-Dichlorobenzene	14.139	146	558805	40.03	ug/L	98
98)	n-Butylbenzene	14.286	92	584452	43.65	ug/L	98
99)	Benzyl Chloride	14.298	126	66339	39.16	ug/L	97
100)	1,2-Dichlorobenzene	14.432	146	516357	41.34	ug/L	99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	51874	40.58	ug/L	85
102)	Hexachlorobutadiene	15.377	225	175673	42.34	ug/L	98
103)	1,2,4-Trichlorobenzene	15.413	180	363080	43.80	ug/L	99
104)	Naphthalene	15.627	128	901875	41.94	ug/L	100
105)	1,2,3-Trichlorobenzene	15.755	180	333802	42.94	ug/L	95
107)	Ethanol	4.227	45	65250	819.00	ug/L	92
108)	Acrolein	4.702	56	266623	151.69	ug/L	99
109)	Tert Butyl Alcohol	5.732	59	316687	459.63	ug/L	98
110)	Isobutyl alcohol	9.207	43	240694	845.07	ug/L	99
111)	Tert Amyl Alcohol	9.329	59	191455	416.24	ug/L	98
112)	1,4-Dioxane	10.548	88	56767	823.33	ug/L	97
113)	3,3-Dimethyl-1-butanol	12.201	57	1495112	2039.66	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

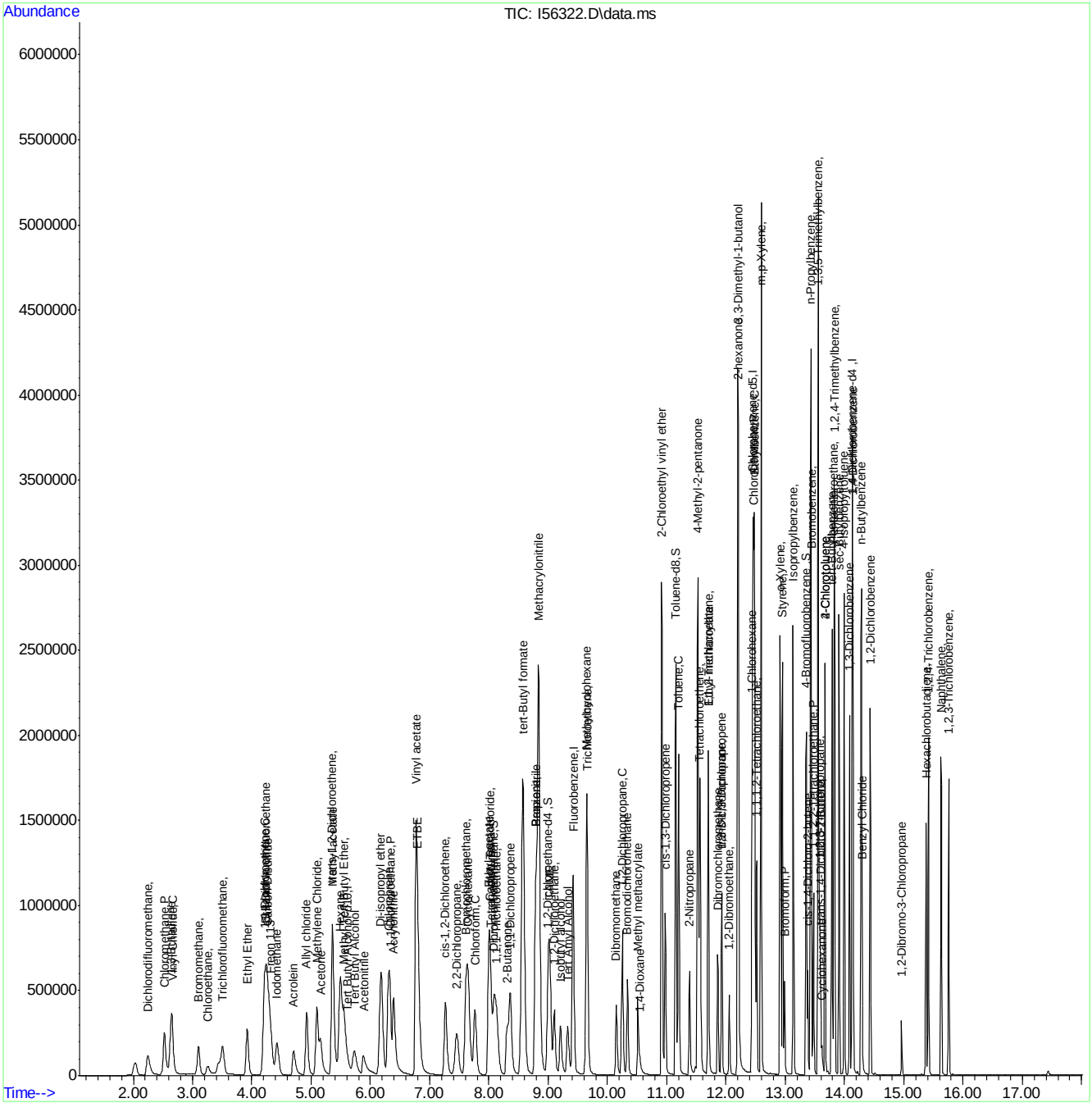
7.6.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/09/18 15:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1112012	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	812808	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	415980	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	97054	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	305068	51.96	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.92%			
46) 1,2-Dichloroethane-d4	8.994	65	408740	51.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.98%			
57) Toluene-d8	11.152	98	1089586	48.58	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.16%			
79) 4-Bromofluorobenzene	13.353	174	321427	48.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.84%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.252	85	251516	39.71	ug/L	99
3) Chloromethane	2.526	50	356663	41.02	ug/L	100
4) 1,3-Butadiene	2.636	39	195435	41.68	ug/L	99
5) Vinyl Chloride	2.660	62	294538	40.27	ug/L	99
6) Bromomethane	3.105	94	139213	36.36	ug/L	97
7) Chloroethane	3.264	64	78406	38.84	ug/L	98
8) Trichlorofluoromethane	3.513	101	349436	41.59	ug/L	99
9) Ethyl Ether	3.922	59	246353	38.02	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.233	67	299936	38.55	ug/L	98
11) 1,1-Dichloroethene	4.215	61	373306	35.89	ug/L	98
12) Freon 113	4.318	101	204325	35.17	ug/L	97
13) Carbon Disulfide	4.257	76	587858	35.65	ug/L	96
14) Iodomethane	4.422	142	307042	34.46	ug/L	99
15) Allyl chloride	4.928	41	399354	44.65	ug/L	97
16) Methylene Chloride	5.098	49	410131	39.98	ug/L	97
17) Acetone	5.159	43	406844	220.37	ug/L	99
18) Methyl acetate	5.367	43	901290	197.77	ug/L	98
19) trans-1,2-Dichloroethene	5.355	61	388959	37.94	ug/L	99
20) Hexane	5.495	56	282767	35.97	ug/L	97
21) Methyl Tert Butyl Ether	5.556	73	494747	38.81	ug/L	98
22) Acetonitrile	5.879	41	292145	459.70	ug/L	99
23) Di-isopropyl ether	6.178	45	916660	40.02	ug/L	98
24) Chloroprene	6.306	53	422699	40.09	ug/L	97
25) 1,1-Dichloroethane	6.330	63	480798	38.94	ug/L	99
26) Acrylonitrile	6.391	53	565279	208.68	ug/L	100
27) ETBE	6.799	59	797550	43.17	ug/L	98
28) Vinyl acetate	6.769	43	3249800	217.41	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	226752	38.36	ug/L	96
30) 2,2-Dichloropropane	7.452	77	256139	48.77	ug/L	99
31) Bromochloromethane	7.610	128	114345	39.69	ug/L	96
32) Cyclohexane	7.641	56	510859	37.32	ug/L	97
33) Chloroform	7.763	83	402318	37.85	ug/L	96
34) Ethyl acetate	7.994	43	1331530	206.64	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.031	42	164426m	42.57 ug/L	
37) Carbon Tetrachloride	8.019	117	275560	43.07 ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	345519	40.38 ug/L	97
39) 2-Butanone	8.305	43	571283	203.70 ug/L	97
40) 1,1-Dichloropropene	8.360	75	289797	38.24 ug/L	96
41) tert-Butyl formate	8.573	59	1631100	607.43 ug/L #	73
42) Propionitrile	8.787	54	432810	445.20 ug/L	99
43) Methacrylonitrile	8.836	41	1669053	438.34 ug/L	99
44) Benzene	8.787	78	856497	37.83 ug/L	97
45) TAME	9.025	73	511709	41.47 ug/L	97
47) 1,2-Dichloroethane	9.098	62	380440	38.90 ug/L	99
48) Trichloroethene	9.652	95	230677	38.58 ug/L	99
49) Methylcyclohexane	9.646	83	365414	37.34 ug/L	97
50) Dibromomethane	10.146	93	146775	39.70 ug/L	100
51) 1,2-Dichloropropane	10.250	63	287989	39.80 ug/L	98
52) Bromodichloromethane	10.335	83	297736	41.47 ug/L	99
53) Methyl methacrylate	10.512	41	202299	38.58 ug/L	97
54) 2-Chloroethyl vinyl ether	10.914	63	953097	223.29 ug/L	97
55) cis-1,3-Dichloropropene	10.975	75	384638	41.81 ug/L	99
58) Toluene	11.195	91	923890	36.80 ug/L	99
59) 2-Nitropropane	11.384	41	303222	219.26 ug/L	100
60) 4-Methyl-2-pentanone	11.524	43	1386496	206.59 ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	20441	41.51 ug/L	90
62) Tetrachloroethene	11.555	166	229337	35.44 ug/L	98
63) Ethyl methacrylate	11.695	69	270969	37.19 ug/L	88
64) 1,1,2-Trichloroethane	11.701	83	184498	39.17 ug/L	97
65) Dibromochloromethane	11.859	129	229971	41.17 ug/L	100
66) 1,3-Dichloropropane	11.926	76	366199	38.65 ug/L	97
67) 1,2-Dibromoethane	12.054	107	206026	39.70 ug/L	99
68) 2-hexanone	12.207	43	1178102	211.78 ug/L	90
69) 1-Chlorohexane	12.439	91	316195	36.71 ug/L	97
70) Ethylbenzene	12.481	91	1086374	37.83 ug/L	100
71) Chlorobenzene	12.469	112	610998	37.40 ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	209449	41.60 ug/L	99
73) m,p-Xylene	12.591	91	1682888	76.94 ug/L	100
74) o-Xylene	12.914	91	851308	38.82 ug/L	99
75) Styrene	12.951	104	623130	40.43 ug/L	99
76) Bromoform	12.987	173	144934	40.67 ug/L	99
77) Isopropylbenzene	13.134	105	942768	39.01 ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	116426	45.50 ug/L	89
81) n-Propylbenzene	13.426	91	1294085	38.86 ug/L	96
82) Bromobenzene	13.432	156	248394	38.49 ug/L	99
83) 1,1,2,2-Tetrachloroethane	13.475	83	282133	38.81 ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	825684	39.34 ug/L	100
85) 2-Chlorotoluene	13.670	91	789022	39.00 ug/L	100
86) trans-1,4-Dichloro-2-B...	13.591	53	109136	46.04 ug/L #	78
87) 1,2,3-Trichloropropane	13.579	110	75887	38.76 ug/L	98
88) Cyclohexanone	13.615	55	71534	229.32 ug/L	95
89) 4-Chlorotoluene	13.670	91	789022	39.00 ug/L	100
90) tert-Butylbenzene	13.786	91	502324	38.67 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.829	105	858108	39.53	ug/L	100
93) Pentachloroethane	13.822	167	159908	44.53	ug/L	99
94) sec-Butylbenzene	13.908	105	1046919	39.07	ug/L	100
95) 4-Isopropyltoluene	13.993	119	852319	39.24	ug/L	99
96) 1,3-Dichlorobenzene	14.085	146	459895	38.39	ug/L	100
97) 1,4-Dichlorobenzene	14.139	146	487019	37.35	ug/L	98
98) n-Butylbenzene	14.280	92	515687	41.24	ug/L	94
99) Benzyl Chloride	14.298	126	88262	52.35	ug/L #	76
100) 1,2-Dichlorobenzene	14.432	146	445180	38.16	ug/L	98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	46744	39.22	ug/L	85
102) Hexachlorobutadiene	15.377	225	148063	38.21	ug/L	99
103) 1,2,4-Trichlorobenzene	15.414	180	300252	38.78	ug/L	99
104) Naphthalene	15.633	128	734299	36.72	ug/L	99
105) 1,2,3-Trichlorobenzene	15.761	180	281098	38.71	ug/L	100
107) Ethanol	4.221	45	56419	783.89	ug/L	98
108) Acrolein	4.702	56	294258	185.81	ug/L	98
109) Tert Butyl Alcohol	5.733	59	245118	394.06	ug/L	97
110) Isobutyl alcohol	9.201	43	207346	806.38	ug/L	97
111) Tert Amyl Alcohol	9.329	59	158979	384.55	ug/L	92
112) 1,4-Dioxane	10.543	88	45094	722.94	ug/L	91
113) 3,3-Dimethyl-1-butanol	12.195	57	1397798	2112.25	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

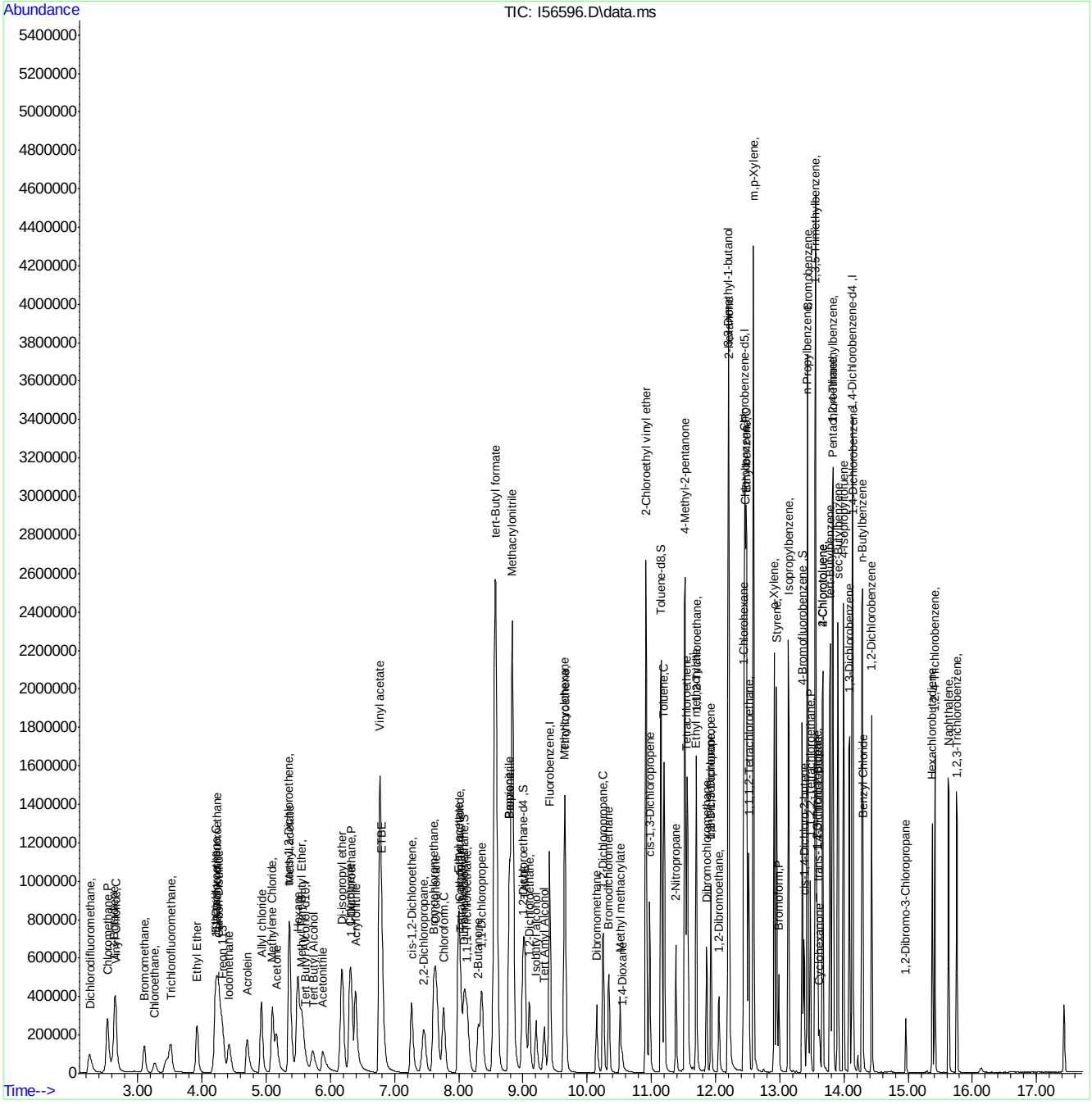
7.6.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integration Approval Summary

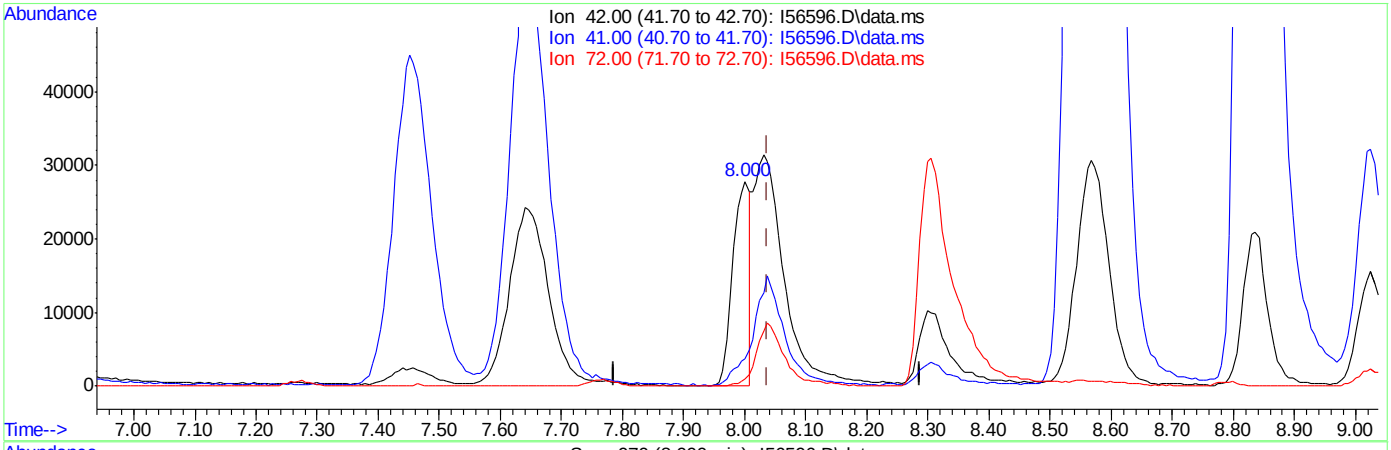
Sample Number:	VI1694-CC1683	**Method:**	SW846 8260B
Lab FileID:	I56596.D	**Analyst approved:**	08/08/18 09:02 Ana Jimenez
Injection Time:	08/08/18 08:41	**Supervisor approved:**	08/09/18 15:39 Melissa Mangual

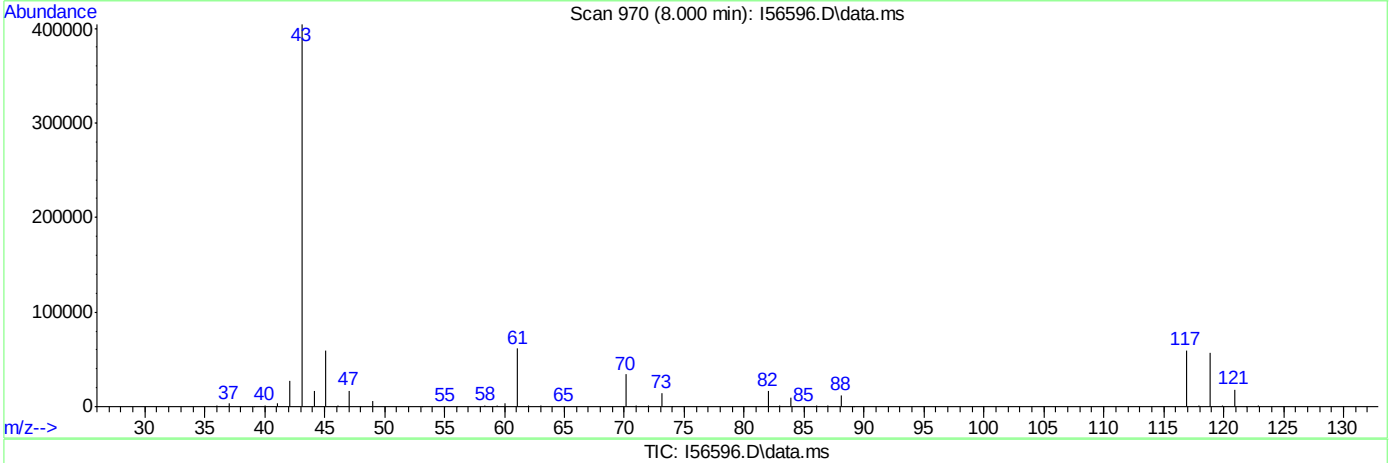
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.03	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:26 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56596.D\data.ms

(35) Tetrahydrofuran

8.000min (-0.037) 13.74ug/L

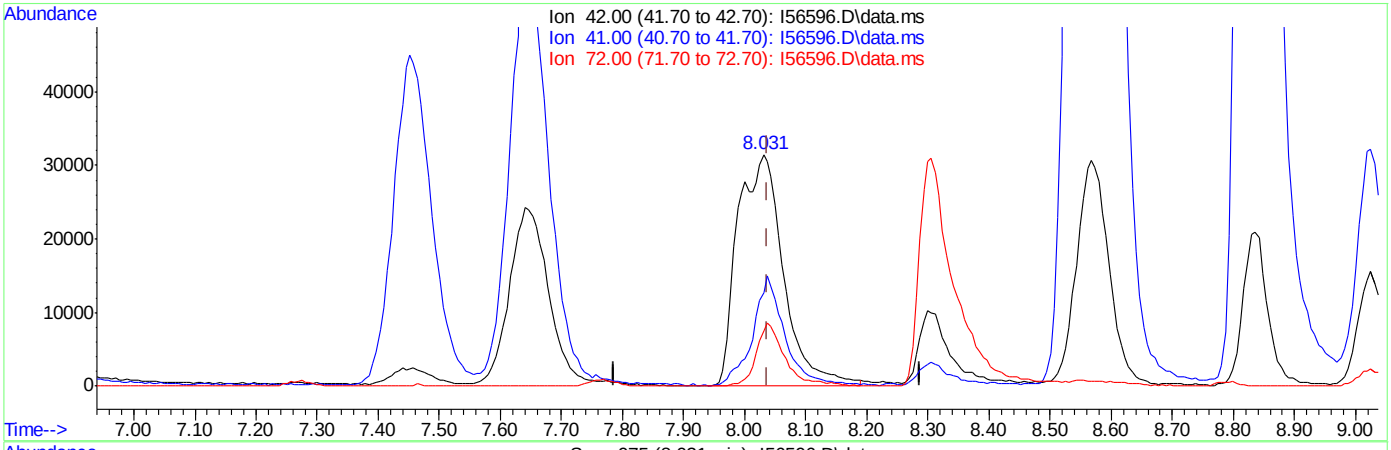
response 53071

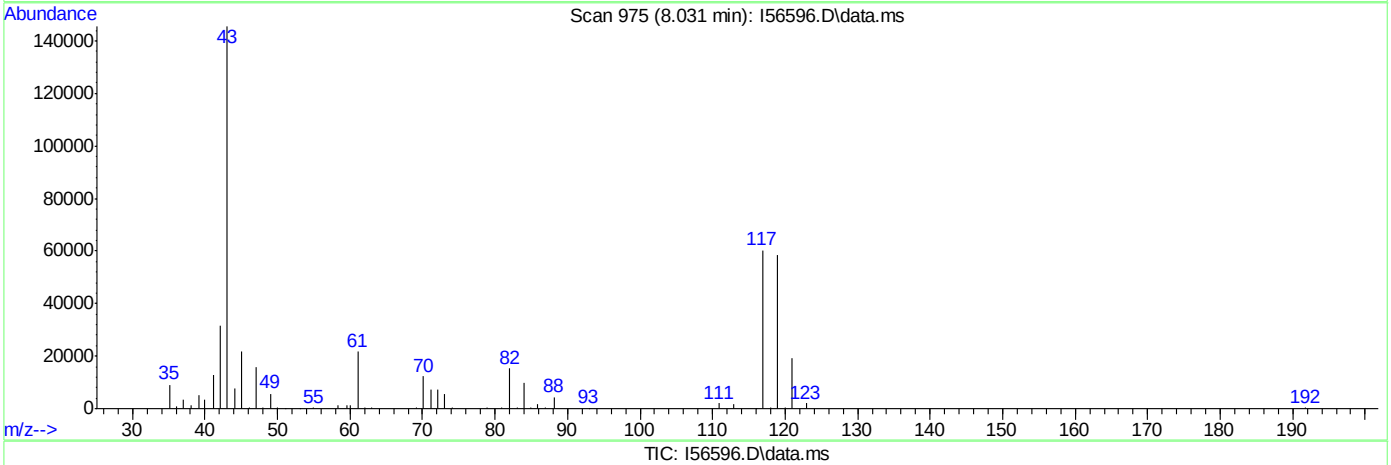
Ion	Exp%	Act%
42.00	100	100
41.00	40.40	13.35#
72.00	23.50	3.31#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:26 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56596.D\data.ms

(35) Tetrahydrofuran

8.031min (-0.006) 42.57ug/L m

response 164426

Ion	Exp%	Act%
42.00	100	100
41.00	40.40	40.57
72.00	23.50	23.69
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/09/18 15:41

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1081258	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	791366	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	404551	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.623	65	99293	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	284102	49.77	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.54%			
46) 1,2-Dichloroethane-d4	9.000	65	407819	52.83	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.66%			
57) Toluene-d8	11.152	98	1066851	48.85	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.70%			
79) 4-Bromofluorobenzene	13.353	174	310151	48.54	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	231490	37.59	ug/L	97
3) Chloromethane	2.526	50	322491	38.15	ug/L	99
4) 1,3-Butadiene	2.642	39	181060	39.71	ug/L	100
5) Vinyl Chloride	2.660	62	273097	38.40	ug/L	98
6) Bromomethane	3.105	94	134649	36.17	ug/L	98
7) Chloroethane	3.263	64	75335	38.19	ug/L	95
8) Trichlorofluoromethane	3.507	101	307318m	37.62	ug/L	
9) Ethyl Ether	3.922	59	227775	36.16	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.233	67	275856	36.46	ug/L	98
11) 1,1-Dichloroethene	4.221	61	343789	33.99	ug/L	97
12) Freon 113	4.312	101	188621	33.39	ug/L	98
13) Carbon Disulfide	4.269	76	523605	32.66	ug/L	97
14) Iodomethane	4.428	142	276772	31.94	ug/L	95
15) Allyl chloride	4.928	41	338152	38.88	ug/L	97
16) Methylene Chloride	5.105	49	378306	37.91	ug/L	96
17) Acetone	5.166	43	366572	204.20	ug/L	98
18) Methyl acetate	5.373	43	870040	196.38	ug/L	99
19) trans-1,2-Dichloroethene	5.361	61	364340	36.55	ug/L	97
20) Hexane	5.495	56	259608	33.96	ug/L	97
21) Methyl Tert Butyl Ether	5.556	73	462585	37.31	ug/L	97
22) Acetonitrile	5.891	41	261869	423.78	ug/L	98
23) Di-isopropyl ether	6.184	45	827730	37.16	ug/L	98
24) Chloroprene	6.306	53	379288	37.00	ug/L	97
25) 1,1-Dichloroethane	6.336	63	451666	37.62	ug/L	98
26) Acrylonitrile	6.397	53	522140	198.73	ug/L	100
27) ETBE	6.799	59	735505	40.95	ug/L	100
28) Vinyl acetate	6.775	43	2848957	196.65	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	210565	36.64	ug/L	92
30) 2,2-Dichloropropane	7.458	77	222296	43.53	ug/L	100
31) Bromochloromethane	7.610	128	109338	39.03	ug/L	94
32) Cyclohexane	7.647	56	486068	36.52	ug/L	97
33) Chloroform	7.769	83	393063	38.03	ug/L	98
34) Ethyl acetate	8.000	43	1320045	210.61	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	169568	45.15	ug/L		100
37) Carbon Tetrachloride	8.019	117	278541	44.78	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	349384	41.99	ug/L		99
39) 2-Butanone	8.311	43	593644	217.25	ug/L		98
40) 1,1-Dichloropropene	8.366	75	301067	40.86	ug/L		97
41) tert-Butyl formate	8.573	59	1586010	607.43	ug/L	#	74
42) Propionitrile	8.793	54	455693	482.07	ug/L		100
43) Methacrylonitrile	8.842	41	1760774	475.58	ug/L		99
44) Benzene	8.793	78	886840	40.28	ug/L		95
45) TAME	9.031	73	519522	43.30	ug/L		96
47) 1,2-Dichloroethane	9.104	62	400144	42.08	ug/L		99
48) Trichloroethene	9.659	95	241515	41.54	ug/L		99
49) Methylcyclohexane	9.652	83	368124	38.69	ug/L		96
50) Dibromomethane	10.146	93	153641	42.73	ug/L		97
51) 1,2-Dichloropropane	10.250	63	296981	42.21	ug/L		97
52) Bromodichloromethane	10.341	83	306930	43.96	ug/L		99
53) Methyl methacrylate	10.518	41	211072	41.25	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	959004	231.06	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	384694	42.94	ug/L		96
58) Toluene	11.201	91	962451	39.38	ug/L		99
59) 2-Nitropropane	11.384	41	319906	236.54	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1463773	224.02	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	19887	41.48	ug/L	#	84
62) Tetrachloroethene	11.555	166	255879	40.62	ug/L		99
63) Ethyl methacrylate	11.701	69	272180	38.32	ug/L		94
64) 1,1,2-Trichloroethane	11.701	83	194468	42.40	ug/L		97
65) Dibromochloromethane	11.865	129	236236	43.44	ug/L		99
66) 1,3-Dichloropropane	11.926	76	378882	41.07	ug/L		94
67) 1,2-Dibromoethane	12.054	107	212795	42.11	ug/L		99
68) 2-hexanone	12.213	43	1275835	235.56	ug/L	#	79
69) 1-Chlorohexane	12.445	91	326453	38.92	ug/L		99
70) Ethylbenzene	12.481	91	1118971	40.02	ug/L		100
71) Chlorobenzene	12.469	112	624397	39.26	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	215459	43.95	ug/L		99
73) m,p-Xylene	12.591	91	1737418	81.59	ug/L		99
74) o-Xylene	12.914	91	873603	40.91	ug/L		100
75) Styrene	12.951	104	630524	42.02	ug/L		98
76) Bromoform	12.987	173	146770	42.21	ug/L		98
77) Isopropylbenzene	13.140	105	966678	41.08	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	113179	45.48	ug/L		85
81) n-Propylbenzene	13.432	91	1326401	40.95	ug/L		98
82) Bromobenzene	13.438	156	255385	40.70	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	301186	42.60	ug/L		100
84) 1,3,5-Trimethylbenzene	13.554	105	852484	41.77	ug/L		99
85) 2-Chlorotoluene	13.670	91	799277	40.62	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.597	53	109869	47.66	ug/L		97
87) 1,2,3-Trichloropropane	13.579	110	82275	43.21	ug/L		98
88) Cyclohexanone	13.621	55	73643	242.75	ug/L		97
89) 4-Chlorotoluene	13.670	91	799277	40.62	ug/L		99
90) tert-Butylbenzene	13.786	91	518046	41.01	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

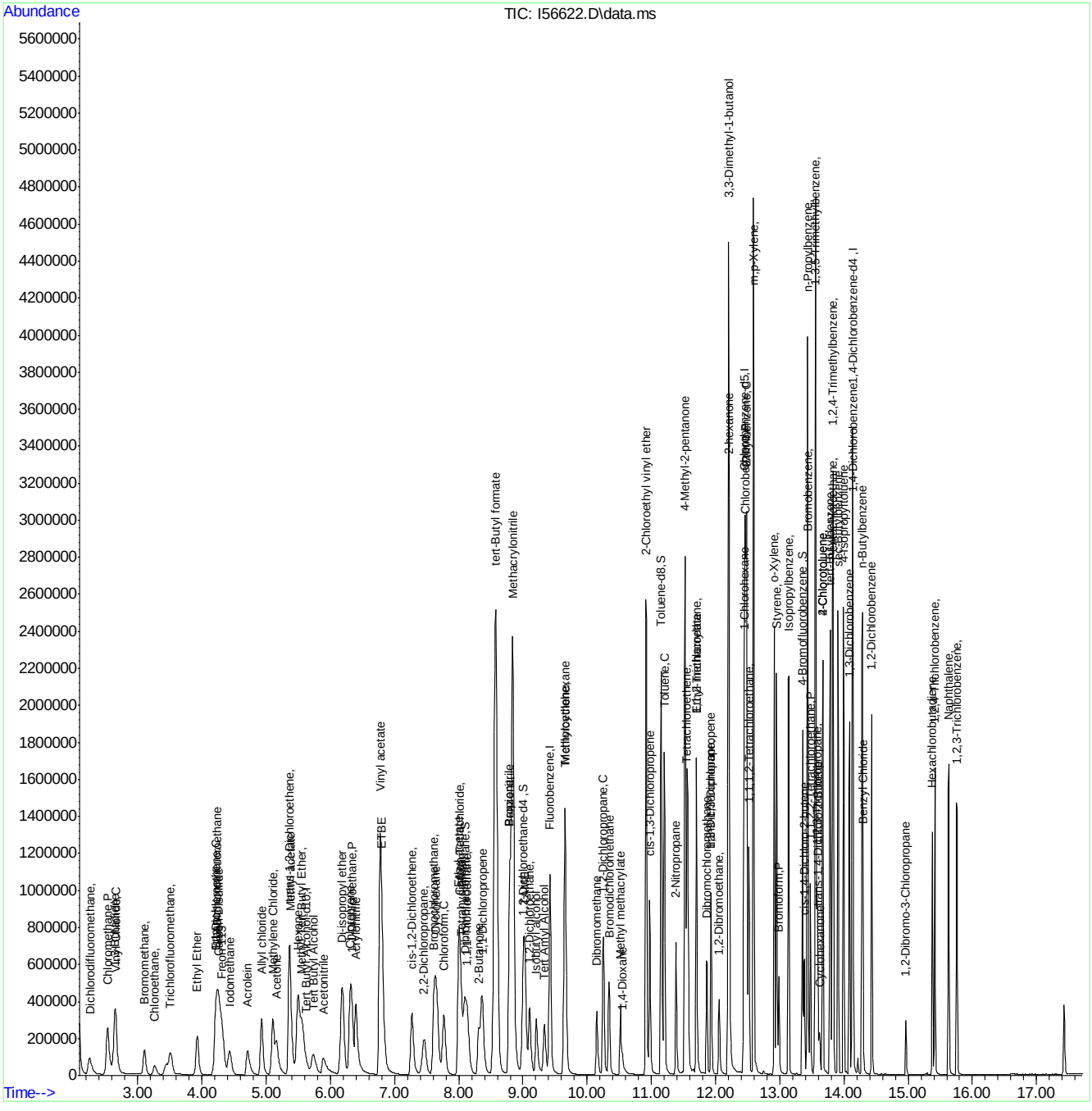
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	877347	41.56	ug/L		99
93)	Pentachloroethane	13.822	167	140338	40.67	ug/L		98
94)	sec-Butylbenzene	13.908	105	1070072	41.06	ug/L		100
95)	4-Isopropyltoluene	13.993	119	873914	41.37	ug/L		100
96)	1,3-Dichlorobenzene	14.085	146	468044	40.17	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	497293	39.22	ug/L		99
98)	n-Butylbenzene	14.286	92	517348	42.54	ug/L		97
99)	Benzyl Chloride	14.298	126	75974	47.42	ug/L	#	90
100)	1,2-Dichlorobenzene	14.432	146	457995	40.36	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	50647	43.44	ug/L		79
102)	Hexachlorobutadiene	15.377	225	147410	39.11	ug/L		99
103)	1,2,4-Trichlorobenzene	15.414	180	302220	40.13	ug/L		99
104)	Naphthalene	15.633	128	779927	39.99	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	286355	40.55	ug/L		98
107)	Ethanol	4.221	45	55079	747.50	ug/L		98
108)	Acrolein	4.708	56	240522	148.13	ug/L		97
109)	Tert Butyl Alcohol	5.739	59	248518	390.52	ug/L		97
110)	Isobutyl alcohol	9.207	43	232236	882.81	ug/L		97
111)	Tert Amyl Alcohol	9.335	59	186291	437.23	ug/L		92
112)	1,4-Dioxane	10.549	88	48851	766.20	ug/L		95
113)	3,3-Dimethyl-1-butanol	12.201	57	1622575	2396.62	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

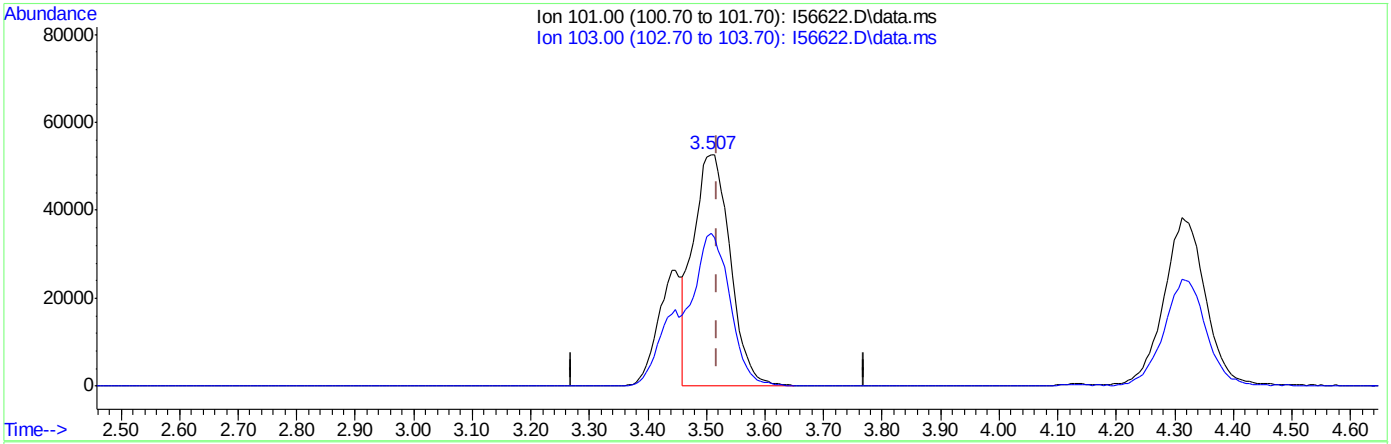
Sample Number:	VI1694-ECC1683	**Method:**	SW846 8260B
Lab FileID:	I56622.D	**Analyst approved:**	08/09/18 11:20 Ana Jimenez
Injection Time:	08/08/18 19:41	**Supervisor approved:**	08/09/18 15:41 Melissa Mangual

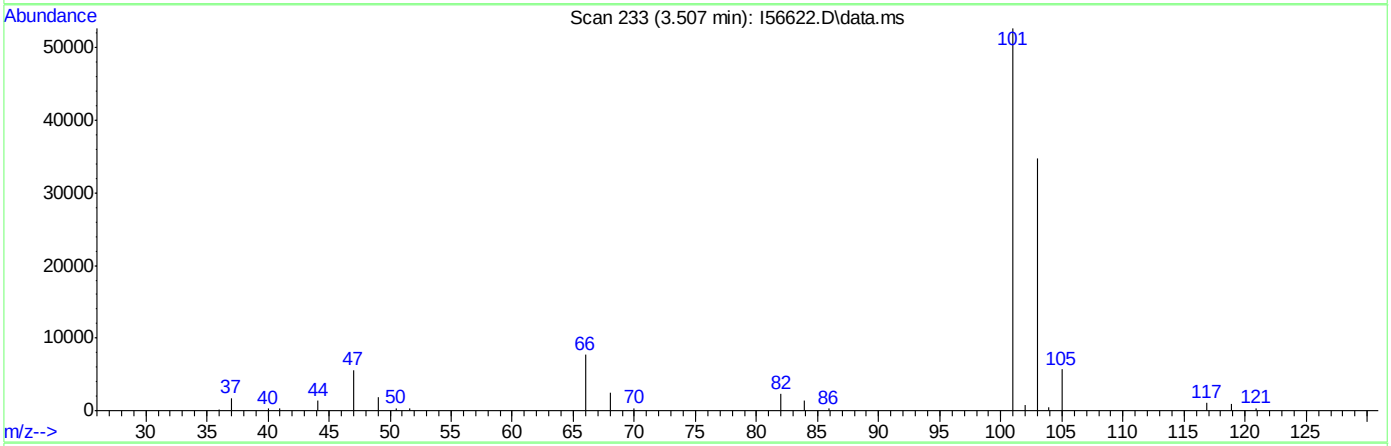
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.51	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:23:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56622.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.012) 28.30ug/L

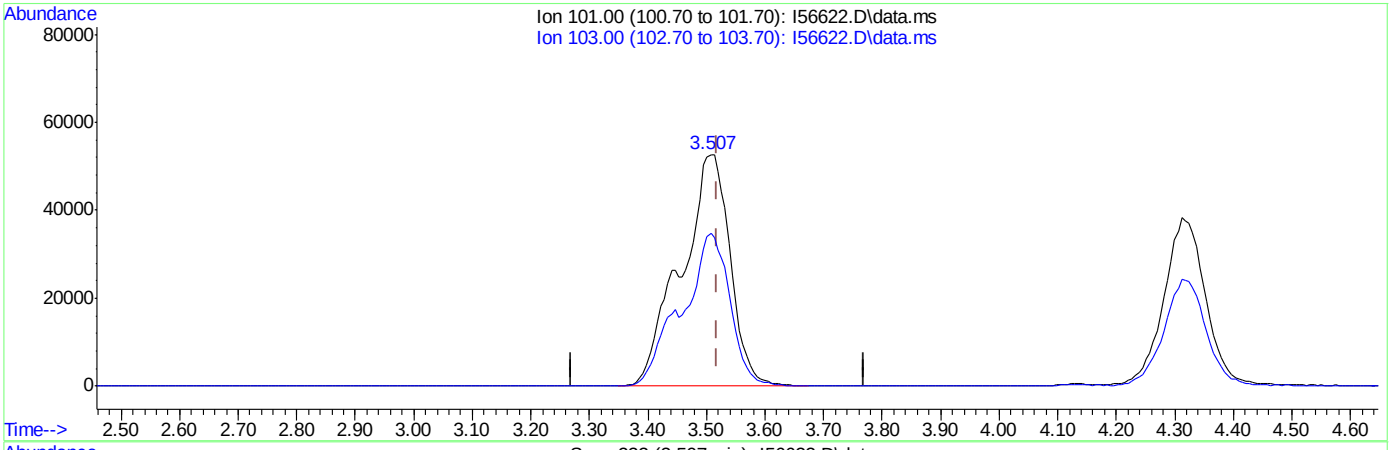
response 231179

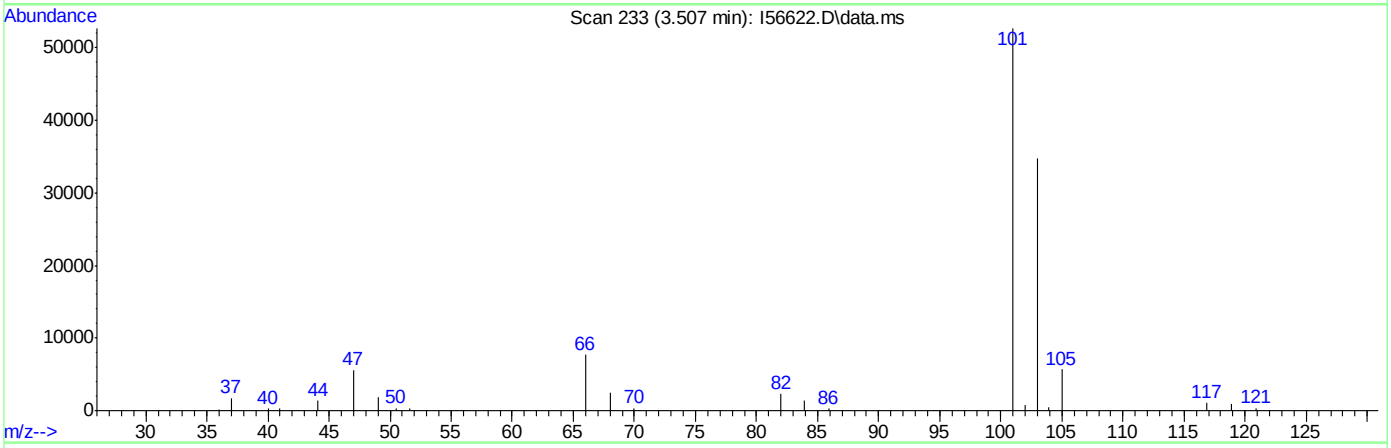
Ion	Exp%	Act%
101.00	100	100
103.00	63.50	65.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:23:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56622.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.012) 37.62ug/L m

response 307318

Ion	Exp%	Act%
101.00	100	100
103.00	63.50	65.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56651.D
Acq On : 10 Aug 2018 8:36 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS41007,VI1696,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 08:54:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1133186	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	809581	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	419428	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	94259	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	307358	51.37	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.74%			
46) 1,2-Dichloroethane-d4	9.000	65	410288	50.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.44%			
57) Toluene-d8	11.152	98	1097765	49.14	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.28%			
79) 4-Bromofluorobenzene	13.353	174	321424	48.52	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.258	85	241128	37.36	ug/L	99
3) Chloromethane	2.526	50	350409	39.55	ug/L	98
4) 1,3-Butadiene	2.642	39	193960	40.59	ug/L	99
5) Vinyl Chloride	2.660	62	288879	38.76	ug/L	99
6) Bromomethane	3.105	94	138948	35.61	ug/L	99
7) Chloroethane	3.270	64	78902	38.16	ug/L	96
8) Trichlorofluoromethane	3.507	101	347186	40.55	ug/L	99
9) Ethyl Ether	3.922	59	276067	41.81	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.233	67	326394	41.17	ug/L	98
11) 1,1-Dichloroethene	4.215	61	473382	44.66	ug/L	98
12) Freon 113	4.318	101	242469	40.96	ug/L	98
13) Carbon Disulfide	4.263	76	758206	45.12	ug/L	99
14) Iodomethane	4.422	142	363821	40.07	ug/L	98
15) Allyl chloride	4.928	41	399280	43.81	ug/L	98
16) Methylene Chloride	5.099	49	465928	44.62	ug/L	97
17) Acetone	5.159	43	401082	213.19	ug/L	99
18) Methyl acetate	5.373	43	956990	205.86	ug/L	98
19) trans-1,2-Dichloroethene	5.355	61	459307	43.97	ug/L	97
20) Hexane	5.501	56	330754	41.28	ug/L	97
21) Methyl Tert Butyl Ether	5.556	73	537011	41.33	ug/L	93
22) Acetonitrile	5.879	41	289149	446.48	ug/L	99
23) Di-isopropyl ether	6.178	45	1001235	42.89	ug/L	98
24) Chloroprene	6.306	53	415087	38.64	ug/L	98
25) 1,1-Dichloroethane	6.336	63	538508	42.80	ug/L	100
26) Acrylonitrile	6.397	53	535546	194.69	ug/L	99
27) ETBE	6.799	59	859086	45.64	ug/L	98
28) Vinyl acetate	6.775	43	3155382	207.47	ug/L	100
29) cis-1,2-Dichloroethene	7.269	96	253391	42.07	ug/L	97
30) 2,2-Dichloropropane	7.458	77	291111	54.40	ug/L	98
31) Bromochloromethane	7.610	128	121453	41.37	ug/L	95
32) Cyclohexane	7.647	56	587523	42.12	ug/L	97
33) Chloroform	7.763	83	435796	40.23	ug/L	98
34) Ethyl acetate	8.006	43	1272504	194.01	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56651.D
Acq On : 10 Aug 2018 8:36 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS41007,VI1696,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 08:54:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	162951	41.40 ug/L	97
37) Carbon Tetrachloride	8.019	117	312734	47.97 ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	387397	44.43 ug/L	97
39) 2-Butanone	8.311	43	570709	199.81 ug/L	98
40) 1,1-Dichloropropene	8.366	75	329034	42.61 ug/L	96
41) tert-Butyl formate	8.573	59	1636062	600.01 ug/L #	71
42) Propionitrile	8.793	54	417864	421.80 ug/L	93
43) Methacrylonitrile	8.836	41	1636134	421.67 ug/L	99
44) Benzene	8.793	78	952477	41.28 ug/L	98
45) TAME	9.025	73	547929	43.57 ug/L	98
47) 1,2-Dichloroethane	9.104	62	409612	41.10 ug/L	98
48) Trichloroethene	9.659	95	253169	41.55 ug/L	98
49) Methylcyclohexane	9.652	83	401987	40.31 ug/L	96
50) Dibromomethane	10.146	93	158102	41.96 ug/L	97
51) 1,2-Dichloropropane	10.250	63	314729	42.68 ug/L	98
52) Bromodichloromethane	10.335	83	320190	43.76 ug/L	98
53) Methyl methacrylate	10.512	41	199333	37.37 ug/L	96
54) 2-Chloroethyl vinyl ether	10.914	63	924141	212.46 ug/L	96
55) cis-1,3-Dichloropropene	10.975	75	411436	43.78 ug/L	98
58) Toluene	11.201	91	993782	39.75 ug/L	100
59) 2-Nitropropane	11.384	41	307283	222.88 ug/L	99
60) 4-Methyl-2-pentanone	11.524	43	1404111	210.05 ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	20197	41.18 ug/L	94
62) Tetrachloroethene	11.555	166	246184	38.20 ug/L	99
63) Ethyl methacrylate	11.701	69	265846	36.66 ug/L	96
64) 1,1,2-Trichloroethane	11.701	83	190414	40.59 ug/L	97
65) Dibromochloromethane	11.859	129	241801	43.46 ug/L	100
66) 1,3-Dichloropropane	11.926	76	381472	40.42 ug/L	96
67) 1,2-Dibromoethane	12.054	107	214192	41.44 ug/L	99
68) 2-hexanone	12.207	43	1178522	212.70 ug/L	90
69) 1-Chlorohexane	12.439	91	327748	38.20 ug/L	94
70) Ethylbenzene	12.481	91	1156928	40.45 ug/L	100
71) Chlorobenzene	12.469	112	640276	39.35 ug/L	98
72) 1,1,1,2-Tetrachloroethane	12.518	131	221641	44.19 ug/L	99
73) m,p-Xylene	12.591	91	1788344	82.09 ug/L	100
74) o-Xylene	12.914	91	904620	41.41 ug/L	99
75) Styrene	12.951	104	649690	42.32 ug/L	99
76) Bromoform	12.987	173	148608	41.80 ug/L	100
77) Isopropylbenzene	13.134	105	991715	41.19 ug/L	99
80) cis-1,4-Dichloro-2-butene	13.377	53	111942	43.38 ug/L	91
81) n-Propylbenzene	13.426	91	1357390	40.42 ug/L	96
82) Bromobenzene	13.432	156	258932	39.80 ug/L	100
83) 1,1,2,2-Tetrachloroethane	13.475	83	287186	39.18 ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	868469	41.04 ug/L	100
85) 2-Chlorotoluene	13.670	91	824272	40.40 ug/L	99
86) trans-1,4-Dichloro-2-B...	13.591	53	108698	45.48 ug/L #	76
87) 1,2,3-Trichloropropane	13.579	110	78113	39.57 ug/L	99
88) Cyclohexanone	13.621	55	62128	197.53 ug/L	97
89) 4-Chlorotoluene	13.670	91	824272	40.40 ug/L	99
90) tert-Butylbenzene	13.786	91	529059	40.40 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56651.D
Acq On : 10 Aug 2018 8:36 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS41007,VI1696,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 08:54:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

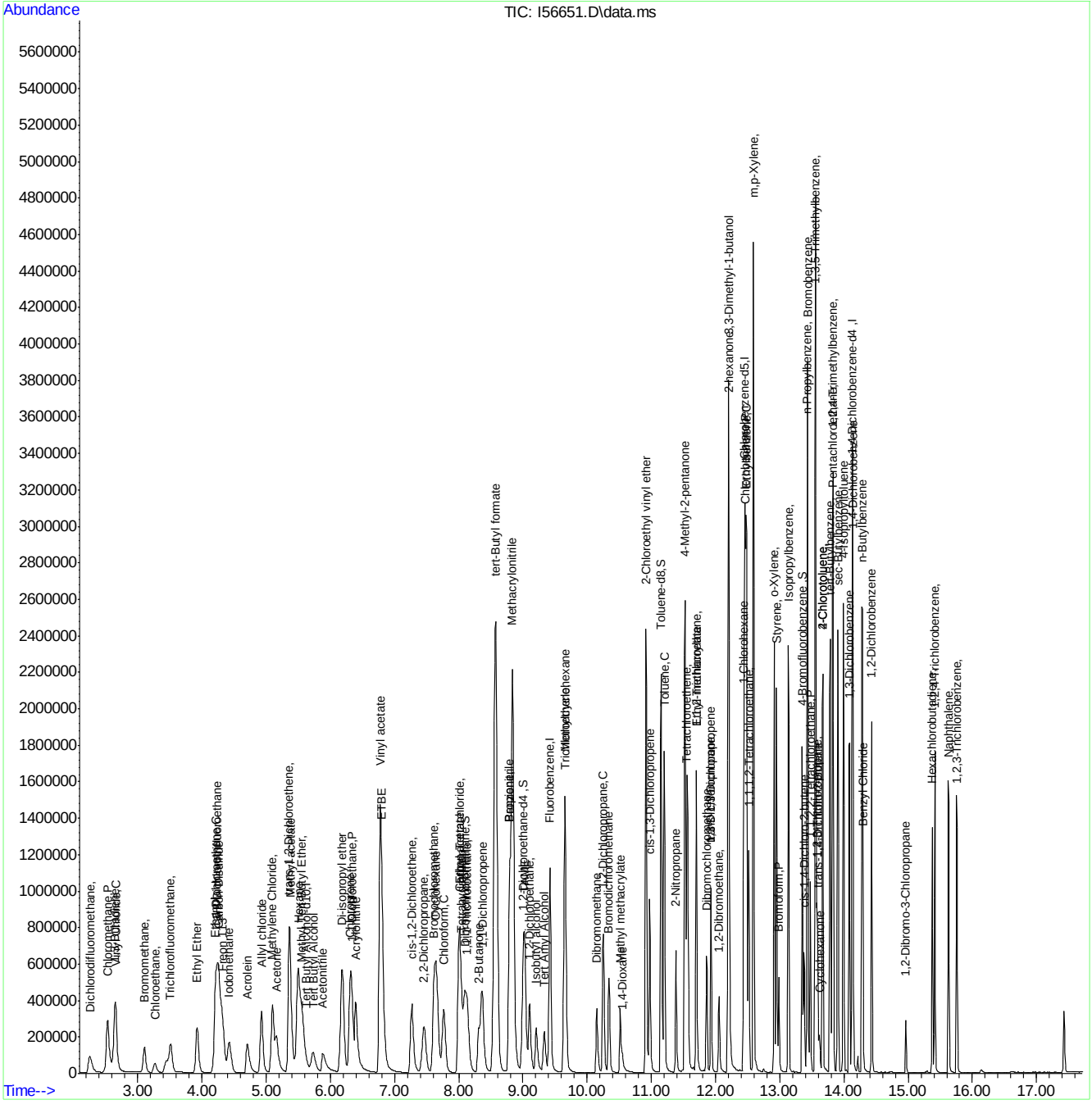
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.829	105	899605	41.11	ug/L		100
93)	Pentachloroethane	13.822	167	156550	43.39	ug/L		97
94)	sec-Butylbenzene	13.908	105	1097393	40.62	ug/L		99
95)	4-Isopropyltoluene	13.993	119	901849	41.18	ug/L		99
96)	1,3-Dichlorobenzene	14.085	146	481741	39.88	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	509330	38.74	ug/L		97
98)	n-Butylbenzene	14.280	92	539673	42.80	ug/L		93
99)	Benzyl Chloride	14.298	126	89654	52.66	ug/L	#	75
100)	1,2-Dichlorobenzene	14.432	146	467085	39.70	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	46991	39.11	ug/L		82
102)	Hexachlorobutadiene	15.377	225	155041	39.68	ug/L		99
103)	1,2,4-Trichlorobenzene	15.414	180	317667	40.69	ug/L		99
104)	Naphthalene	15.633	128	758485	37.59	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	291604	39.83	ug/L		99
107)	Ethanol	4.208	45	51813	740.63	ug/L		95
108)	Acrolein	4.708	56	286488	186.27	ug/L		98
109)	Tert Butyl Alcohol	5.733	59	248961	412.11	ug/L		91
110)	Isobutyl alcohol	9.207	43	201397	806.47	ug/L		99
111)	Tert Amyl Alcohol	9.335	59	162060	402.61	ug/L		91
112)	1,4-Dioxane	10.549	88	45247	747.28	ug/L		95
113)	3,3-Dimethyl-1-butanol	12.201	57	1334241	2075.99	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56651.D
Acq On : 10 Aug 2018 8:36 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS41007,VI1696,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 08:54:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/13/18 15:35

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56675.D
Acq On : 10 Aug 2018 7:39 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 08:15:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1114075	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	808693	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	417260	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	102837	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	302510	51.43	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.86%			
46) 1,2-Dichloroethane-d4	9.000	65	407702	51.26	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.52%			
57) Toluene-d8	11.152	98	1085952	48.66	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.32%			
79) 4-Bromofluorobenzene	13.353	174	323904	49.15	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.30%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	237364	37.41	ug/L	97
3) Chloromethane	2.532	50	362474	41.61	ug/L	100
4) 1,3-Butadiene	2.642	39	210174	44.74	ug/L	96
5) Vinyl Chloride	2.660	62	303015	41.36	ug/L	98
6) Bromomethane	3.105	94	143955	37.53	ug/L	97
7) Chloroethane	3.263	64	81137	40.68	ug/L	99
8) Trichlorofluoromethane	3.507	101	356048	42.30	ug/L	100
9) Ethyl Ether	3.922	59	283670	43.70	ug/L	95
10) 1,2-Dichlorotrifluoroe...	4.233	67	338947	43.48	ug/L	98
11) 1,1-Dichloroethene	4.220	61	491828	47.19	ug/L	99
12) Freon 113	4.318	101	252229	43.34	ug/L	97
13) Carbon Disulfide	4.263	76	793873	48.05	ug/L	98
14) Iodomethane	4.422	142	375798	42.10	ug/L	99
15) Allyl chloride	4.928	41	405932	45.30	ug/L	96
16) Methylene Chloride	5.098	49	489302	47.71	ug/L	96
17) Acetone	5.165	43	373677	202.03	ug/L	100
18) Methyl acetate	5.373	43	983337	214.90	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	474242	46.17	ug/L	99
20) Hexane	5.495	56	328688	41.73	ug/L	98
21) Methyl Tert Butyl Ether	5.556	73	552087	43.22	ug/L	93
22) Acetonitrile	5.885	41	299860	470.96	ug/L	99
23) Di-isopropyl ether	6.184	45	1038510	45.25	ug/L	99
24) Chloroprene	6.312	53	423222	40.07	ug/L	97
25) 1,1-Dichloroethane	6.336	63	555720	44.92	ug/L	99
26) Acrylonitrile	6.397	53	542740	200.41	ug/L	100
27) ETBE	6.799	59	887078	47.93	ug/L	98
28) Vinyl acetate	6.775	43	3188748	213.08	ug/L	100
29) cis-1,2-Dichloroethene	7.269	96	258392	43.64	ug/L	95
30) 2,2-Dichloropropane	7.464	77	298467	56.73	ug/L	100
31) Bromochloromethane	7.610	128	123488	42.78	ug/L	94
32) Cyclohexane	7.653	56	611138	44.56	ug/L	97
33) Chloroform	7.769	83	450028	42.26	ug/L	98
34) Ethyl acetate	8.000	43	1301103	201.63	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56675.D
Acq On : 10 Aug 2018 7:39 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 08:15:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	167634m	43.32 ug/L	
37) Carbon Tetrachloride	8.019	117	320888	50.07 ug/L	100
38) 1,1,1-Trichloroethane	8.134	97	400347	46.70 ug/L	98
39) 2-Butanone	8.305	43	551179	196.38 ug/L	97
40) 1,1-Dichloropropene	8.360	75	336385	44.31 ug/L	95
41) tert-Butyl formate	8.573	59	1704015	627.44 ug/L #	69
42) Propionitrile	8.793	54	429552	441.03 ug/L	91
43) Methacrylonitrile	8.835	41	1674226	438.89 ug/L	99
44) Benzene	8.793	78	972085	42.85 ug/L	97
45) TAME	9.031	73	563625	45.59 ug/L	97
47) 1,2-Dichloroethane	9.104	62	425430	43.42 ug/L	98
48) Trichloroethene	9.652	95	258997	43.23 ug/L	96
49) Methylcyclohexane	9.652	83	410626	41.88 ug/L	97
50) Dibromomethane	10.146	93	159932	43.17 ug/L	98
51) 1,2-Dichloropropane	10.250	63	319634	44.09 ug/L	98
52) Bromodichloromethane	10.335	83	321761	44.73 ug/L	98
53) Methyl methacrylate	10.512	41	202645	38.58 ug/L	96
54) 2-Chloroethyl vinyl ether	10.914	63	916504	214.32 ug/L	96
55) cis-1,3-Dichloropropene	10.975	75	416122	44.97 ug/L	98
58) Toluene	11.201	91	1020463	40.86 ug/L	99
59) 2-Nitropropane	11.384	41	305504	221.89 ug/L	97
60) 4-Methyl-2-pentanone	11.524	43	1384682	207.37 ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	21460	43.80 ug/L	91
62) Tetrachloroethene	11.554	166	253135	39.32 ug/L	99
63) Ethyl methacrylate	11.701	69	272660	37.60 ug/L	96
64) 1,1,2-Trichloroethane	11.701	83	192697	41.12 ug/L	97
65) Dibromochloromethane	11.859	129	243583	43.83 ug/L	99
66) 1,3-Dichloropropane	11.926	76	392659	41.66 ug/L	96
67) 1,2-Dibromoethane	12.054	107	220129	42.63 ug/L	100
68) 2-hexanone	12.207	43	1177162	212.69 ug/L	97
69) 1-Chlorohexane	12.438	91	352243	41.10 ug/L	93
70) Ethylbenzene	12.481	91	1183726	41.43 ug/L	99
71) Chlorobenzene	12.469	112	652209	40.13 ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	224285	44.77 ug/L	97
73) m,p-Xylene	12.591	91	1845926	84.83 ug/L	99
74) o-Xylene	12.914	91	935042	42.85 ug/L	99
75) Styrene	12.950	104	669697	43.67 ug/L	99
76) Bromoform	12.987	173	149742	42.14 ug/L	98
77) Isopropylbenzene	13.133	105	1029169	42.80 ug/L	99
80) cis-1,4-Dichloro-2-butene	13.377	53	117036	45.59 ug/L	93
81) n-Propylbenzene	13.432	91	1411618	42.26 ug/L	100
82) Bromobenzene	13.438	156	267295	41.30 ug/L	99
83) 1,1,2,2-Tetrachloroethane	13.475	83	299314	41.05 ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	903184	42.90 ug/L	99
85) 2-Chlorotoluene	13.670	91	857202	42.24 ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	111635	46.95 ug/L	92
87) 1,2,3-Trichloropropane	13.578	110	80766	41.12 ug/L	97
88) Cyclohexanone	13.621	55	70892	226.56 ug/L	98
89) 4-Chlorotoluene	13.670	91	857202	42.24 ug/L	100
90) tert-Butylbenzene	13.786	91	548124	42.07 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56675.D
Acq On : 10 Aug 2018 7:39 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 08:15:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

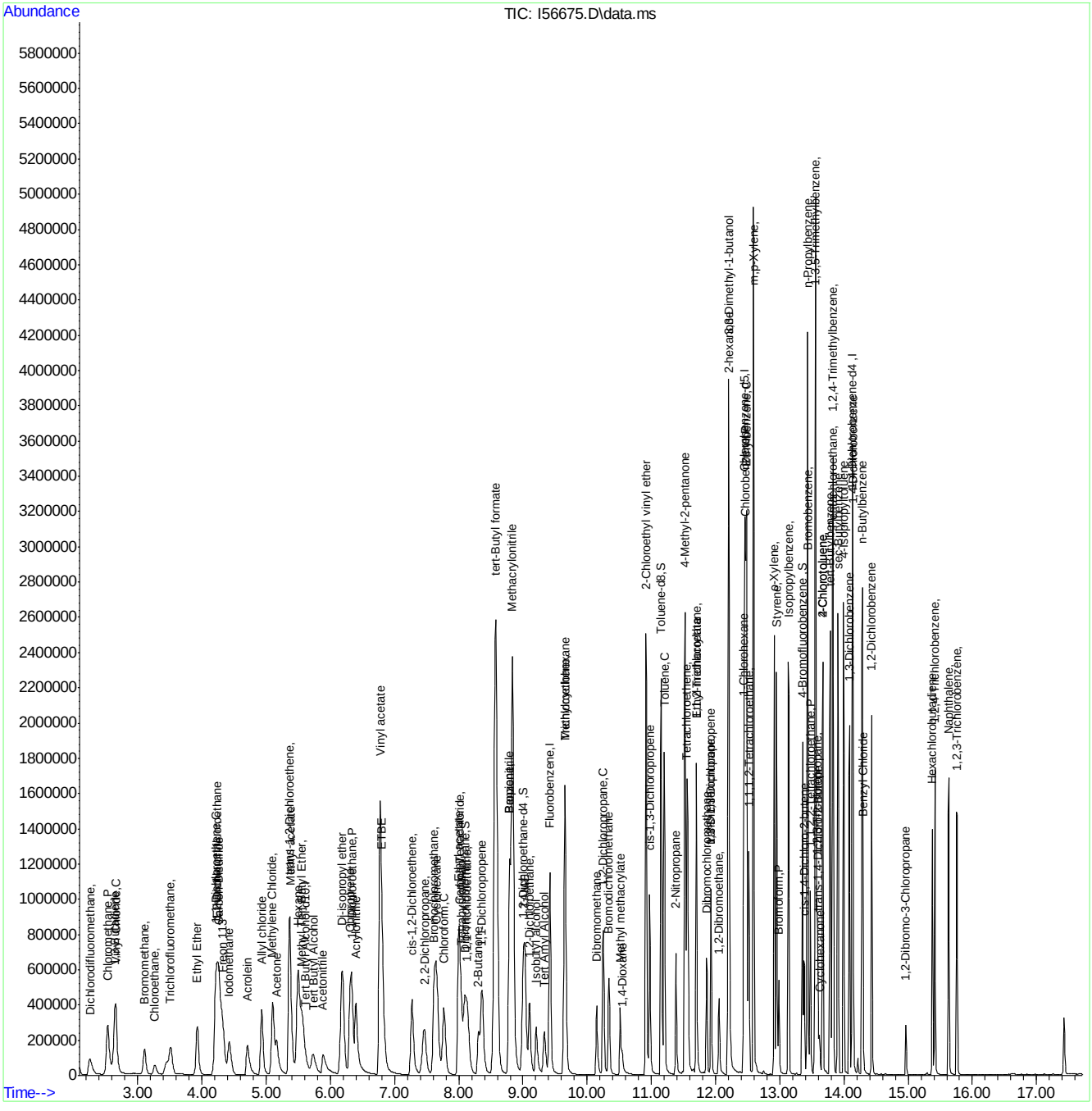
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	939412	43.15	ug/L	99
93) Pentachloroethane	13.822	167	158592	44.09	ug/L	99
94) sec-Butylbenzene	13.908	105	1143600	42.55	ug/L	100
95) 4-Isopropyltoluene	13.993	119	938427	43.07	ug/L	100
96) 1,3-Dichlorobenzene	14.084	146	495890	41.27	ug/L	100
97) 1,4-Dichlorobenzene	14.139	146	524857	40.13	ug/L	100
98) n-Butylbenzene	14.286	92	556667	44.38	ug/L	95
99) Benzyl Chloride	14.298	126	86624	51.44	ug/L #	90
100) 1,2-Dichlorobenzene	14.432	146	481625	41.15	ug/L	99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	49429	41.23	ug/L	80
102) Hexachlorobutadiene	15.377	225	161581	41.57	ug/L	99
103) 1,2,4-Trichlorobenzene	15.413	180	321908	41.45	ug/L	99
104) Naphthalene	15.633	128	776913	38.67	ug/L	100
105) 1,2,3-Trichlorobenzene	15.761	180	299540	41.13	ug/L	99
107) Ethanol	4.227	45	62636	821.93	ug/L	98
108) Acrolein	4.708	56	287556	171.22	ug/L	100
109) Tert Butyl Alcohol	5.732	59	261428	396.65	ug/L	97
110) Isobutyl alcohol	9.201	43	212077	778.40	ug/L	99
111) Tert Amyl Alcohol	9.329	59	170990	390.04	ug/L	93
112) 1,4-Dioxane	10.542	88	48435	732.99	ug/L	94
113) 3,3-Dimethyl-1-butanol	12.201	57	1397676	1993.29	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56675.D
Acq On : 10 Aug 2018 7:39 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 08:15:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

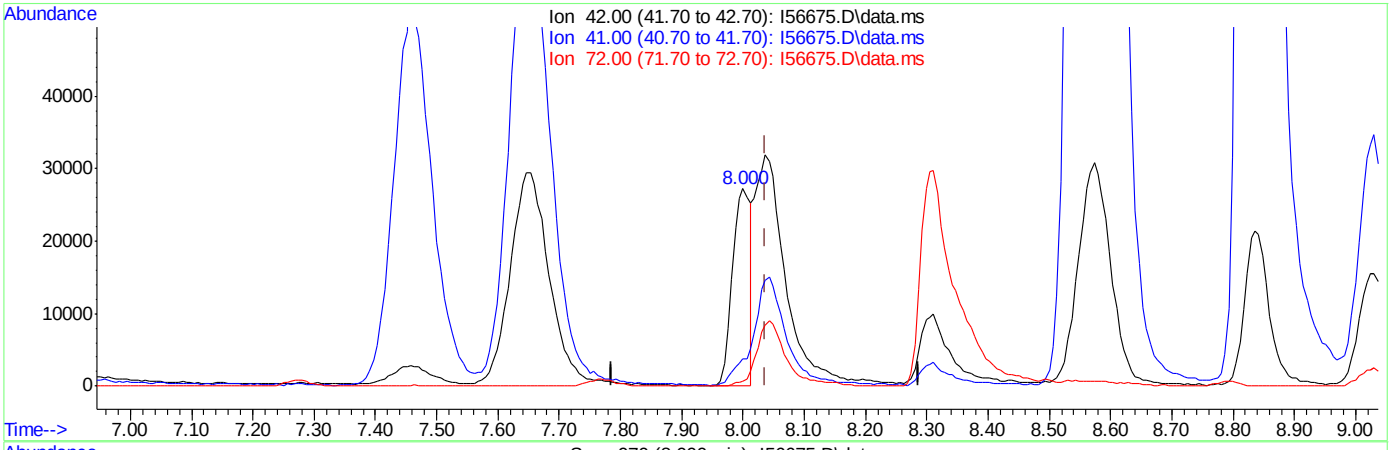
Sample Number:	VI1696-ECC1683	**Method:**	SW846 8260B
Lab FileID:	I56675.D	**Analyst approved:**	08/13/18 08:24 Ana Jimenez
Injection Time:	08/10/18 19:39	**Supervisor approved:**	08/13/18 15:35 Melissa Mangual

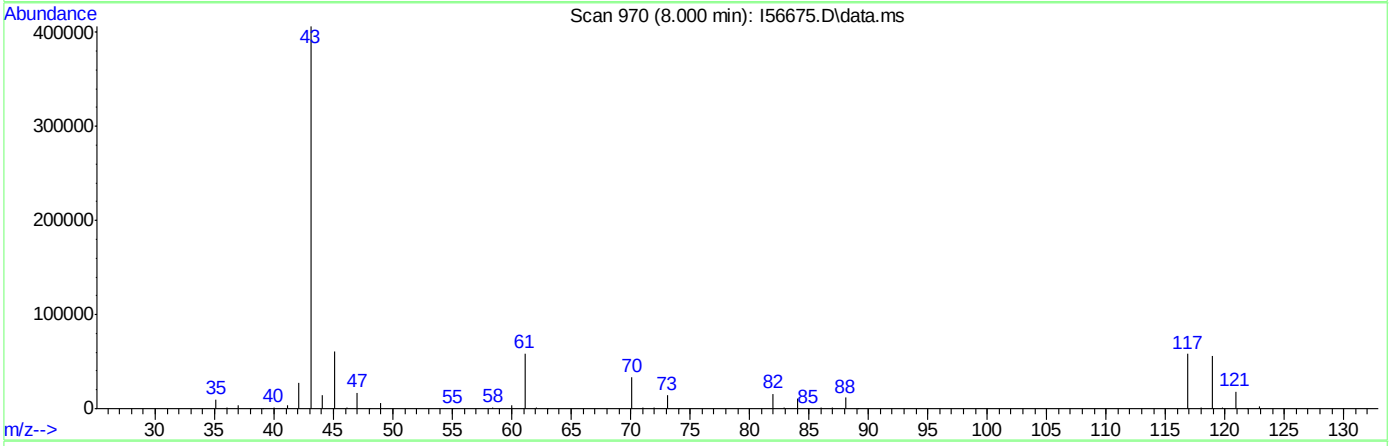
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.04	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56675.D
Acq On : 10 Aug 2018 7:39 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 07:35:38 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56675.D\data.ms

(35) Tetrahydrofuran

8.000min (-0.037) 14.47ug/L

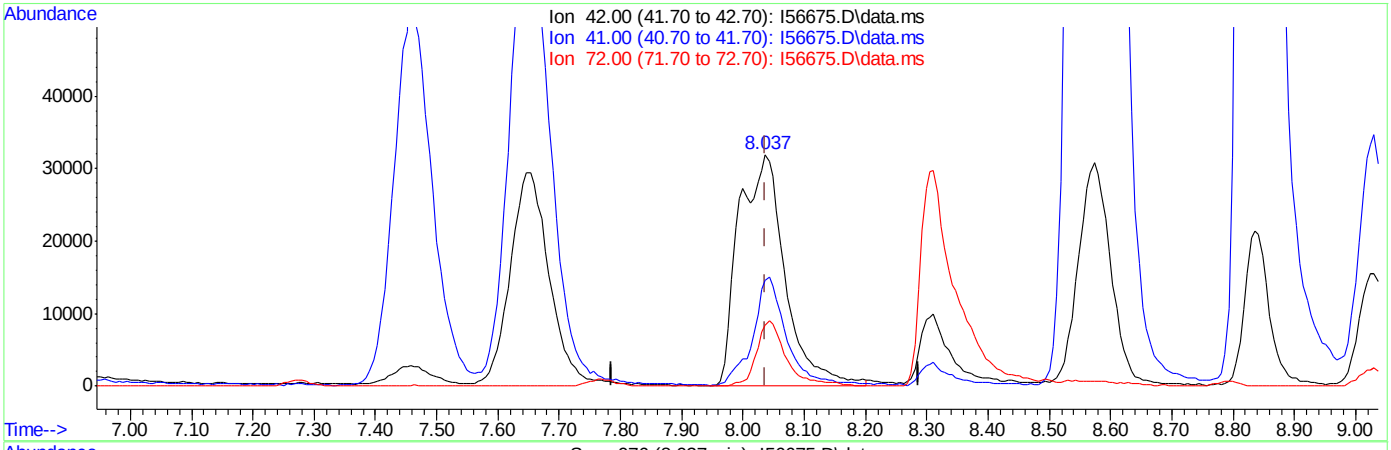
response 56000

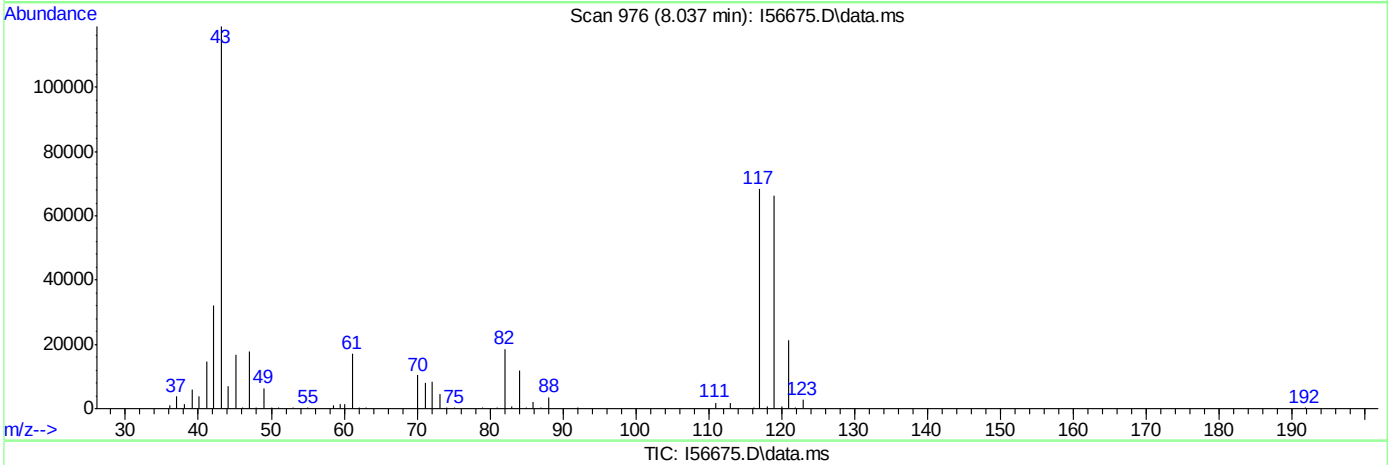
Ion	Exp%	Act%
42.00	100	100
41.00	40.40	13.55#
72.00	23.50	2.70#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\081018\
Data File : I56675.D
Acq On : 10 Aug 2018 7:39 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS41011,VI1696,,,,,
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 07:35:38 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56675.D\data.ms

(35) Tetrahydrofuran

8.037min (-0.000) 43.32ug/L m

response 167634

Ion	Exp%	Act%
42.00	100	100
41.00	40.40	45.46
72.00	23.50	26.13
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez
07/30/18 08:45

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53200.D
Acq On : 26 Jul 2018 9:48 am
Operator : melissam
Sample : IC2005-1 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 14:54:40 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	5972415	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	4578879	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2674143	5.44	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 108.80%				
19) Toluene-d8	9.044	98	4700885	5.33	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 106.60%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.907	62	64221	0.10	ppb		84
3) Chloromethane	2.794	50	69918	0.12	ppb		93
4) 1,1-Dichloroethene	4.159	96	43321	0.11	ppb		97
6) trans-1,2-Dichloroethene	4.962	96	46145	0.10	ppb		96
7) 1,1-Dichloroethane	5.622	63	89221	0.10	ppb	#	97
8) cis-1,2-Dichloroethene	6.187	96	43644	0.10	ppb		98
9) Chloroform	6.454	83	121303	0.13	ppb		100
10) Carbon Tetrachloride	6.626	117	69119	0.10	ppb		98
11) 1,1,1-Trichloroethane	6.702	97	79958m	0.11	ppb		
12) Benzene	7.075	78	140700	0.09	ppb		99
14) 1,2-Dichloroethane	7.272	62	65205	0.10	ppb		98
15) Trichloroethene	7.646	95	58506	0.12	ppb	#	99
16) 1,2-Dichloropropane	8.184	63	38162	0.10	ppb		95
17) cis-1,3-Dichloropropene	8.852	75	35442	0.18	ppb		93
20) trans-1,3-Dichloropropene	9.491	75	29152	0.07	ppb		99
21) Tetrachloroethene	9.479	166	46450	0.11	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

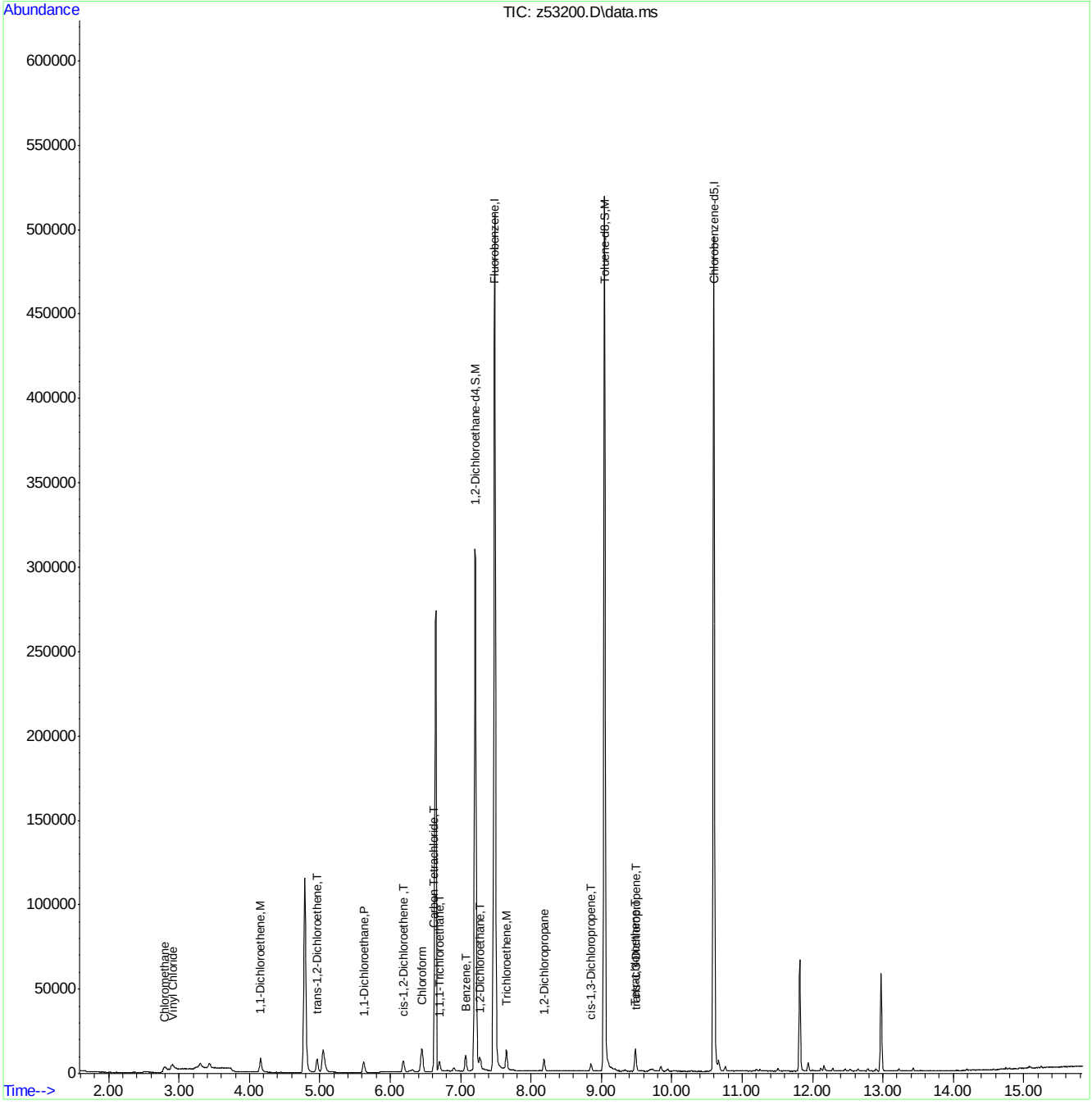
7.6.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53200.D
Acq On : 26 Jul 2018 9:48 am
Operator : melissam
Sample : IC2005-1 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 14:54:40 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



SIMCL072618.M Fri Jul 27 15:30:52 2018 Page: 2

Manual Integration Approval Summary

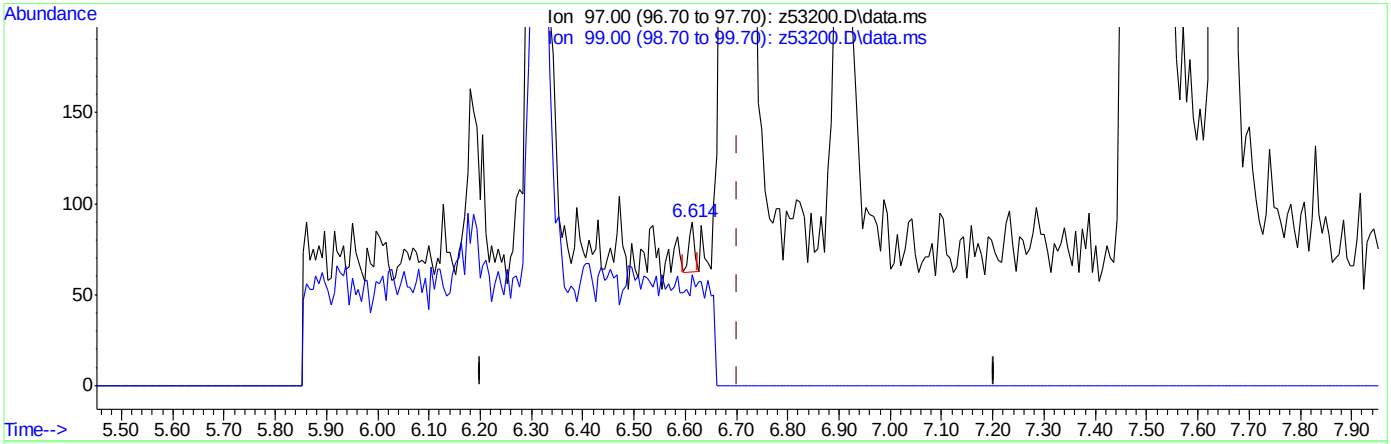
Sample Number:	VZ2005-IC2005	**Method:**	SW846 8260B BY SIM
Lab FileID:	Z53200.D	**Analyst approved:**	07/27/18 15:28 Melissa Mangual
Injection Time:	07/26/18 09:48	**Supervisor approved:**	07/30/18 08:45 Evita Martinez

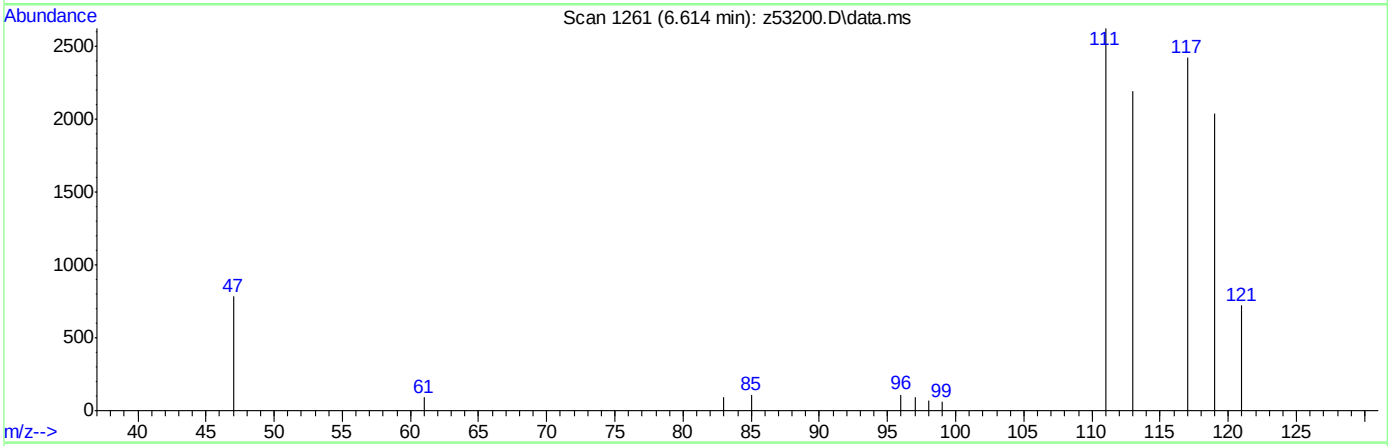
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,1,1-Trichloroethane	71-55-6		6.70	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53200.D
Acq On : 26 Jul 2018 9:48 am
Operator : melissam
Sample : IC2005-1 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 12:14:34 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072018.M
Quant Title : WATER-EPA 8260B
QLast Update : Tue Jul 03 14:59:15 2018
Response via : Initial Calibration





TIC: z53200.D\data.ms

(11) 1,1,1-Trichloroethane (T)

6.614min (-0.088) 0.00ppb

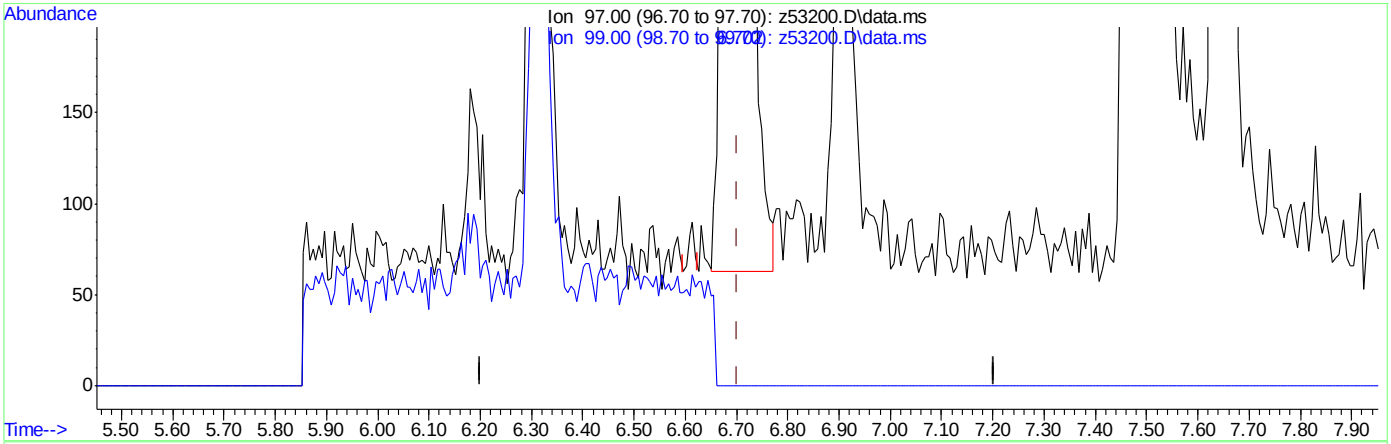
response 212

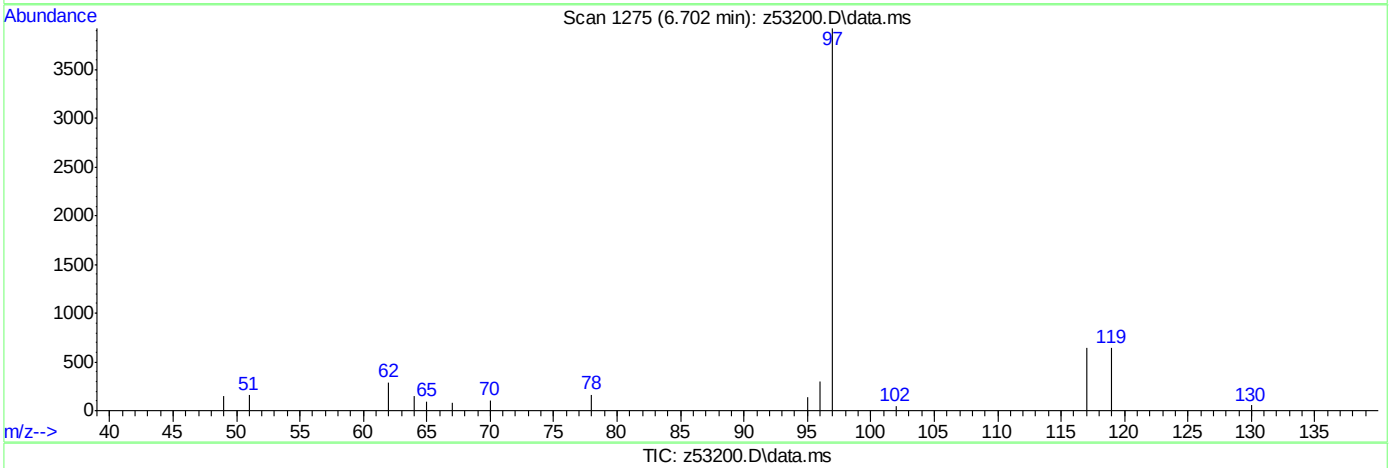
Ion	Exp%	Act%
97.00	100	100
99.00	0.00	62.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53200.D
Acq On : 26 Jul 2018 9:48 am
Operator : melissam
Sample : IC2005-1 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 12:14:34 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072018.M
Quant Title : WATER-EPA 8260B
QLast Update : Tue Jul 03 14:59:15 2018
Response via : Initial Calibration





(11) 1,1,1-Trichloroethane (T)

6.702min (+0.000) 0.13ppb m

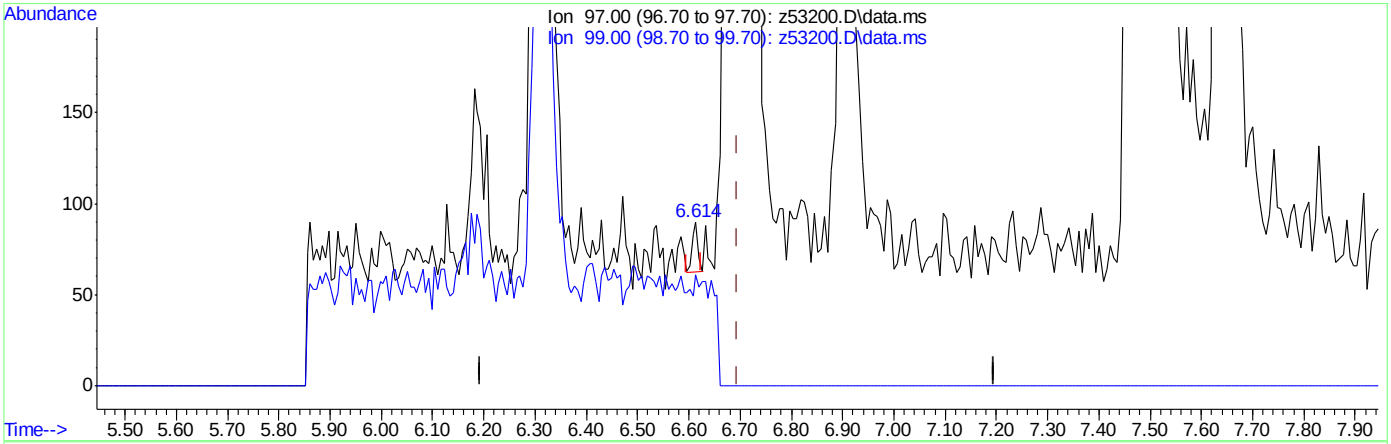
response 79994

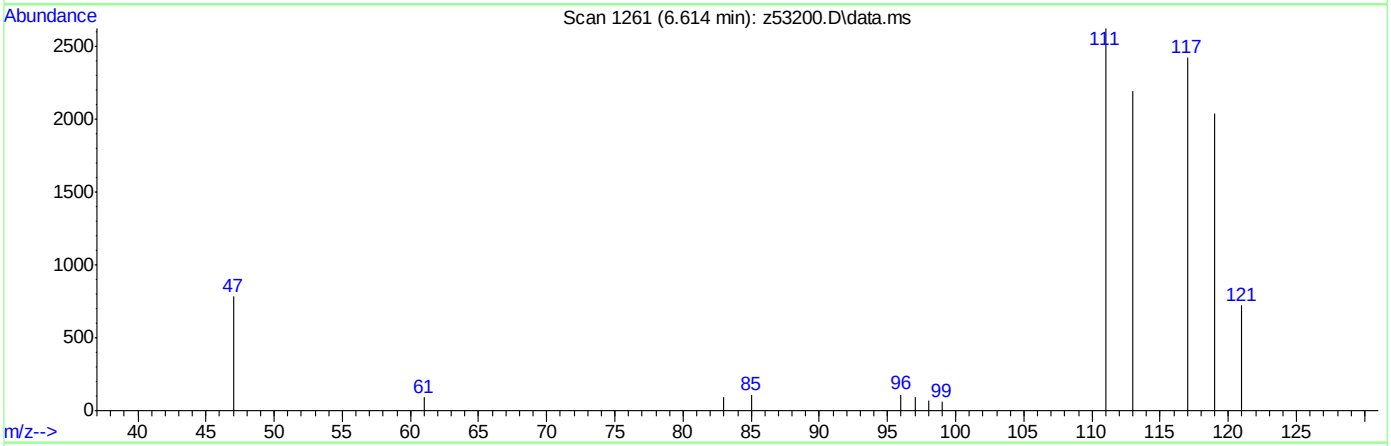
Ion	Exp%	Act%
97.00	100	100
99.00	0.00	0.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53200.D
Acq On : 26 Jul 2018 9:48 am
Operator : melissam
Sample : IC2005-1 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 14:53:44 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration





TIC: z53200.D\data.ms

(11) 1,1,1-Trichloroethane (T)

6.614min (-0.081) 0.00ppb

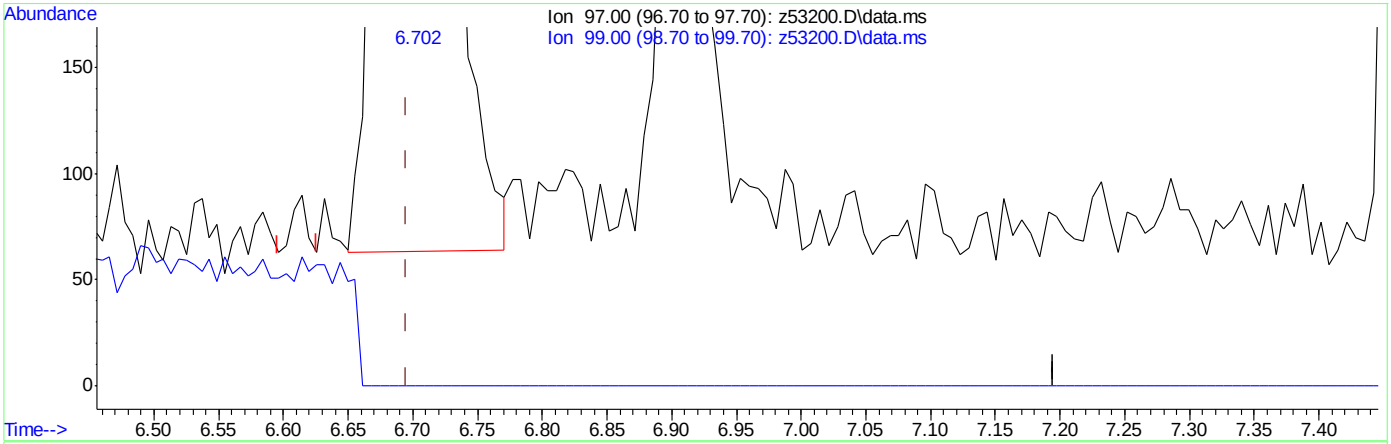
response 212

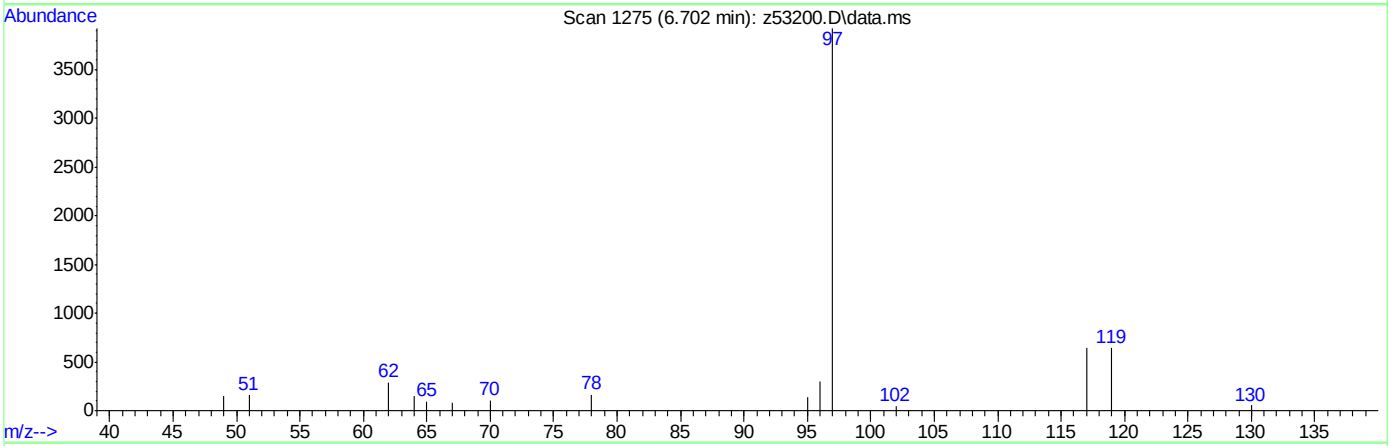
Ion	Exp%	Act%
97.00	100	100
99.00	0.10	62.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53200.D
Acq On : 26 Jul 2018 9:48 am
Operator : melissam
Sample : IC2005-1 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 14:53:44 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration





TIC: z53200.D\data.ms

(11) 1,1,1-Trichloroethane (T)

6.702min (+0.007) 0.11ppb m

response 79958

Ion	Exp%	Act%
97.00	100	100
99.00	0.10	0.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53201.D
Acq On : 26 Jul 2018 10:09 am
Operator : melissam
Sample : IC2005-2 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 14:53:46 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

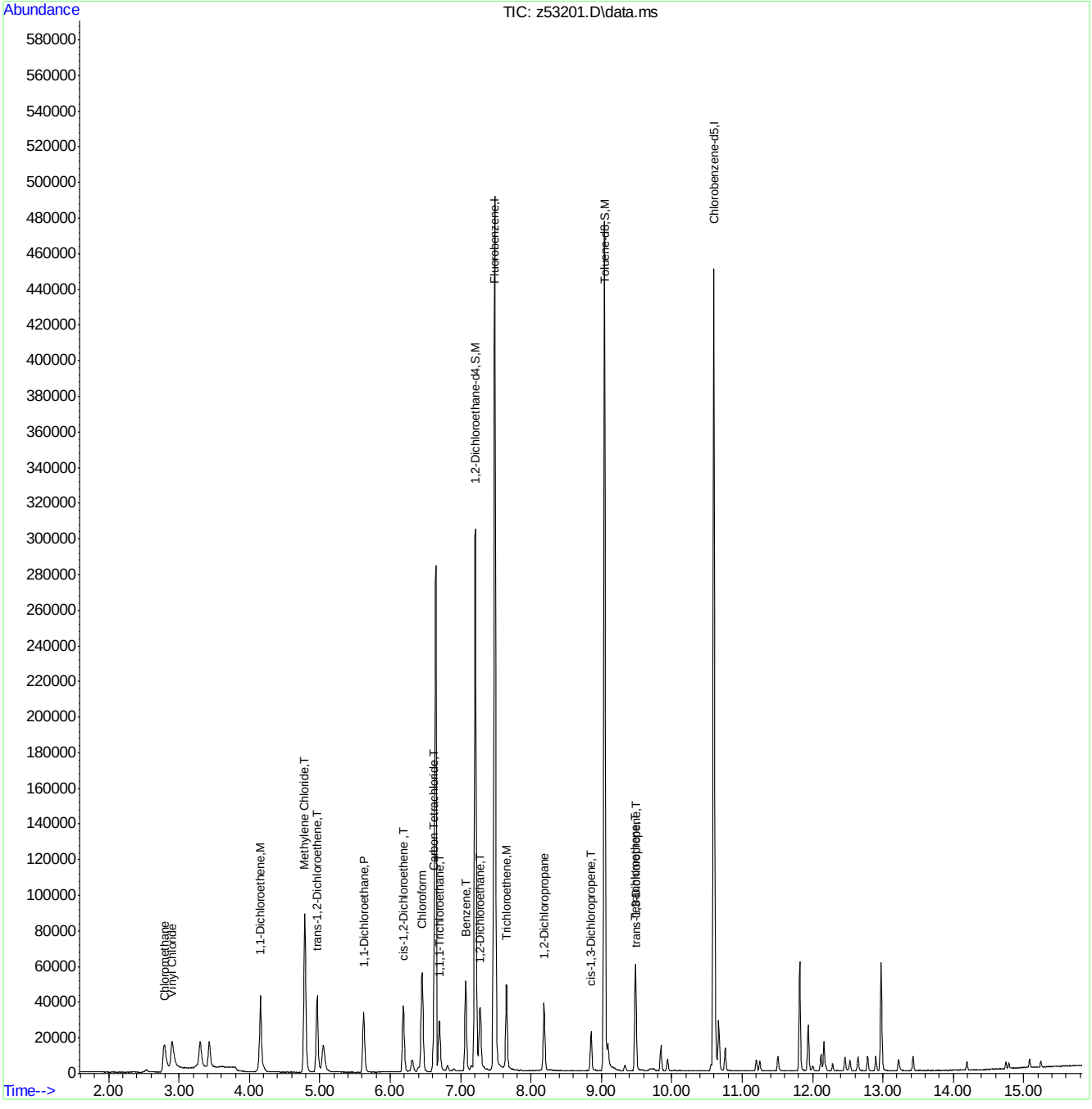
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	5746162	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	4150286	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2566114	5.42	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 108.40%				
19) Toluene-d8	9.044	98	4277458	5.35	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 107.00%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	377239	0.61	ppb		79
3) Chloromethane	2.790	50	361032	0.67	ppb		99
4) 1,1-Dichloroethene	4.159	96	217979	0.55	ppb		99
5) Methylene Chloride	4.785	84	595048	1.00	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	245624	0.55	ppb		98
7) 1,1-Dichloroethane	5.622	63	468906	0.57	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	232808	0.53	ppb		98
9) Chloroform	6.454	83	542906	0.59	ppb		100
10) Carbon Tetrachloride	6.626	117	365433	0.56	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	399995	0.55	ppb	#	100
12) Benzene	7.076	78	752036	0.52	ppb		98
14) 1,2-Dichloroethane	7.279	62	340102	0.55	ppb		99
15) Trichloroethene	7.646	95	230405	0.50	ppb	#	98
16) 1,2-Dichloropropane	8.184	63	204001	0.53	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	177794	0.55	ppb		99
20) trans-1,3-Dichloropropene	9.492	75	136164	0.38	ppb		100
21) Tetrachloroethene	9.483	166	200922	0.51	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53201.D
Acq On : 26 Jul 2018 10:09 am
Operator : melissam
Sample : IC2005-2 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 14:53:46 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53202.D
Acq On : 26 Jul 2018 10:31 am
Operator : melissam
Sample : IC2005-3 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 27 14:53:48 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

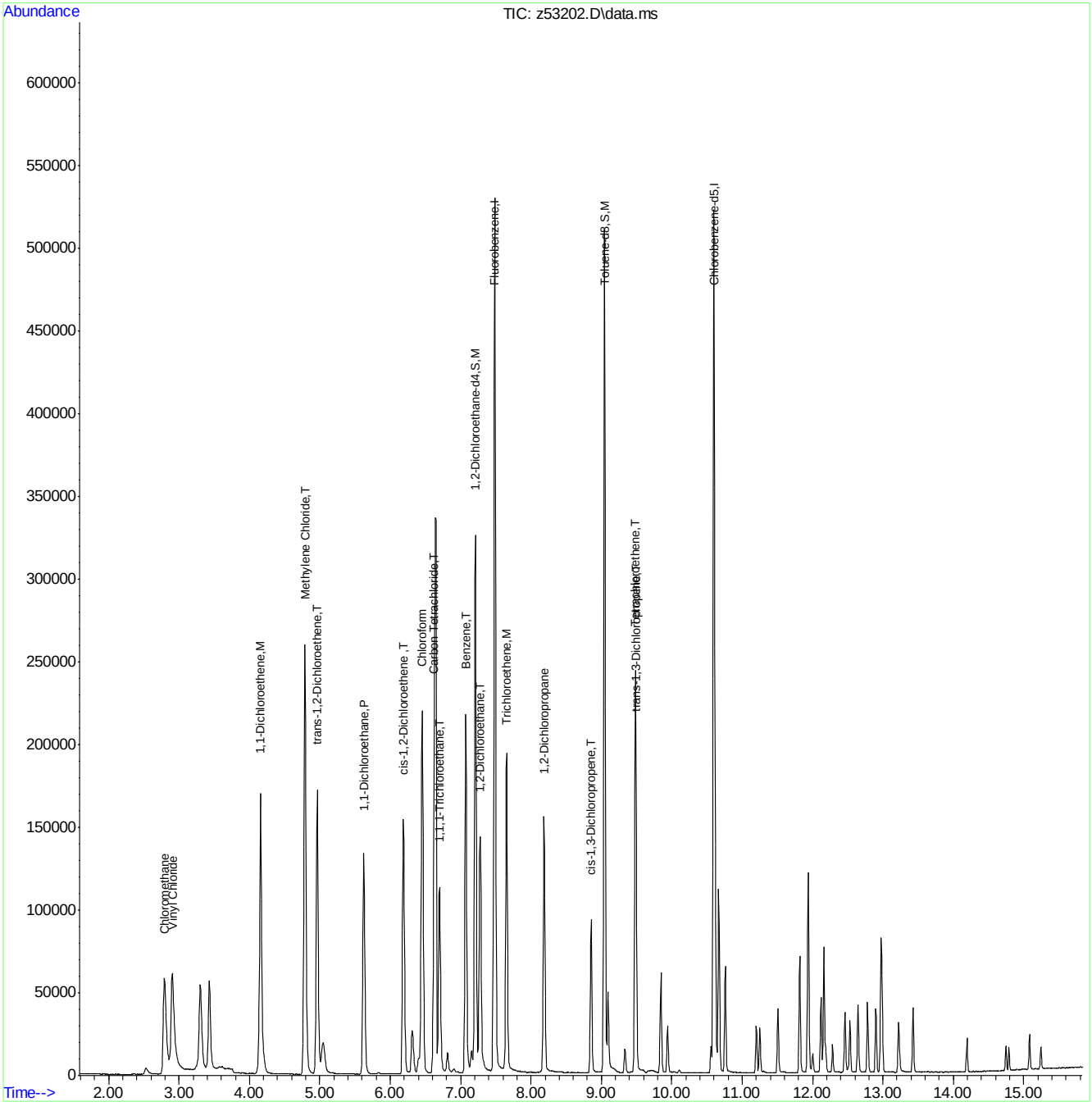
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6154646	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	4560171	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2652315	5.23	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery	=	104.60%		
19) Toluene-d8	9.044	98	4544907	5.18	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery	=	103.60%		
Target Compounds							Qvalue
2) Vinyl Chloride	2.907	62	1449242	2.22	ppb		93
3) Chloromethane	2.793	50	1309539	2.29	ppb		99
4) 1,1-Dichloroethene	4.159	96	888016	2.10	ppb		99
5) Methylene Chloride	4.788	84	1742283	2.76	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	958416	2.01	ppb		99
7) 1,1-Dichloroethane	5.622	63	1865853	2.11	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	933298	2.00	ppb		100
9) Chloroform	6.454	83	2128754	2.17	ppb		100
10) Carbon Tetrachloride	6.626	117	1461234	2.09	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	1605372	2.06	ppb	#	100
12) Benzene	7.075	78	3160768	2.03	ppb		99
14) 1,2-Dichloroethane	7.279	62	1396364	2.10	ppb		100
15) Trichloroethene	7.646	95	937701	1.91	ppb	#	98
16) 1,2-Dichloropropane	8.188	63	830520	2.03	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	731930	1.84	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	611959	1.56	ppb		99
21) Tetrachloroethene	9.483	166	813692	1.92	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53202.D
Acq On : 26 Jul 2018 10:31 am
Operator : melissam
Sample : IC2005-3 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 27 14:53:48 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



SIMCL072618.M Fri Jul 27 15:30:56 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53203.D
Acq On : 26 Jul 2018 10:52 am
Operator : melissam
Sample : IC2005-4 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 27 14:53:50 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

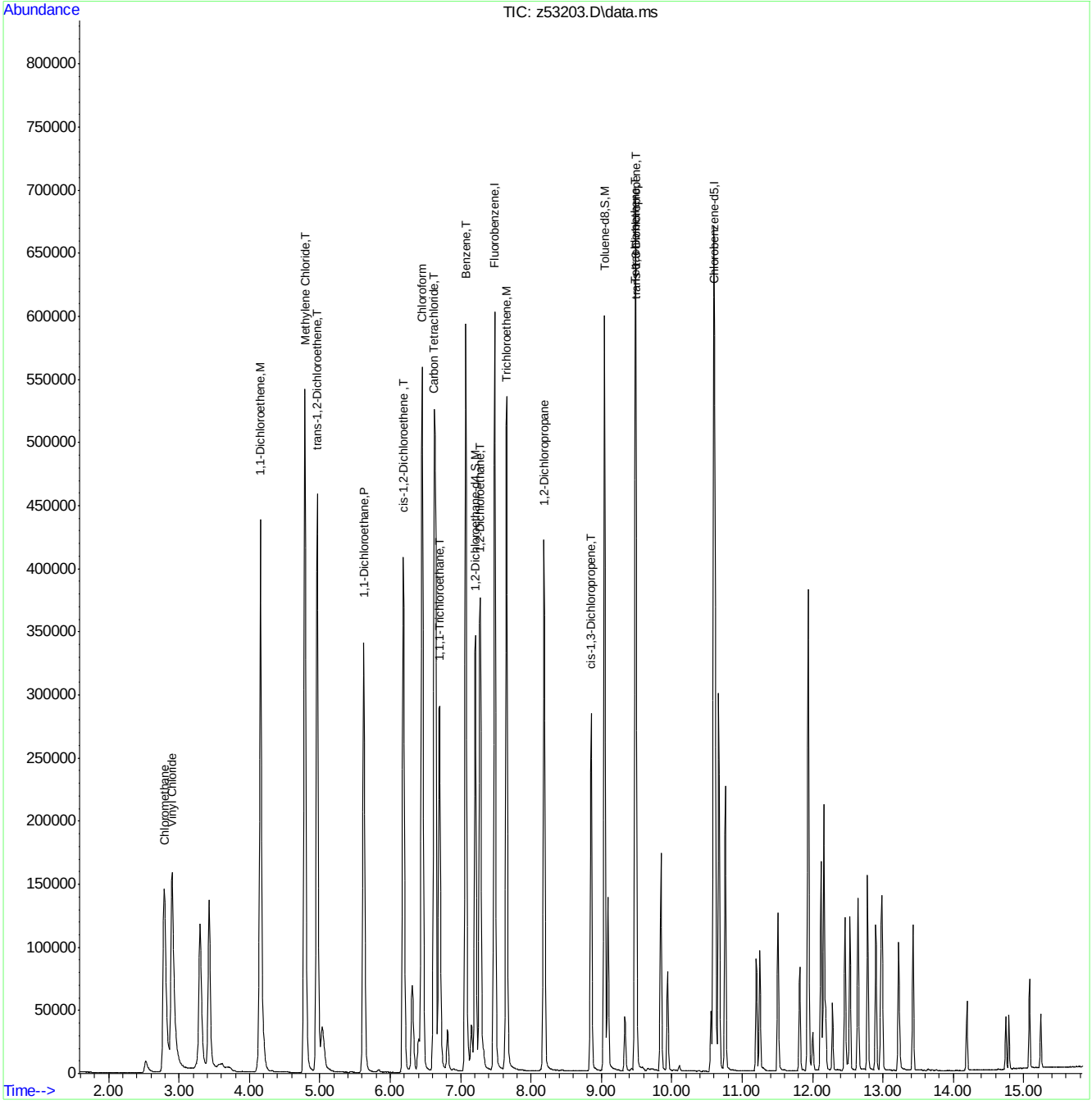
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6909387	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5517072	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2842961	5.00	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 100.00%				
19) Toluene-d8	9.044	98	5264244	4.96	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	3641283	5.05	ppb		98
3) Chloromethane	2.790	50	3220420	5.09	ppb		100
4) 1,1-Dichloroethene	4.155	96	2218686	4.68	ppb		99
5) Methylene Chloride	4.788	84	3575673	5.15	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	2511831	4.69	ppb		100
7) 1,1-Dichloroethane	5.622	63	4732020	4.76	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	2484785	4.73	ppb		99
9) Chloroform	6.454	83	5408459	4.96	ppb		100
10) Carbon Tetrachloride	6.626	117	3759793	4.79	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	4095251	4.69	ppb		100
12) Benzene	7.075	78	8625691	4.94	ppb		99
14) 1,2-Dichloroethane	7.279	62	3718312	4.97	ppb		100
15) Trichloroethene	7.646	95	2571392	4.67	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	2249147	4.89	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	2265545	4.82	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	1986188	4.29	ppb		99
21) Tetrachloroethene	9.483	166	2216012	4.51	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53203.D
Acq On : 26 Jul 2018 10:52 am
Operator : melissam
Sample : IC2005-4 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 27 14:53:50 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53204.D
Acq On : 26 Jul 2018 11:13 am
Operator : melissam
Sample : ICC2005-5 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 27 14:53:52 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7581745	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6427219	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2964686	4.75	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 95.00%				
19) Toluene-d8	9.041	98	6024045	4.87	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 97.40%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	7561518	9.80	ppb		100
3) Chloromethane	2.786	50	6723435	9.95	ppb		100
4) 1,1-Dichloroethene	4.151	96	4745516	9.12	ppb		100
5) Methylene Chloride	4.785	84	7129496	9.72	ppb		100
6) trans-1,2-Dichloroethene	4.958	96	5650833	9.61	ppb		100
7) 1,1-Dichloroethane	5.622	63	10312059	9.45	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	5663453	9.83	ppb		100
9) Chloroform	6.454	83	11773525	9.97	ppb		100
10) Carbon Tetrachloride	6.626	117	8143812	9.45	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	9118893	9.52	ppb		100
12) Benzene	7.076	78	19711119	10.28	ppb		100
14) 1,2-Dichloroethane	7.279	62	8099509	9.87	ppb		100
15) Trichloroethene	7.646	95	5895945	9.77	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	5101818	10.12	ppb		100
17) cis-1,3-Dichloropropene	8.856	75	5673751	10.53	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	5158867	10.11	ppb		100
21) Tetrachloroethene	9.483	166	5052572	9.67	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

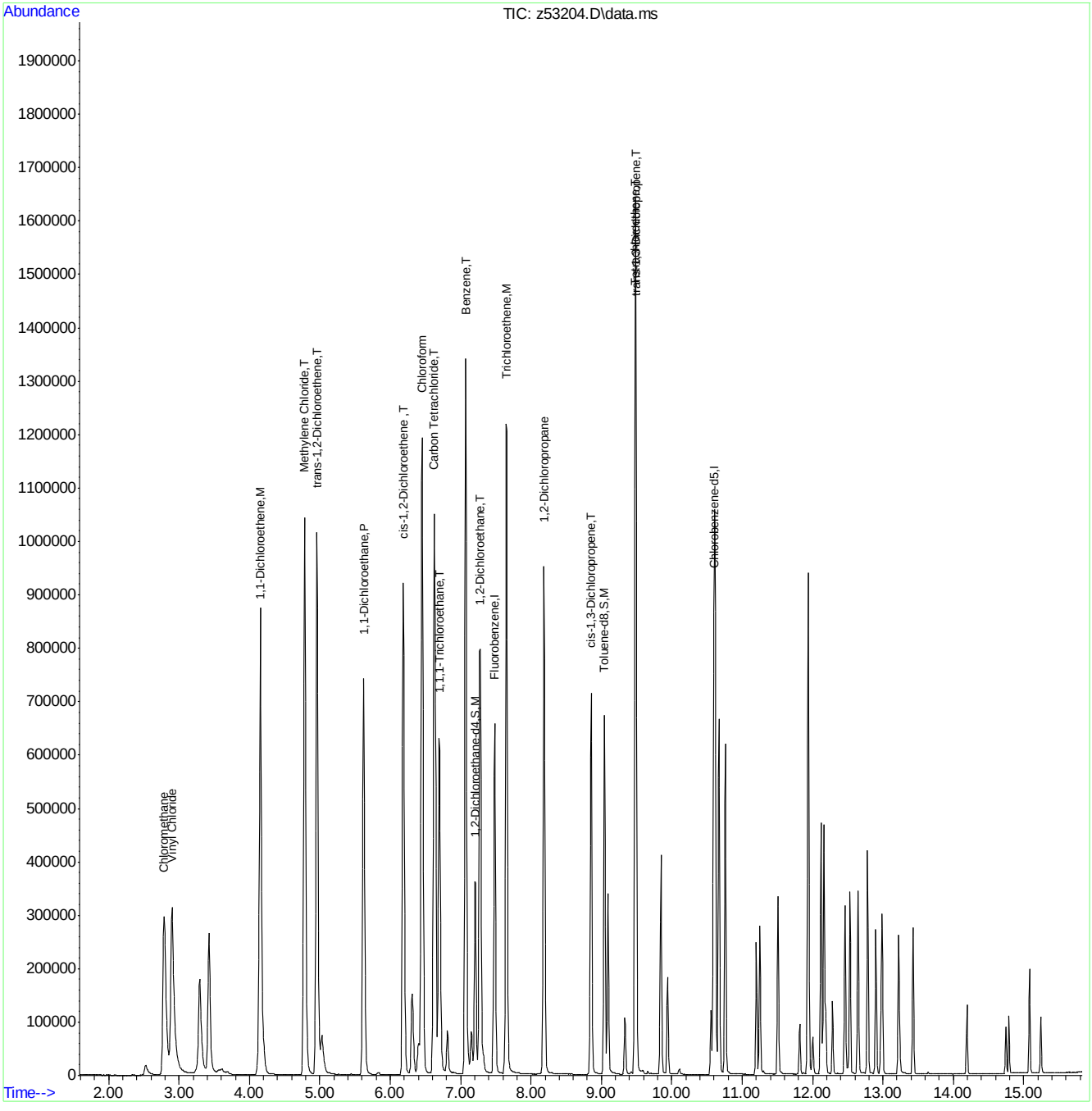
7.6.17

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53204.D
Acq On : 26 Jul 2018 11:13 am
Operator : melissam
Sample : ICC2005-5 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 27 14:53:52 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



SIMCL072618.M Fri Jul 27 15:31:00 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53205.D
Acq On : 26 Jul 2018 11:34 am
Operator : melissam
Sample : IC2005-6 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 27 14:53:54 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

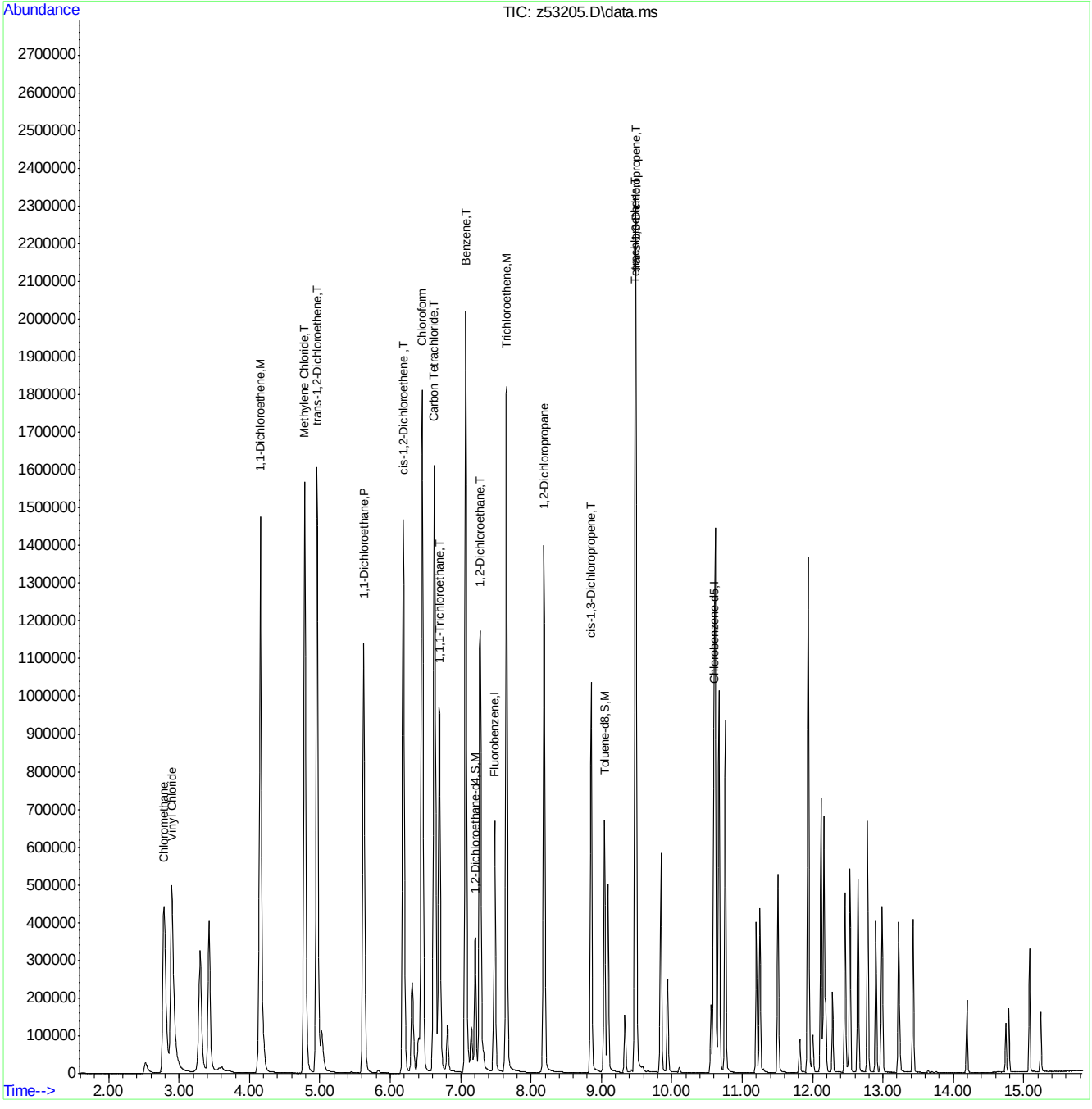
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7686742	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6205192	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2910168	4.60	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 92.00%				
19) Toluene-d8	9.044	98	6005011	5.03	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.60%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.895	62	11472499	15.09	ppb		100
3) Chloromethane	2.786	50	9835070	14.78	ppb		100
4) 1,1-Dichloroethene	4.155	96	7762775	14.72	ppb		100
5) Methylene Chloride	4.784	84	10443933	14.66	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	8874218	14.88	ppb		100
7) 1,1-Dichloroethane	5.622	63	15659268	14.15	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	8871438	15.19	ppb		100
9) Chloroform	6.454	83	17692360	14.98	ppb		100
10) Carbon Tetrachloride	6.626	117	12559533	14.37	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	14046445	14.47	ppb	#	100
12) Benzene	7.075	78	29462009	15.16	ppb		100
14) 1,2-Dichloroethane	7.279	62	11763185	14.14	ppb		99
15) Trichloroethene	7.646	95	8725596	14.26	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	7585450	14.83	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	8155004	14.55	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	7450438	16.04	ppb		100
21) Tetrachloroethene	9.483	166	7261071	16.49	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53205.D
Acq On : 26 Jul 2018 11:34 am
Operator : melissam
Sample : IC2005-6 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 27 14:53:54 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



Z53206.D

Manual Integrations APPROVED (compounds with "m" flag)

Evita Martinez 07/30/18 08:45

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53206.D
Acq On : 26 Jul 2018 11:56 am
Operator : melissam
Sample : IC2005-7 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 27 14:58:11 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7943452	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6369446m	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2970429	4.54	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 90.80%				
19) Toluene-d8	9.044	98	6346417	5.17	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 103.40%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	15291772	20.00	ppb		99
3) Chloromethane	2.790	50	13405309	20.13	ppb		100
4) 1,1-Dichloroethene	4.155	96	10429053	19.13	ppb		100
5) Methylene Chloride	4.788	84	14180568	20.28	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	12421853	20.16	ppb		99
7) 1,1-Dichloroethane	5.622	63	21389043	18.71	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	12476034	20.66	ppb		100
9) Chloroform	6.454	83	24083234	20.02	ppb		99
10) Carbon Tetrachloride	6.626	117	17318529	19.18	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	19072455	19.01	ppb		100
12) Benzene	7.075	78	39849369	19.84	ppb		99
14) 1,2-Dichloroethane	7.279	62	15919709	18.52	ppb		99
15) Trichloroethene	7.652	95	11938681	18.88	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	10346033	19.58	ppb		98
17) cis-1,3-Dichloropropene	8.856	75	12051110	20.13	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	10756780	24.80	ppb		100
21) Tetrachloroethene	9.483	166	9832278	Below Cal			100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

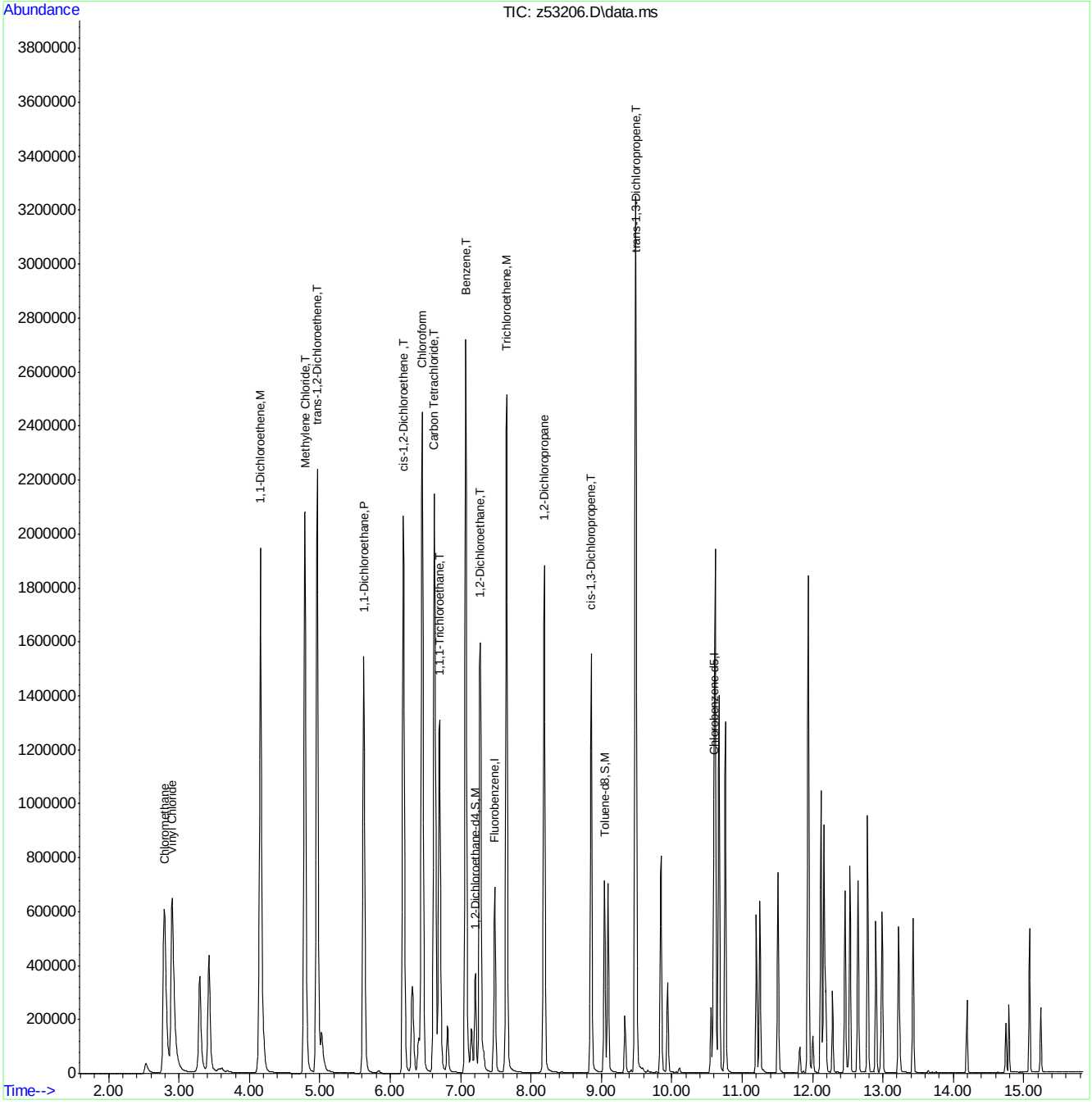
7.6.19

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53206.D
Acq On : 26 Jul 2018 11:56 am
Operator : melissam
Sample : IC2005-7 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 27 14:58:11 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration



SIMCL072618.M Fri Jul 27 15:31:04 2018 Page: 2

Manual Integration Approval Summary

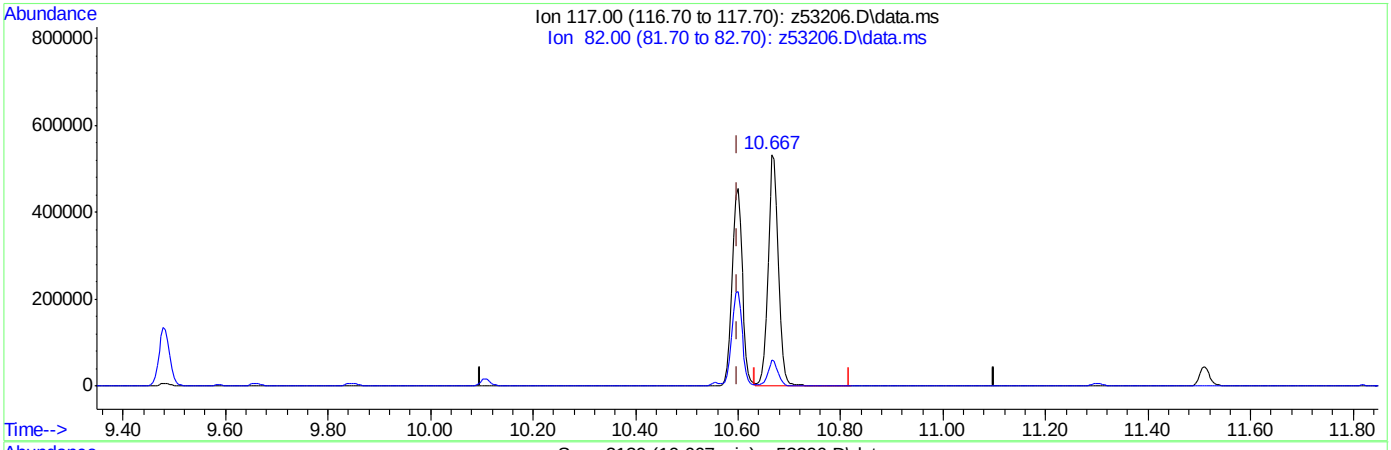
Sample Number:	VZ2005-IC2005	**Method:**	SW846 8260B BY SIM
Lab FileID:	Z53206.D	**Analyst approved:**	07/27/18 15:28 Melissa Mangual
Injection Time:	07/26/18 11:56	**Supervisor approved:**	07/30/18 08:45 Evita Martinez

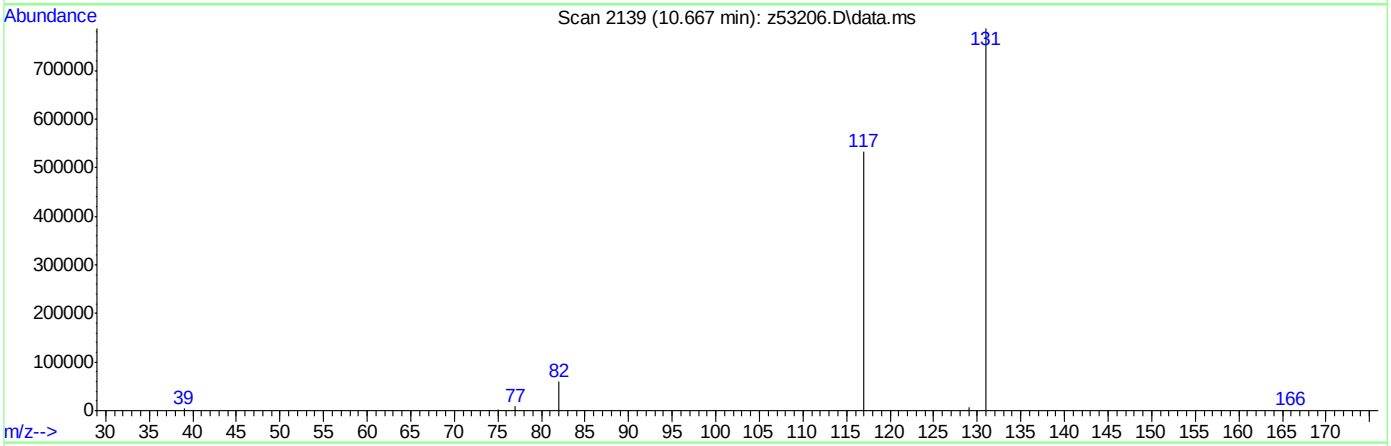
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlorobenzene-D5	3114-55-4		10.60	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53206.D
Acq On : 26 Jul 2018 11:56 am
Operator : melissam
Sample : IC2005-7 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 27 14:53:56 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration





TIC: z53206.D\data.ms

(18) Chlorobenzene-d5 (I)

10.667min (+0.068) 5.00ppb

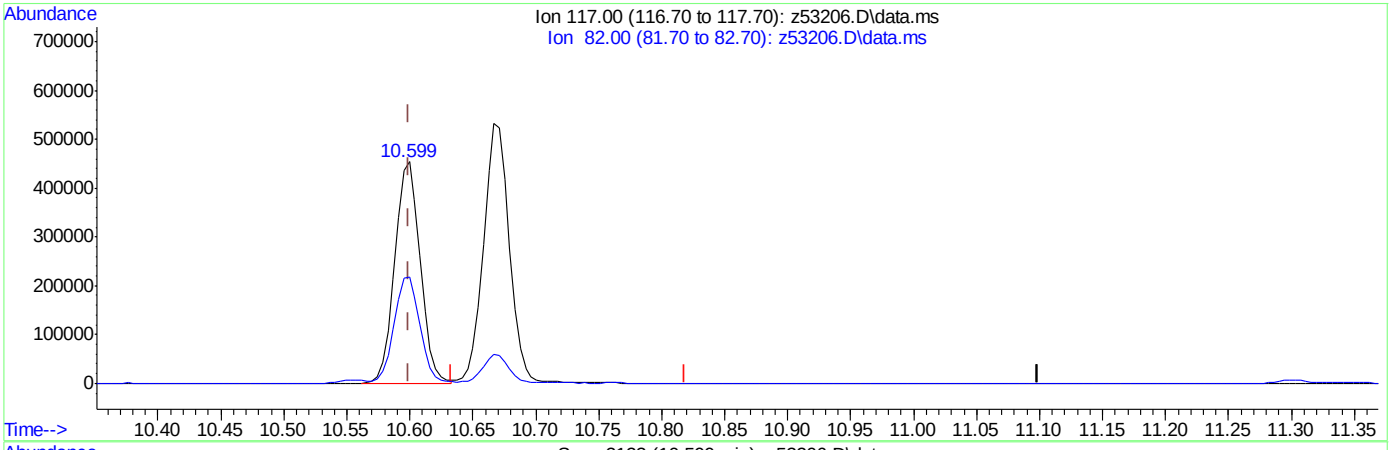
response 7678358

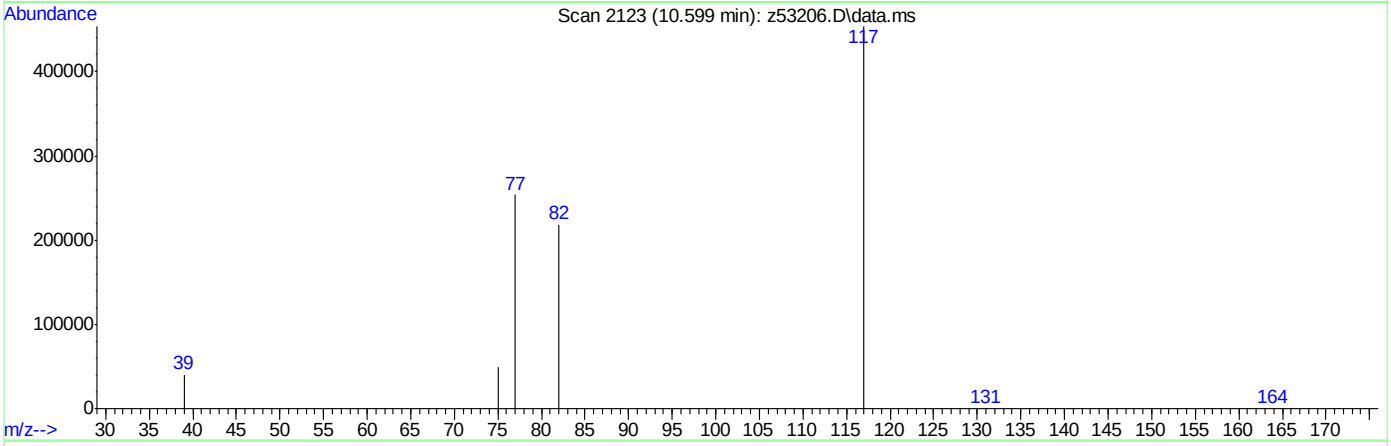
Ion	Exp%	Act%
117.00	100	100
82.00	48.40	11.02#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53206.D
Acq On : 26 Jul 2018 11:56 am
Operator : melissam
Sample : IC2005-7 Inst : MSVOA15
Misc : ms40817,vz2005,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 27 14:53:56 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Jul 26 12:17:38 2018
Response via : Initial Calibration





TIC: z53206.D\data.ms

(18) Chlorobenzene-d5 (I)

10.599min (+0.000) 5.00ppb m

response 6369446

Ion	Exp%	Act%
117.00	100	100
82.00	48.40	13.28#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53209.D
Acq On : 26 Jul 2018 1:30 pm
Operator : melissam
Sample : icv2005-5 Inst : MSVOA15
Misc : MS40817,VZ2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 15:00:48 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

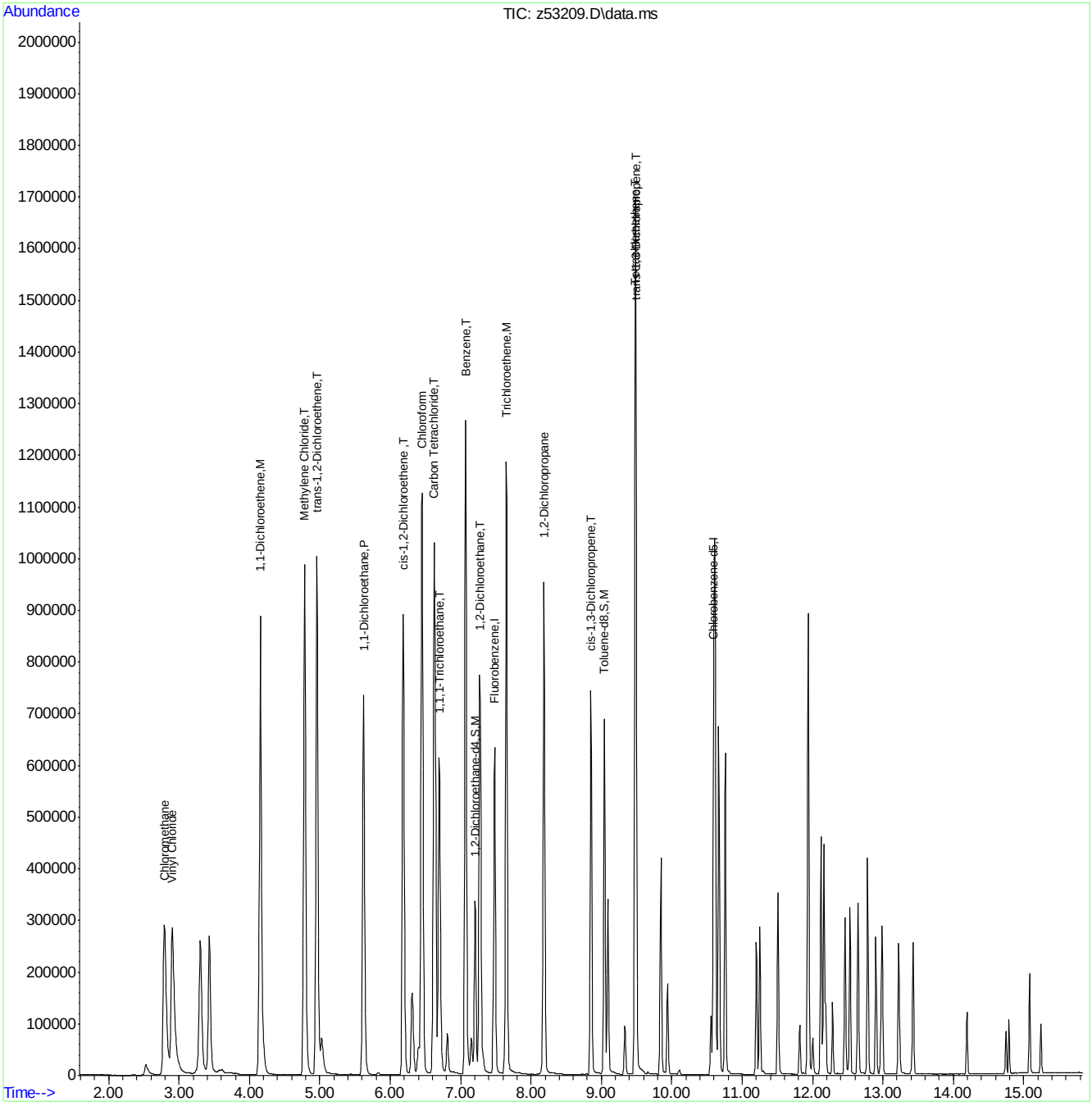
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7514500	5.00	ppb		0.00
18) Chlorobenzene-d5	10.595	117	6254728	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	2771051	4.48	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 89.60%				
19) Toluene-d8	9.040	98	6200979	5.02	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 100.40%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	7100720	9.26	ppb		100
3) Chloromethane	2.793	50	6518401	9.72	ppb		100
4) 1,1-Dichloroethene	4.155	96	4909250	9.52	ppb		97
5) Methylene Chloride	4.785	84	6901666	9.48	ppb		100
6) trans-1,2-Dichloroethene	4.958	96	5731833	9.83	ppb		99
7) 1,1-Dichloroethane	5.622	63	10386753	9.60	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	5647917	9.89	ppb		100
9) Chloroform	6.454	83	11395470	9.73	ppb		100
10) Carbon Tetrachloride	6.626	117	8142722	9.53	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	9013205	9.50	ppb		100
12) Benzene	7.075	78	19353233	10.18	ppb		100
14) 1,2-Dichloroethane	7.272	62	7760785	9.54	ppb		99
15) Trichloroethene	7.646	95	5690340	9.51	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	5165364	10.33	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	5952766	11.10	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	5801724	11.75	ppb		100
21) Tetrachloroethene	9.483	166	5127908	10.36	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\072618\
Data File : z53209.D
Acq On : 26 Jul 2018 1:30 pm
Operator : melissam
Sample : icv2005-5 Inst : MSVOA15
Misc : MS40817,VZ2005,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 15:00:48 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL072618.M Fri Jul 27 15:31:10 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : z53225.D
Acq On : 2 Aug 2018 2:39 pm
Operator : melissam
Sample : cc2005-5 Inst : MSVOA15
Misc : ms40817,vz2006,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 06:51:21 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

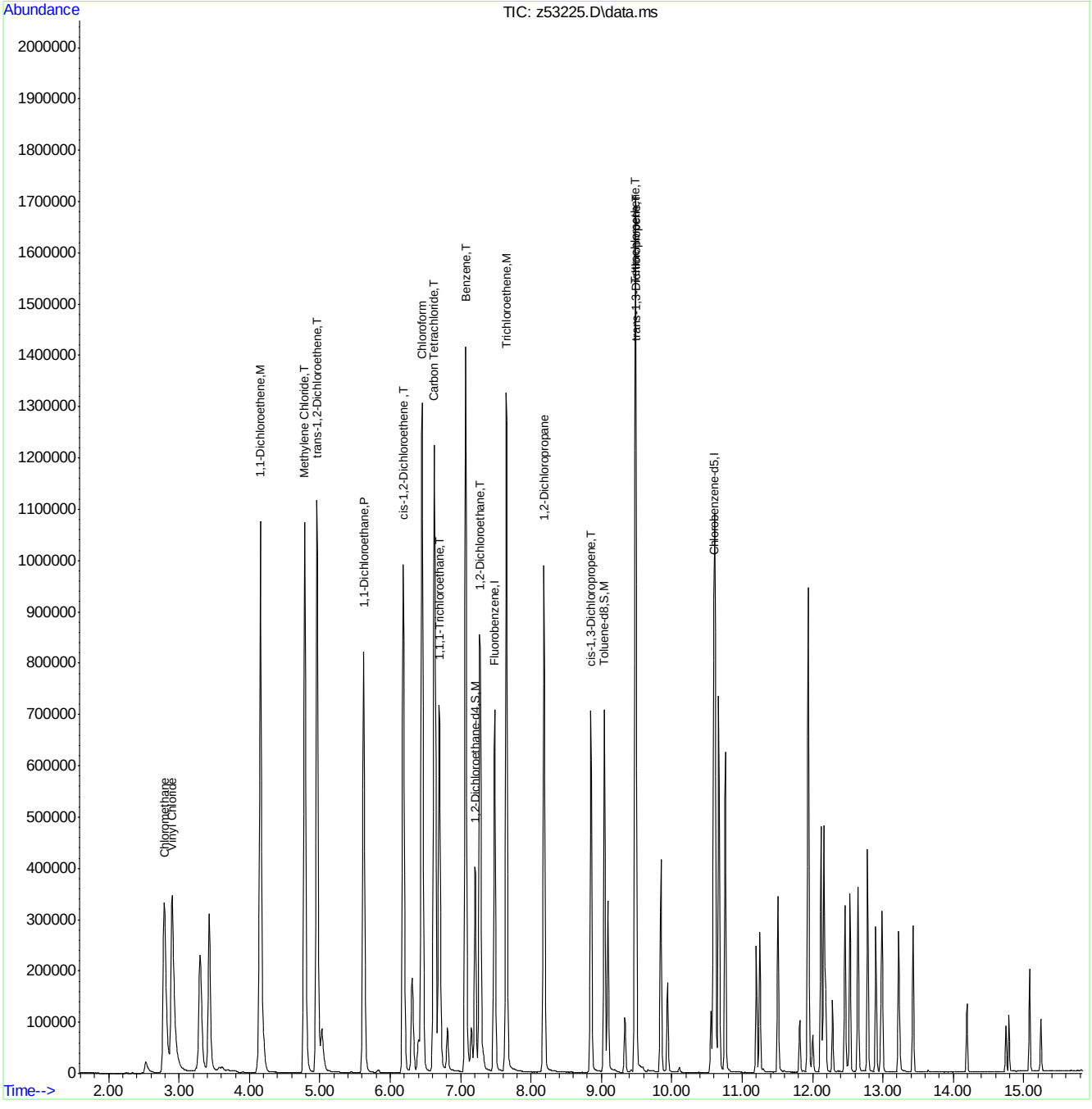
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	8196964	5.00	ppb		0.00
18) Chlorobenzene-d5	10.600	117	6784295	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.205	65	3287714	4.87	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 97.40%				
19) Toluene-d8	9.041	98	6350075	4.74	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	8200035	9.83	ppb		99
3) Chloromethane	2.790	50	7306764	10.01	ppb		100
4) 1,1-Dichloroethene	4.155	96	5584767	9.93	ppb		99
5) Methylene Chloride	4.785	84	7251660	9.11	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	6259591	9.84	ppb		99
7) 1,1-Dichloroethane	5.622	63	11288451	9.57	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	6152794	9.88	ppb		99
9) Chloroform	6.454	83	12971410	10.17	ppb		100
10) Carbon Tetrachloride	6.626	117	9391427	10.08	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	10198018	9.85	ppb		100
12) Benzene	7.076	78	21081275	10.17	ppb		99
14) 1,2-Dichloroethane	7.272	62	8569409	9.66	ppb		99
15) Trichloroethene	7.646	95	6296708	9.65	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	5345944	9.80	ppb		99
17) cis-1,3-Dichloropropene	8.852	75	5657537	9.76	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	5120306	9.73	ppb		100
21) Tetrachloroethene	9.483	166	5349190	9.96	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : z53225.D
Acq On : 2 Aug 2018 2:39 pm
Operator : melissam
Sample : cc2005-5 Inst : MSVOA15
Misc : ms40817,vz2006,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 06:51:21 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL080618.M Tue Aug 07 07:42:11 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53247.D
Acq On : 3 Aug 2018 12:02 am
Operator : melissam
Sample : ECC2005-5 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 03 06:52:01 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

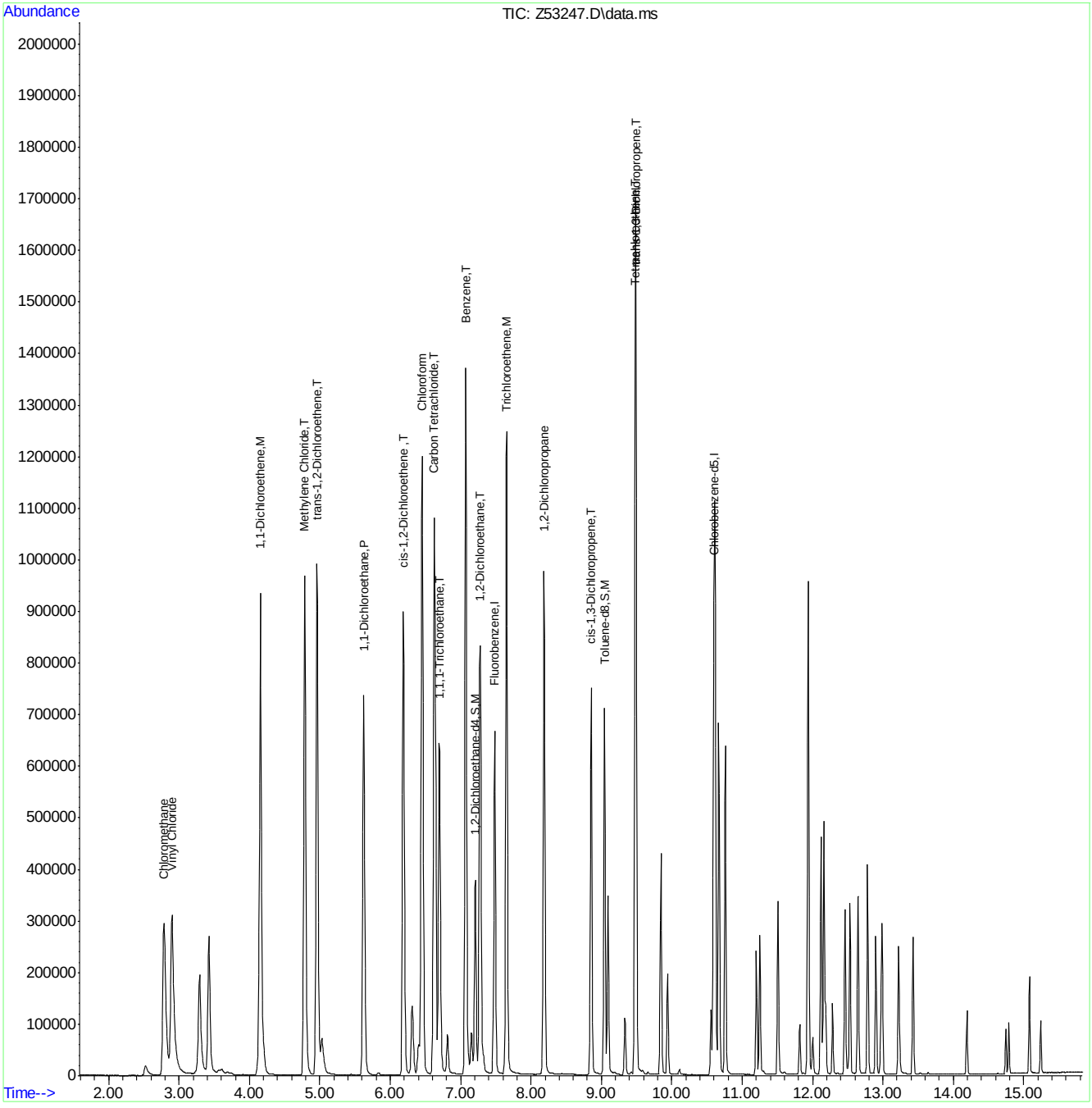
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7644063	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6867888	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	3072002	4.88	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 97.60%				
19) Toluene-d8	9.044	98	6253649	4.61	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 92.20%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	7311935	9.38	ppb		100
3) Chloromethane	2.786	50	6488486	9.50	ppb		100
4) 1,1-Dichloroethene	4.155	96	4805665	9.16	ppb		99
5) Methylene Chloride	4.785	84	6494094	8.72	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	5556336	9.37	ppb		100
7) 1,1-Dichloroethane	5.622	63	10200576	9.27	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	5460694	9.40	ppb		100
9) Chloroform	6.454	83	11772448	9.89	ppb		100
10) Carbon Tetrachloride	6.626	117	8275312	9.52	ppb		98
11) 1,1,1-Trichloroethane	6.695	97	9167420	9.49	ppb		100
12) Benzene	7.076	78	19787266	10.24	ppb		100
14) 1,2-Dichloroethane	7.279	62	8299303	10.03	ppb		99
15) Trichloroethene	7.646	95	5956055	9.79	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	5226897	10.28	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	5861493	10.77	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	5553926	10.37	ppb		100
21) Tetrachloroethene	9.483	166	5226844	9.60	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080218\
Data File : Z53247.D
Acq On : 3 Aug 2018 12:02 am
Operator : melissam
Sample : ECC2005-5 Inst : MSVOA15
Misc : MS40952,VZ2006,,,,,
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 03 06:52:01 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL072618.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL080618.M Tue Aug 07 07:42:25 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53342.D
Acq On : 9 Aug 2018 9:48 am
Operator : melissam
Sample : ic2011-1 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 09:46:12 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

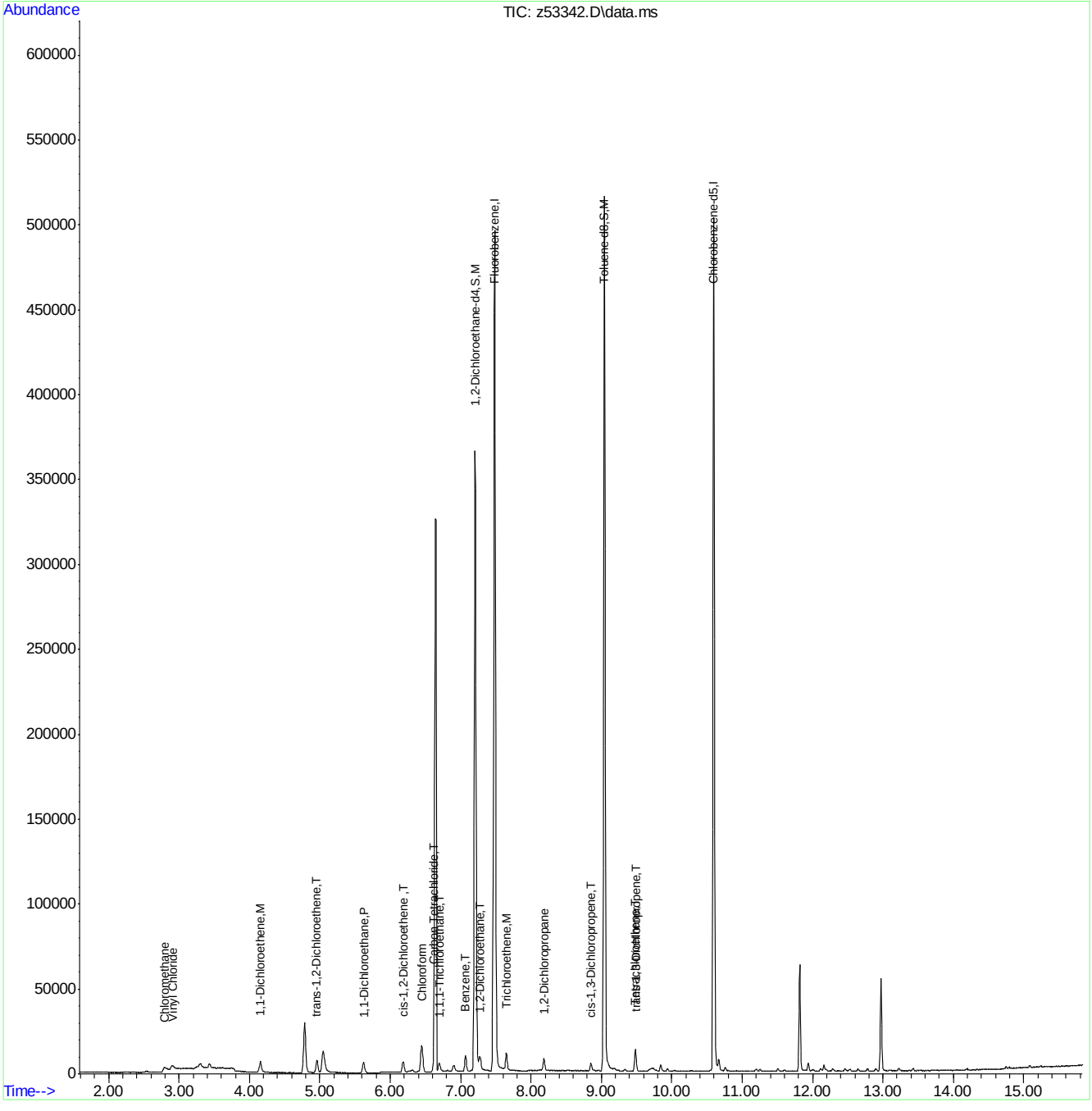
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	5910649	5.00	ppb		0.00
18) Chlorobenzene-d5	10.595	117	4672781	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	3099671	6.37	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 127.40%#				
19) Toluene-d8	9.041	98	4674289	5.07	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 101.40%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.907	62	48365	0.08	ppb		73
3) Chloromethane	2.794	50	58630	0.11	ppb	#	54
4) 1,1-Dichloroethene	4.155	96	41147	0.10	ppb	#	85
6) trans-1,2-Dichloroethene	4.954	96	45994	0.10	ppb		90
7) 1,1-Dichloroethane	5.622	63	88616	0.10	ppb	#	96
8) cis-1,2-Dichloroethene	6.187	96	42373	0.09	ppb		94
9) Chloroform	6.448	83	135301	0.14	ppb		98
10) Carbon Tetrachloride	6.620	117	69965	0.10	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	75792	0.10	ppb		99
12) Benzene	7.069	78	142505	0.10	ppb		99
14) 1,2-Dichloroethane	7.272	62	76074	0.12	ppb		99
15) Trichloroethene	7.646	95	51769	0.11	ppb	#	96
16) 1,2-Dichloropropane	8.180	63	40892	0.10	ppb		98
17) cis-1,3-Dichloropropene	8.852	75	40720	0.19	ppb		97
20) trans-1,3-Dichloropropene	9.491	75	32591	0.10	ppb		99
21) Tetrachloroethene	9.479	166	43768	0.12	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53342.D
Acq On : 9 Aug 2018 9:48 am
Operator : melissam
Sample : ic2011-1 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 10 09:46:12 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53343.D
Acq On : 9 Aug 2018 10:13 am
Operator : melissam
Sample : ic2011-2 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 09 13:03:53 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

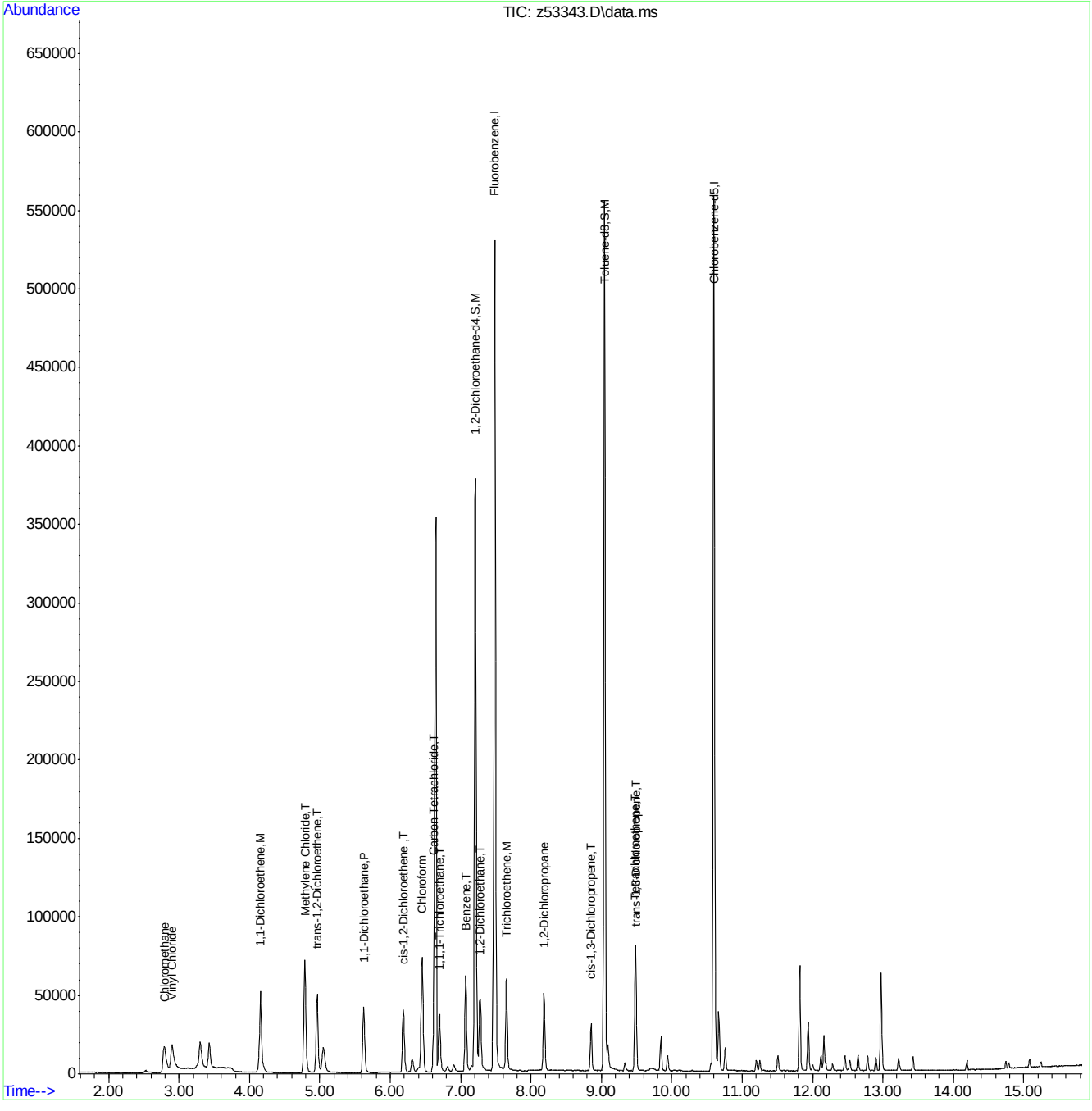
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6125474	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5052445	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	3211207	6.37	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 127.40%#				
19) Toluene-d8	9.044	98	4942977	4.96	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.20%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	381455	0.58	ppb		97
3) Chloromethane	2.790	50	389174	0.68	ppb		98
4) 1,1-Dichloroethene	4.155	96	273769	0.65	ppb		99
5) Methylene Chloride	4.788	84	491748	0.77	ppb		98
6) trans-1,2-Dichloroethene	4.962	96	277524	0.58	ppb		99
7) 1,1-Dichloroethane	5.622	63	579764	0.66	ppb	#	98
8) cis-1,2-Dichloroethene	6.187	96	250264	0.54	ppb		100
9) Chloroform	6.454	83	706326	0.72	ppb		98
10) Carbon Tetrachloride	6.626	117	490058	0.70	ppb		99
11) 1,1,1-Trichloroethane	6.702	97	522142	0.67	ppb		100
12) Benzene	7.075	78	896850	0.58	ppb		98
14) 1,2-Dichloroethane	7.279	62	450771	0.68	ppb		99
15) Trichloroethene	7.646	95	289678	0.59	ppb	#	95
16) 1,2-Dichloropropane	8.184	63	261829	0.64	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	244931	0.68	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	205737	0.57	ppb		98
21) Tetrachloroethene	9.483	166	269468	0.66	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53343.D
Acq On : 9 Aug 2018 10:13 am
Operator : melissam
Sample : ic2011-2 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 09 13:03:53 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53344.D
Acq On : 9 Aug 2018 10:38 am
Operator : melissam
Sample : ic2011-3 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 13:03:55 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

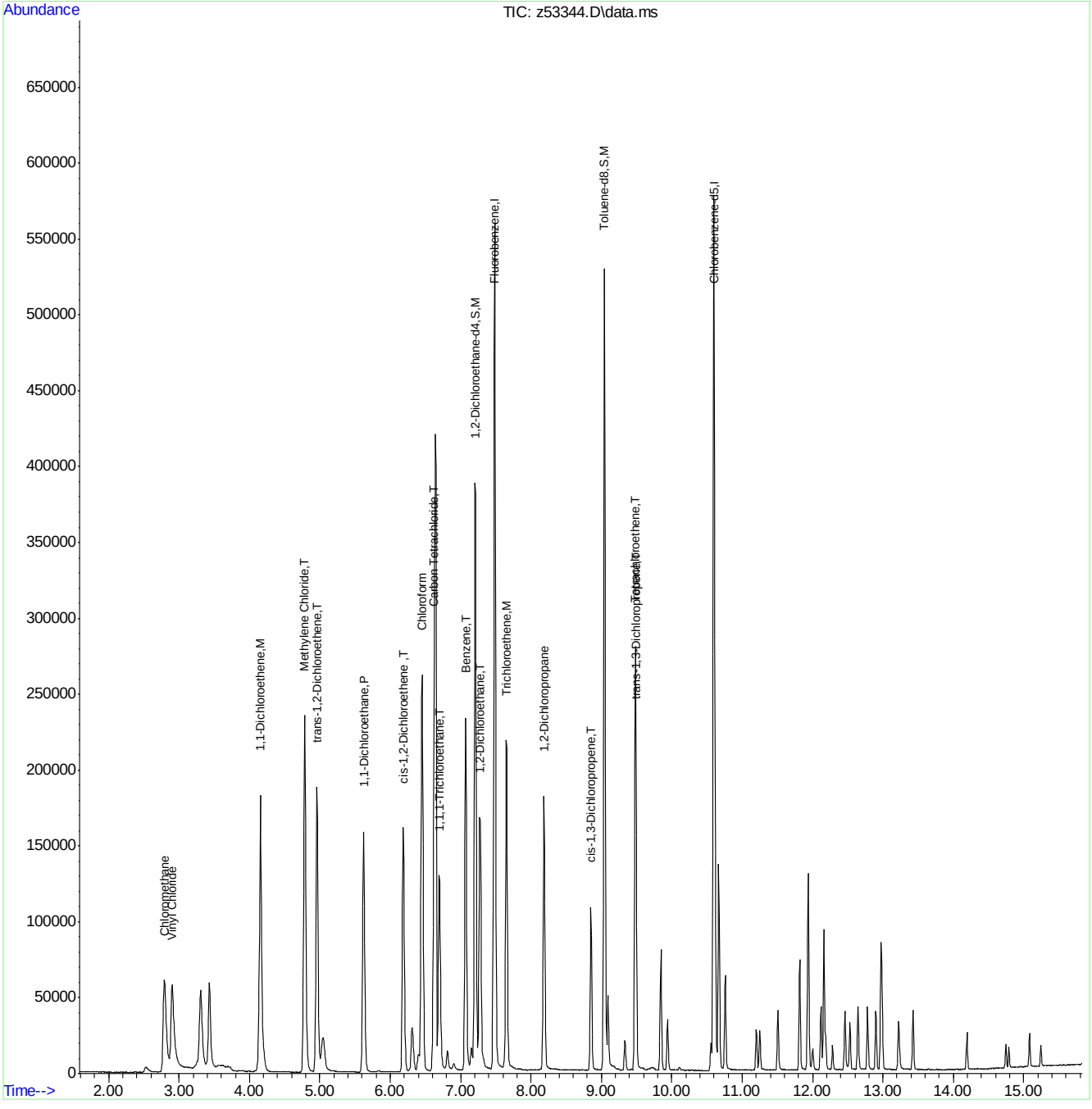
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6509574	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5073128	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.205	65	3298530	6.16	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 123.20%				
19) Toluene-d8	9.041	98	4746965	4.74	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	1345344	1.95	ppb		96
3) Chloromethane	2.790	50	1394317	2.30	ppb		99
4) 1,1-Dichloroethene	4.155	96	1017269	2.28	ppb		99
5) Methylene Chloride	4.785	84	1644451	2.46	ppb		99
6) trans-1,2-Dichloroethene	4.958	96	1066312	2.11	ppb		99
7) 1,1-Dichloroethane	5.622	63	2219901	2.37	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	1006105	2.03	ppb		99
9) Chloroform	6.454	83	2606456	2.52	ppb		99
10) Carbon Tetrachloride	6.626	117	1771424	2.39	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	1899444	2.31	ppb		100
12) Benzene	7.076	78	3540858	2.15	ppb		98
14) 1,2-Dichloroethane	7.272	62	1693425	2.40	ppb		100
15) Trichloroethene	7.646	95	1069702	2.06	ppb	#	97
16) 1,2-Dichloropropane	8.184	63	963675	2.23	ppb		99
17) cis-1,3-Dichloropropene	8.852	75	869125	2.05	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	738534	2.01	ppb		98
21) Tetrachloroethene	9.483	166	924979	2.26	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53344.D
Acq On : 9 Aug 2018 10:38 am
Operator : melissam
Sample : ic2011-3 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 09 13:03:55 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53345.D
Acq On : 9 Aug 2018 11:03 am
Operator : melissam
Sample : ic2011-4 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 09 13:03:57 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

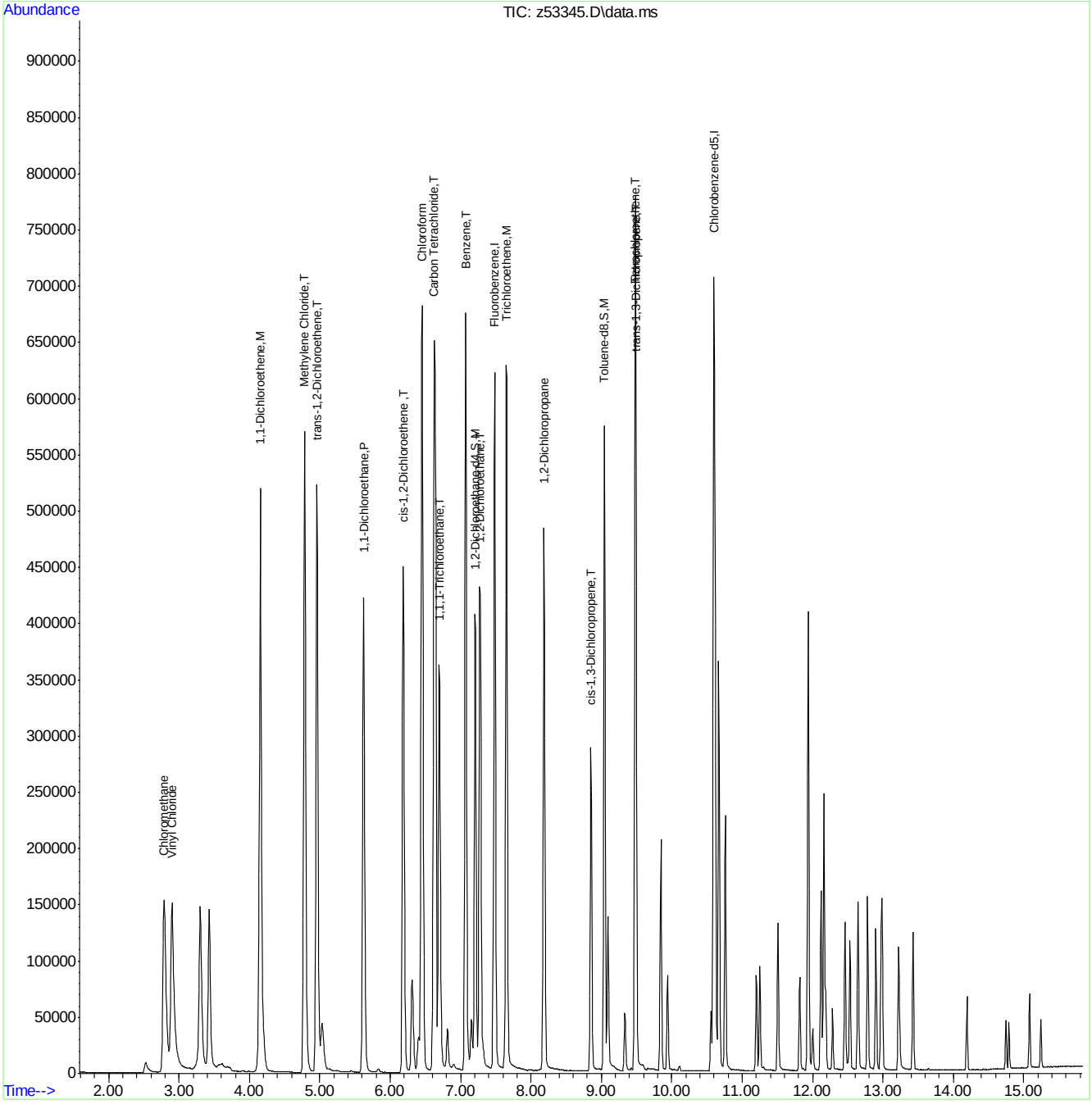
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7220341	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	5877747	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.204	65	3343356	5.63	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 112.60%				
19) Toluene-d8	9.041	98	5143849	4.43	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.60%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	3567479	4.73	ppb		100
3) Chloromethane	2.786	50	3441106	5.21	ppb		99
4) 1,1-Dichloroethene	4.155	96	2779207	5.61	ppb		98
5) Methylene Chloride	4.785	84	3920369	5.42	ppb		99
6) trans-1,2-Dichloroethene	4.958	96	2954977	5.28	ppb		99
7) 1,1-Dichloroethane	5.622	63	5849110	5.63	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	2790619	5.09	ppb		99
9) Chloroform	6.454	83	6789128	5.97	ppb		99
10) Carbon Tetrachloride	6.626	117	4800976	5.85	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	5161031	5.66	ppb		100
12) Benzene	7.075	78	10024444	5.49	ppb		98
14) 1,2-Dichloroethane	7.272	62	4377256	5.60	ppb		99
15) Trichloroethene	7.646	95	3008344	5.23	ppb	#	98
16) 1,2-Dichloropropane	8.184	63	2567950	5.35	ppb		100
17) cis-1,3-Dichloropropene	8.856	75	2332553	4.75	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	2066920	4.73	ppb		100
21) Tetrachloroethene	9.483	166	2522871	5.35	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53345.D
Acq On : 9 Aug 2018 11:03 am
Operator : melissam
Sample : ic2011-4 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 09 13:03:57 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53346.D
Acq On : 9 Aug 2018 11:28 am
Operator : melissam
Sample : icc2011-5 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 09 13:03:59 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	8256078	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	7288040	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	3525303	5.19	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 103.80%				
19) Toluene-d8	9.044	98	6308067	4.38	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 87.60%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	7647985	9.07	ppb		99
3) Chloromethane	2.790	50	7206067	9.79	ppb		100
4) 1,1-Dichloroethene	4.155	96	6123565	10.81	ppb		100
5) Methylene Chloride	4.788	84	8152095	10.26	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	6747782	10.54	ppb		99
7) 1,1-Dichloroethane	5.622	63	12601017	10.60	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	6450713	10.28	ppb		99
9) Chloroform	6.454	83	14499646	11.32	ppb		100
10) Carbon Tetrachloride	6.626	117	10543157	11.23	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	11205413	10.74	ppb		100
12) Benzene	7.075	78	23217015	11.12	ppb		99
14) 1,2-Dichloroethane	7.279	62	9651435	10.80	ppb		99
15) Trichloroethene	7.646	95	7018081	10.68	ppb	#	98
16) 1,2-Dichloropropane	8.184	63	5889467	10.72	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	5946090	10.16	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	5524387	9.76	ppb		100
21) Tetrachloroethene	9.483	166	5759265	9.98	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

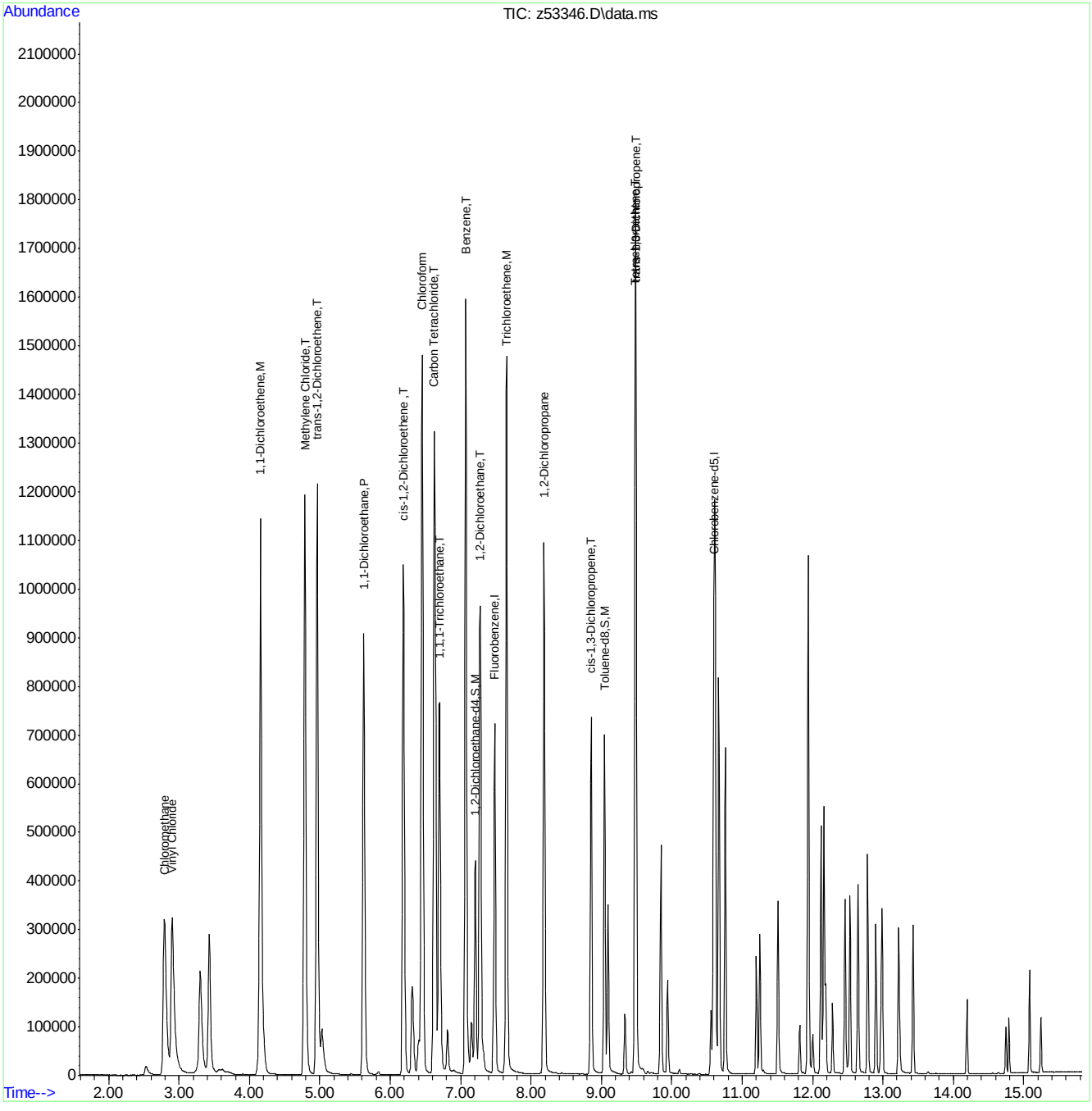
7.6.27

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53346.D
Acq On : 9 Aug 2018 11:28 am
Operator : melissam
Sample : icc2011-5 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 09 13:03:59 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL080918.M Fri Aug 10 10:49:57 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53347.D
Acq On : 9 Aug 2018 11:52 am
Operator : melissam
Sample : ic2011-6 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 09 13:04:01 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

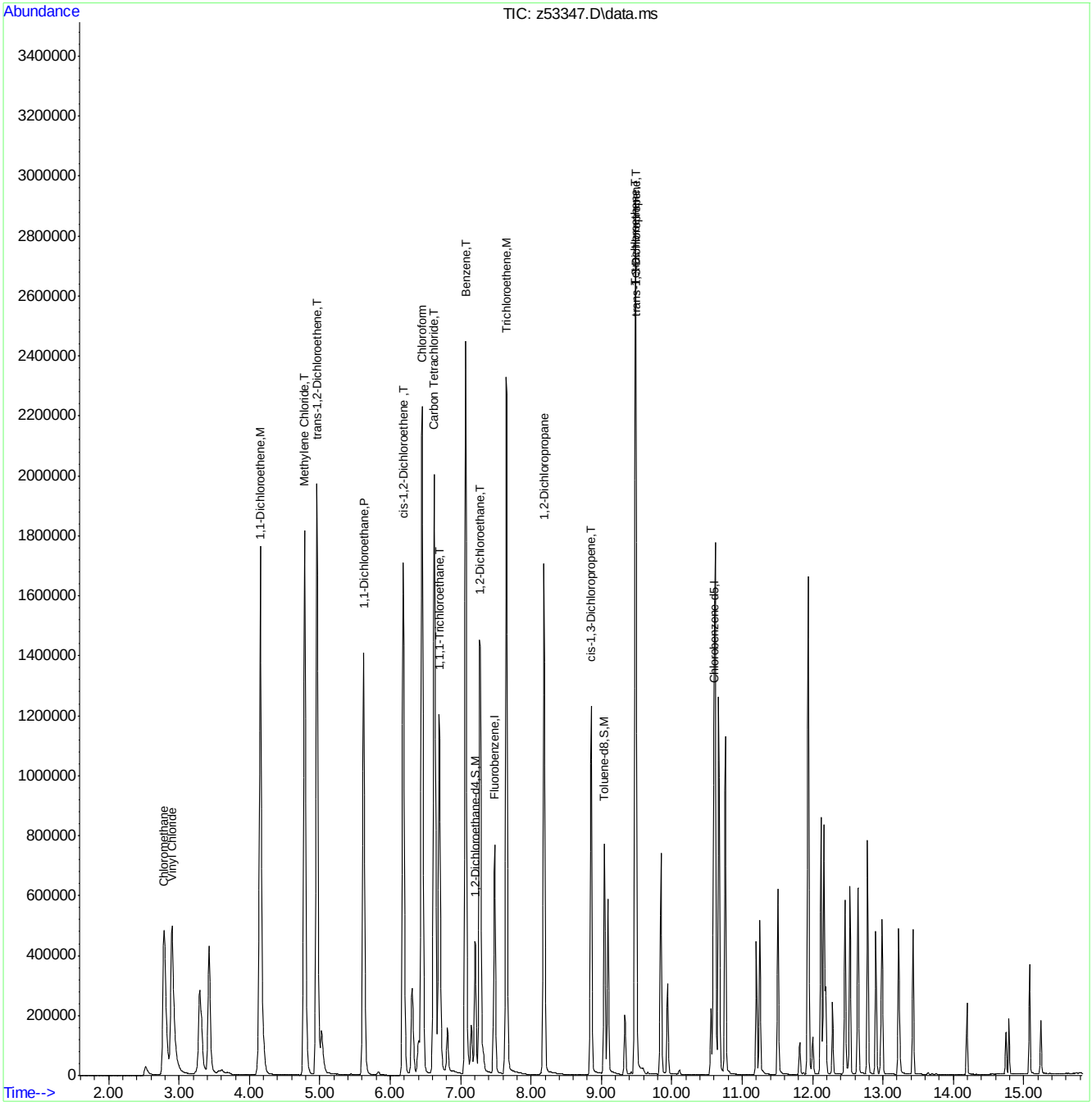
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	8867200	5.00	ppb		0.00
18) Chlorobenzene-d5	10.600	117	7826059	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.205	65	3579703	4.91	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 98.20%				
19) Toluene-d8	9.041	98	6806731	4.41	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 88.20%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	11843205	13.38	ppb		99
3) Chloromethane	2.786	50	10872253	14.10	ppb		100
4) 1,1-Dichloroethene	4.151	96	9649254	15.86	ppb		99
5) Methylene Chloride	4.785	84	12495713	15.30	ppb		98
6) trans-1,2-Dichloroethene	4.958	96	10961037	15.94	ppb		99
7) 1,1-Dichloroethane	5.622	63	19451624	15.24	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	10489608	15.56	ppb		100
9) Chloroform	6.454	83	22163599	16.33	ppb		100
10) Carbon Tetrachloride	6.626	117	16019870	15.89	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	17200441	15.36	ppb		100
12) Benzene	7.076	78	36489442	16.27	ppb		100
14) 1,2-Dichloroethane	7.272	62	14614868	15.23	ppb		99
15) Trichloroethene	7.646	95	11150371	15.79	ppb	#	99
16) 1,2-Dichloropropane	8.184	63	9170513	15.55	ppb		98
17) cis-1,3-Dichloropropene	8.856	75	9920548	15.28	ppb		99
20) trans-1,3-Dichloropropene	9.492	75	9265441	14.65	ppb		100
21) Tetrachloroethene	9.483	166	9043964	14.78	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53347.D
Acq On : 9 Aug 2018 11:52 am
Operator : melissam
Sample : ic2011-6 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 09 13:04:01 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



Z53348.D

Manual Integrations APPROVED (compounds with "m" flag)

Juan Garcia
08/13/18 16:45

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53348.D
Acq On : 9 Aug 2018 12:17 pm
Operator : melissam
Sample : ic2011-7 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 13:05:50 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	9581112	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	8843807m	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	3676828	4.66	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 93.20%				
19) Toluene-d8	9.044	98	8123420	4.65	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.00%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	15824577	16.86	ppb		99
3) Chloromethane	2.790	50	14649221	18.01	ppb		100
4) 1,1-Dichloroethene	4.155	96	13477565	20.50	ppb		99
5) Methylene Chloride	4.785	84	16832140	19.87	ppb		98
6) trans-1,2-Dichloroethene	4.962	96	15263726	20.54	ppb		99
7) 1,1-Dichloroethane	5.622	63	26262213	19.04	ppb	#	99
8) cis-1,2-Dichloroethene	6.187	96	14690316	20.17	ppb		99
9) Chloroform	6.454	83	29628901	20.44	ppb		99
10) Carbon Tetrachloride	6.626	117	22360293	20.53	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	23502264	19.42	ppb		100
12) Benzene	7.076	78	49791579	20.55	ppb		99
14) 1,2-Dichloroethane	7.279	62	20245000	19.52	ppb		99
15) Trichloroethene	7.646	95	15594578	20.44	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	13382368	21.00	ppb		98
17) cis-1,3-Dichloropropene	8.856	75	16687360	22.77	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	16014571	21.27	ppb		100
21) Tetrachloroethene	9.483	166	13465691	19.74	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

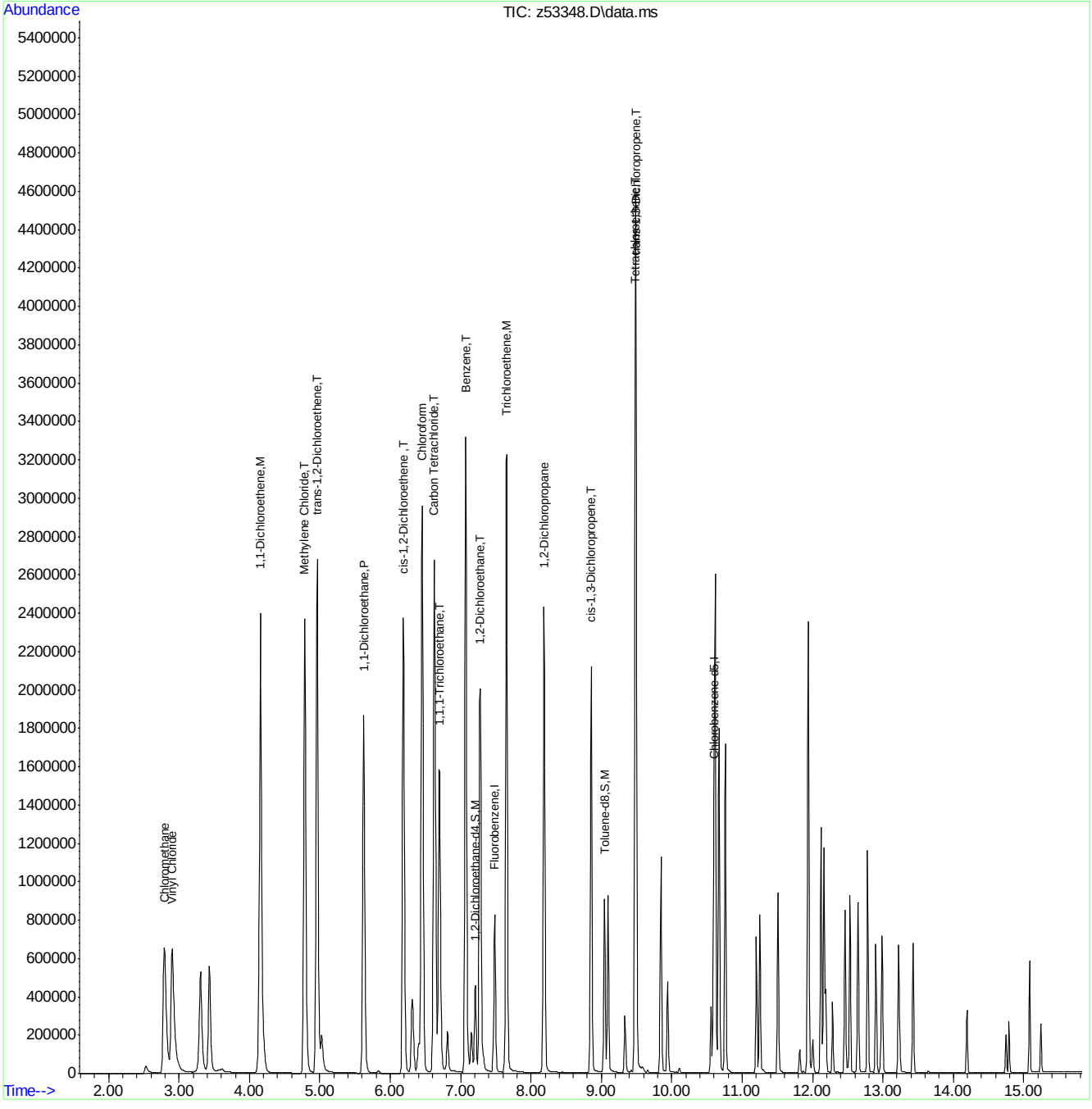
7.6.29

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53348.D
Acq On : 9 Aug 2018 12:17 pm
Operator : melissam
Sample : ic2011-7 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 13:05:50 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration



SIMCL080918.M Fri Aug 10 10:50:01 2018 Page: 2

Manual Integration Approval Summary

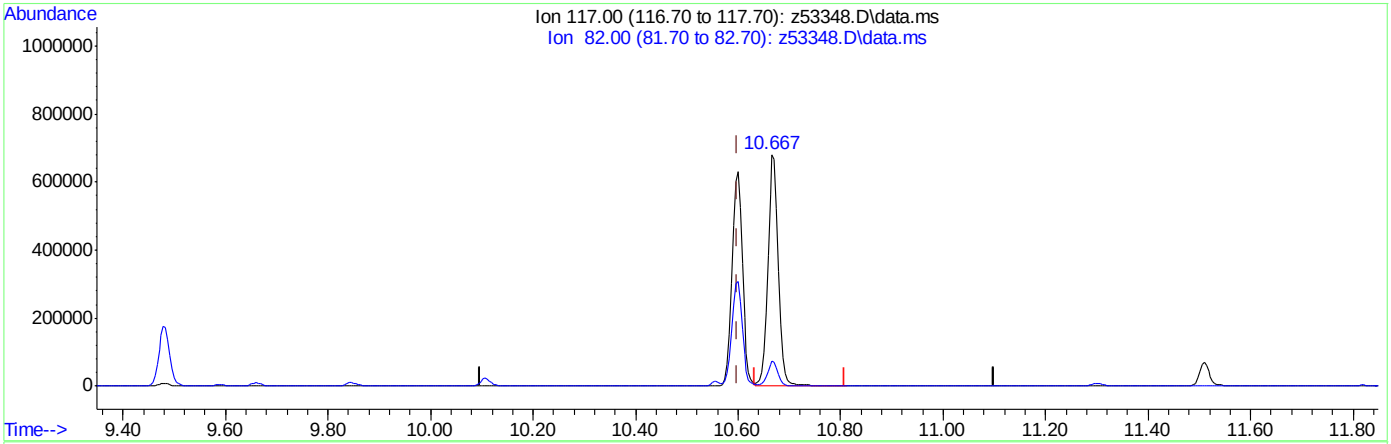
Sample Number:	VZ2011-IC2011	**Method:**	SW846 8260B BY SIM
Lab FileID:	Z53348.D	**Analyst approved:**	08/10/18 10:33 Melissa Mangual
Injection Time:	08/09/18 12:17	**Supervisor approved:**	08/13/18 16:45 Juan Garcia

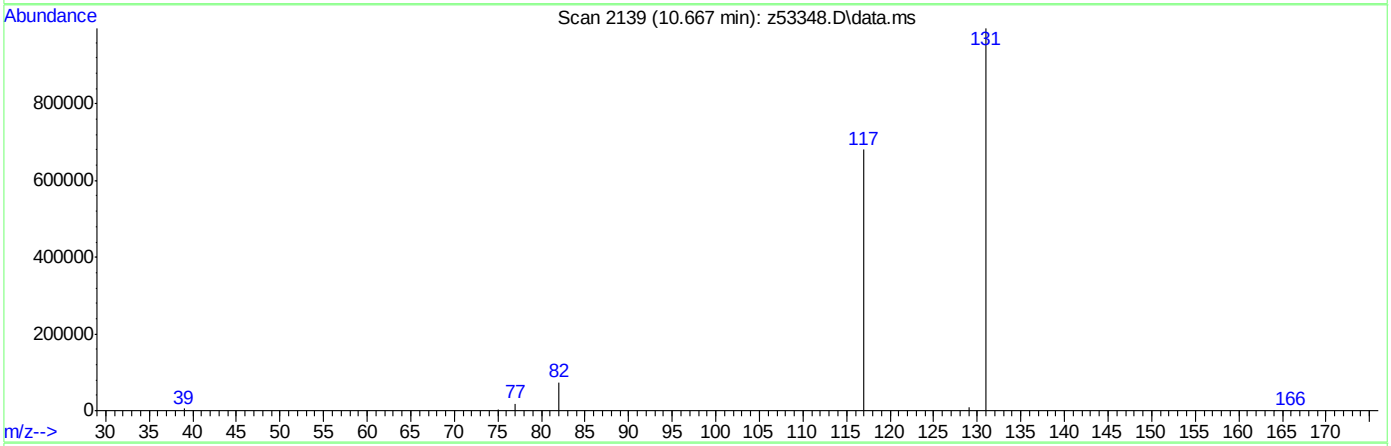
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlorobenzene-D5	3114-55-4		10.60	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53348.D
Acq On : 9 Aug 2018 12:17 pm
Operator : melissam
Sample : ic2011-7 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 13:04:03 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration





TIC: z53348.D\data.ms

(18) Chlorobenzene-d5 (I)

10.667min (+0.068) 5.00ppb

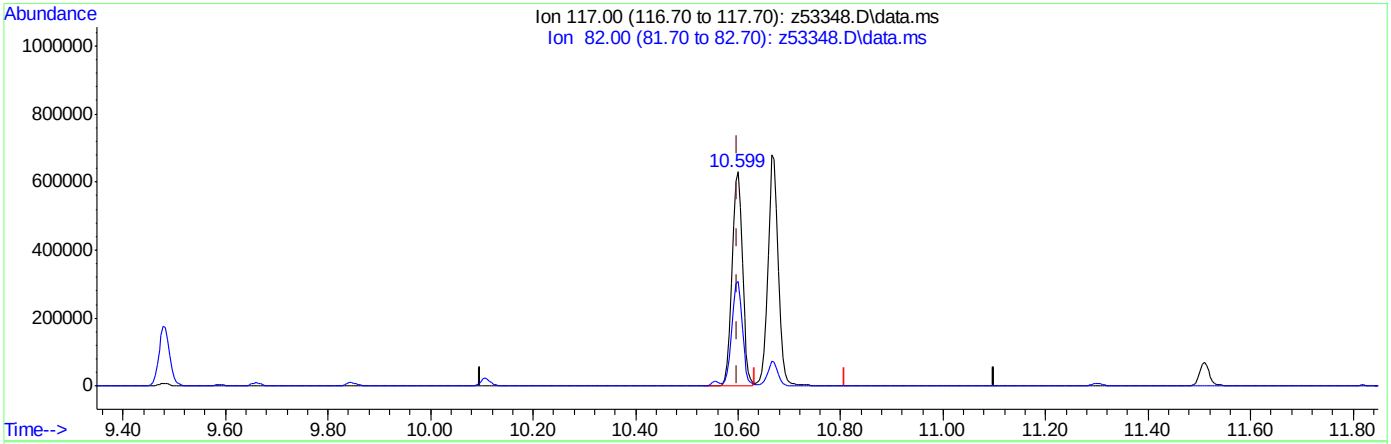
response 9887663

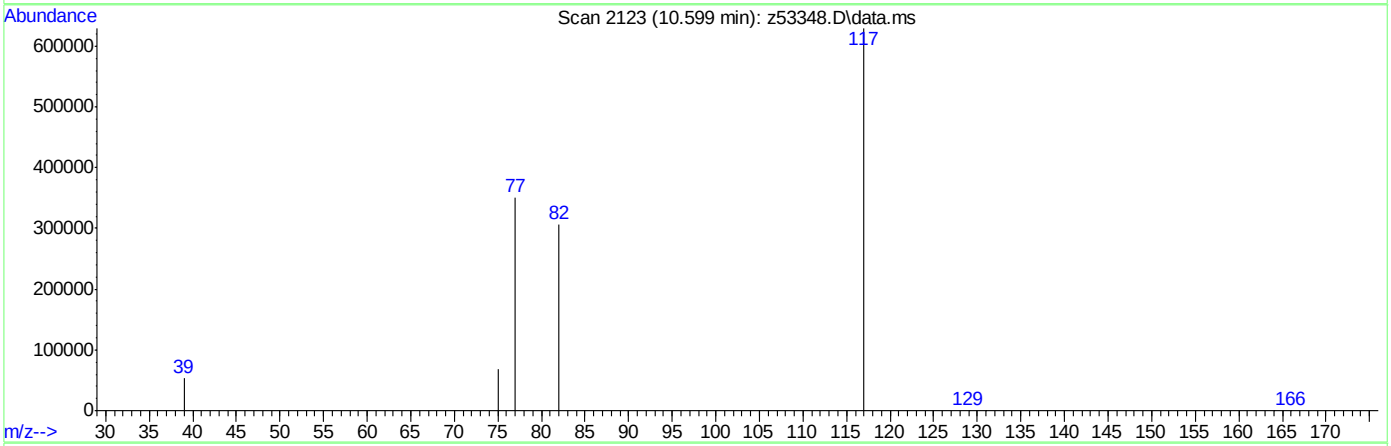
Ion	Exp%	Act%
117.00	100	100
82.00	48.40	11.03#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53348.D
Acq On : 9 Aug 2018 12:17 pm
Operator : melissam
Sample : ic2011-7 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 13:04:03 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Fri Jul 27 14:59:47 2018
Response via : Initial Calibration





TIC: z53348.D\data.ms

(18) Chlorobenzene-d5 (I)

10.599min (+0.000) 5.00ppb m

response 8843807

Ion	Exp%	Act%
117.00	100	100
82.00	48.40	12.34#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53351.D
Acq On : 9 Aug 2018 1:37 pm
Operator : melissam
Sample : icv2011-5 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 10 10:05:40 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

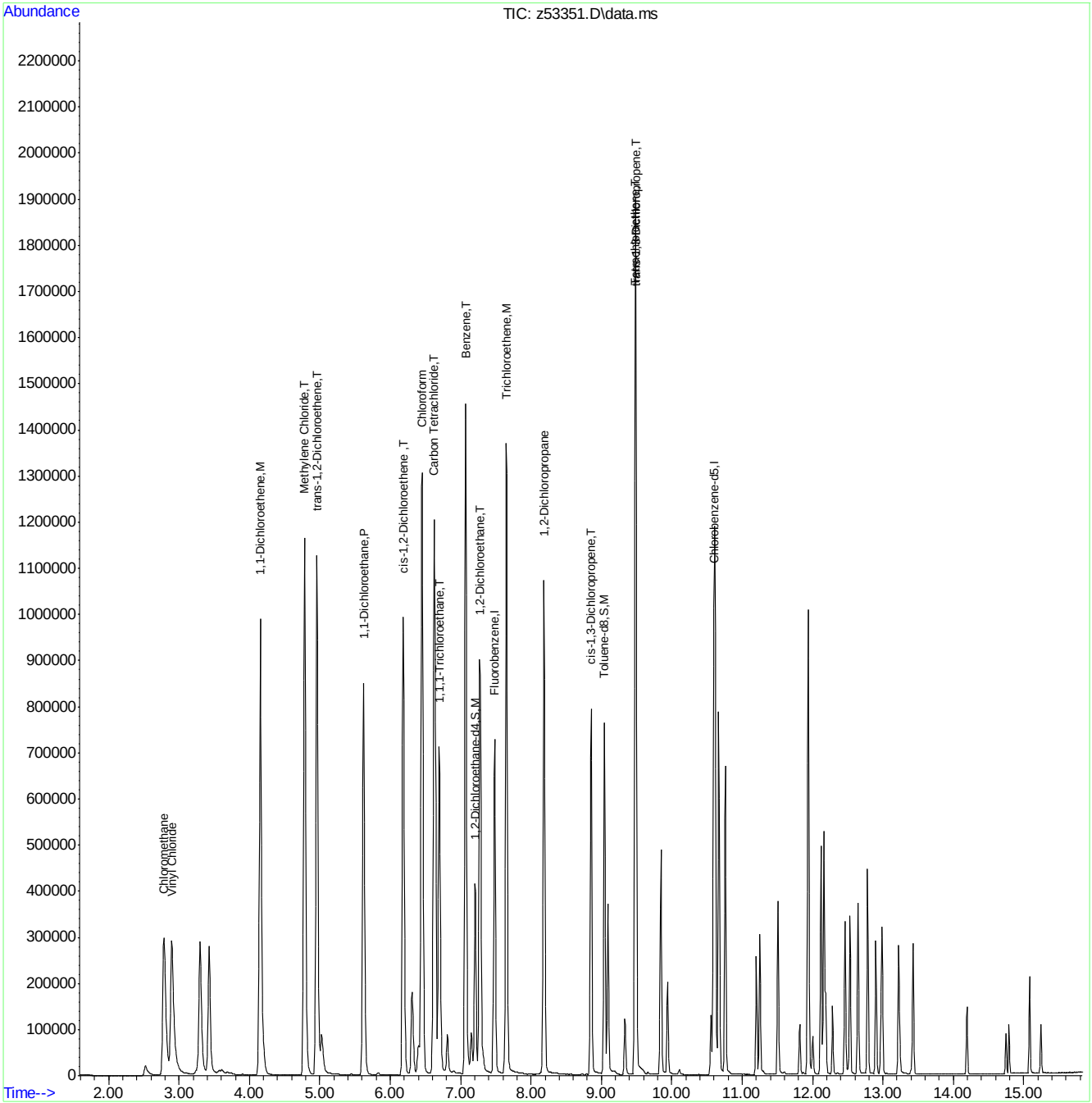
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	8499597	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	7573816	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.205	65	3389496	4.32	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 86.40%				
19) Toluene-d8	9.041	98	6956542	4.99	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 99.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.895	62	6879786	8.50	ppb		100
3) Chloromethane	2.786	50	6529772	8.55	ppb		100
4) 1,1-Dichloroethene	4.155	96	5460632	8.47	ppb		97
5) Methylene Chloride	4.785	84	8041925	9.33	ppb		100
6) trans-1,2-Dichloroethene	4.958	96	6328260	9.05	ppb		100
7) 1,1-Dichloroethane	5.622	63	11831202	8.80	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	6164683	9.37	ppb		99
9) Chloroform	6.454	83	13130462	8.57	ppb		100
10) Carbon Tetrachloride	6.626	117	9412378	8.50	ppb		99
11) 1,1,1-Trichloroethane	6.695	97	10121208	8.55	ppb		100
12) Benzene	7.076	78	21874730	9.49	ppb		100
14) 1,2-Dichloroethane	7.272	62	9037615	9.07	ppb		99
15) Trichloroethene	7.646	95	6538380	9.01	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	5812726	9.39	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	6494761	10.74	ppb		99
20) trans-1,3-Dichloropropene	9.492	75	6591247	11.37	ppb		100
21) Tetrachloroethene	9.483	166	5756042	9.46	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53351.D
Acq On : 9 Aug 2018 1:37 pm
Operator : melissam
Sample : icv2011-5 Inst : MSVOA15
Misc : ms40981,vz2011,,,,,
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 10 10:05:40 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



SIMCL080918.M Fri Aug 10 10:50:03 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53368.D
Acq On : 9 Aug 2018 8:55 pm
Operator : melissam
Sample : ECC2011-5 Inst : MSVOA15
Misc : ms41007,vz2011,,,,,
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 10 10:06:14 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

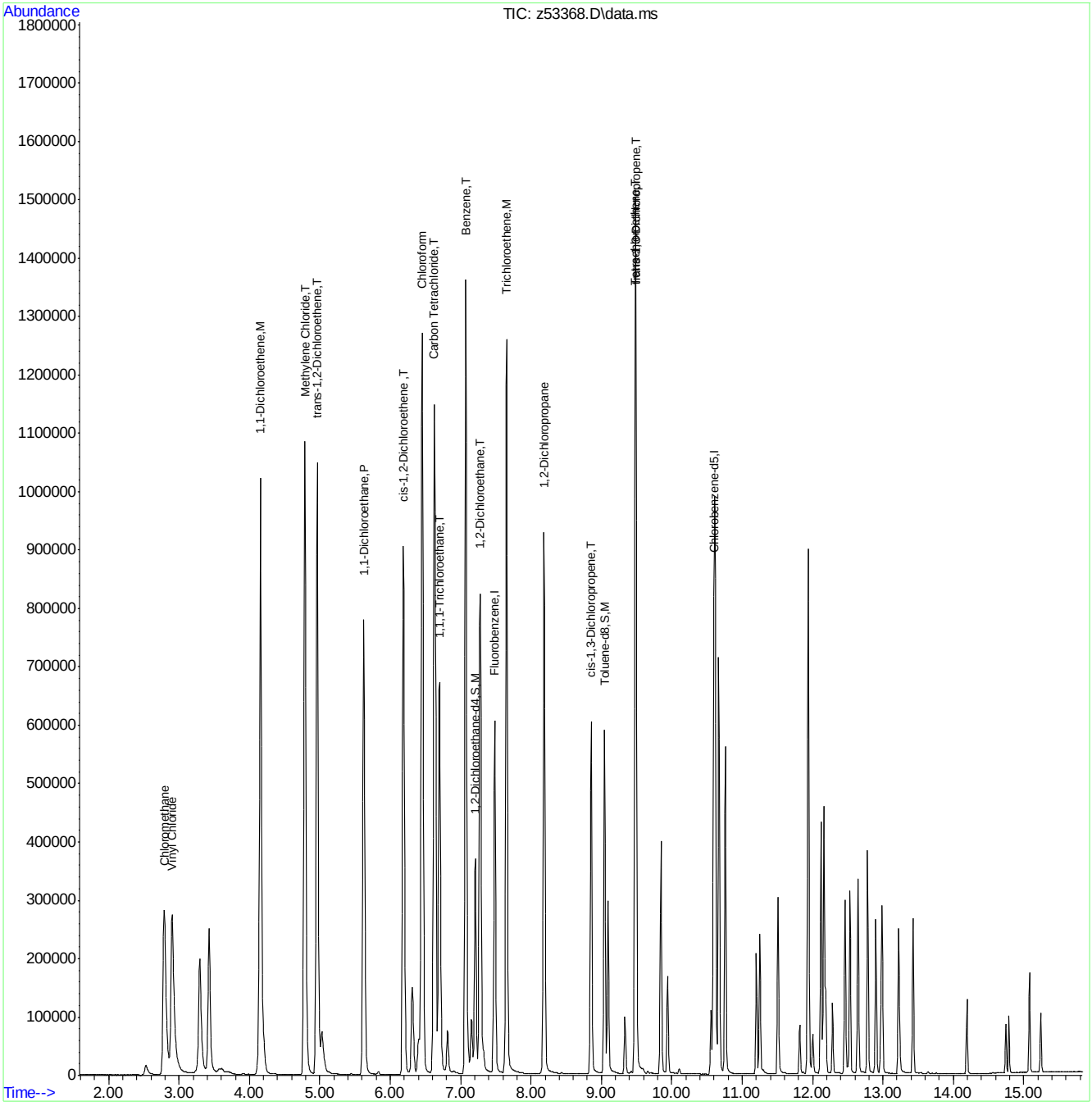
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	7009286	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6137981	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2984499	4.61	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 92.20%				
19) Toluene-d8	9.044	98	5324426	4.71	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 94.20%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	6408334	9.73	ppb		100
3) Chloromethane	2.790	50	6098539	9.86	ppb		99
4) 1,1-Dichloroethene	4.155	96	5229454	9.83	ppb		100
5) Methylene Chloride	4.788	84	7376050	10.54	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	5803200	10.06	ppb		100
7) 1,1-Dichloroethane	5.622	63	10887091	9.82	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	5576491	10.28	ppb		100
9) Chloroform	6.454	83	12533011	10.12	ppb		100
10) Carbon Tetrachloride	6.626	117	9052347	9.91	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	9695252	9.93	ppb		100
12) Benzene	7.075	78	19817359	10.42	ppb		100
14) 1,2-Dichloroethane	7.279	62	8207096	10.08	ppb		99
15) Trichloroethene	7.652	95	5925278	9.90	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	5059188	9.91	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	4887592	9.97	ppb		99
20) trans-1,3-Dichloropropene	9.491	75	4524729	9.92	ppb		99
21) Tetrachloroethene	9.483	166	4822590	9.80	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\080918\
Data File : z53368.D
Acq On : 9 Aug 2018 8:55 pm
Operator : melissam
Sample : ECC2011-5 Inst : MSVOA15
Misc : ms41007,vz2011,,,,,
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 10 10:06:14 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



SIMCL080918.M Fri Aug 10 10:50:11 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : z53372.D
Acq On : 10 Aug 2018 10:15 am
Operator : melissam
Sample : cc2011-5 Inst : MSVOA15
Misc : ms40981,vz2012,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 13 11:19:23 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6392383	5.00	ppb		0.00
18) Chlorobenzene-d5	10.595	117	6101612	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.205	65	2870555	4.86	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 97.20%				
19) Toluene-d8	9.044	98	4996928	4.45	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 89.00%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.899	62	5710930	9.48	ppb		100
3) Chloromethane	2.786	50	5443996	9.62	ppb		100
4) 1,1-Dichloroethene	4.155	96	4571241	9.42	ppb		99
5) Methylene Chloride	4.785	84	6346115	9.86	ppb		100
6) trans-1,2-Dichloroethene	4.962	96	5198736	9.88	ppb		99
7) 1,1-Dichloroethane	5.622	63	9941770	9.83	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	4934337	9.98	ppb		100
9) Chloroform	6.454	83	11612724	10.30	ppb		100
10) Carbon Tetrachloride	6.626	117	8567633	10.28	ppb		100
11) 1,1,1-Trichloroethane	6.695	97	8805969	9.89	ppb		100
12) Benzene	7.076	78	18434277	10.63	ppb		100
14) 1,2-Dichloroethane	7.272	62	7830836	10.60	ppb		100
15) Trichloroethene	7.646	95	5708241	10.45	ppb	#	100
16) 1,2-Dichloropropane	8.184	63	4773560	10.25	ppb		100
17) cis-1,3-Dichloropropene	8.852	75	5044037	11.02	ppb		100
20) trans-1,3-Dichloropropene	9.492	75	4779531	10.43	ppb		100
21) Tetrachloroethene	9.483	166	4793960	9.80	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

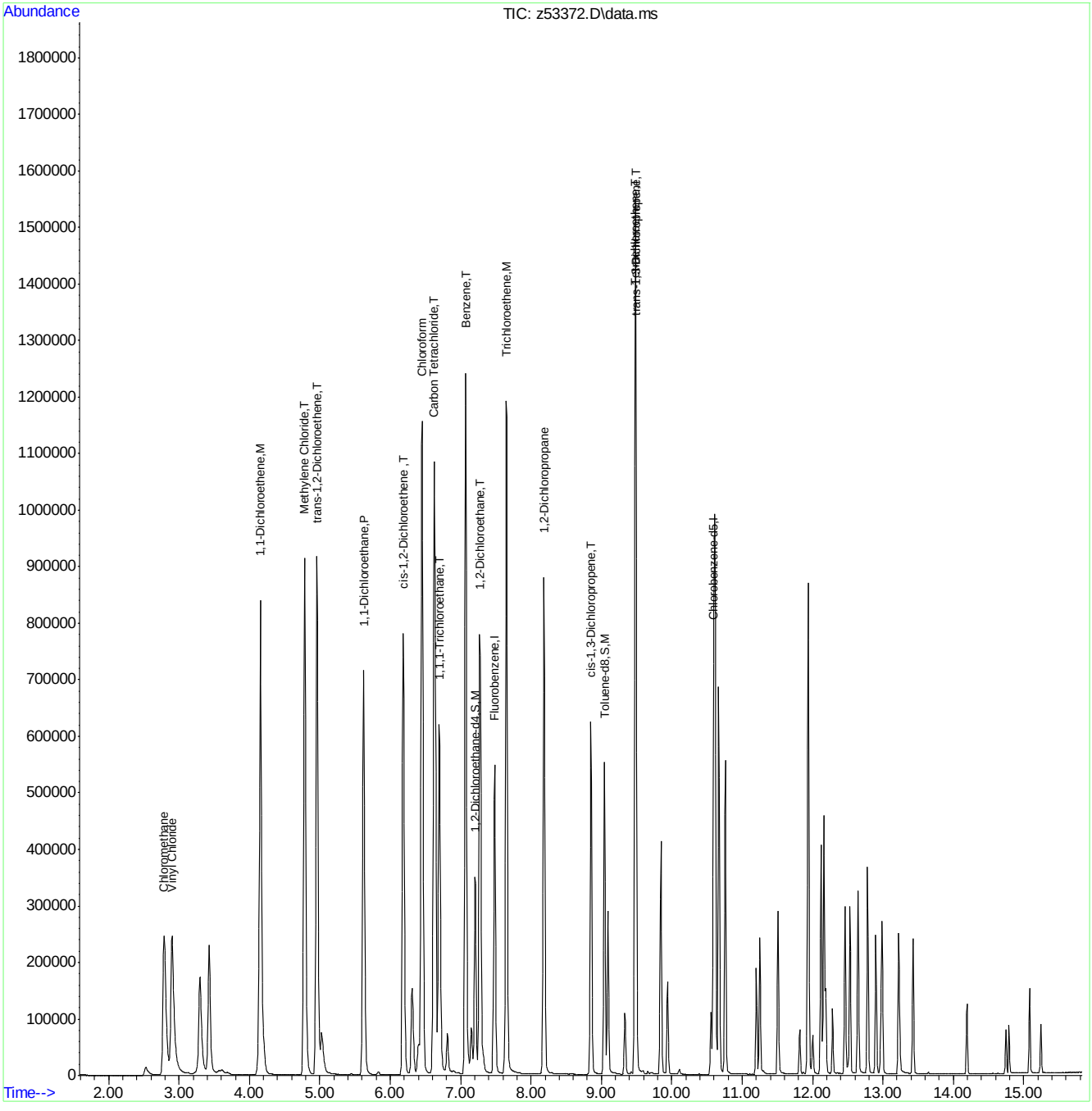
7.6.32

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : z53372.D
Acq On : 10 Aug 2018 10:15 am
Operator : melissam
Sample : cc2011-5 Inst : MSVOA15
Misc : ms40981,vz2012,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 13 11:19:23 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



SIMCL080918.M Mon Aug 13 12:29:49 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53391.D
Acq On : 10 Aug 2018 6:35 pm
Operator : melissam
Sample : ECC2011-5 Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 13 11:19:59 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration

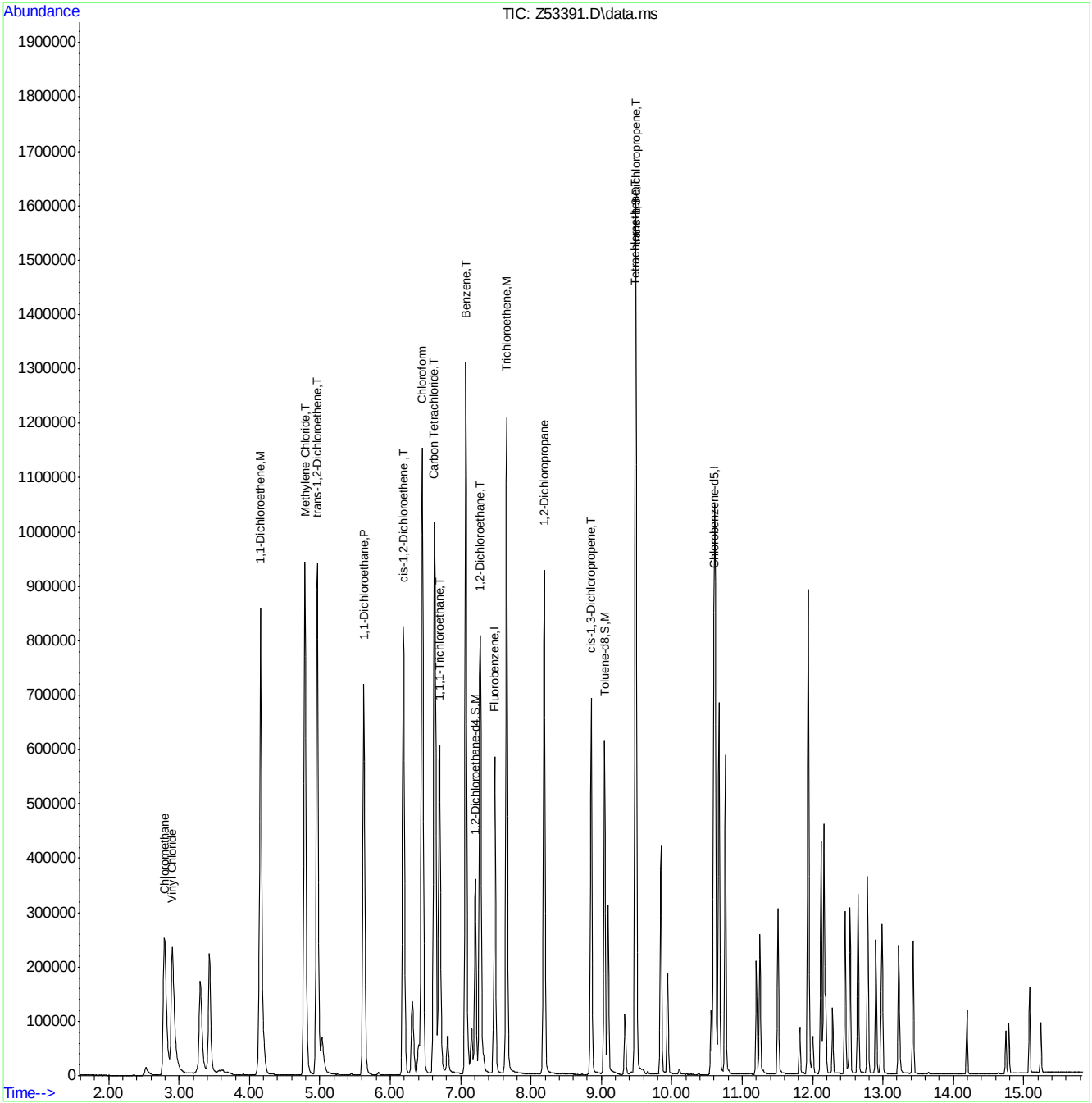
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	7.483	96	6819323	5.00	ppb		0.00
18) Chlorobenzene-d5	10.599	117	6458515	5.00	ppb		0.00
System Monitoring Compounds							
13) 1,2-Dichloroethane-d4	7.211	65	2887215	4.58	ppb		0.00
Spiked Amount 5.000	Range 79 - 125		Recovery = 91.60%				
19) Toluene-d8	9.044	98	5577086	4.69	ppb		0.00
Spiked Amount 5.000	Range 70 - 130		Recovery = 93.80%				
Target Compounds							Qvalue
2) Vinyl Chloride	2.903	62	5661228	8.74	ppb		100
3) Chloromethane	2.794	50	5711079	9.43	ppb		100
4) 1,1-Dichloroethene	4.155	96	4768384	9.21	ppb		99
5) Methylene Chloride	4.788	84	6604702	9.58	ppb		99
6) trans-1,2-Dichloroethene	4.962	96	5330820	9.50	ppb		99
7) 1,1-Dichloroethane	5.625	63	10109215	9.37	ppb	#	100
8) cis-1,2-Dichloroethene	6.187	96	5114473	9.69	ppb		99
9) Chloroform	6.454	83	11512488	9.48	ppb		100
10) Carbon Tetrachloride	6.626	117	8287950	9.33	ppb		100
11) 1,1,1-Trichloroethane	6.702	97	8901718	9.37	ppb		100
12) Benzene	7.075	78	19034518	10.29	ppb		100
14) 1,2-Dichloroethane	7.279	62	7998748	10.10	ppb		100
15) Trichloroethene	7.652	95	5734364	9.85	ppb	#	99
16) 1,2-Dichloropropane	8.188	63	5028261	10.12	ppb		99
17) cis-1,3-Dichloropropene	8.856	75	5510721	11.23	ppb		100
20) trans-1,3-Dichloropropene	9.491	75	5340117	10.90	ppb		99
21) Tetrachloroethene	9.483	166	4892948	9.43	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\081018\
Data File : Z53391.D
Acq On : 10 Aug 2018 6:35 pm
Operator : melissam
Sample : ECC2011-5 Inst : MSVOA15
Misc : MS41007,VZ2012,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 13 11:19:59 2018
Quant Method : C:\msdchem\1\METHODS\SIMCL080918.M
Quant Title : WATER-EPA 8260B
QLast Update : Thu Aug 09 15:01:26 2018
Response via : Initial Calibration



SIMCL080918.M Mon Aug 13 12:30:01 2018 Page: 2

SGS-ORLANDO ANALYSIS LOG

MSVOA16-I-ANALYSIS LOG

DATE: 7/25/2018	**METHODS:*** 8260	**BFB:** V23957	**PH LOT:** 1/12pH:230814
COLUMN TYPE: RTXVMS	**METHOD FILE:** I-July2518.M	**ICAL/CC:** V23908, V23907, V23864	0/3pH:200416
DETECTOR: 5973 MSD	**CALIB. DATE:** 7/252018	V23865,V23860,V23859,V23874,V23909	**KI PAPER LOT:** 06517
INSTRUMENT: MSVOA4-B	**EM VOLTAGE:** 1624V	**ISTD/SURR:** V23957	
PURGE PRESSURE: 6.7psi	**BFB RESPONSE** 2063466	**ICV/QC:** V23905,V23863, V23828	**SAMPLE ID VERIFIED BY:**
PURGE VOLUME: 5mL		V23924, V23872, V23921, V23852,	ANAJ
ANALYST: ANAJ	**RUN ID** ***VI1683***	V23853, V23910	**DATE VERIFIED:** 07/25/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56313	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56314	IC1683-1	N/A	N/A	w	1	8260	7SP,61MP,97MP,107MP,112MP	N/A	N/A		✓ Passed 10mL(IC2)-->50mL
I56315	IC1683-2	N/A	N/A	w	2	8260	7SP , 107PII	N/A	N/A		✓ Passed 5uL-->100mL
I56316	IC1683-3	N/A	N/A	w	3	8260		N/A	N/A		✓ Passed 5uL-->50mL
I56317	IC1683-4	N/A	N/A	w	4	8260	35MP, 42MP	N/A	N/A		✓ Passed 12.5uL-->50mL
I56318	ICC1683-5	N/A	N/A	w	5	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56319	IC1683-6	N/A	N/A	w	6	8260		N/A	N/A		✓ Passed 35uL-->50mL
I56320	IC1683-7	N/A	N/A	w	7	8260		N/A	N/A		✓ Passed 50uL-->50mL
I56321	Blank	N/A	N/A	w	8	8260		N/A	N/A		✓
I56322	ICV1683-5	N/A	N/A	w	9	8260		N/A	N/A		✓ Passed 25uL-->50mL
I56323	BS	N/A	N/A	w	10	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56324	MB	N/A	N/A	w	11	8260		N/A	N/A		✓ Hexachlorobutadiene

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA16-I-ANALYSIS LOG

DATE:	8/8/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/25/2018
EM VOLTAGE:	1624V
BFB RESPONSE	1976762
RUN ID	*VI1694*

BFB:	V23957
ICAL/CC:	V23908, V23997, V23945
	V23946,V23947,V23948,V23949,V23984
ISTD/SURR:	V23957
ICV/QC:	V24007,V23952, V23954
	V23924, V23987, V23921, V23988,
	V23989, V23975

PH LOT:	1/12pH:230814
	0/3pH:200416
KI PAPER LOT:	06517
SAMPLE ID VERIFIED BY:	
	ANAJ
DATE VERIFIED:	08/09/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56595	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56596	CC1683-5	N/A	N/A	w	1	8260	35SP	N/A	N/A		✓ Passed 20uL-->50mL
I56597	BS	N/A	N/A	w	2	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56598	MB	N/A	N/A	w	3	8260		N/A	N/A		✓ Hexachlorobutadiene
I56599	FA56228-1	1x	1	w	1	8260		1	N		✓ ND
I56600	FA56228-2	1x	1	w	2	8260		1	N		✓ ND
I56601	FA56228-3	1x	1	w	3	8260		1	N		✓ ND
I56602	FA56228-4	1x	1	w	4	8260		1	N		✓
I56603	FA56228-5	1x	2	w	5	8260		1	N		✓ ND
I56604	FA56228-6	1x	1	w	6	8260		1	N		✓
I56605	FA56228-7	1x	1	w	7	8260		1	N		✓ ND
I56606	FA56228-8	1x	2	w	8	8260		1	N		✓
I56607	FA56228-9	1x	2	w	9	8260		1	N		✓ ND
I56608	FA56349-1	1x	2	w	10	8260		1	N		✓ ND
I56609	FA56349-2,hs	1x	2	w	11	8260	All vials with headspace.	1	N		✓ ND
I56610	FA56349-3	1x	2	w	12	8260		1	N		✓
I56611	FA56349-1ms	1x	4	w	13	8260		1	N		✓ 12.5uL-->40mL
I56612	FA56349-1msd	1x	5	w	14	8260		1	N		✓ 12.5uL-->40mL
I56613	Blank	N/A	N/A	w	15	8260		N/A	N/A		✓
I56614	FA56349-4	1x	2	w	16	8260		1	N		✓
I56615	FA56349-5	1x	2	w	17	8260		1	N		✓
I56616	FA56349-6	1x	2	w	18	8260		1	N		✓
I56617	FA56349-7	1x	2	w	19	8260		1	N		✓
I56618	FA56349-8	1x	2	w	20	8260		1	N		✓
I56619	FA56349-9	1x	3	w	21	8260		1	N		✓
I56620	FA56349-10	1x	1	w	22	8260		1	N		✓
I56621	FA56349-11	1x	2	w	23	8260		1	N		✓
I56622	ECC1683-5	N/A	N/A	w	24	8260	8SP	N/A	N/A		✓ Passed 20uL-->50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA16-I-ANALYSIS LOG

DATE:	8/10/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/25/2018
EM VOLTAGE:	1624V
BFB RESPONSE	2012937
RUN ID	*VI1696*

BFB:	V23957
ICAL/CC:	V23986, V23997, V23945
	V23946,V23947,V23948,V24017,V23984
ISTD/SURR:	V23957
ICV/QC:	V24007,V23929, V23954
	V23924, V23987, V23921, V23988,
	V23989, V23975

PH LOT:	1/12pH:230814
	0/3pH:200416
KI PAPER LOT:	06517
SAMPLE ID VERIFIED BY:	
	ANAJ
DATE VERIFIED:	08/13/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56650	BFB	N/A	N/A	w	1	8260C		N/A	N/A		✓ Passed (AF)
I56651	CC1683-5	N/A	N/A	w	1	8260C		N/A	N/A		✓ Passed 20uL-->50mL
I56652	BS	N/A	N/A	w	2	8260C		N/A	N/A		✓ Passed 12.5uL-->40mL
I56653	MB	N/A	N/A	w	3	8260C		N/A	N/A		✓ Hexachlorobutadiene
I56654	FA56349-12	1x	1	w	1	8260C		1	N		✓
I56655	FA56349-13	1x	3	w	2	8260C		1	N		✓ ND
I56656	FA56349-14	1x	3	w	3	8260C		1	N		✓ ND
I56657	FA56349-15	1x	2	w	4	8260C		1	N		✓ ND
I56658	FA56349-16	1x	2	w	5	8260C		1	N		✓ ND
I56659	FA56349-17	1x	2	w	6	8260C		1	N		✓ ND
I56660	FA56349-18	1x	3	w	7	8260C		1	N		✓ ND
I56661	FA56349-19	1x	3	w	8	8260C	107PII	1	N		✓
I56662	FA56394-1	1x	1	w	9	8260C		1	N		✓
I56663	FA56394-2	1x	1	w	10	8260C		1	N		✓
I56664	FA56394-3	1x	1	w	11	8260C		1	N		✓
I56665	FA56394-4	1x	1	w	12	8260C	12MP	1	N		✓
I56666	FA56394-5	1x	1	w	13	8260C		1	N		✓
I56667	FA56394-6	1x	1	w	14	8260C		1	N		✓
I56668	FA56394-8	1x	1	w	15	8260C		1	N		✓
I56669	FA56394-9	1x	3	w	16	8260C		1	N		✓
I56670	FA56394-16	1x	1	w	17	8260C		1	N		✓
I56671	FA56394-17	1x	1	w	18	8260C		1	N		✓ ND
I56672	FA56435-16	5x	2	w	19	8260C		1	N		✓ 10mL-->50mL,E!combine
I56673	FA56349-13ms	1x	4	w	20	8260C	35SP, 107PII	1	N		✓ 12.5uL-->40mL
I56674	FA56349-13msd	1x	5	w	21	8260C		1	N		✓ 12.5uL-->40mL
I56675	ECC1683-5	N/A	N/A	w	22	8260C		N/A	N/A		✓ Passed 20uL-->50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA15-Z-ANALYSIS LOG

DATE:	7/26/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5975 MSD
INSTRUMENT:	MSVOA15-Z
PURGE PRESSURE:	9.3psi
PURGE VOLUME:	5mL
ANALYST:	Melissa M

METHODS:*	simcl
METHOD FILE:	SIMCL072618.M
CALIB. DATE:	7/26/2018
EM VOLTAGE:	1753v
BFB RESPONSE:	150481825
VZ2005	

BFB:	V23881G
ICAL/CC:	v23960,v23848
ISTD/SUR:	v23896
ICV/QC:	v23964,v23812

PH LOT:200814,220416
KI PAPER LOT:06517
SAMPLE ID VERIFIED BY:
Melissa Mangual
DATE VERIFIED: 07/27/18

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
Z53196	BLANK	N/A	N/A	W	1	SIMCL		NA	NA		✓
Z53197	BLANK	N/A	N/A	W	2	SIMCL		NA	NA		✓
Z53198	BFB	N/A	N/A	W	1	BFB		NA	NA		Pass on autofind 2uL
Z53199	BLANK	N/A	N/A	W	1	SIMCL		NA	NA		✓
Z53200	IC2005-1	N/A	N/A	W	1	SIMCL	#11 mp	NA	NA		10mL of IC 2 in 50mL
Z53201	IC2005-2	N/A	N/A	W	2	SIMCL		NA	NA		5uL in 100mL
Z53202	IC2005-3	N/A	N/A	W	3	SIMCL		NA	NA		10uL in 50mL
Z53203	IC2005-4	N/A	N/A	W	4	SIMCL		NA	NA		25uL in 50mL
Z53204	IC2005-5		N/A	W	5	SIMCL		NA	NA		50uL in 50mL
Z53205	IC2005-6		N/A	W	6	SIMCL		NA	NA		75uL in 50mL
Z53206	IC2005-7		N/A	W	7	SIMCL	#18 mp	NA	NA		100uL in 50mL
Z53207	BLANK		N/A	W	8	SIMCL		NA	NA		
Z53208	ICV2005-5		N/A	W	9	SIMCL	gases low	NA	NA		50uL in 50mL
Z53209	ICV2005-5A		N/A	W	10	SIMCL	New gas mix	NA	NA		50uL in 50mL
Z53210	BS		N/A	W	1	SIMCL		NA	NA		20uL in 40mL
Z53211	MB		N/A	W	2	SIMCL		NA	NA		✓
Z53212	MB		N/A	W	3	SIMCL		NA	NA		✓
Z53213	FA56092-1		1	W	4	SIMCL		1	no		✓
Z53214	FA56092-2		1	W	5	SIMCL		1	no		✓
Z53215	FA56092-3		1	W	6	SIMCL		1	no		✓
Z53216	FA56092-4		1	W	7	SIMCL		1	no		✓
Z53217	FA56092-5		2	W	8	SIMCL		1	no		✓
Z53218	FA56092-6		1	W	9	SIMCL		1	no		✓
Z53219	FA56092-2MS		2	W	10	SIMCL		1	no		20uL in 40mL
Z53220	FA56092-2MSD		2	W	11	SIMCL		1	no		20uL in 40mL
Z53221	ECC2005-5			W				NA	NA		50uL in 40mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA15-Z-ANALYSIS LOG

DATE:	8/2/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5975 MSD
INSTRUMENT:	MSVOA15-Z
PURGE PRESSURE:	9.3psi
PURGE VOLUME:	5mL
ANALYST:	Melissa M

METHODS:*	simcl
METHOD FILE:	SIM072618.M
CALIB. DATE:	7/26/2018
EM VOLTAGE:	1753v
BFB RESPONSE:	151302377
VZ2006	

BFB:	V23881G
ICAL/CC:	v23848,v23960
ISTD/SUR:	v23896
ICV/QC:	v23964,v23991

PH LOT:200814,220416
KI PAPER LOT:06517
SAMPLE ID VERIFIED BY:
Melissa Mangual
DATE VERIFIED: 08/03/18

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
Z53222	BLANK	N/A	N/A	W	1	SIMCL		NA	NA		✓
Z53223	BLANK	N/A	N/A	W	2	SIMCL		NA	NA		✓
Z53224	BFB	N/A	N/A	W	1	BFB		NA	NA		Pass on autofind 2uL
Z53225	cc2005-5	N/A	N/A	W	1	SIMCL		NA	NA		50uL in 50mL
Z53226	bs	N/A	N/A	W	1	SIMCL	made wrong. Missing 8260mix	NA	NA		20uL in 40mL
Z53227	mb	N/A	N/A	W	2	SIMCL		NA	NA		
Z53228	bs	N/A	N/A	W	3	SIMCL		NA	NA		20uL in 40mL
Z53229	mb	N/A	N/A	W	4	SIMCL		NA	NA		✓
Z53230	FA56218-1		1	W	5	SIMCL		1	no		✓
Z53231	FA56218-2		2	W	6	SIMCL		1	no		✓
Z53232	FA56218-18		1	W	7	SIMCL		1	no		✓
Z53233	FA56218-3		1	W	8	SIMCL		1	no		✓
Z53234	FA56218-4		1	W	9	SIMCL		1	no	1x	✓
Z53235	FA56218-16		1	W	10	SIMCL		1	no		✓
Z53236	FA56349-13		1	W	1	SIMCL		1	no		✓
Z53237	FA56349-14		1	W	2	SIMCL	surr high	1	no	1x	✓
Z53238	FA56349-15		1	W	3	SIMCL		1	no		✓
Z53239	FA56349-16		1	W	4	SIMCL		1	no		✓
Z53240	FA56349-17		1	W	5	SIMCL		1	no		✓
Z53241	FA56349-18		2	W	6	SIMCL		1	no		✓
Z53242	FA56349-19		1	W	7	SIMCL	suur high	1	no	1x	✓
Z53243	FA56218-1ms		2	W	8	SIMCL		1	no		20uL in 40mL
Z53244	FA56218-1msd		2	W	9	SIMCL		1	no		20uL in 40mL
Z53245	FA56349-13ms		2	W	10	SIMCL		1	no		20uL in 40mL
Z53246	FA56349-13msd		2	W	11	SIMCL		1	no		20uL in 40mL
Z53221	ECC2005-5		na	W	12	SIMCL		NA	NA		50uL in 40mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA15-Z-ANALYSIS LOG

DATE:	8/9/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5975 MSD
INSTRUMENT:	MSVOA15-Z
PURGE PRESSURE:	9.3psi
PURGE VOLUME:	5mL
ANALYST:	Melissa M

METHODS:*	simcl
METHOD FILE:	SIMCL080918.M
CALIB. DATE:	8/9/2018
EM VOLTAGE:	1788v
BFB RESPONSE:	164506749
VZ2011	

BFB:	V23881G
ICAL/CC:	v23993, v23998
ISTD/SUR:	v23911
ICV/QC:	v23994,v23991

PH LOT:200814,220416
KI PAPER LOT:06517
SAMPLE ID VERIFIED BY:
Melissa Mangual
DATE VERIFIED: 08/10/18

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
Z53338	BLANK	N/A	N/A	W	1	SIMCL		NA	NA		✓
Z53339	BLANK	N/A	N/A	NA	2	SIMCL		NA	NA		✓
Z53340	BFB	N/A	N/A	NA	na	bfb		NA	NA		Pass on autofind 2uL
Z53341	BFB	N/A	N/A	N/A	1	bfb		NA	NA		Pass on autofind 2uL
Z53342	IC2011-1	N/A	N/A	W	2	SIMCL		NA	NA		10mL of IC 2 in 50mL
Z53343	IC2011-2	N/A	N/A	W	3	SIMCL		NA	NA		5uL in 50mL
Z53344	IC2011-3	N/A	N/A	W	4	SIMCL		NA	NA		10uL in 50mL
Z53345	IC2011-4	N/A	N/A	W	5	SIMCL		NA	NA		25uL in 50mL
Z53346	ICC2011-5	N/A	N/A	W	6	SIMCL		NA	NA		50uL in 50mL
Z53347	IC2011-6	N/A	N/A	W	7	SIMCL		NA	NA		75uL in 50mL
Z53348	IC2011-7	N/A	N/A	W	8	SIMCL	#18 mp	NA	NA		100uL in 50mL
Z53349	IC2011-7	N/A	N/A	W	9	SIMCL	Re ran by mistake	NA	NA		100uL in 50mL
Z53350	BLANK	N/A	N/A	W	10	SIMCL		NA	NA		
Z53351	ICV2011-5	N/A	N/A	W	10	SIMCL		NA	NA		50uL in 50mL
Z53352	BS	N/A	N/A	W	13	SIMCL		NA	NA		20uL in 40mL
Z53353	MB	N/A	N/A	W	14	SIMCL	surr high	NA	NA		✓
Z53354	BLANK	N/A	N/A	W	15	SIMCL	GC room	NA	NA		✓
Z53355	FA56218-4		2	W	16	SIMCL		1	no		✓
Z53356	FA56349-14		2	W	17	SIMCL		1	no		✓
Z53357	FA56349-19		2	W	18	SIMCL	Elevator error.	1	no		✓
Z53358	FA56394-11		3	W	19	SIMCL	hs	1	no		✓
Z53359	FA56394-10		3	W	20	SIMCL	IS failure	1	no		✓
Z53360	FA56394-12		4	W	21	SIMCL		1	no		✓
Z53361	FA56505-1		2	W	22	SIMCL	5/22/2018 IS failure	1	no	1X	✓
Z53362	FA56505-2		2	W	23	SIMCL		1	no		✓
Z53363	FA56505-3		2	W	24	SIMCL	IS failure	1	no	1X	✓
Z53364	FA56505-4		2	W	25	SIMCL	IS failure	1	no	1X	✓
Z53365	FA56505-5		2	W	26	SIMCL	IS/SS failure	1	no	1X	✓
Z53366	FA56505-3MS		1	W	27	SIMCL		1	no		20uL in 40mL
Z53367	FA56505-3MSD		1	W	27	SIMCL		1	no		20uL in 40mL
Z53368	ECC2011-5		N/A	W	28	SIMCL					50uL in 50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA15-Z-ANALYSIS LOG

DATE:	8/10/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5975 MSD
INSTRUMENT:	MSVOA15-Z
PURGE PRESSURE:	9.3psi
PURGE VOLUME:	5mL
ANALYST:	Melissa M

METHODS:*	simcl
METHOD FILE:	SIMCL080918.M
CALIB. DATE:	8/9/2018
EM VOLTAGE:	1788v
BFB RESPONSE:	124959904
VZ2012	

BFB:	V23881G
ICAL/CC:	v23993, v23998
ISTD/SUR:	v23911
ICV/QC:	v23994,v23991

PH LOT:200814,220416
KI PAPER LOT:06517
SAMPLE ID VERIFIED BY:
Melissa Mangual
DATE VERIFIED: 08/13/18

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
Z53369	BLANK	N/A	N/A	W	1	SIMCL		NA	NA		✓
Z53370	BLANK	N/A	N/A	NA	2	SIMCL		NA	NA		✓
Z53371	BFB	N/A	N/A	N/A	1	bfb		NA	NA		Pass on autofind 2uL
Z53372	CC2011-5	N/A	N/A	W	1	SIMCL		NA	NA		50uL in 50mL
Z53373	BS	N/A	N/A	W	2	SIMCL		NA	NA		20ul in 40mL
Z53374	MB	N/A	N/A	W	3	SIMCL		NA	NA		✓
Z53375	FA56394-13		2	W	4	SIMCL		1	NO		✓
Z53376	FA56394-14		2	W	5	SIMCL		1	NO		✓
Z53377	FA56394-15		2	W	6	SIMCL		1	NO		✓
Z53378	FA56394-16		3	W	7	SIMCL		1	NO		✓
Z53379	FA56505-1		1	W	8	SIMCL	5/22/2018 IS failure	1	NO		✓
Z53380	FA56505-2		1	W	9	SIMCL		1	NO		✓
Z53381	FA56505-3		3	W	10	SIMCL	IS failure	1	NO		✓
Z53382	FA56505-4		1	W	11	SIMCL		1	NO		✓
Z53383	FA56505-5		1	W	12	SIMCL	IS failure	1	NO		✓
Z53384	FA56394-12		6	W	13	SIMCL		1	NO		✓
Z53385	FA56349-14		4	W	14	SIMCL		1	NO		✓
Z53386	FA56349-19		4	W	15	SIMCL		1	NO		✓
Z53387	FA56394-12MS		5	W	16	SIMCL		1	NO		20ul in 40mL
Z53388	FA56394-12MSD		5	W	16	SIMCL		1	NO		20ul in 40mL
Z53389	FA56394-13MS		3	W	17	SIMCL		1	NO		20ul in 40mL
Z53390	FA56394-13MSD		3	W	17	SIMCL		1	NO		20ul in 40mL
Z53391	ECC2011-5			W	18	SIMCL		NA	NA		50uL in 50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

ORLD-VOA-0001-12-OO-FORM-msvoa15_z_log.xlsm 040918

Analyst's Signature:

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF1693-MB	FF43894.D	1	08/03/18	EG	n/a	n/a	GFF1693

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF1693-BS	FF43895.D	1	08/03/18	EG	n/a	n/a	GFF1693
GFF1693-BSD	FF43896.D	1	08/03/18	EG	n/a	n/a	GFF1693

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	108	124	115	120	111	3	62-139/30
74-84-0	Ethane	219	253	116	242	111	4	67-141/30
74-85-1	Ethene	290	346	119	329	113	5	68-141/30

8.2.1

8

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	FF43902.D	1	08/03/18	EG	n/a	n/a	GFF1693
FA56349-1	FF43897.D	1	08/03/18	EG	n/a	n/a	GFF1693

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12

CAS No.	Compound	FA56349-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	350		108	442	85	62-139
74-84-0	Ethane	0.35	J	219	244	111	67-141
74-85-1	Ethene	1.0 U		290	332	114	68-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA56349
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1DUP	FF43901.D	1	08/03/18	EG	n/a	n/a	GFF1693
FA56349-1	FF43897.D	1	08/03/18	EG	n/a	n/a	GFF1693

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12

CAS No.	Compound	FA56349-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	350		360		3	30
74-84-0	Ethane	0.35	J	0.86	J	200*	30
74-85-1	Ethene	1.0 U		ND		nc	30

* = Outside of Control Limits.

Initial Calibration Summary

Job Number: FA56349 **Sample:** GFF1692-ICC1692
Account: EAENYS EA Engineering **Lab FileID:** FF43877.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
                         Response Factor Report  VOA9

 Method       : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
 Title        : Dissolved Gases in Water
 Last Update  : Thu Aug 02 13:12:33 2018
 Response via : Initial Calibration

 Calibration Files
 1   =FF43874.D   2   =FF43875.D   3   =FF43876.D   4   =FF43877.D
 5   =FF43878.D   6   =FF43879.D   7   =FF43880.D

    Compound             1     2     3     4     5     6     7     Avg   %RSD
 ---------------------------------------------------------------------------
 1)  Methane           5.109 5.999 4.401 4.532 4.701 4.158 4.102 4.715 E3  14.02
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 4118.59757 *A

 2)  Acetylene         1.246 1.504 1.165 1.279 1.328 1.155 1.159 1.262 E4   9.96
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 11600.66997 *A

 3)  Ethylene          0.872 1.064 0.826 0.862 0.890 0.803 0.785 0.872 E4  10.64
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 7895.77270 *A

 4)  Ethane            0.930 1.103 0.859 0.901 0.938 0.840 0.822 0.913 E4  10.39
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 8262.27825 *A

 5)  Propane           0.921 1.596 1.174 1.305 1.346 1.227 1.202 1.253 E4  16.25
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 12080.55965 *A

---------------------------------------------------------------------------
(#) = Out of Range

          DGME8218.M        Mon Aug 06 10:49:16 2018
```

8.5.1

8

Initial Calibration Verification

Job Number: FA56349 **Sample:** GFF1692-ICV1692
Account: EAENYS EA Engineering **Lab FileID:** FF43882.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\080218\FF43882.D            Vial: 10
Acq On    :  2 Aug 2018   1:43 pm                    Operator: eileeng
Sample    : icv1692-5                                Inst    : VOA9
Misc      : gc21077,gff1692,38,21,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
		Amount	Calc.	%Drift			
1	Methane	1000.000	1093.896	-9.4	96	0.00	0.26- 0.86
2	Acetylene	1000.000	1008.907	-0.9	88	0.00	0.68- 1.68
3	Ethylene	1000.000	1090.715	-9.1	97	0.00	1.18- 1.98
4	Ethane	1000.000	1078.827	-7.9	95	0.00	1.53- 2.33
5	Propane	1000.000	864.493	13.6	78	0.00	4.15- 5.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
FF43878.D DGME8218.M Mon Aug 06 10:49:01 2018

8.5.2

8

Continuing Calibration Summary

Job Number: FA56349 **Sample:** GFF1693-CC1692
Account: EAENYS EA Engineering **Lab FileID:** FF43892.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\080318\FF43892.D          Vial: 1
Acq On    :  3 Aug 2018  10:16 am                   Operator: eileeng
Sample    : cc1692-5                                Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1           Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
		Amount	Calc.	%Drift			
1	Methane	1000.000	1107.109	-10.7	97	0.00	0.26- 0.86
2	Acetylene	1000.000	1095.012	-9.5	96	0.00	0.68- 1.68
3	Ethylene	1000.000	1077.494	-7.7	96	0.00	1.18- 1.98
4	Ethane	1000.000	1070.738	-7.1	94	0.00	1.53- 2.33
5	Propane	1000.000	1087.723	-8.8	98	0.02	4.15- 5.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
FF43878.D DGME8218.M Fri Aug 03 17:22:35 2018

8.5.3

8

Continuing Calibration Summary

Job Number: FA56349 **Sample:** GFF1693-CC1692
Account: EAENYS EA Engineering **Lab FileID:** FF43903.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
                    Evaluate Continuing Calibration Report

 Data File : C:\HPCHEM\2\DATA\080318\FF43903.D            Vial: 12
 Acq On    :  3 Aug 2018   2:18 pm                     Operator: eileeng
 Sample    : cc1692-4                                  Inst    : VOA9
 Misc      : gc21080,gff1693,38,20,500,5,1             Multiplr: 1.00
 IntFile   : EVENTS.E

 Method       : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
 Title        : Dissolved Gases in Water
 Last Update  : Thu Aug 02 13:12:33 2018
 Response via : Multiple Level Calibration

 Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
 Max. RRF Dev :  15%     Max. Rel. Area : 150%

        Compound                Amount  Calc.    %Drift Area% Dev(min)RT Window
 ---------------------------------------------------------------------------

           -------------------- Amount  Calc.    %Drift  --------------
 1     Methane                500.000 533.397     -6.7   97   0.00    0.26- 0.86
 2     Acetylene              500.000 528.946     -5.8   96   0.00    0.68- 1.68
 3     Ethylene               500.000 526.431     -5.3   96   0.00    1.18- 1.98
 4     Ethane                 500.000 528.769     -5.8   97   0.00    1.53- 2.33
 5     Propane                500.000 512.880     -2.6   95   0.00    4.15- 5.15
-----------------------------------------------------------------------------
-----------------------------------------------------------------------------

   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    FF43877.D  DGME8218.M       Fri Aug 03 17:22:55 2018
```

8.5.4

8

Continuing Calibration Summary

Job Number: FA56349 **Sample:** GFF1693-ECC1692
Account: EAENYS EA Engineering **Lab FileID:** FF43913.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
                    Evaluate Continuing Calibration Report

 Data File : C:\HPCHEM\2\DATA\080318\FF43913.D            Vial: 22
 Acq On    :  3 Aug 2018   5:40 pm                     Operator: eileeng
 Sample    : ecc1692-5                                 Inst    : VOA9
 Misc      : gc21080,gff1693,38,20,500,5,1             Multiplr: 1.00
 IntFile   : EVENTS.E

 Method       : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
 Title        : Dissolved Gases in Water
 Last Update  : Thu Aug 02 13:12:33 2018
 Response via : Multiple Level Calibration

 Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
 Max. RRF Dev :  15%     Max. Rel. Area : 150%

        Compound                Amount  Calc.    %Drift Area% Dev(min)RT Window
 ---------------------------------------------------------------------------

           -------------------- Amount  Calc.    %Drift  --------------
 1     Methane                1000.000 1135.208    -13.5   99   0.00    0.26- 0.86
 2     Acetylene              1000.000 1133.548    -13.4   99   0.00    0.68- 1.68
 3     Ethylene               1000.000 1114.064    -11.4   99   0.00    1.18- 1.98
 4     Ethane                 1000.000 1130.632    -13.1  100   0.00    1.53- 2.33
 5     Propane                1000.000 1102.119    -10.2   99   0.00    4.15- 5.15
---------------------------------------------------------------------------
---------------------------------------------------------------------------

   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    FF43878.D  DGME8218.M       Fri Aug 03 17:52:12 2018
```

8.5.5

8

GC Volatiles

Raw Data

Manual Integrations
APPROVED
(compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43897.D            Vial: 6
Acq On    :  3 Aug 2018  12:28 pm                    Operator: eileeng
Sample    : fa56349-1                                Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:15 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.55	12981530	3151.930	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv
3)	Ethylene	0.00	0	N.D.	ppmv
4)	Ethane	0.00	0	N.D.	ppmv
5)	Propane	0.00	0	N.D.	ppmv d

9.1.1

9

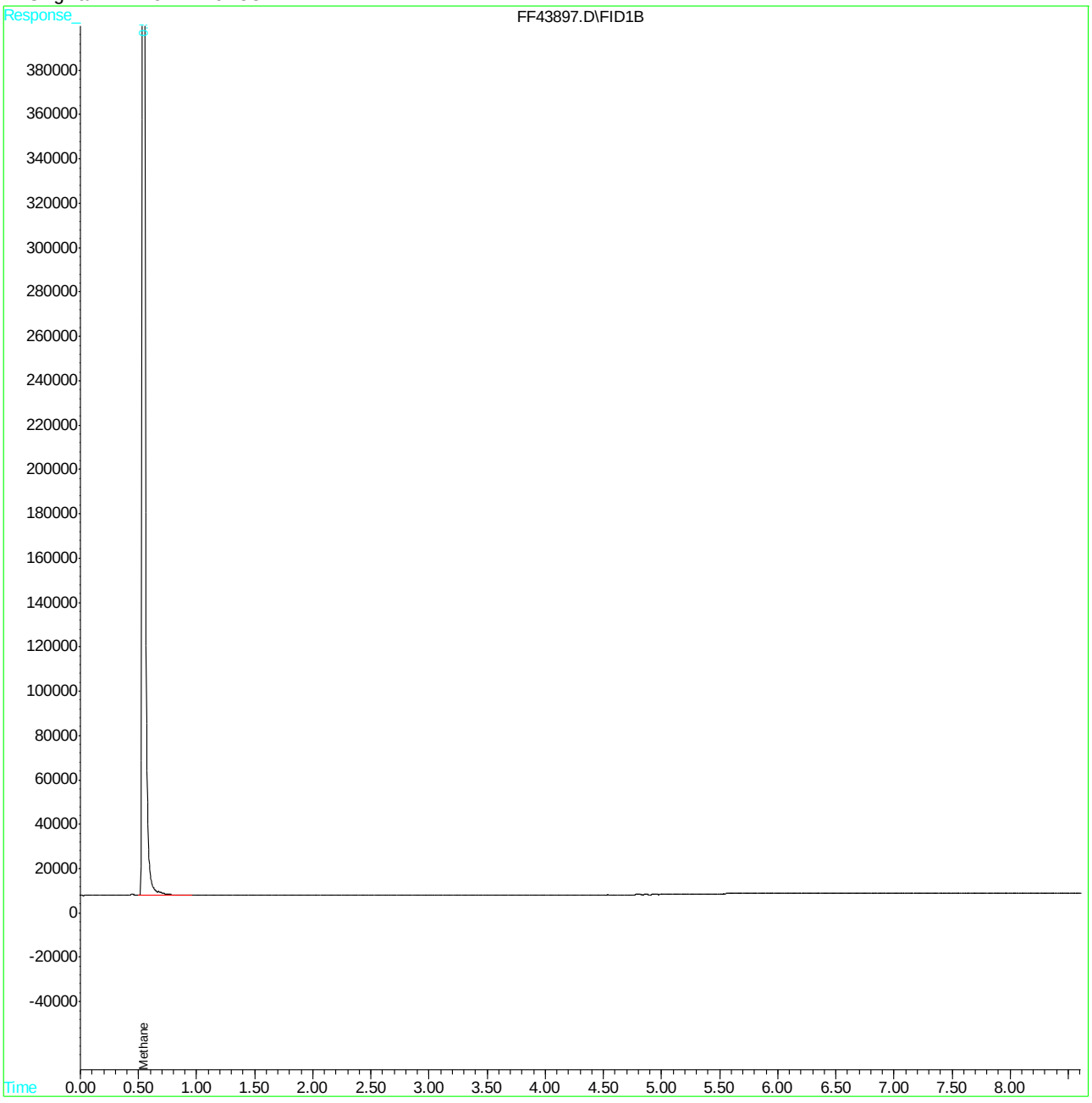
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43897.D Vial: 6
Acq On : 3 Aug 2018 12:28 pm Operator: eileeng
Sample : fa56349-1 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:15 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	FA56349-1	**Method:**	RSKSOP-147/175
Lab FileID:	FF43897.D	**Analyst approved:**	08/08/18 12:41 Eileen Grekoski
Injection Time:	08/03/18 12:28	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethane	74-84-0	1	1.89	Missed peak

Dissolved Gases Raw Data Summary

Sample Number:	FA56349-1	**Sample Volume:**	38.0 ml
Lab FileID:	FF43897.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 12:28	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	3151.93	37600	350	ug/l
Ethane	74-84-0	30	1.55	26300	0.35	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43898.D Vial: 7
Acq On : 3 Aug 2018 12:48 pm Operator: eileeng
Sample : fa56349-2 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:15 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.53	335009384	81340.645	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv
3)	Ethylene	0.00	0	N.D.	ppmv d
4)	Ethane	1.94	28624	3.464	ppmv
5)	Propane	0.00	0	N.D.	ppmv d

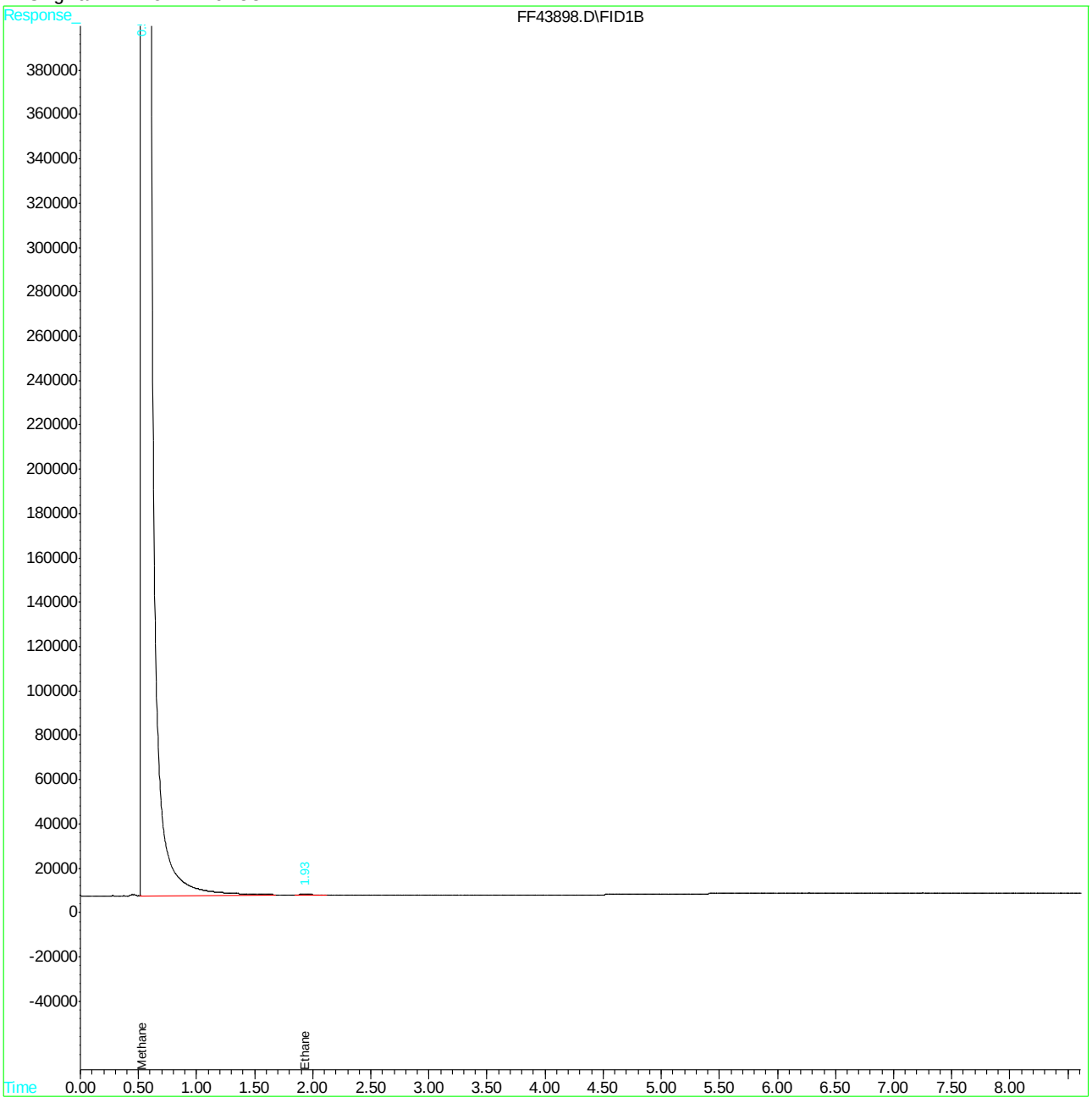
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43898.D DGME8218.M Fri Aug 03 17:23:25 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43898.D Vial: 7
Acq On : 3 Aug 2018 12:48 pm Operator: eileeng
Sample : fa56349-2 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:15 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-2	**Sample Volume:**	38.0 ml
Lab FileID:	FF43898.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 12:48	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	81340.65	37600	9040	ug/l
Ethane	74-84-0	30	3.46	26300	0.79	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43909.D Vial: 18
Acq On : 3 Aug 2018 4:21 pm Operator: eileeng
Sample : fa56349-2,20x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,20 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.55	24407118	5926.075	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv
3)	Ethylene	0.00	0	N.D.	ppmv
4)	Ethane	0.00	0	N.D.	ppmv
5)	Propane	0.00	0	N.D.	ppmv d

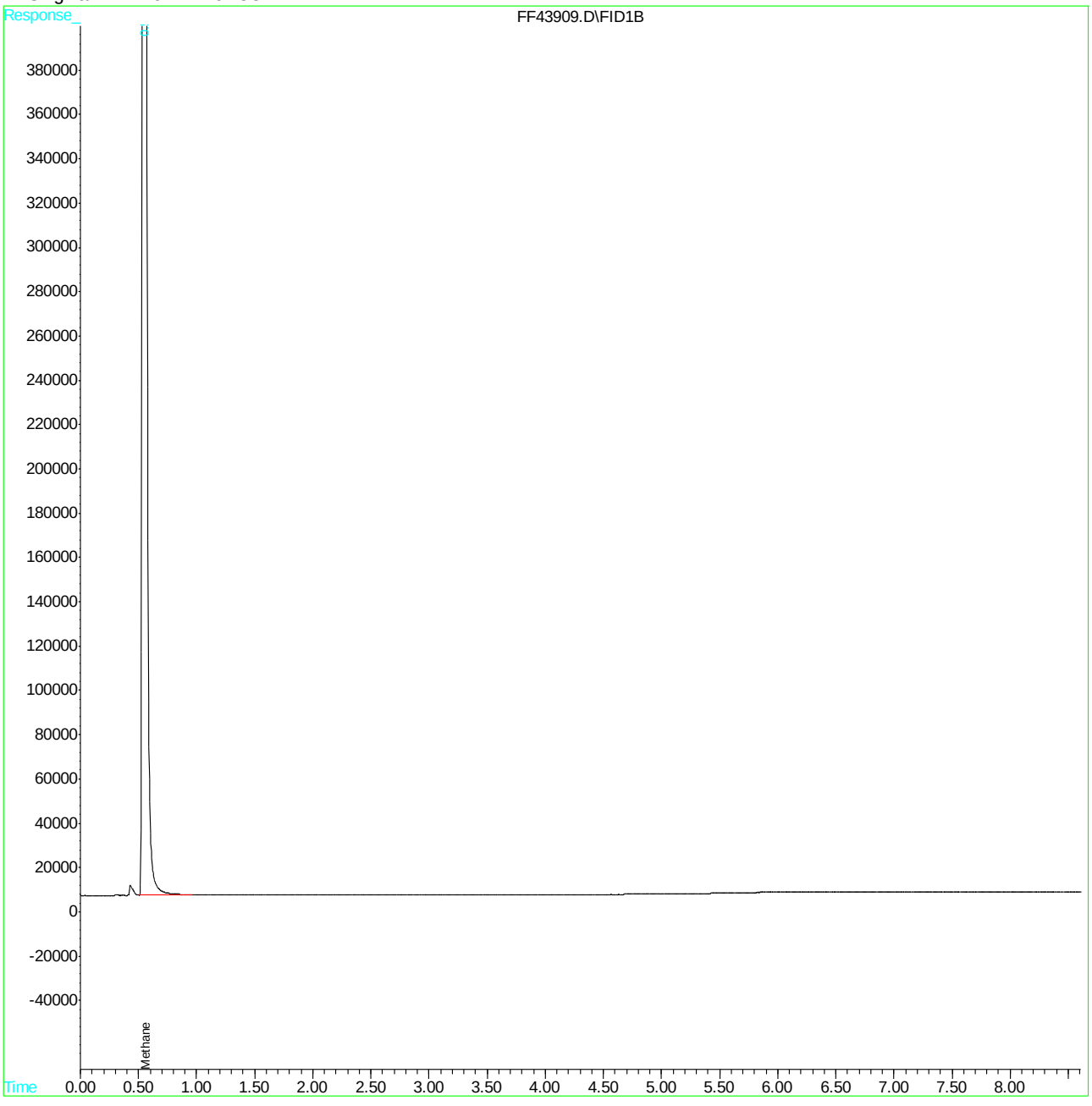
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43909.D Vial: 18
Acq On : 3 Aug 2018 4:21 pm Operator: eileeng
Sample : fa56349-2,20x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,20 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-2	**Sample Volume:**	38.0 ml
Lab FileID:	FF43909.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 16:21	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	5926.07	37600	13200	ug/l
Ethane	74-84-0	30	0	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43899.D Vial: 8
Acq On : 3 Aug 2018 1:24 pm Operator: eileeng
Sample : fa56349-3 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:15 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.54	375623557	91201.811	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv d
3)	Ethylene	0.00	0	N.D.	ppmv d
4)	Ethane	1.94	2172207	262.907	ppmv
5)	Propane	0.00	0	N.D.	ppmv

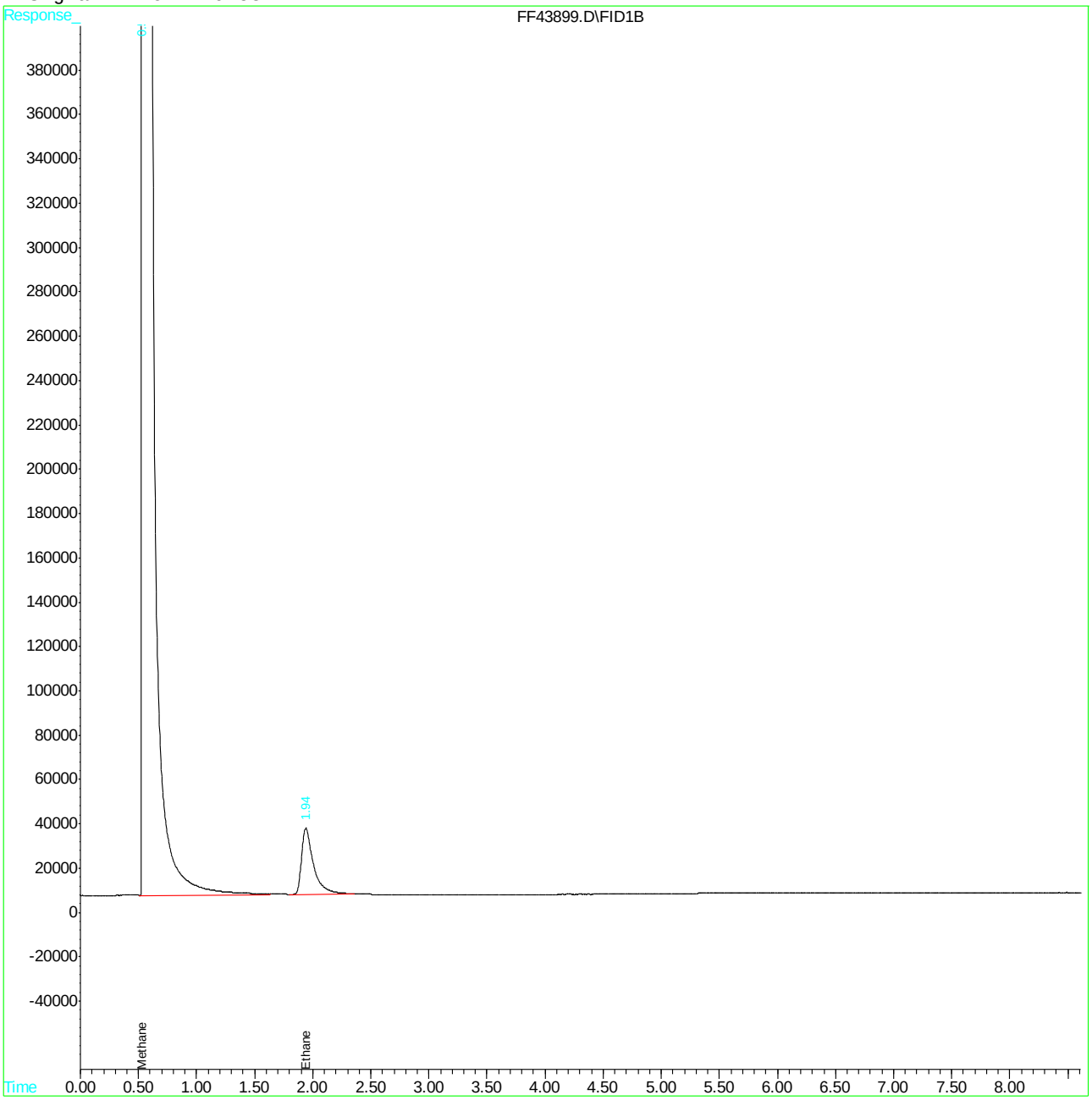
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43899.D Vial: 8
Acq On : 3 Aug 2018 1:24 pm Operator: eileeng
Sample : fa56349-3 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:15 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-3	**Sample Volume:**	38.0 ml
Lab FileID:	FF43899.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 13:24	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	91201.81	37600	10100	ug/l
Ethane	74-84-0	30	262.91	26300	59.8	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43910.D Vial: 19
Acq On : 3 Aug 2018 4:33 pm Operator: eileeng
Sample : fa56349-3,20x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,20 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.56	32868850	7980.593	ppmv	
2)	Acetylene	0.00	0	N.D.	ppmv	
3)	Ethylene	0.00	0	N.D.	ppmv	d
4)	Ethane	1.93	112781	13.650	ppmv	
5)	Propane	0.00	0	N.D.	ppmv	d

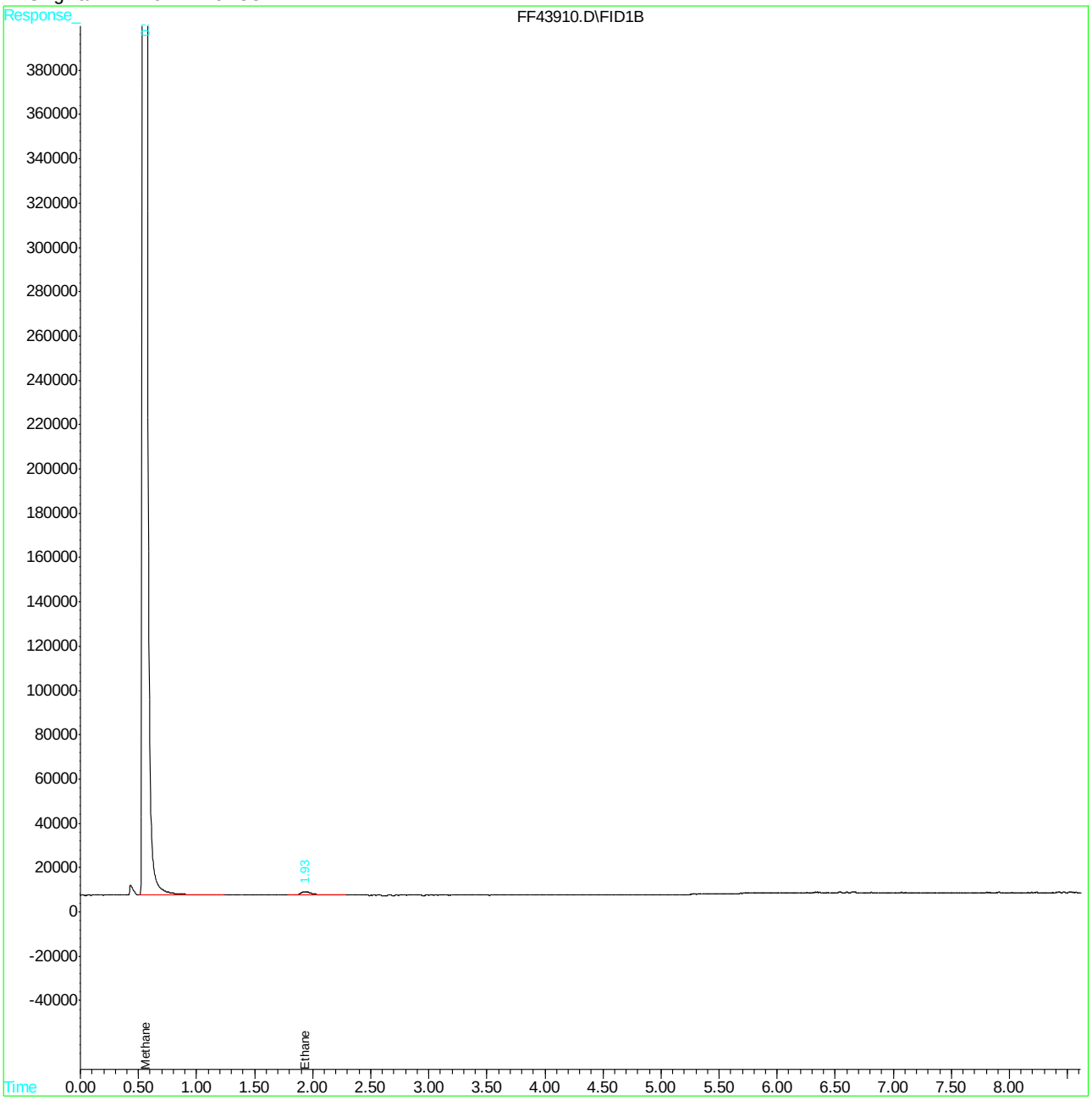
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43910.D DGME8218.M Fri Aug 03 17:23:42 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43910.D Vial: 19
Acq On : 3 Aug 2018 4:33 pm Operator: eileeng
Sample : fa56349-3,20x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,20 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-3	**Sample Volume:**	38.0 ml
Lab FileID:	FF43910.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 16:33	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	7980.59	37600	17700	ug/l
Ethane	74-84-0	30	13.65	26300	62.1	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43900.D Vial: 9
Acq On : 3 Aug 2018 1:36 pm Operator: eileeng
Sample : fa56349-4 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.54	146662205	35609.744	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv d
3)	Ethylene	1.57	576928	73.068	ppmv
4)	Ethane	1.92	3703152	448.200	ppmv
5)	Propane	0.00	0	N.D.	ppmv d

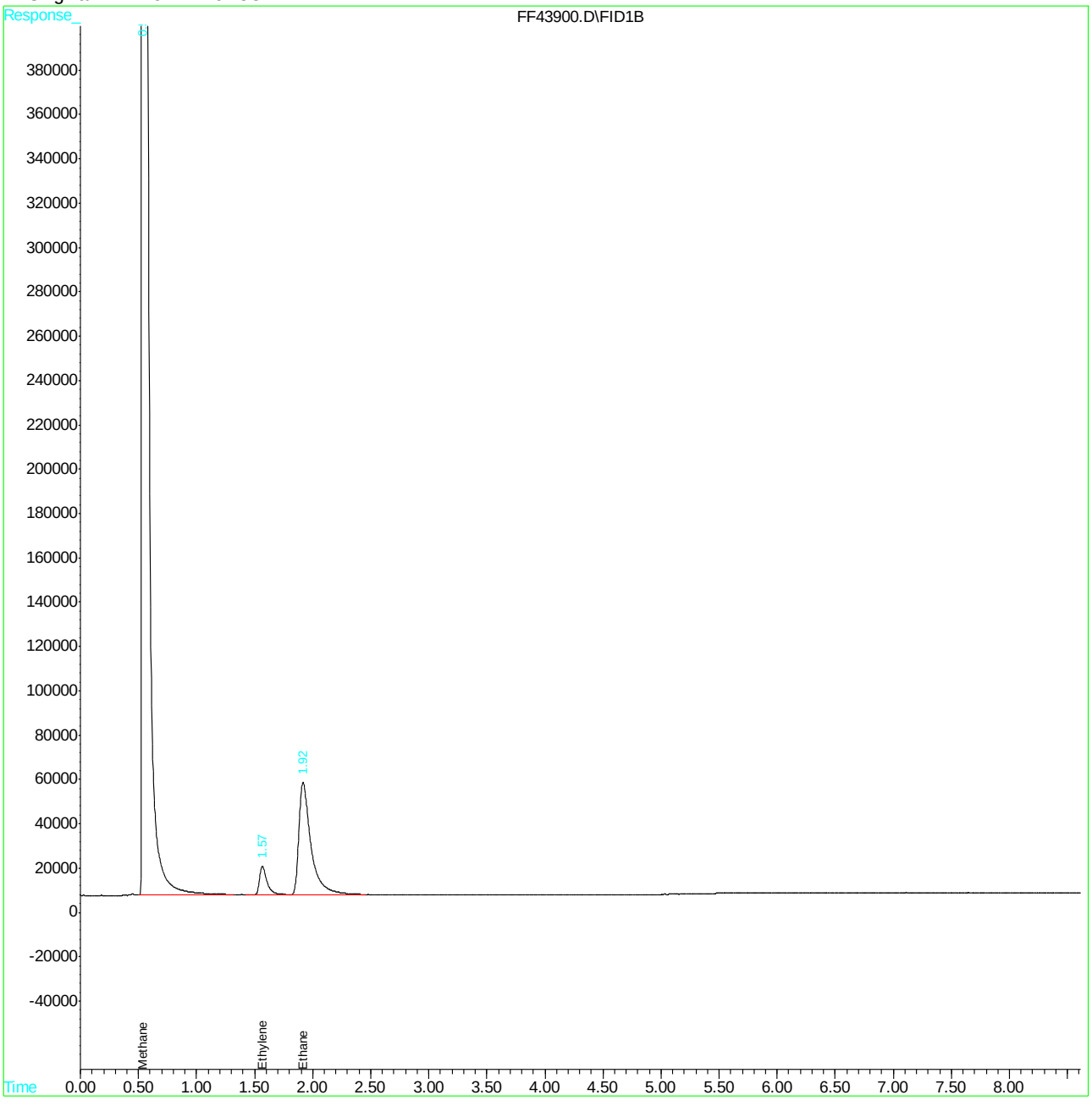
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43900.D Vial: 9
Acq On : 3 Aug 2018 1:36 pm Operator: eileeng
Sample : fa56349-4 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-4	**Sample Volume:**	38.0 ml
Lab FileID:	FF43900.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 13:36	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	35609.74	37600	3960	ug/l
Ethane	74-84-0	30	448.2	26300	102	ug/l
Ethene	74-85-1	28	73.07	10200	22.3	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43911.D Vial: 20
Acq On : 3 Aug 2018 4:45 pm Operator: eileeng
Sample : fa56349-4,10x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.56	16159653	3923.581	ppmv	
2)	Acetylene	0.00	0	N.D.	ppmv	d
3)	Ethylene	1.58	53926	6.830	ppmv	
4)	Ethane	1.93	340761	41.243	ppmv	
5)	Propane	0.00	0	N.D.	ppmv	

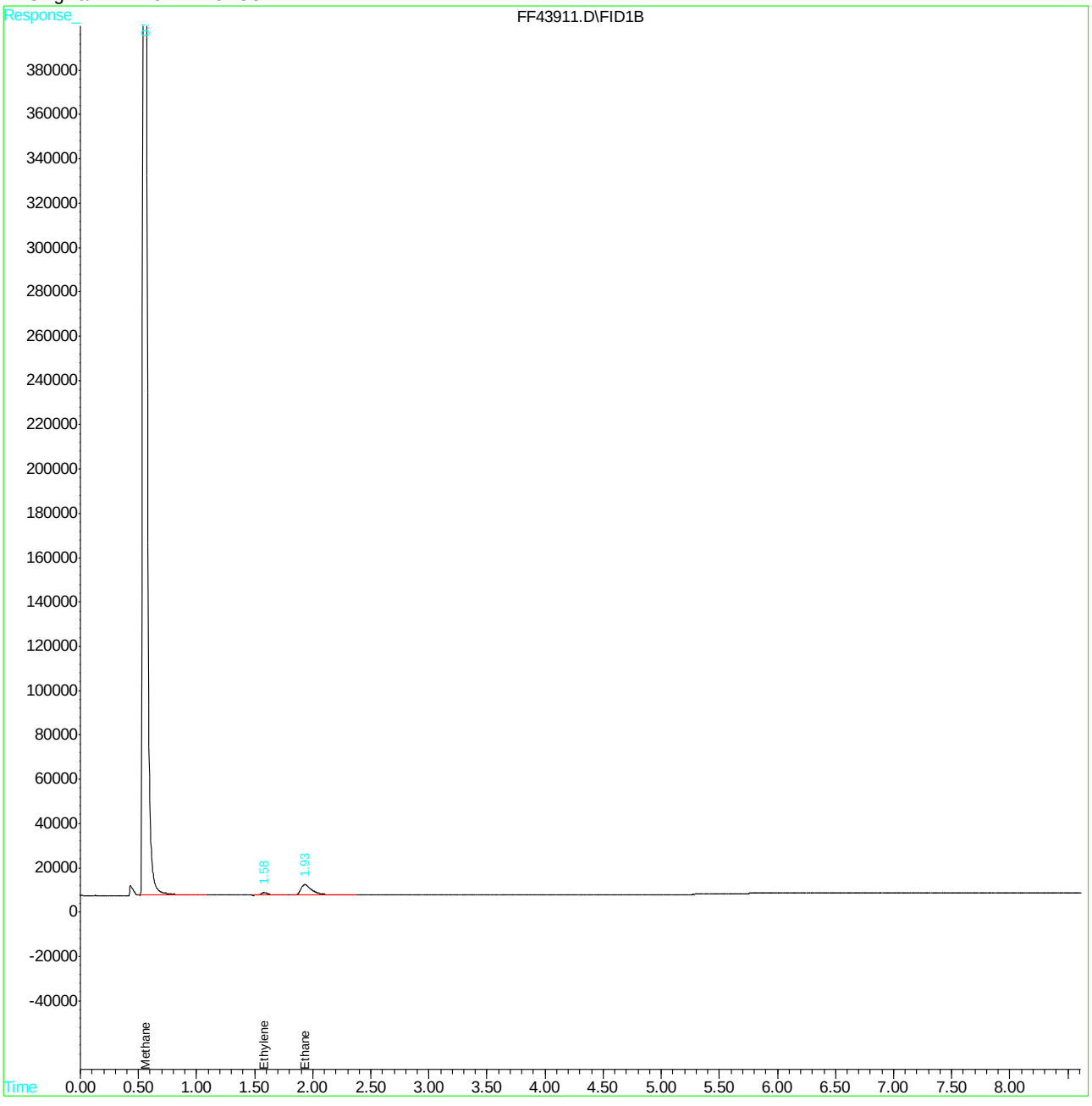
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43911.D Vial: 20
Acq On : 3 Aug 2018 4:45 pm Operator: eileeng
Sample : fa56349-4,10x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-4	**Sample Volume:**	38.0 ml
Lab FileID:	FF43911.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 16:45	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	3923.58	37600	4360	ug/l
Ethane	74-84-0	30	41.24	26300	93.8	ug/l
Ethene	74-85-1	28	6.83	10200	20.9	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations
APPROVED
(compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43905.D            Vial: 14
Acq On    :  3 Aug 2018   3:20 pm                    Operator: eileeng
Sample    : fa56349-5                                Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:17 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.54	138336401	33588.230	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv d
3)	Ethylene	1.56	12127	1.536	ppmv m
4)	Ethane	1.91	1043513	126.299	ppmv
5)	Propane	0.00	0	N.D.	ppmv

9.1.8

9

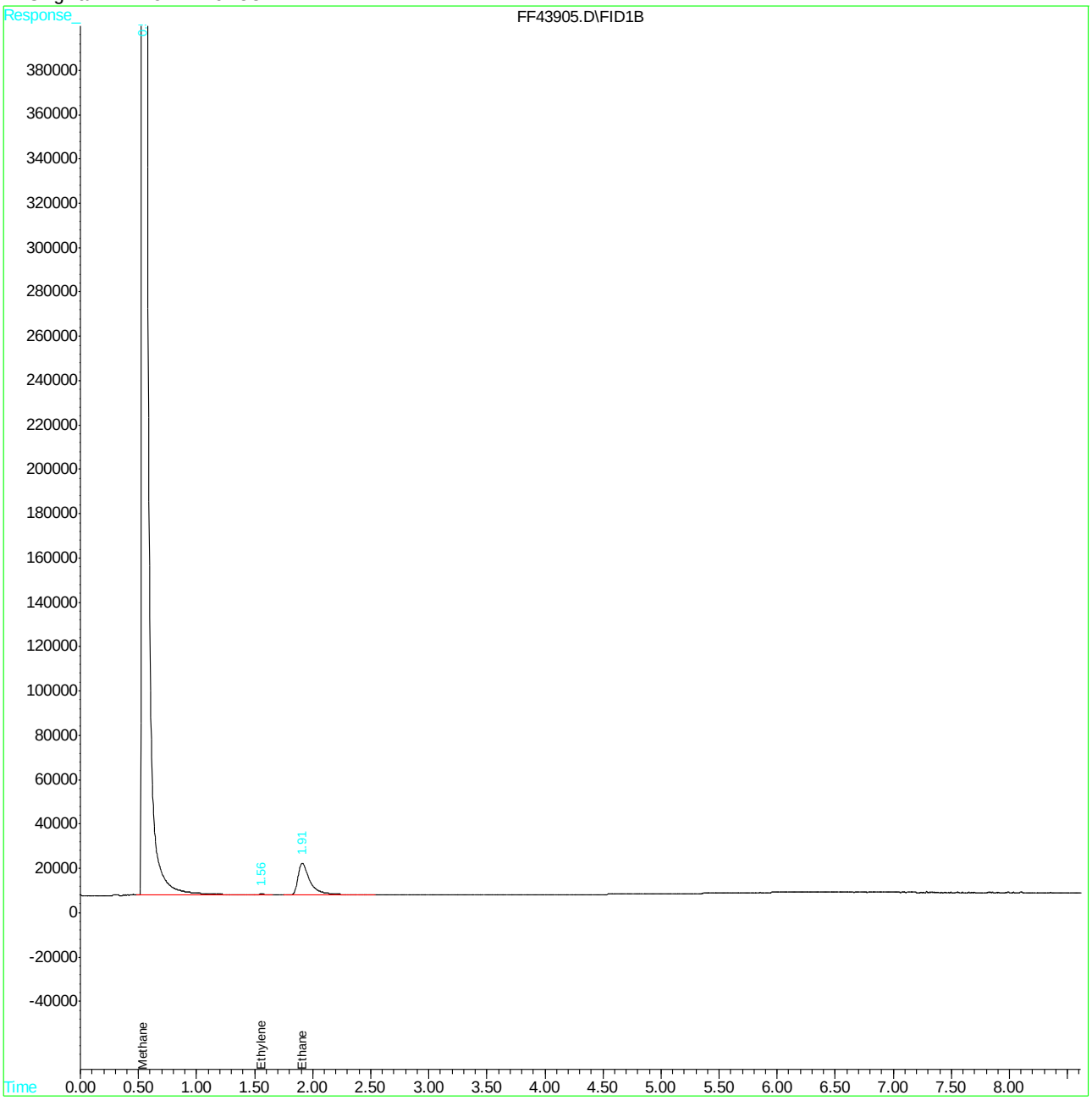
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43905.D Vial: 14
Acq On : 3 Aug 2018 3:20 pm Operator: eileeng
Sample : fa56349-5 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:17 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	FA56349-5	**Method:**	RSKSOP-147/175
Lab FileID:	FF43905.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 15:20	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethene	74-85-1	1	1.56	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	FA56349-5	**Sample Volume:**	38.0 ml
Lab FileID:	FF43905.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 15:20	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	33588.23	37600	3730	ug/l
Ethane	74-84-0	30	126.3	26300	28.7	ug/l
Ethene	74-85-1	28	1.54	10200	0.47	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43912.D Vial: 21
Acq On : 3 Aug 2018 4:57 pm Operator: eileeng
Sample : fa56349-5,10x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Methane	0.56	20792540	5048.452	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv
3)	Ethylene	0.00	0	N.D.	ppmv d
4)	Ethane	1.94	137962	16.698	ppmv
5)	Propane	0.00	0	N.D.	ppmv

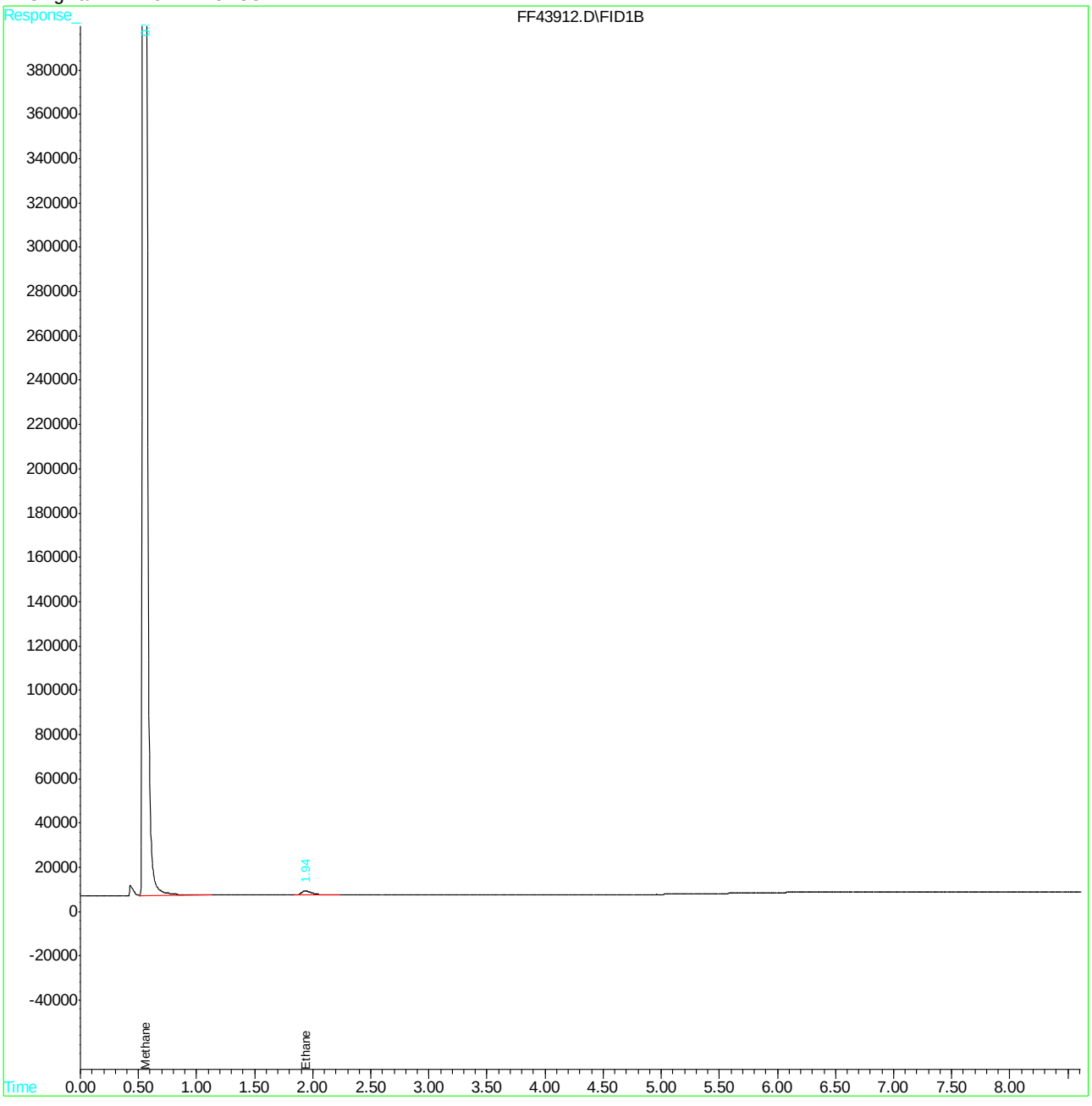
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43912.D DGME8218.M Fri Aug 03 17:23:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43912.D Vial: 21
Acq On : 3 Aug 2018 4:57 pm Operator: eileeng
Sample : fa56349-5,10x Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-5	**Sample Volume:**	38.0 ml
Lab FileID:	FF43912.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 16:57	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	5048.45	37600	5610	ug/l
Ethane	74-84-0	30	16.7	26300	38.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43906.D Vial: 15
Acq On : 3 Aug 2018 3:32 pm Operator: eileeng
Sample : fa56349-6 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:17 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.56	14587549	3541.873	ppmv	
2)	Acetylene	0.00	0	N.D.	ppmv	
3)	Ethylene	0.00	0	N.D.	ppmv	d
4)	Ethane	1.92	52310	6.331	ppmv	
5)	Propane	0.00	0	N.D.	ppmv	

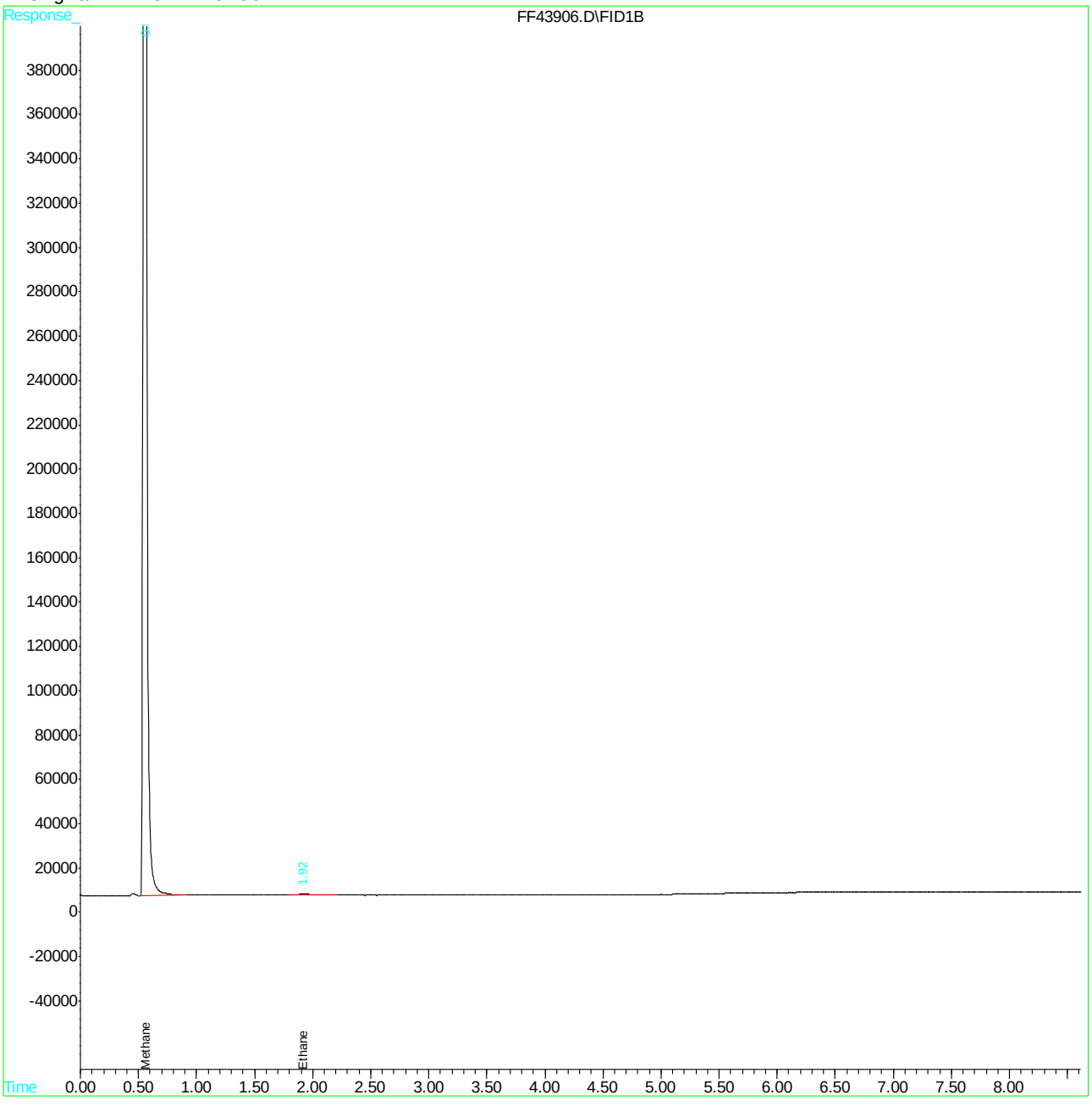
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43906.D Vial: 15
Acq On : 3 Aug 2018 3:32 pm Operator: eileeng
Sample : fa56349-6 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:17 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-6	**Sample Volume:**	38.0 ml
Lab FileID:	FF43906.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 15:32	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	3541.87	37600	394	ug/l
Ethane	74-84-0	30	6.33	26300	1.4	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43907.D            Vial: 16
Acq On    :  3 Aug 2018   3:43 pm                    Operator: eileeng
Sample    : fa56349-11                               Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:17 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.55	13514133	3281.246	ppmv	
2)	Acetylene	0.00	0	N.D.	ppmv	
3)	Ethylene	0.00	0	N.D.	ppmv	
4)	Ethane	1.91	3703	0.448	ppmv	m
5)	Propane	0.00	0	N.D.	ppmv	d

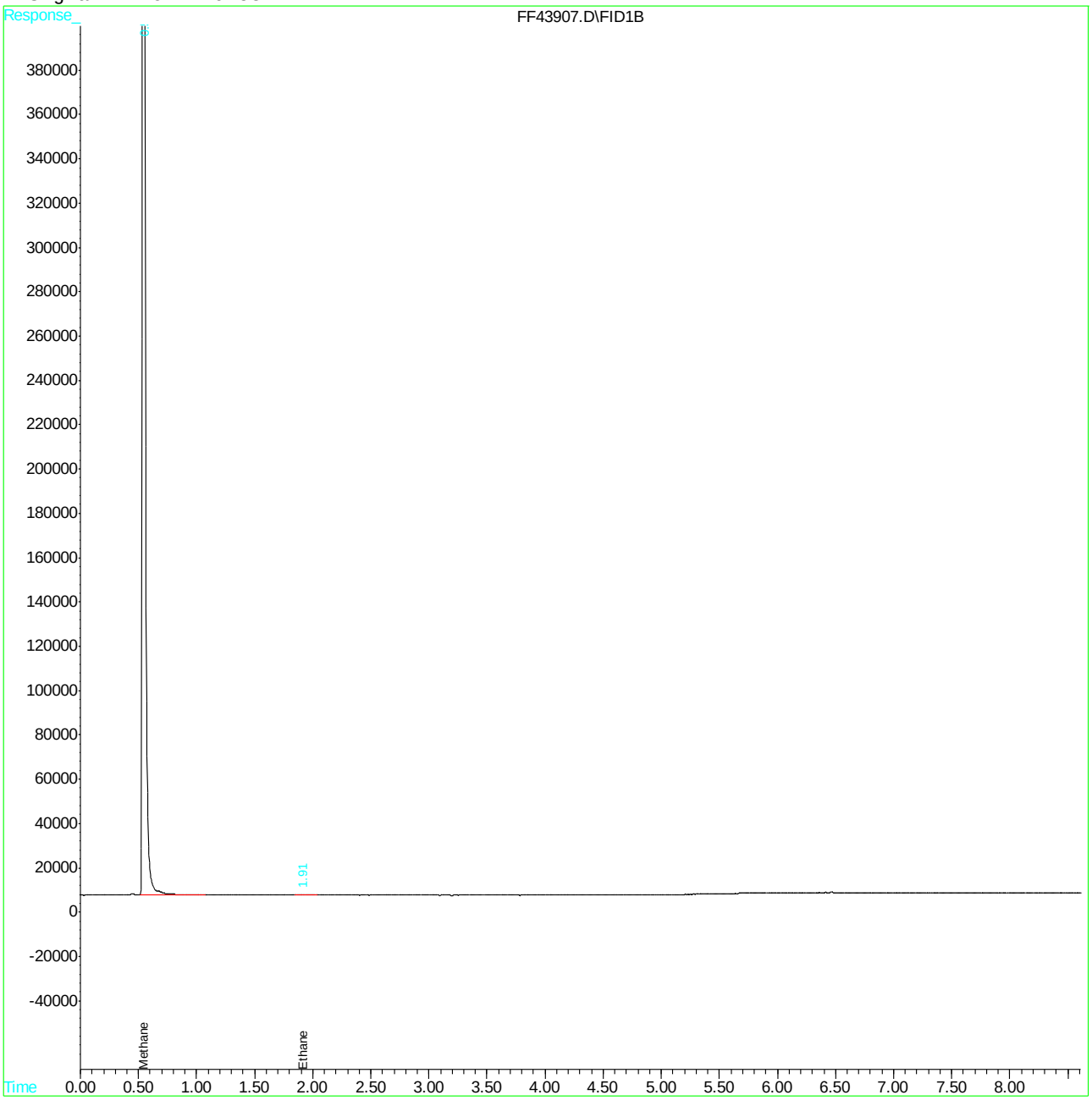
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43907.D Vial: 16
Acq On : 3 Aug 2018 3:43 pm Operator: eileeng
Sample : fa56349-11 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:17 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	FA56349-11	**Method:**	RSKSOP-147/175
Lab FileID:	FF43907.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 15:43	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethane	74-84-0	1	1.91	Missed peak

Dissolved Gases Raw Data Summary

Sample Number:	FA56349-11	**Sample Volume:**	38.0 ml
Lab FileID:	FF43907.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 15:43	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	3281.25	37600	365	ug/l
Ethane	74-84-0	30	0.45	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43908.D            Vial: 17
Acq On    :  3 Aug 2018   4:00 pm                    Operator: eileeng
Sample    : fa56349-12                               Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:18 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.55	2512	0.610	ppmv	m
2)	Acetylene	0.00	0	N.D.	ppmv	
3)	Ethylene	0.00	0	N.D.	ppmv	
4)	Ethane	0.00	0	N.D.	ppmv	
5)	Propane	0.00	0	N.D.	ppmv	

9.1.12

9

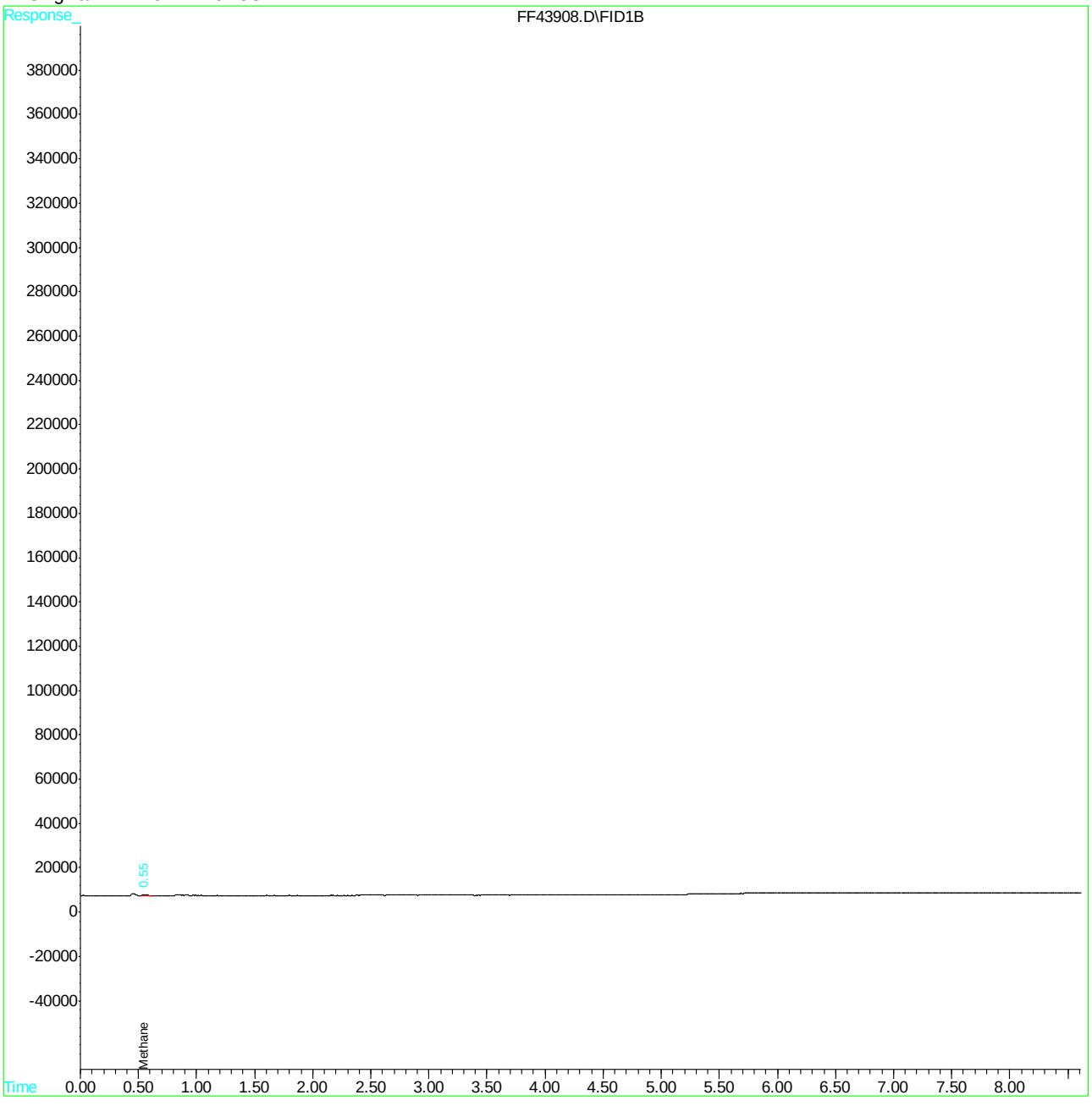
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43908.D Vial: 17
Acq On : 3 Aug 2018 4:00 pm Operator: eileeng
Sample : fa56349-12 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:18 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	FA56349-12	**Method:**	RSKSOP-147/175
Lab FileID:	FF43908.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 16:00	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Methane	74-82-8	1	0.55	Missed peak

Dissolved Gases Raw Data Summary

Sample Number:	FA56349-12	**Sample Volume:**	38.0 ml
Lab FileID:	FF43908.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 16:00	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	0.61	37600	0.0	ug/l
Ethane	74-84-0	30	0	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43894.D Vial: 3
Acq On : 3 Aug 2018 11:08 am Operator: eileeng
Sample : mb Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:14 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.00	0	N.D.	ppmv	d
2)	Acetylene	0.00	0	N.D.	ppmv	d
3)	Ethylene	0.00	0	N.D.	ppmv	
4)	Ethane	0.00	0	N.D.	ppmv	
5)	Propane	0.00	0	N.D.	ppmv	

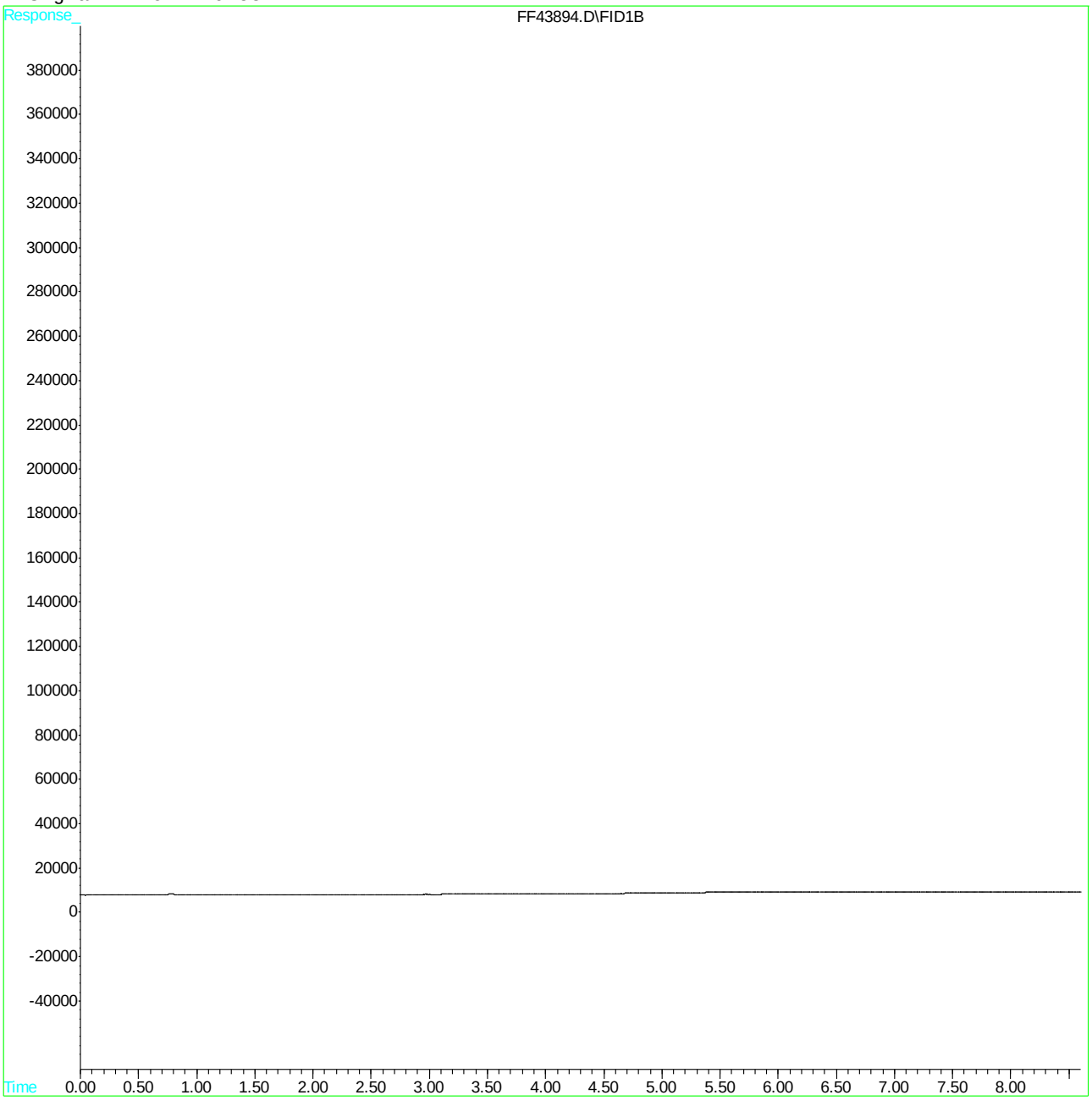
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43894.D Vial: 3
Acq On : 3 Aug 2018 11:08 am Operator: eileeng
Sample : mb Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:14 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	GFF1693-MB	**Sample Volume:**	38.0 ml
Lab FileID:	FF43894.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 11:08	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	0	37600	0.0	ug/l
Ethane	74-84-0	30	0	26300	0.0	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations
APPROVED
(compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43895.D Vial: 4
Acq On : 3 Aug 2018 11:39 am Operator: eileeng
Sample : bs Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:14 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.55	4609773	1119.258	ppmv
2)	Acetylene	1.17	11971598	1031.975	ppmv
3)	Ethylene	1.57	8943398	1132.682	ppmv
4)	Ethane	1.92	9204013	1113.980	ppmv
5)	Propane	4.65	11236209	930.107	ppmv m

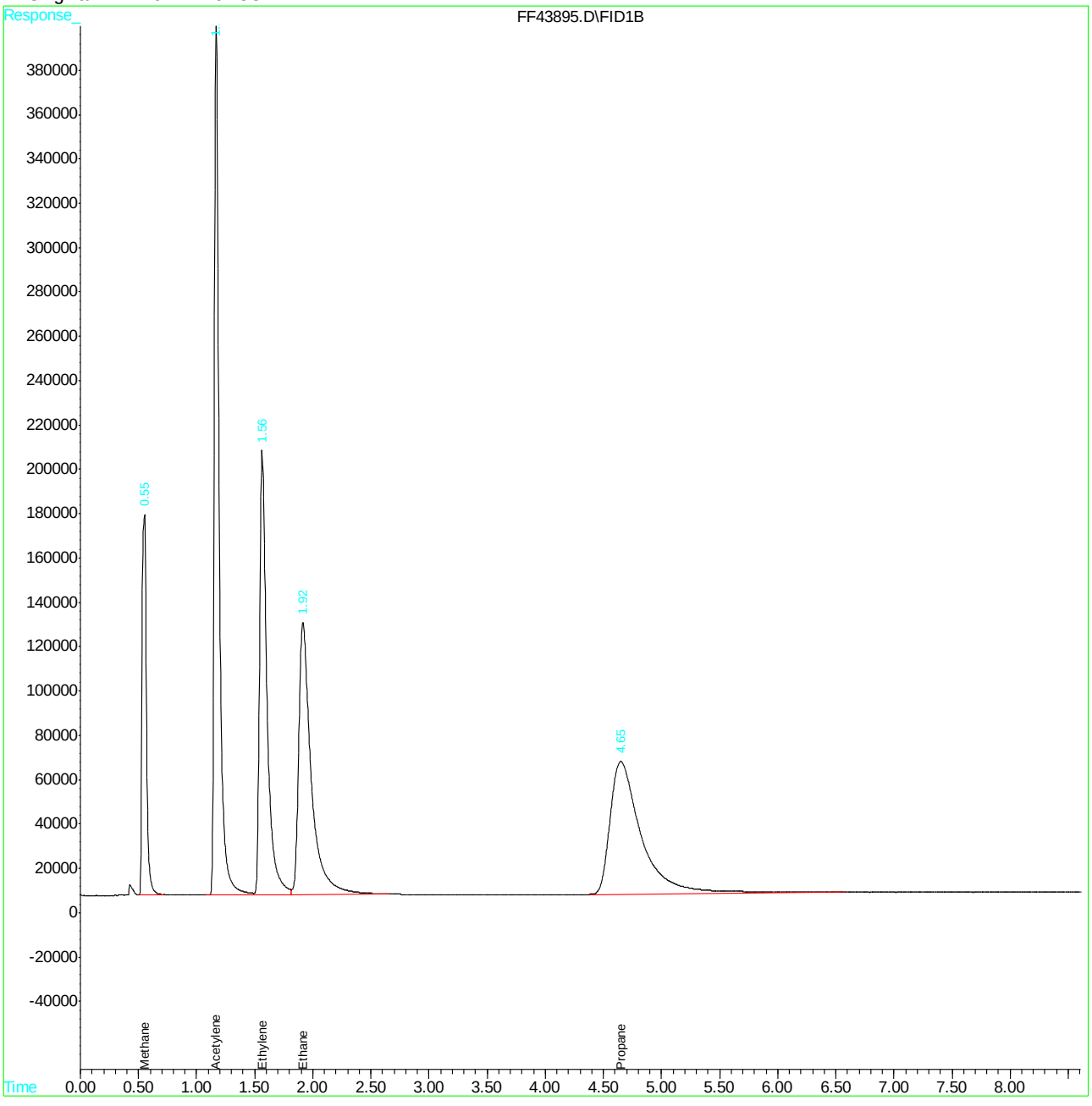
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43895.D DGME8218.M Fri Aug 03 17:23:21 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43895.D Vial: 4
Acq On : 3 Aug 2018 11:39 am Operator: eileeng
Sample : bs Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:14 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1693-BS	**Method:**	RSKSOP-147/175
Lab FileID:	FF43895.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 11:39	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.65	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	GFF1693-BS	**Sample Volume:**	38.0 ml
Lab FileID:	FF43895.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 11:39	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	1119.26	37600	124	ug/l
Ethane	74-84-0	30	1113.98	26300	253	ug/l
Ethene	74-85-1	28	1132.68	10200	346	ug/l
Acetylene	74-86-2	26	1031.97	11940	272	ug/l
Propane	74-98-6	44	930.11	31474	296	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43896.D            Vial: 5
Acq On    :  3 Aug 2018  12:17 pm                    Operator: eileeng
Sample    : bsd                                      Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:15 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.54	4437945	1077.538	ppmv
2)	Acetylene	1.16	11612602	1001.029	ppmv
3)	Ethylene	1.56	8494141	1075.783	ppmv
4)	Ethane	1.90	8798867	1064.944	ppmv
5)	Propane	4.63	10429495	863.329	ppmv m

9.3.2

9

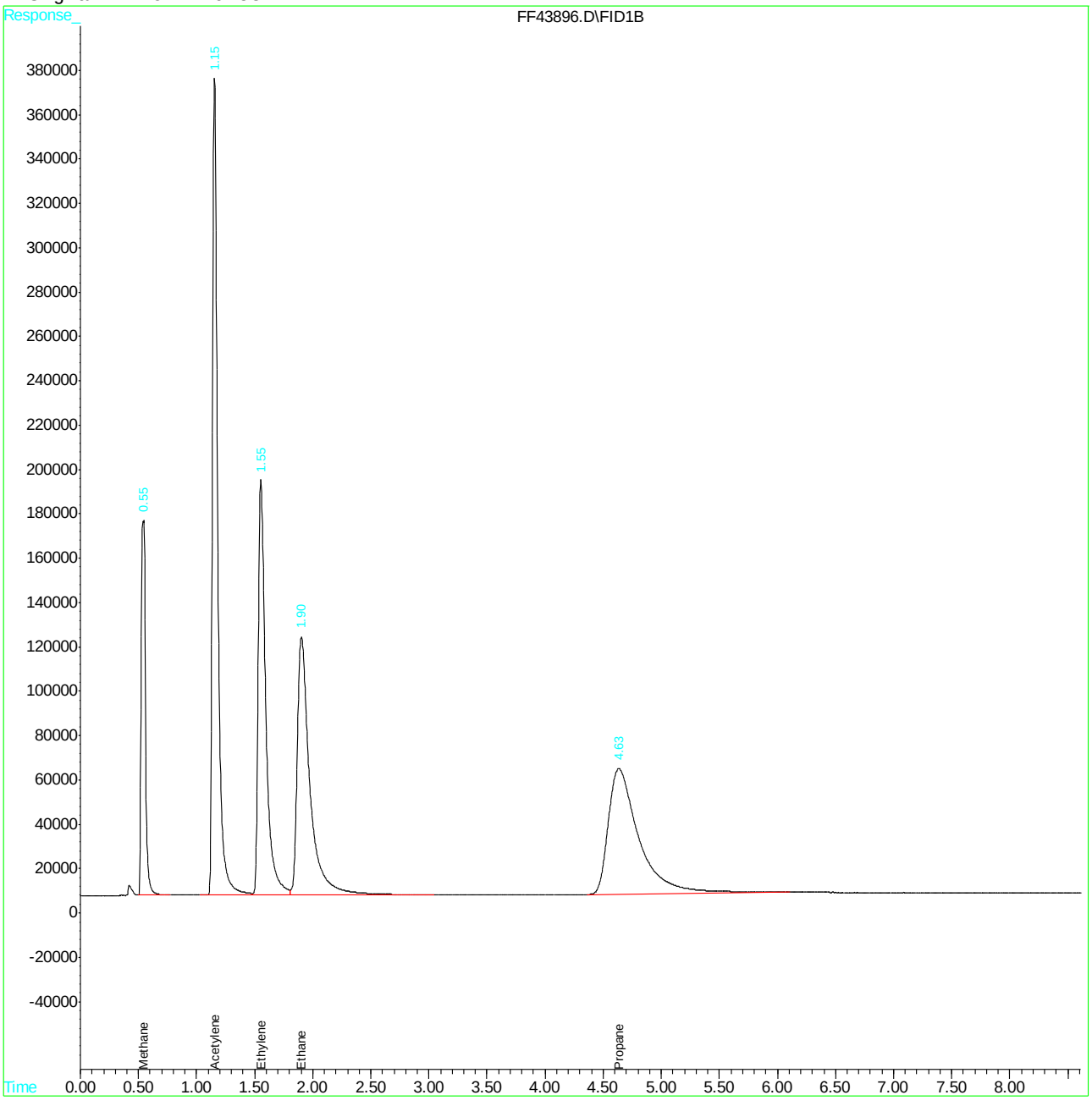
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43896.D Vial: 5
Acq On : 3 Aug 2018 12:17 pm Operator: eileeng
Sample : bsd Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:15 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1693-BSD	**Method:**	RSKSOP-147/175
Lab FileID:	FF43896.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 12:17	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.63	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	GFF1693-BSD	**Sample Volume:**	38.0 ml
Lab FileID:	FF43896.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 12:17	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	1077.54	37600	120	ug/l
Ethane	74-84-0	30	1064.94	26300	242	ug/l
Ethene	74-85-1	28	1075.78	10200	329	ug/l
Acetylene	74-86-2	26	1001.03	11940	263	ug/l
Propane	74-98-6	44	863.33	31474	275	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations
APPROVED
(compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43902.D Vial: 11
Acq On : 3 Aug 2018 2:06 pm Operator: eileeng
Sample : fa56349-1ms Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.54	16378317	3976.673	ppmv
2)	Acetylene	1.16	11596916	999.676	ppmv
3)	Ethylene	1.56	8565365	1084.804	ppmv
4)	Ethane	1.91	8868591	1073.383	ppmv
5)	Propane	4.64	10588040	876.453	ppmv m

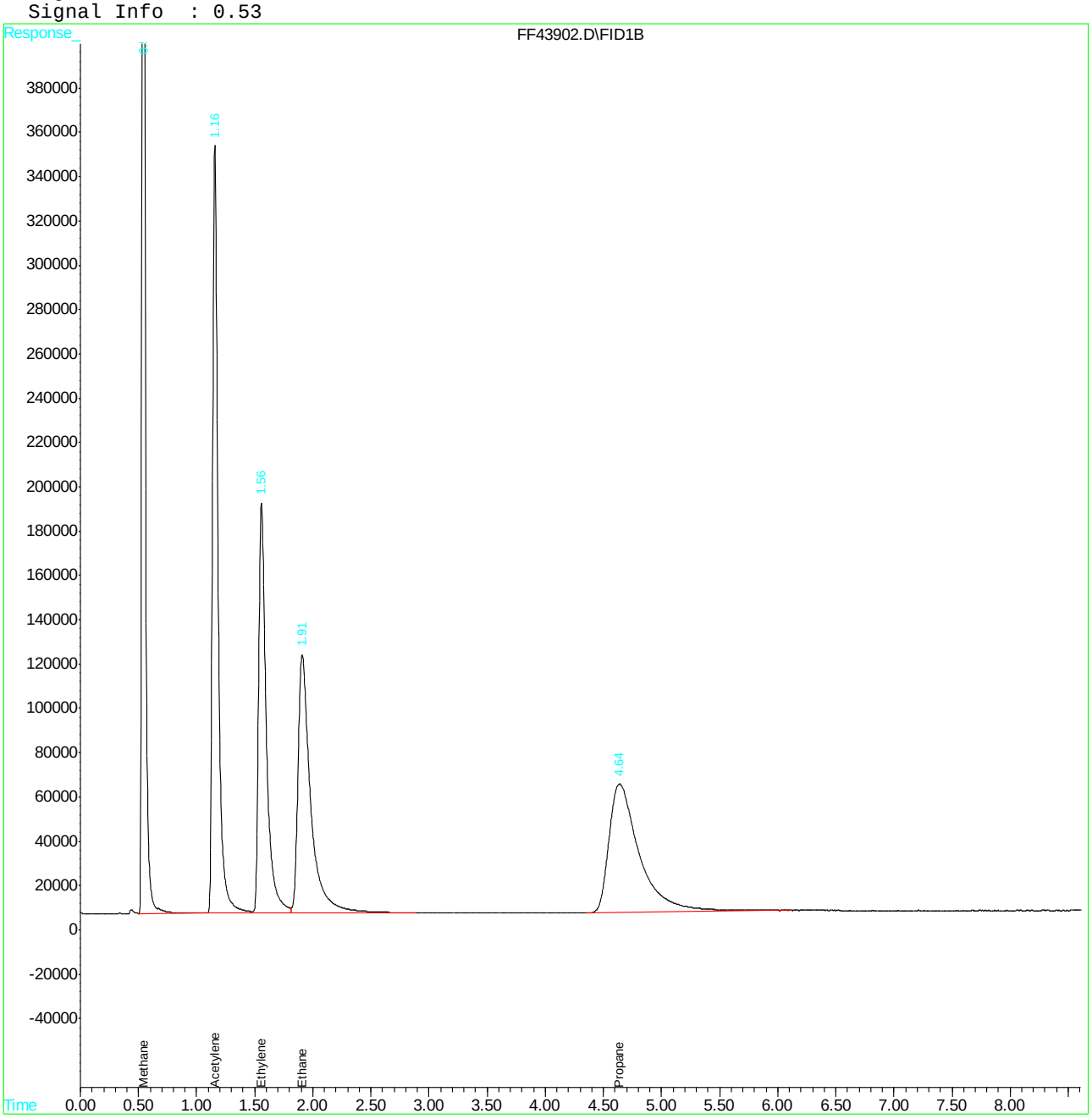
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43902.D DGME8218.M Fri Aug 03 17:23:31 2018

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43902.D Vial: 11
Acq On : 3 Aug 2018 2:06 pm Operator: eileeng
Sample : fa56349-1ms Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	FA56349-1MS	**Method:**	RSKSOP-147/175
Lab FileID:	FF43902.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 14:06	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.64	Poor instrument integration

Dissolved Gases Raw Data Summary

Sample Number:	FA56349-1MS	**Sample Volume:**	38.0 ml
Lab FileID:	FF43902.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 14:06	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	3976.67	37600	442	ug/l
Ethane	74-84-0	30	1073.38	26300	244	ug/l
Ethene	74-85-1	28	1084.8	10200	332	ug/l
Acetylene	74-86-2	26	999.68	11940	263	ug/l
Propane	74-98-6	44	876.45	31474	279	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43901.D Vial: 10
Acq On : 3 Aug 2018 1:49 pm Operator: eileeng
Sample : fa56349-1dup Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	13337594	3238.383	ppmv
2)	Acetylene	0.00	0	N.D.	ppmv d
3)	Ethylene	0.00	0	N.D.	ppmv d
4)	Ethane	1.92	31379	3.798	ppmv
5)	Propane	0.00	0	N.D.	ppmv

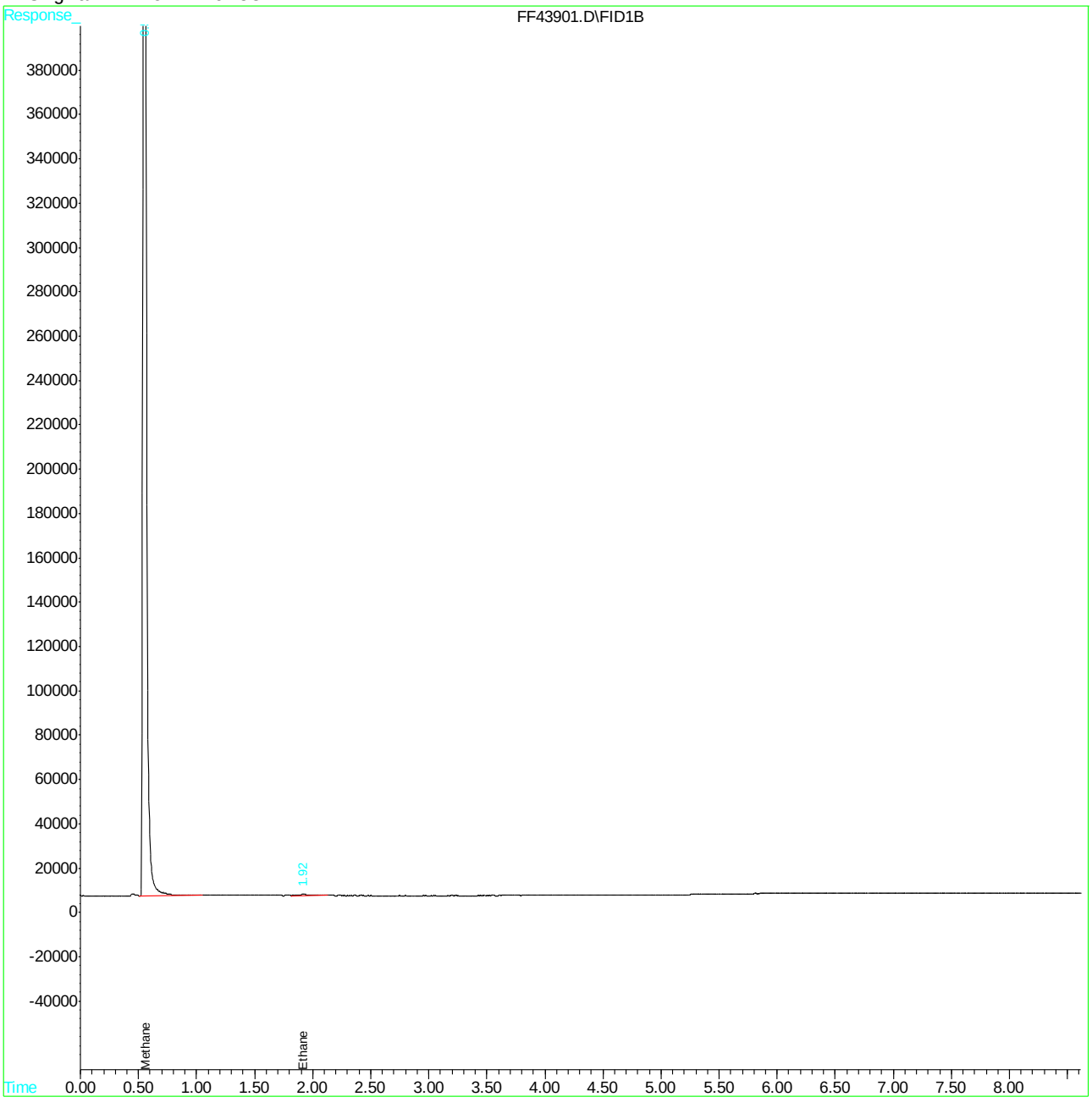
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43901.D Vial: 10
Acq On : 3 Aug 2018 1:49 pm Operator: eileeng
Sample : fa56349-1dup Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Dissolved Gases Raw Data Summary

Sample Number:	FA56349-1DUP	**Sample Volume:**	38.0 ml
Lab FileID:	FF43901.D	**Headspace:**	5.0 ml
Injection Time:	08/03/18 13:49	**Volume Injected:**	500 ul
Method:	RSKSOP-147/175	**Temperature:**	20 Deg. C

Parameter	CAS	MW	Result (ppmv)	Henry's Constant	Total	Units
Methane	74-82-8	16	3238.38	37600	360	ug/l
Ethane	74-84-0	30	3.8	26300	0.86	ug/l
Ethene	74-85-1	28	0	10200	0.0	ug/l
Acetylene	74-86-2	26	0	11940	0.0	ug/l
Propane	74-98-6	44	0	31474	0.0	ug/l

Henry's Constants	20	21	22	23	24	25	26	27	28	29	30
Methane	37600	38340	39080	39820	40560	41300	42020	42740	43360	44180	44900
Ethane	26300	27080	27860	28640	29420	30200	31000	31800	32600	33400	34200
Ethene	10200	10440	10680	10920	11160	11400	11660	11920	12180	12440	12700
Acetylene	11940	12200	12470	12730	13000	13260	13530	13800	14060	14330	14600
Propane	31474	32552	33643	34744	35857	36978	38107	39244	40387	41535	42688

Manual Integrations
APPROVED
(compounds with "m" flag)
Melissa Mangual
08/06/18 14:44

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43874.D Vial: 2
Acq On : 2 Aug 2018 11:15 am Operator: eileeng
Sample : ic1692-1 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:58 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Methane	0.56	7664	2.050	ppmv	m
2)	Acetylene	1.17	18692	1.891	ppmv	
3)	Ethylene	1.57	13082	1.922	ppmv	
4)	Ethane	1.92	13950	1.973	ppmv	m
5)	Propane	4.85	13813	1.415	ppmv	m

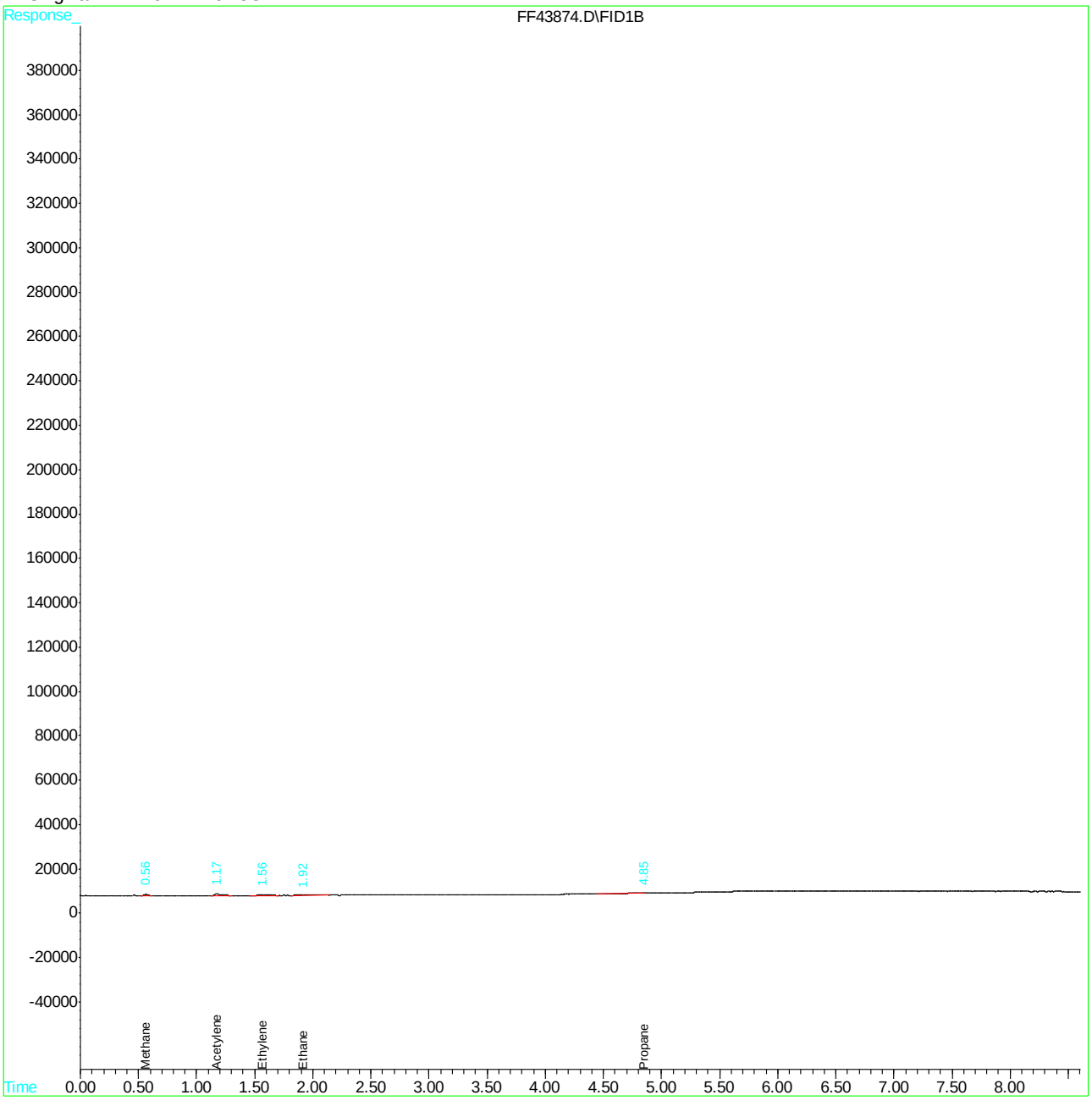
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43874.D DGME8218.M Fri Aug 03 14:21:16 2018

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43874.D Vial: 2
Acq On : 2 Aug 2018 11:15 am Operator: eileeng
Sample : ic1692-1 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:58 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1692-IC1692	**Method:**	RSKSOP-147/175
Lab FileID:	FF43874.D	**Analyst approved:**	08/03/18 14:24 Eileen Grekoski
Injection Time:	08/02/18 11:15	**Supervisor approved:**	08/06/18 14:44 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Methane	74-82-8	1	0.56	Missed peak
Ethane	74-84-0	1	1.92	Missed peak
Propane	74-98-6	1	4.85	Missed peak

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/06/18 14:44

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43875.D Vial: 3
Acq On : 2 Aug 2018 11:44 am Operator: eileeng
Sample : ic1692-2 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:58 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	89984	24.075	ppmv
2)	Acetylene	1.18	225589	22.821	ppmv
3)	Ethylene	1.57	159541	23.435	ppmv m
4)	Ethane	1.93	165507	23.409	ppmv
5)	Propane	4.65	239355	24.513	ppmv m

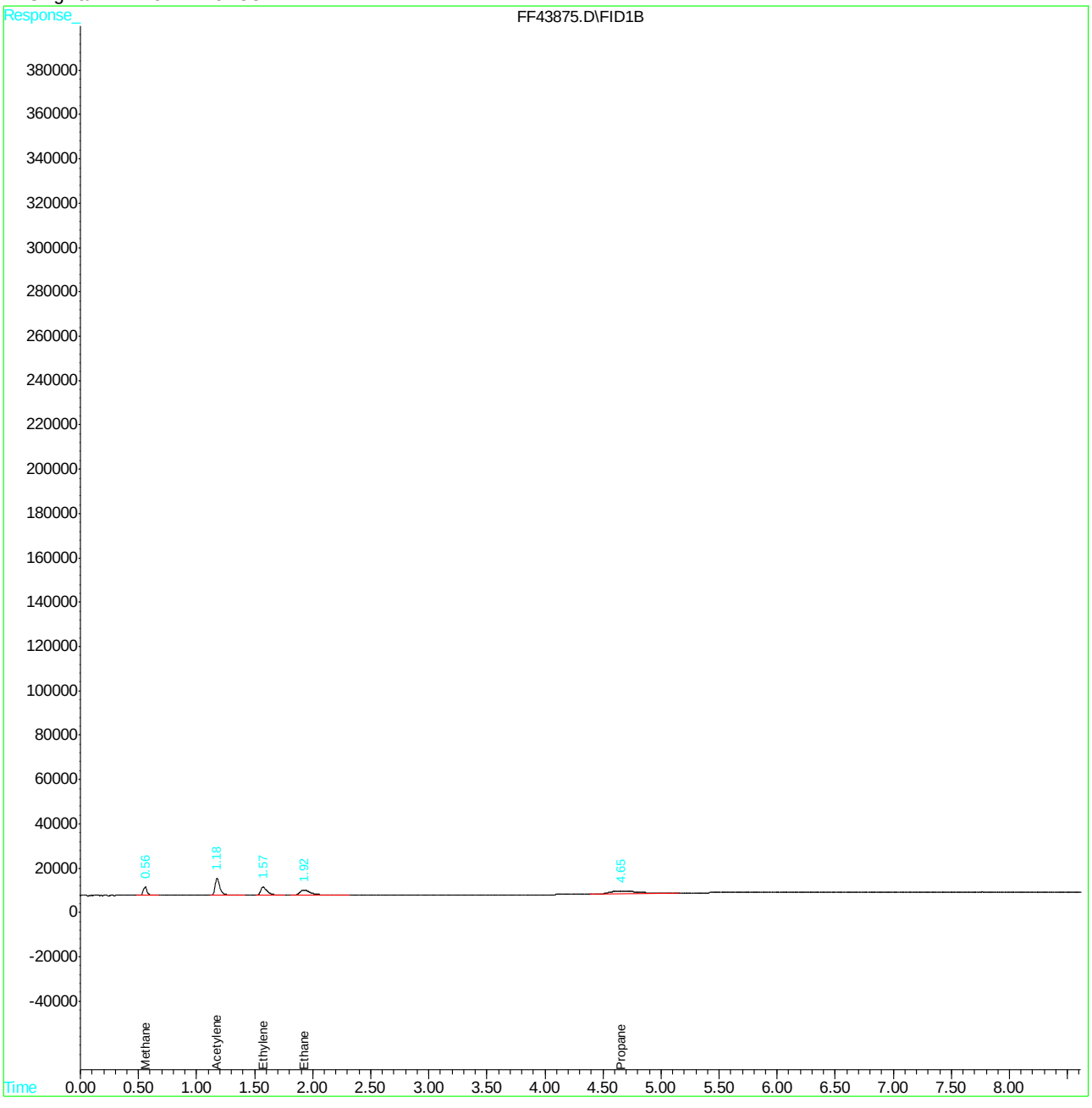
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43875.D DGME8218.M Fri Aug 03 14:21:17 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43875.D Vial: 3
Acq On : 2 Aug 2018 11:44 am Operator: eileeng
Sample : ic1692-2 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:58 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1692-IC1692	**Method:**	RSKSOP-147/175
Lab FileID:	FF43875.D	**Analyst approved:**	08/03/18 14:24 Eileen Grekoski
Injection Time:	08/02/18 11:44	**Supervisor approved:**	08/06/18 14:44 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethene	74-85-1	1	1.57	Poor instrument integration
Propane	74-98-6	1	4.65	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual
08/06/18 14:44

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43876.D Vial: 4
Acq On : 2 Aug 2018 12:03 pm Operator: eileeng
Sample : ic1692-3,10x Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:59 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	440135	117.756	ppmv
2)	Acetylene	1.17	1164752	117.827	ppmv
3)	Ethylene	1.57	825644	121.277	ppmv
4)	Ethane	1.92	858677	121.451	ppmv
5)	Propane	4.65	1173853	120.216	ppmv m

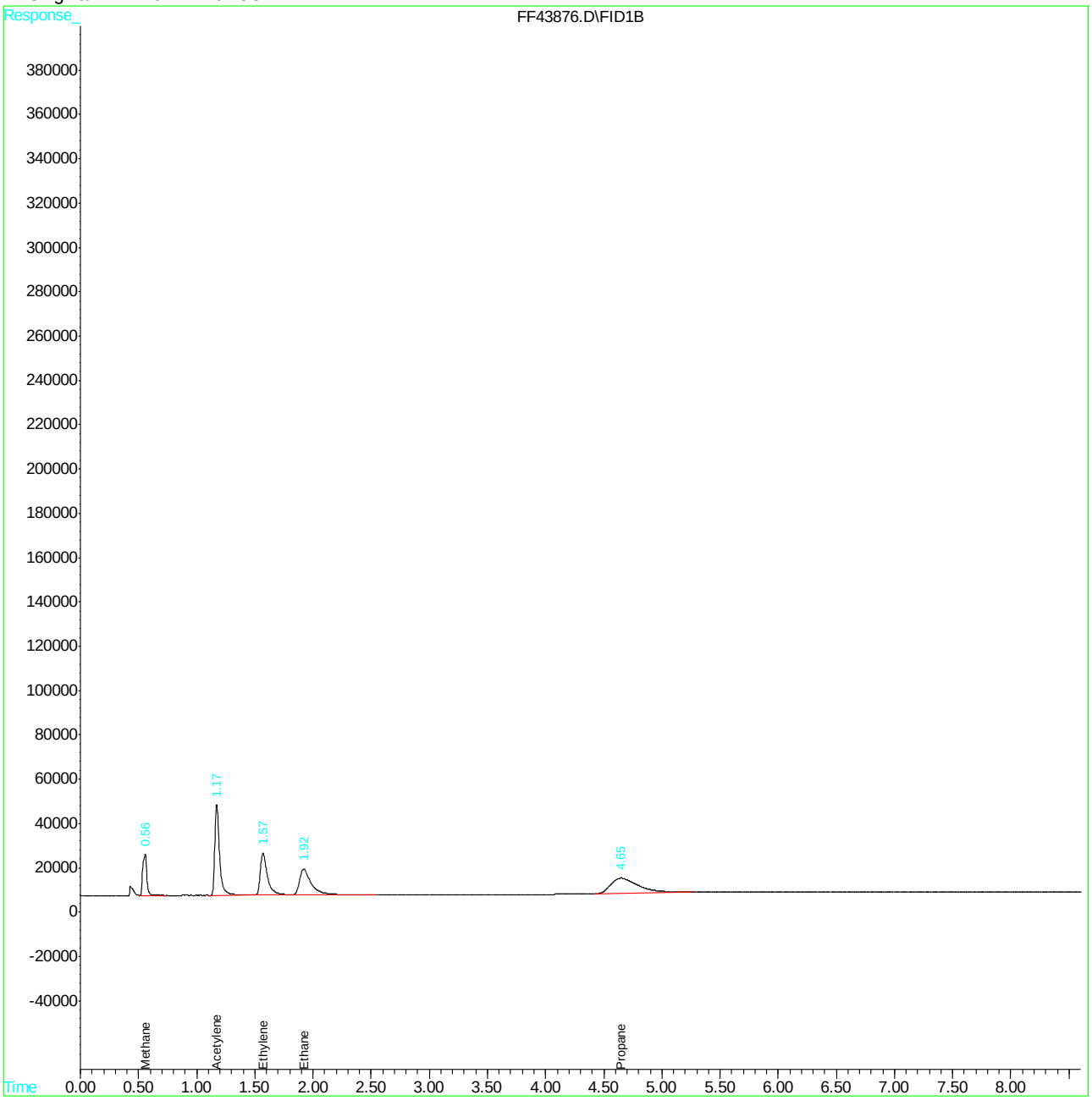
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43876.D DGME8218.M Fri Aug 03 14:21:18 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43876.D Vial: 4
Acq On : 2 Aug 2018 12:03 pm Operator: eileeng
Sample : ic1692-3,10x Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:59 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1692-IC1692	**Method:**	RSKSOP-147/175
Lab FileID:	FF43876.D	**Analyst approved:**	08/03/18 14:24 Eileen Grekoski
Injection Time:	08/02/18 12:03	**Supervisor approved:**	08/06/18 14:44 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.65	Poor instrument integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43877.D Vial: 5
Acq On : 2 Aug 2018 12:15 pm Operator: eileeng
Sample : icc1692-4 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:54 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	2265759	606.192	ppmv
2)	Acetylene	1.18	6393377	646.758	ppmv
3)	Ethylene	1.58	4310749	633.198	ppmv
4)	Ethane	1.93	4507036	637.473	ppmv
5)	Propane	4.65	6524523	668.186	ppmv

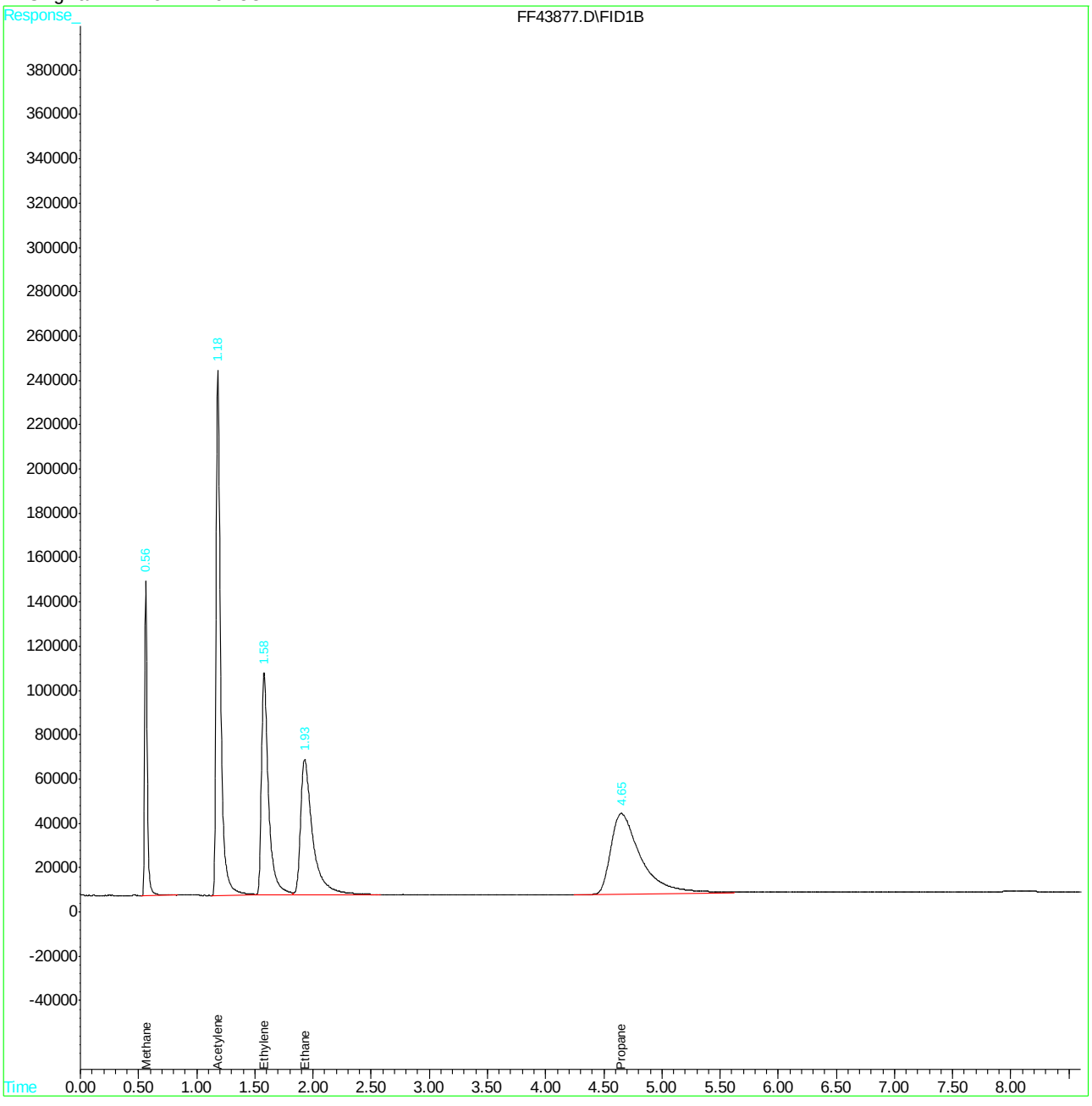
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43877.D DGME8218.M Fri Aug 03 14:21:19 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43877.D Vial: 5
Acq On : 2 Aug 2018 12:15 pm Operator: eileeng
Sample : icc1692-4 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:54 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43878.D Vial: 6
Acq On : 2 Aug 2018 12:29 pm Operator: eileeng
Sample : ic1692-5 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:54 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	4700840	1257.684	ppmv
2)	Acetylene	1.17	13278255	1343.237	ppmv
3)	Ethylene	1.57	8899118	1307.175	ppmv
4)	Ethane	1.92	9381907	1326.972	ppmv
5)	Propane	4.65	13457412	1378.193	ppmv

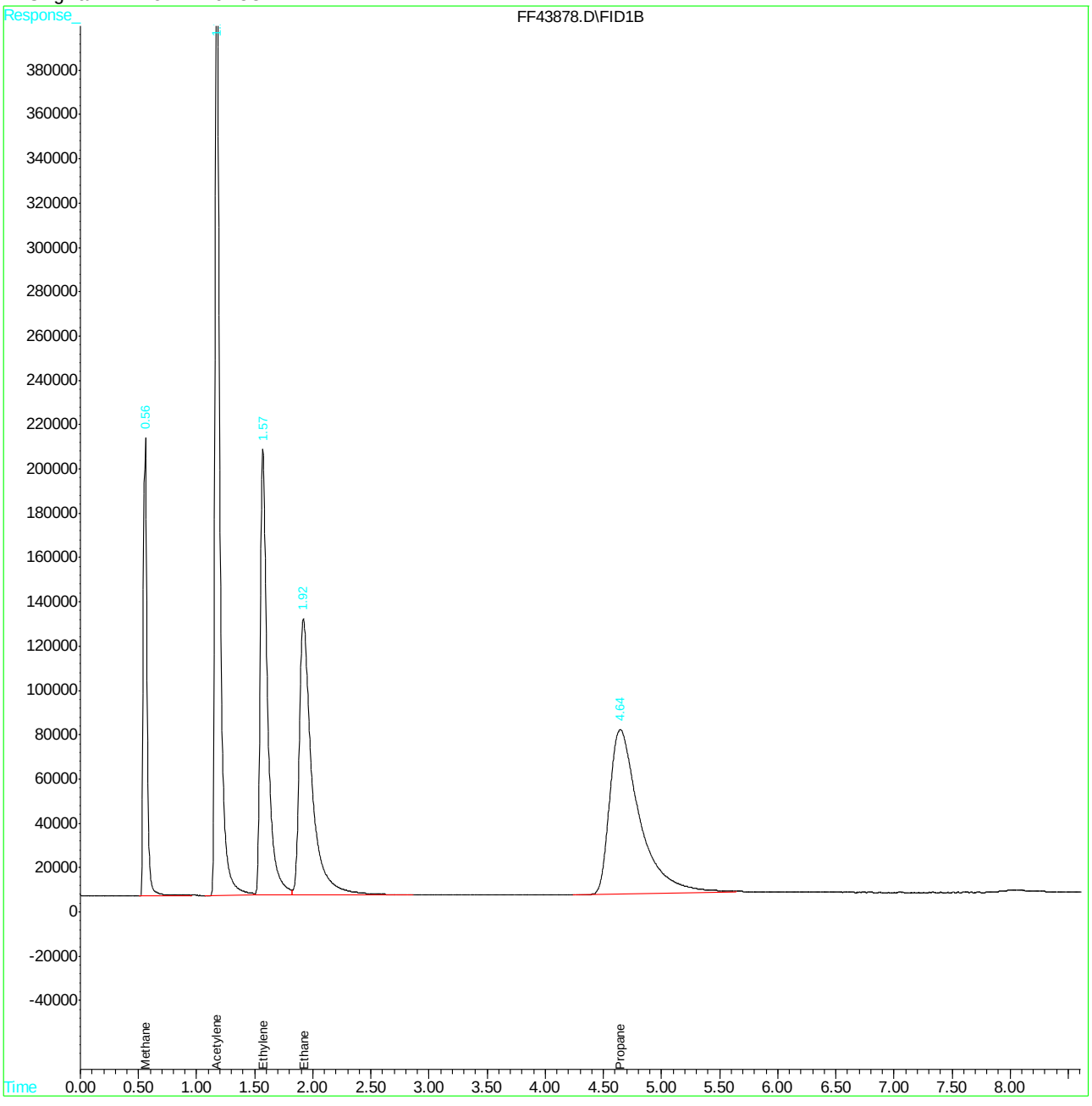
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43878.D DGME8218.M Fri Aug 03 14:21:20 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43878.D Vial: 6
Acq On : 2 Aug 2018 12:29 pm Operator: eileeng
Sample : ic1692-5 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:54 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



FF43878.D DGME8218.M Fri Aug 03 14:21:20 2018 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43879.D Vial: 7
Acq On : 2 Aug 2018 12:43 pm Operator: eileeng
Sample : ic1692-6 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:54 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.57	20791278	5562.593	ppmv
2)	Acetylene	1.17	57760230	5843.064	ppmv
3)	Ethylene	1.56	40153032	5898.004	ppmv
4)	Ethane	1.90	41977280	5937.247	ppmv
5)	Propane	4.61	61360354	6284.003	ppmv

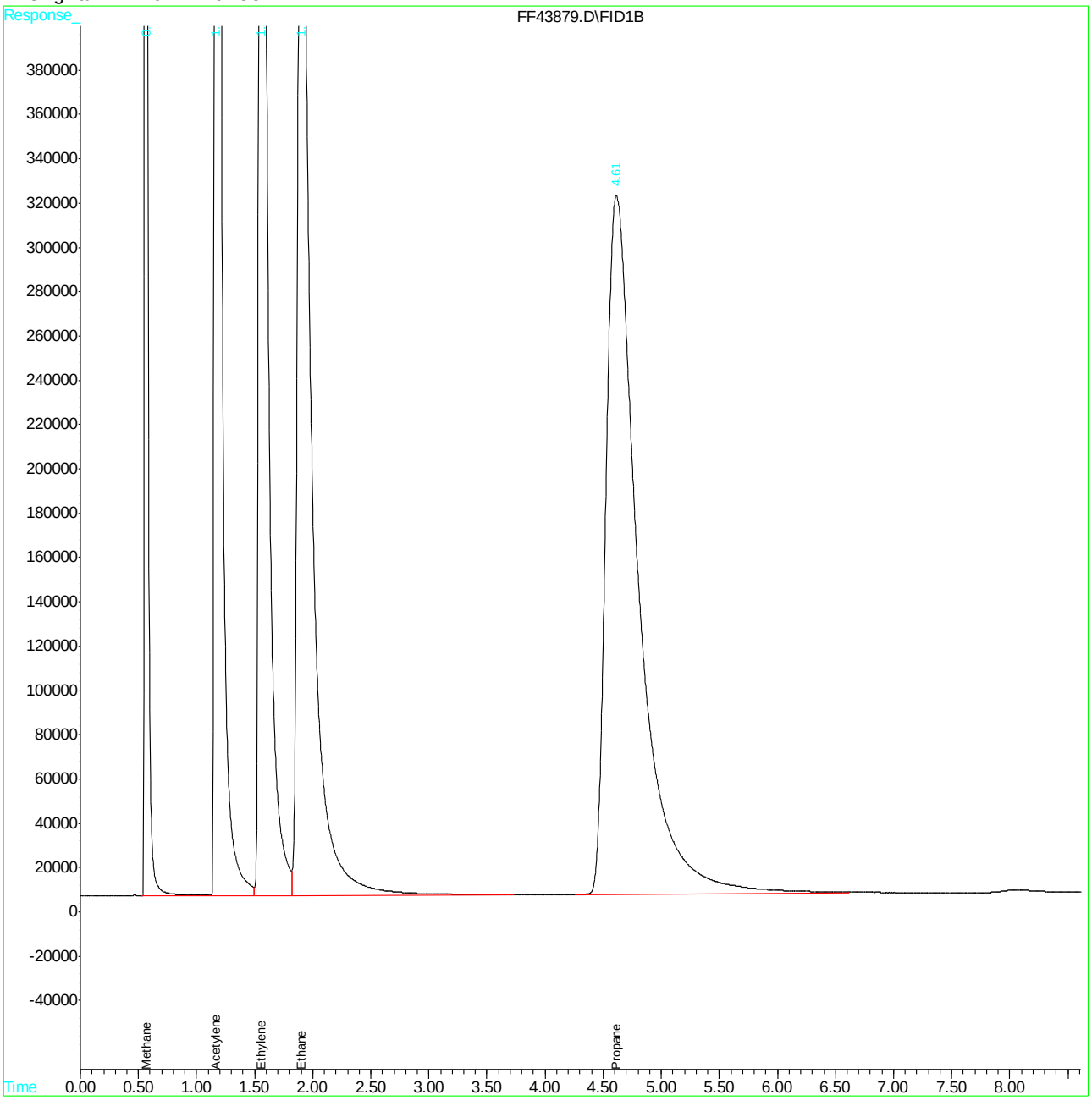
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43879.D DGME8218.M Fri Aug 03 14:21:20 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43879.D Vial: 7
Acq On : 2 Aug 2018 12:43 pm Operator: eileeng
Sample : ic1692-6 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 12:54 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43880.D Vial: 8
Acq On : 2 Aug 2018 12:54 pm Operator: eileeng
Sample : ic1692-7 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 13:09 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	41017958	10974.132	ppmv
2)	Acetylene	1.15	115930725	11727.631	ppmv
3)	Ethylene	1.53	78501743	11530.974	ppmv
4)	Ethane	1.88	82158694	11620.487	ppmv
5)	Propane	4.57	120165176	12306.290	ppmv

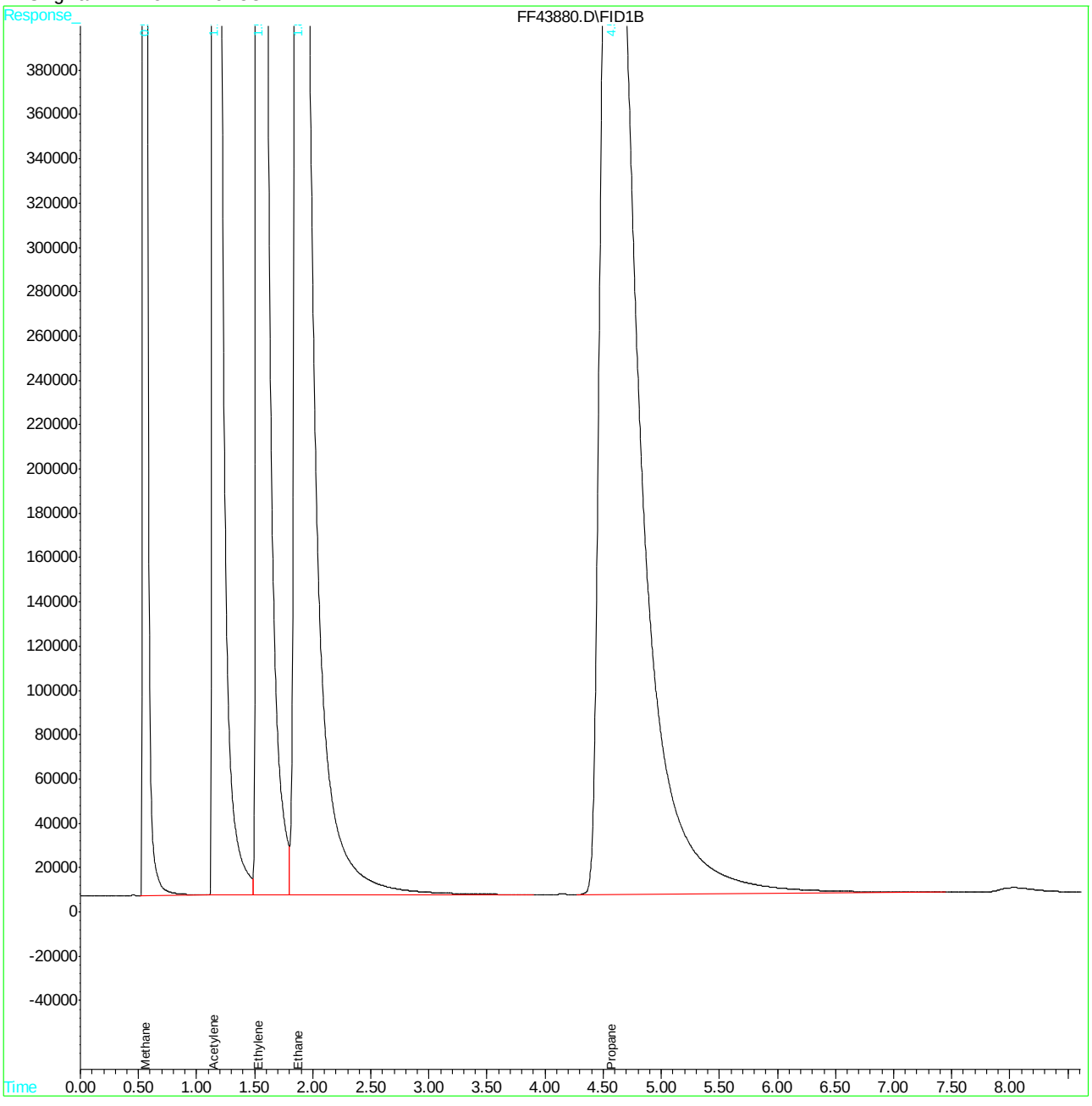
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43880.D DGME8218.M Fri Aug 03 14:21:21 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43880.D Vial: 8
Acq On : 2 Aug 2018 12:54 pm Operator: eileeng
Sample : ic1692-7 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 13:09 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 12:41:18 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integrations
APPROVED
(compounds with "m" flag)
Melissa Mangual
08/06/18 14:44

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43882.D Vial: 10
Acq On : 2 Aug 2018 1:43 pm Operator: eileeng
Sample : icv1692-5 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 16:39 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	4505318	1093.896	ppmv
2)	Acetylene	1.17	11703997	1008.907	ppmv
3)	Ethylene	1.57	8612035	1090.715	ppmv
4)	Ethane	1.92	8913569	1078.827	ppmv
5)	Propane	4.65	10443557	864.493	ppmv m

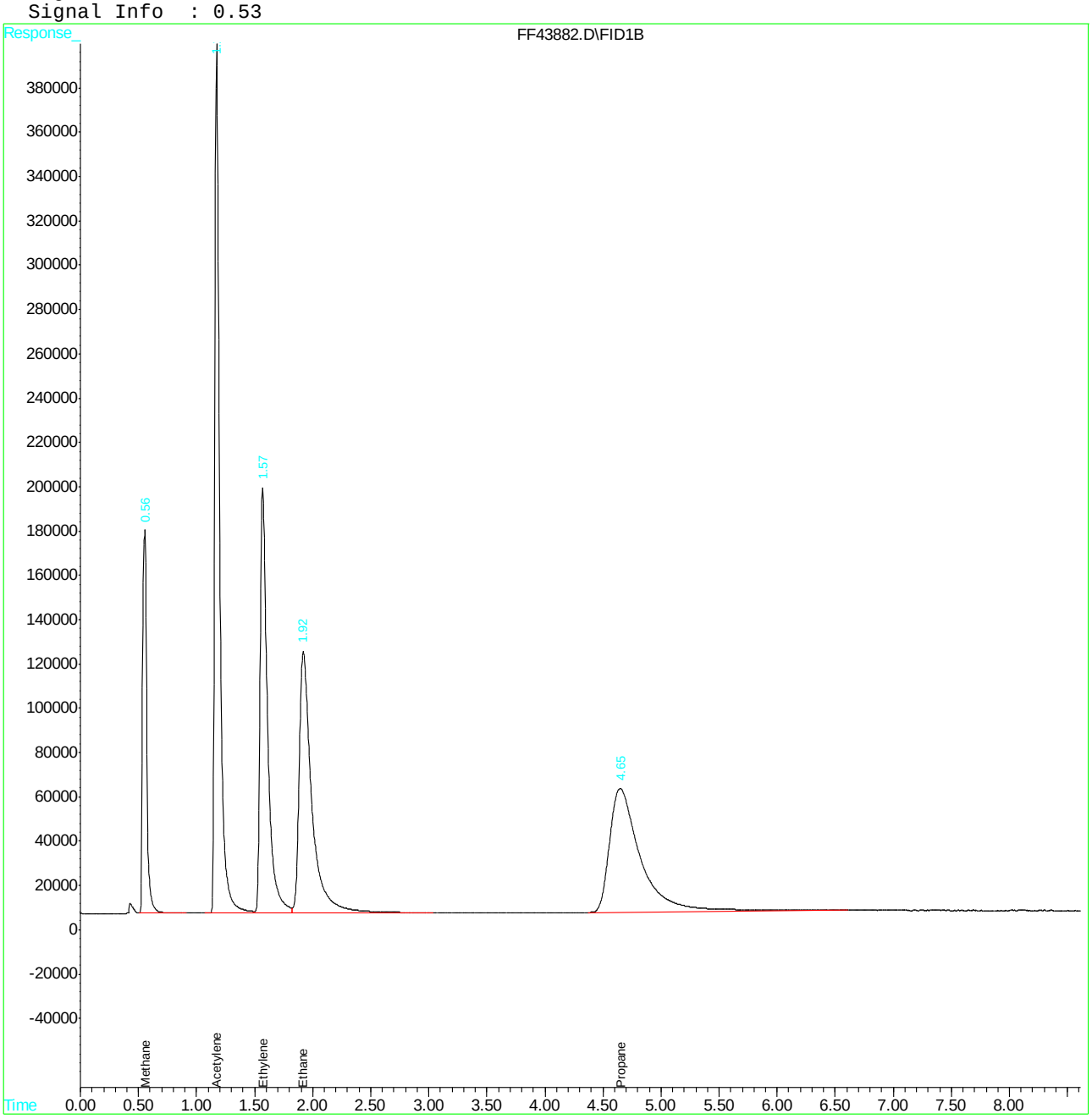
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43882.D DGME8218.M Mon Aug 06 10:50:06 2018

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080218\FF43882.D Vial: 10
Acq On : 2 Aug 2018 1:43 pm Operator: eileeng
Sample : icv1692-5 Inst : VOA9
Misc : gc21077,gff1692,38,21,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 2 16:39 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1692-ICV1692	**Method:**	RSKSOP-147/175
Lab FileID:	FF43882.D	**Analyst approved:**	08/06/18 10:52 Eileen Grekoski
Injection Time:	08/02/18 13:43	**Supervisor approved:**	08/06/18 14:44 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.65	Poor instrument integration

Manual Integrations
APPROVED
(compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43892.D            Vial: 1
Acq On    :  3 Aug 2018  10:16 am                    Operator: eileeng
Sample    : cc1692-5                                 Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:14 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.57	4559737	1107.109	ppmv
2)	Acetylene	1.18	12702872	1095.012	ppmv
3)	Ethylene	1.58	8507647	1077.494	ppmv
4)	Ethane	1.93	8846731	1070.738	ppmv
5)	Propane	4.67	13140299	1087.723	ppmv m

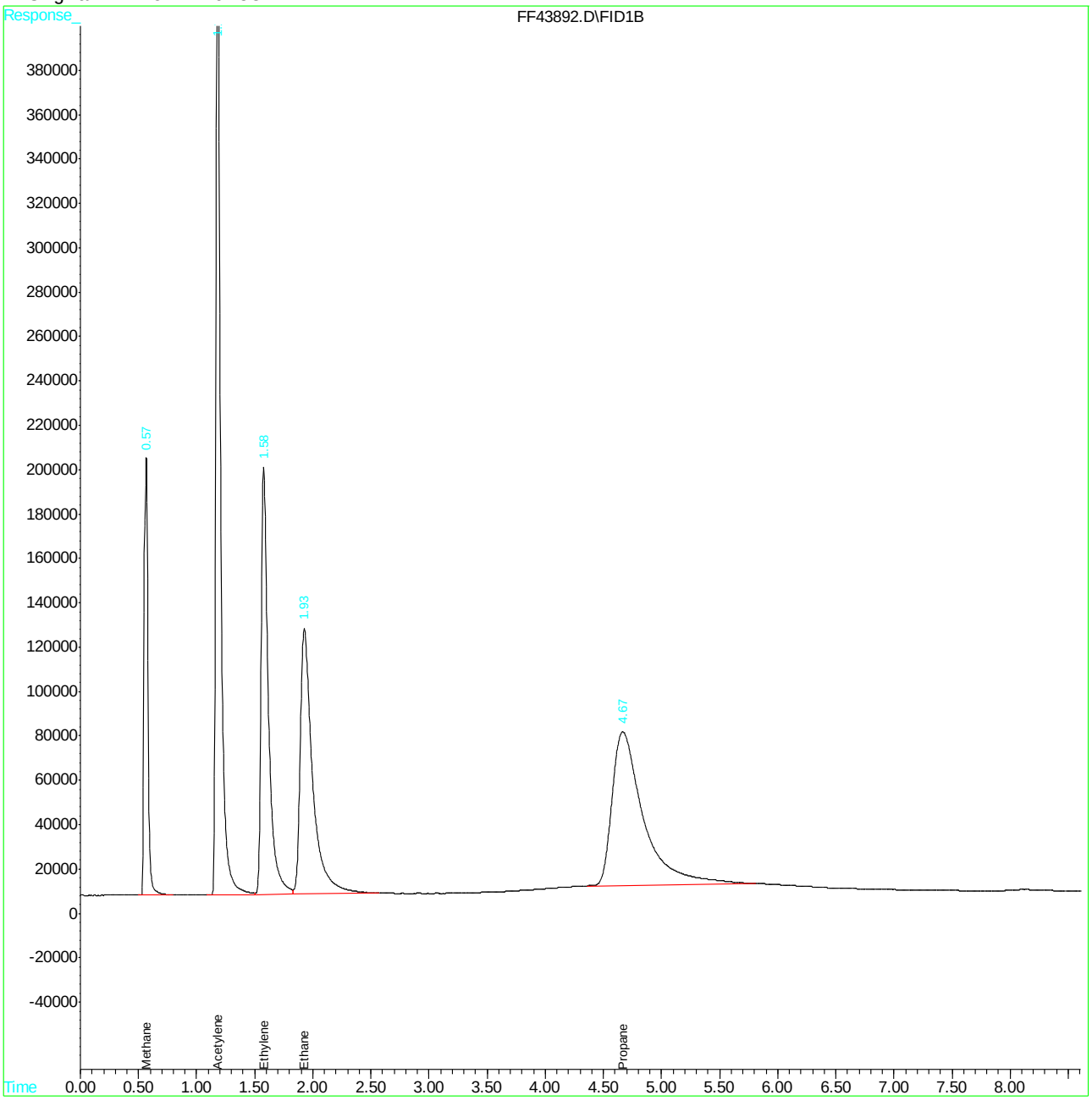
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43892.D Vial: 1
Acq On : 3 Aug 2018 10:16 am Operator: eileeng
Sample : cc1692-5 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:14 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1693-CC1692	**Method:**	RSKSOP-147/175
Lab FileID:	FF43892.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 10:16	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.67	Poor instrument integration

Manual Integrations
APPROVED
(compounds with "m" flag)
Evita Martinez
08/08/18 15:12

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\2\DATA\080318\FF43903.D            Vial: 12
Acq On    :  3 Aug 2018   2:18 pm                    Operator: eileeng
Sample    : cc1692-4                                 Inst    : VOA9
Misc      : gc21080,gff1693,38,20,500,5,1            Multiplr: 1.00
IntFile   : EVENTS.E
Quant Time: Aug  3 17:16 2018  Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title        : Dissolved Gases in Water
Last Update  : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj.  : 500uL
Signal Phase : C1006 PLOT
Signal Info  : 0.53
```

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	2196847	533.397	ppmv
2)	Acetylene	1.18	6136129	528.946	ppmv
3)	Ethylene	1.58	4156576	526.431	ppmv
4)	Ethane	1.92	4368836	528.769	ppmv
5)	Propane	4.65	6195874	512.880	ppmv m

9.6.10

9

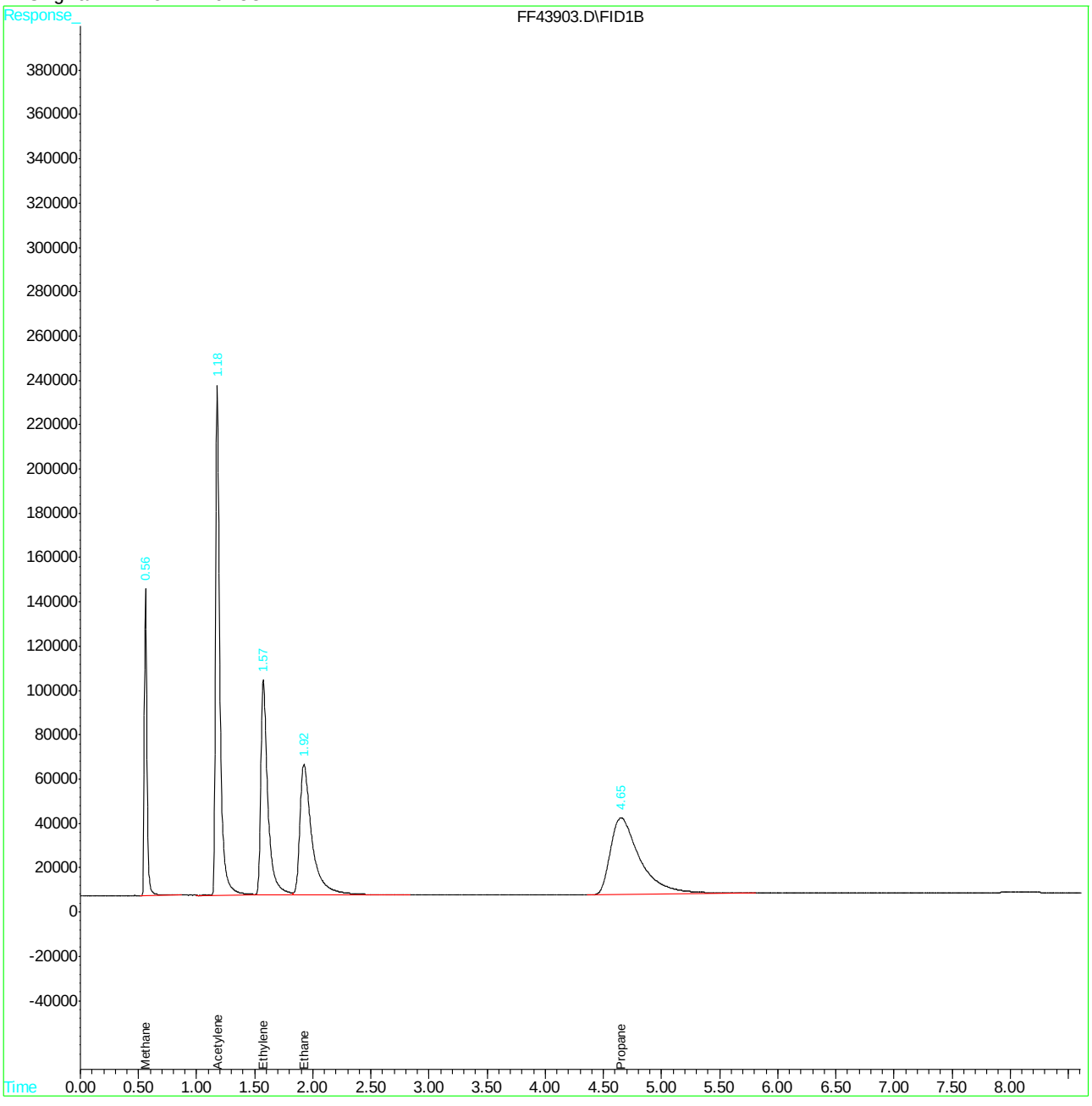
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43903.D Vial: 12
Acq On : 3 Aug 2018 2:18 pm Operator: eileeng
Sample : cc1692-4 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:16 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



Manual Integration Approval Summary

Sample Number:	GFF1693-CC1692	**Method:**	RSKSOP-147/175
Lab FileID:	FF43903.D	**Analyst approved:**	08/08/18 12:10 Eileen Grekoski
Injection Time:	08/03/18 14:18	**Supervisor approved:**	08/08/18 15:12 Evita Martinez

Parameter	CAS	Sig#	R.T. (min.)	Reason
Propane	74-98-6	1	4.65	Poor instrument integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43913.D Vial: 22
Acq On : 3 Aug 2018 5:40 pm Operator: eileeng
Sample : ecc1692-5 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:51 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Initial Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Methane	0.56	4675467	1135.208	ppmv
2)	Acetylene	1.18	13149921	1133.548	ppmv
3)	Ethylene	1.57	8796398	1114.064	ppmv
4)	Ethane	1.92	9341600	1130.632	ppmv
5)	Propane	4.64	13314209	1102.119	ppmv

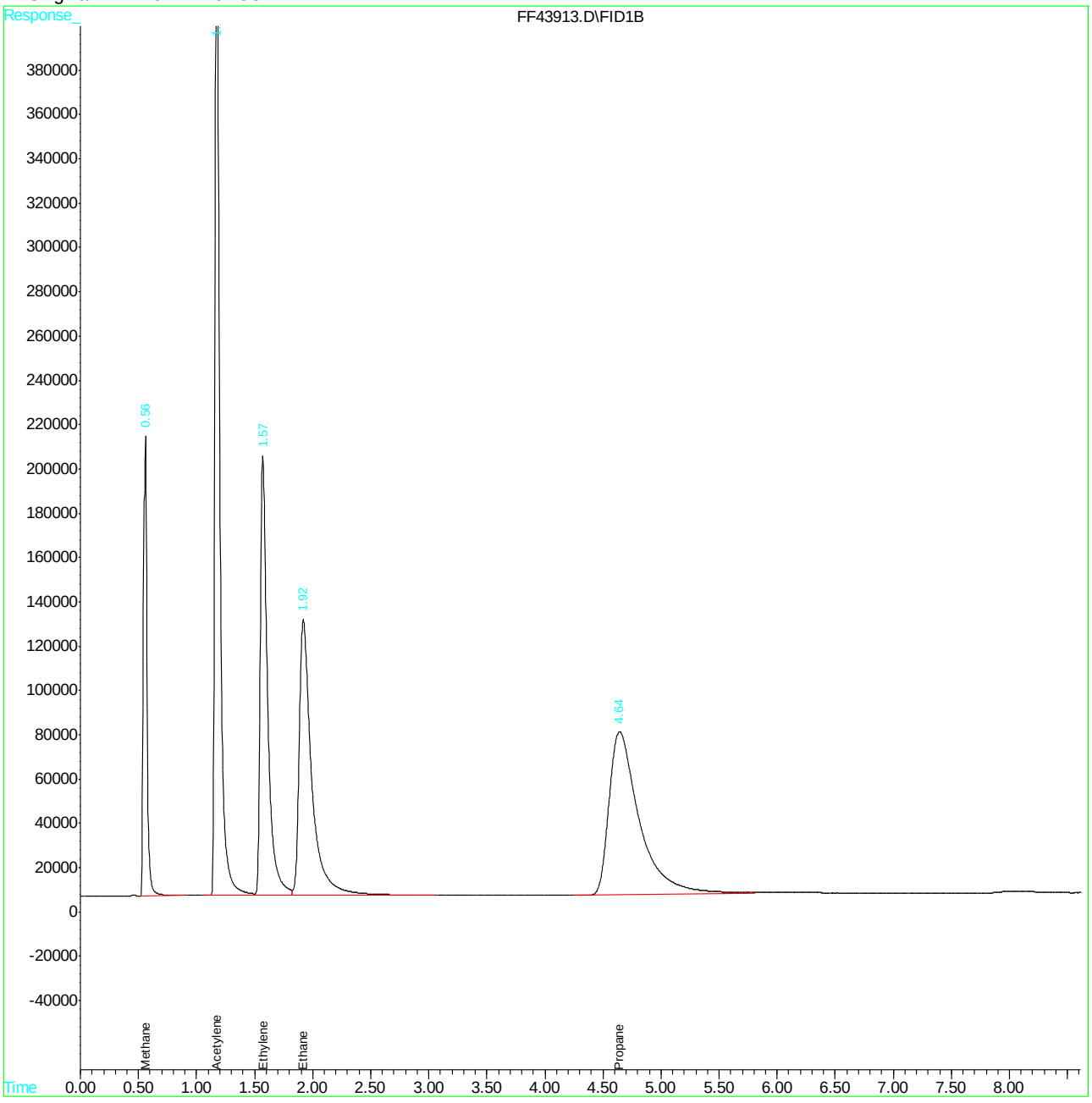
(f)=RT Delta > 1/2 Window (m)=manual int.
FF43913.D DGME8218.M Fri Aug 03 17:52:31 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080318\FF43913.D Vial: 22
Acq On : 3 Aug 2018 5:40 pm Operator: eileeng
Sample : ecc1692-5 Inst : VOA9
Misc : gc21080,gff1693,38,20,500,5,1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 3 17:51 2018 Quant Results File: DGME8218.RES

Quant Method : C:\HPCHEM\2\METHODS\DGME8218.M (Chemstation Integrator)
Title : Dissolved Gases in Water
Last Update : Thu Aug 02 13:12:33 2018
Response via : Multiple Level Calibration
DataAcq Meth : DGMEE2.M

Volume Inj. : 500uL
Signal Phase : C1006 PLOT
Signal Info : 0.53



FF43913.D DGME8218.M Fri Aug 03 17:52:31 2018 Page 2

SGS ACCUTEST-ORLANDO

DATE:	08/02/18
COLUMN TYPE:	C1006
DETECTOR:	FID
INSTRUMENT:	VOA9-FF
ANALYST:	Eileen G.

Sample ID verified by: Analysis Signature: Date: 08/02/18

GC VOA9-FF ANALYSIS LOG

METHODS:	New RSK 147/175
METHOD FILE:	DGME8218.M
CALIB. DATE:	08/02/18
RUN ID:	GFF 1692

STANDARDS

ICAL/CCV:	8380 8127 9062
ISTD/SURR:	NA
ICV/QC:	8371 8074
AMBIENT TEMP.:	20°C+1°C=21°C
THERM ID:	VOA2

µl STD ppm Conc. EG 08/02/18

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	FINAL VOL.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	RR	COMMENTS
FF 43873	He Blank	NA	W	—				NA		✓
FF 74	IC 1692-1 1.5				50	15	MP:1,4,5			✓
FF 75	-2 15				500	↓	PII:3,5			✓
FF 76	-3,10x 100,10x				500	1000	~~MP~~ PII:5 EG 08/02/18			✓ 500µl→5ml
FF 77	ICC -4 500				250					✓
FF 78	-5 1000				500	↓				✓
FF 79	-6 5000				250	10,000				✓
FF 80	-7 10,000				500	↓				✓
FF 81	He Blank				NA					✓ ND
FF 82	ICV1692-~~85~~ EG 08/02/18				500	1000	PII:5			✓ pass
FF 83	He Blank			↓	NA					✓ ND
FF 84	MB			38mL	500µl		MP:1			✓ ND
FF 85	BS						PII:5			✓
FF 86	BSD						PII:5			✓
FF 87	FA55731-10			—	25	15	PII:3			✓ 0.08 ppb MDL Ver
FF 88	-10A				50	15	PII:5,2			✓ 0.16 ppb MDL Ver
FF 89	-10B				125	15	PII:5			✓ 0.4 ppb MDL Ver.
FF 90	ECC1692-5				500	1000				Pass
FF 91	ECC1692-4				250	1000				✓ Pass
FF ~~92~~										
FF ~~93~~										
FF										
FF										
FF										
FF										
FF										EG 08/02/18
FF										

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature: Eileen Gjuchoshi

gcvoa9_ff_log.xlsME 06/16

SGS ACCUTEST-ORLANDO

DATE:	08/03/18
COLUMN TYPE:	C1006
DETECTOR:	FID
INSTRUMENT:	VOA9-FF
ANALYST:	Eileen G.

Sample ID verified by: Cjrukoski
Analysis Signature
Date 08/03/18

GC VOA9-FF ANALYSIS LOG

METHODS:	New RSK 147/175
METHOD FILE:	DGME8218.M
CALIB. DATE:	08/02/18
RUN ID:	GFF 1693

1-12Ph
LOT 220416
0-3 pH
lot 200814
KI starch paper
022918

STANDARDS

ICAL/CCV:	8380
ISTD/SURR:	NA
ICV/QC:	8371 8074
AMBIENT TEMP.:	19°C+1°C=20°C
THERM ID:	VOA2

STD Conc CG 08/03/18

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	FINAL VOL.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	RR	COMMENTS
FF 43892	CC1692-5	NA	W	—	500µl	1000ppm	PII:5	NA		✓pass
FF 93	He Blank	↓	↓	—				↓		✓ND
FF 94	MB			38mL	500µl					✓ND
FF 95	BS			↓	↓		PII:5			✓
FF 96	BSD						PII:5			✓
FF 97	FA56349-1	8					MP:4			✓
FF 98	-2	5							20x	✓
FF 99	-3	4							20x	✓
FF 900	-4	4							10x	✓
FF 1	-1 DUP	9								✓
FF 2	-1 MS	10		↓	↓		PII:5			✓
FF 3	CC1692-4	—		—	250µl	1000ppm	PII:5	—		✓pass
FF 4	He Blank	—		—				—		✓ND
FF 5	FA56349-5	4		38mL	500µl		PII:3	3	10x	foamy ✓ pH double checked
FF 6	-6	4								✓
FF 7	-11	4					MP:4			✓
FF 8	-12	4					MP:1			✓
FF 9	-2, 20x	6								✓ 250µl → 5mL
FF 10	-3, 20x	5								✓ ↓
FF 11	-4, 10x	5								✓ 500µl → 5mL
FF 12	-5, 10x	5		↓						✓pH double checked ↓
FF 13	ECC1692-5	NA	↓	—	↓	1000ppm		—		pass
FF										
FF										
FF										
FF										
FF										CG 08/03/18

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature: Cjrukoski

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA56349
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Total Organic Carbon	GP31863/GN79401	1.0	0.0	mg/l	15	14.9	99.3	90-110%

Associated Samples:
Batch GP31863: FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA56349
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Total Organic Carbon	GP31863/GN79401	FA56349-1	mg/l	7.7	15	21.2	90.0	90-110%
Total Organic Carbon	GP31863/GN79401	FA56349-13	mg/l	16.8	15	32.2	102.7	90-110%

Associated Samples:
Batch GP31863: FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA56349
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Total Organic Carbon	GP31863/GN79401	FA56349-1	mg/l	7.7	15	22.4	5.5	20%
Total Organic Carbon	GP31863/GN79401	FA56349-13	mg/l	16.8	15	31.8	1.3	20%

Associated Samples:
Batch GP31863: FA56349-1, FA56349-2, FA56349-3, FA56349-4, FA56349-5, FA56349-6, FA56349-11, FA56349-12, FA56349-13, FA56349-14, FA56349-15, FA56349-16, FA56349-17, FA56349-18, FA56349-19
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56349
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: B80809W1.TXT Date Analyzed: 08/09/18 Methods: SM5310 B-11/SW9060A
Analyst: FN Run ID: GN79401
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:25	GN79401-CCV1	1		
15:47	GP31863-MB1	1		
16:06	GP31863-B1	1		
16:25	FA56349-1	1		
16:48	GP31863-S1	1		
17:07	GP31863-S2	1		
17:29	FA56349-2	1		
17:48	FA56349-3	2		
18:21	FA56349-4	1		
18:42	FA56349-5	1.72		
19:06	FA56349-6	1		
19:25	GN79401-CCV2	1		
19:50	GN79401-CCB1	1		
20:09	FA56349-11	1		
20:31	FA56349-12	1		
20:50	FA56349-13	1		
21:13	GP31863-S3	1		
21:33	GP31863-S4	1		
21:54	FA56349-14	1		
22:15	FA56349-15	1		
22:35	FA56349-16	1		
23:16	FA56349-18	1		
23:35	GN79401-CCV3	1		
23:55	GN79401-CCB2	1		
00:16	FA56349-19	1		
00:35	ZZZZZZ	1.79		
00:57	ZZZZZZ	1		
01:19	ZZZZZZ	1		
01:42	ZZZZZZ	1		
02:01	ZZZZZZ	2.78		
02:35	ZZZZZZ	2.94		
03:10	ZZZZZZ	1		
03:30	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56349
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: B80809W1.TXT Date Analyzed: 08/09/18 Methods: SM5310 B-11/SW9060A
Analyst: FN Run ID: GN79401
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:54	ZZZZZZ	1		
04:15	GN79401-CCV4	1		
04:34	GP31864-MB1	1		
04:57	GP31864-B1	1		
05:16	FA56549-4	1		(sample used for QC only; not part of login FA56349)
05:40	GP31864-S1	1		
05:55	GP31864-S2	1		
06:38	ZZZZZZ	1		
06:58	ZZZZZZ	1		
07:17	ZZZZZZ	1		
07:39	ZZZZZZ	1		
08:01	ZZZZZZ	1		
08:22	GN79401-CCV5	1		
08:44	GN79401-CCB3	1		
10:49	FA56349-17	2		
11:09	GN79401-CCV6	1		
11:34	GN79401-CCB4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA56349
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: B80809W1.TXT Date Analyzed: 08/09/18 Methods: SM5310 B-11/SW9060A
Run ID: GN79401 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN79401-CCV1	Total Organic Carbon	15.2	1.0	0.23	15	101.3	90-110
GN79401-CCV2	Total Organic Carbon	15.0	1.0	0.23	15	100.0	90-110
GN79401-CCB1	Total Organic Carbon	0.23 U	1.0	0.23			
GN79401-CCV3	Total Organic Carbon	14.7	1.0	0.23	15	98.0	90-110
GN79401-CCB2	Total Organic Carbon	0.23 U	1.0	0.23			
GN79401-CCV4	Total Organic Carbon	14.7	1.0	0.23	15	98.0	90-110
GN79401-CCV5	Total Organic Carbon	14.5	1.0	0.23	15	96.7	90-110
GN79401-CCB3	Total Organic Carbon	0.23 U	1.0	0.23			
GN79401-CCV6	Total Organic Carbon	14.8	1.0	0.23	15	98.7	90-110
GN79401-CCB4	Total Organic Carbon	0.23 U	1.0	0.23			

(!) Outside of QC limits

General Chemistry

Raw Data

TOC ANALYSIS LOG, Aqueous

DATE: 08-09-2018	METHODS: SM5310B SW846 9060A	pH paper lot# WC 942	STANDARDS
ANALYST: F.N.	METHOD FILE: NPOC-MET	pipette ID# NU10575	ICAL: LIST INDIVIDUALLY IN COMMENTS
INSTRUMENT: TOC2	CALIB. DATE: 08-08-2018	pipette ID# MU26115	ICV: TOC 3581
INST. FILE NAME: b80809w1.txt	GN BATCH: GN79401	pipette ID# —	CCV: TOC 3580
			QC: TOC 3577

Autosampler position	Sample ID	Bottle #	pH, su	Injected Volume, ml	Manual Dilution	Instrument Dilution	GP BATCH	COMMENTS
1	BLANK	—	—	50 ml	1x	1x		
2	500	—	1.0			17x		TOC 3582
3	CCV	—	1.5			1x		
4	MB1	—	—				31863	
5	B1	—	1.5					
6	FA56349-1	12	1.5					
7	S1(FA56349-1)	13	1.0					
8	S2(FA56349-1)	15	1.0					
9	FA56349-2	7	1.5					* ⇒ INITIAL PH>2, ADDED (10-15)
10	-3	7	1.0*	25 ml				DROPS CONC. HCL TO GET PH<2.
11	-4	7	1.5	50 ml				
12	-5	7	1.0*	29 ml				
13	-6	7	1.5	50 ml				
14	CCV	—	1.5					
15	CCB	—	—					
16	FA56349-11	7	1.5				31863	
17	-12	7	1.5					
18	-13	13	1.5					
19	S3(FA56349-13)	14	1.0					
20	S4(FA56349-13)	16	1.0					
21	FA56349-14	7	1.5					
22	-15	7	1.5					
23	-16	7	1.5					
24	-17	7	1.5					DNR! ⇒ NEEDS 2X DIL.
25	-18	7	1.5					
26/27	CCV/CCB	—/—	1.5/—					

Notes: (1 of 2) ACID LOT#: WC1066 (CONC. HCL)

Analyst Signature Frida N.

TOC ANALYSIS LOG, Aqueous

DATE:	08-09-2018
ANALYST:	F. N.
INSTRUMENT:	TOC2
INST. FILE NAME:	180809w1.txt

METHODS:	SM5310B SW846 9060A
METHOD FILE:	NPOC-MET.
CALIB. DATE:	08-08-2018
GN BATCH:	GN79401

pH paper lot#	WC942
pipette ID#	NU10575
pipette ID#	MU261115
pipette ID#	—

STANDARDS	
ICAL:	LIST INDIVIDUALLY IN COMMENTS
ICV:	TOC3581
CCV:	TOC3580
QC:	TOC3577

Autosampler position	Sample ID	Bottle #	pH, su	Injected Volume, ml	Manual Dilution	Instrument Dilution	GP BATCH	COMMENTS
28	FA56349-19	7	1.5	50 ul	1x	1x	31863	
29	FA56433-1	5	1.5	28 ul				
30	-2	5	1.5	50 ul				
31	-3	5	1.5					
32	-4	5	1.5					
33	FA56109-14	1	1.5	18 ul				
34	-14A	1	1.5	17 ul			31864	
35	FA56549-1	7	1.5	50 ul				
36	-2	7	1.5					
37	-3	7	1.5					
38	CCV	—	1.5					
39	MBI	—	—				31864	
40	BI	—	1.5					
41	FA56549-4	7	1.5					
42	S1(FA56549-4)	8	1.0					
42	S2(FA56549-4)	8	1.0					
43	FA56549-5	7	1.5					
44	-6	7	1.5					
45	-7	7	1.5					
46	-8	7	1.0*					*=INITIAL PH>2, ADDED (10-15) DROPS
47	-9	7	1.5					CONC. HCL TO GET PH<2.
48	CCV	—	1.5					
49	CCB	—	—					
24	FA56349-17	7	1.5			2x	31863	
48	CCV	—	1.5			1x		
49	CCB	—	—			1x		

Notes: (2 of 2) ACID LOT #: 1066 (CONC. HCL)

Analyst Signature Frida N.

Accutest Laboratories Southeast Organic Carbon Standards Preparation Log

Accutest Std. #	Name Description	Parent Std. #	Parent Name	Parent Vendor	Vendor Exp. Date	Accutest* Exp. Date	Parent Conc, mg/l	Weight g	Bal. ID**	Vol. Used, ml	Final Vol., ml	Final Conc.mg/l	Prep. Date	Exp. Date	Initials
TOC 3568	ICV - STD 15PPM - (AQ)	TOC 3556	SECOND. STOCK SOLUTION	—	—	*07/ 08/17/18	1000	—	—	3.75	250	15.0	06/14/18	07/14/18	F.N.
TOC 3569	500 - STD 500PPM (AQ)	TOC 3555	PRIMARY SOURCE STOCK SOL.	—	—	08/17/18	1000	—	—	100	200	500	06/28/18	07/28/18	F.N.
TOC 3570	CCV - STD 15PPM - (AQ)	TOC 3555	PRIMARY SOURCE STOCK SOL.	—	—	08/17/18	1000	—	—	3.75	250	15.0	06/28/18	07/28/18	F.N.
TOC 3571	ICV - STD 15PPM - (AQ)	TOC 3556	SECOND. SOURCE STOCK SOL.	—	—	08/17/18	1000	—	—	3.75	250	15.0	06/28/18	07/28/18	F.N.
TOC 3572	30mg/L STD (AQ)	WC 1144	KHP STD	TELEDYNE TEKMAR	03/31/20	→	1000	—	—	3.0	100	30.0	07/25/18	08/25/18	KHC.
TOC 3573	PRIMARY STOCK STD. SOLUT.	GC 113	KHP	FISHER	12/31/18	→	DRY	0.2125	AS-120S	—	100	1000	07/24/18	10/24/18	F.N.
TOC 3574	CCV - STD 15PPM (AQ)	TOC 3556	SECOND. STOCK SOLUT.	—	—	08/17/18	1000	—	—	3.75	250	15.0	07/31/18	08/17/18	F.N.
TOC 3575	ICV - STD 15PPM (AQ)	TOC 3556	SECOND. STOCK SOLUT.	—	—	08/17/18	1000	—	—	3.75	250	15.0	07/31/18	08/17/18	F.N.
TOC 3576	PRIMARY SOURCE STOCK SOLUTION 1000 PPM.	GC 113	KHP	FISHER	12/31/18	→	NEAT	0.2125	AS 120S	X —	100	1000	08/07/18	11/07/18	F.N.
TOC 3577	SECONDARY SOURCE STOCK SOLUTION 1000 PPM	GC 500(1)	KHP	ALFA AESAR	08/13/21	→	NEAT	0.2125	AS 120S	—	100	1000	08/07/18	11/07/18	F.N.
TOC 3578	STD - 100 100PPM (AQ)	TOC 3576	PRIMARY SOURCE STOCK SOLUT.	—	—	11/07/18	1000	—	—	10.0	100	100	08/08/18	09/08/18	F.N.
TOC 3579	STD - 50 50PPM (AQ)	TOC 3576	SECONDARY SOURCE STOCK SOLUTION	—	—	11/07/18	1000	—	—	5.0	100	50	08/08/18	09/08/18	F.N.
TOC 3580	CCV - STD 15PPM (AQ)	TOC 3577	SECOND. STOCK SOLUT.	—	—	11/07/18	1000	—	—	3.75	250	15.0	08/08/18	09/08/18	F.N.
TOC 3581	ICV - STD 15PPM (AQ)	TOC 3577	SECOND. STOCK SOLUT.	—	—	11/07/18	1000	—	—	3.75	250	15.0	08/08/18	09/08/18	F.N.
TOC 3582	500 - STD 500PPM (AQ)	TOC 3576	PRIMARY STOCK SOLUT.	—	—	11/07/18	1000	—	—	20	40	500	08/09/18	09/09/18	F.N.

*F.N. 06-14-18

*F.N. 07-27-18

* based on date opened as specified in each Accutest SOP. ** Record ANALYTICAL balance sequential number

Rev 102714 SI

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	Type	Analysis	Sample Name	Origin	Manual Dilution	Result	Comment	Status	Date / Time	Vial
1	Unknown	NPOC	BLANK	NPOC.met	1.000	NPOC:-0.04358mg/L	SM5310B SW846 9060A	Completed	8/9/2018 2:40:32 PM	1
2	Unknown	NPOC	500	NPOC.met	1.000	NPOC:516.9mg/L	SM5310B SW846 9060A	Completed	8/9/2018 3:12:52 PM	2
3	Unknown	NPOC	CCV	NPOC.met	1.000	NPOC:15.18mg/L	SM5310B SW846 9060A	Completed	8/9/2018 3:32:10 PM	3
4	Unknown	NPOC	GP31863-MB1	NPOC.met	1.000	NPOC:0.03774mg/L	SM5310B SW846 9060A	Completed	8/9/2018 3:53:26 PM	4
5	Unknown	NPOC	GP31863-B1	NPOC.met	1.000	NPOC:14.91mg/L	SM5310B SW846 9060A	Completed	8/9/2018 4:12:40 PM	5
6	Unknown	NPOC	FA56349-1	NPOC.met	1.000	NPOC:7.656mg/L	SM5310B SW846 9060A	Completed	8/9/2018 4:35:28 PM	6
7	Unknown	NPOC	GP31863-S1	NPOC.met	1.000	NPOC:21.23mg/L	SM5310B SW846 9060A	Completed	8/9/2018 4:54:47 PM	7
8	Unknown	NPOC	GP31863-S2	NPOC.met	1.000	NPOC:22.37mg/L	SM5310B SW846 9060A	Completed	8/9/2018 5:14:00 PM	8
9	Unknown	NPOC	FA56349-2	NPOC.met	1.000	NPOC:6.346mg/L	SM5310B SW846 9060A	Completed	8/9/2018 5:35:44 PM	9
10	Unknown	NPOC	FA56349-3	NPOC.met	1.000	NPOC:49.17mg/L	SM5310B SW846 9060A	Completed	8/9/2018 6:08:56 PM	10
11	Unknown	NPOC	FA56349-4	NPOC.met	1.000	NPOC:29.09mg/L	SM5310B SW846 9060A	Completed	8/9/2018 6:28:59 PM	11
12	Unknown	NPOC	FA56349-5	NPOC.met	1.000	NPOC:43.09mg/L	SM5310B SW846 9060A	Completed	8/9/2018 6:50:59 PM	12
13	Unknown	NPOC	FA56349-6	NPOC.met	1.000	NPOC:6.046mg/L	SM5310B SW846 9060A	Completed	8/9/2018 7:12:10 PM	13
14	Unknown	NPOC	CCV	NPOC.met	1.000	NPOC:14.97mg/L	SM5310B SW846 9060A	Completed	8/9/2018 7:35:05 PM	14
15	Unknown	NPOC	CCB	NPOC.met	1.000	NPOC:0.09817mg/L	SM5310B SW846 9060A	Completed	8/9/2018 7:56:21 PM	15
16	Unknown	NPOC	FA56349-11	NPOC.met	1.000	NPOC:6.590mg/L	SM5310B SW846 9060A	Completed	8/9/2018 8:15:53 PM	16
17	Unknown	NPOC	FA56349-12	NPOC.met	1.000	NPOC:0.4923mg/L	SM5310B SW846 9060A	Completed	8/9/2018 8:37:09 PM	17
18	Unknown	NPOC	FA56349-13	NPOC.met	1.000	NPOC:16.82mg/L	SM5310B SW846 9060A	Completed	8/9/2018 8:58:42 PM	18
19	Unknown	NPOC	GP31863-S3	NPOC.met	1.000	NPOC:32.22mg/L	SM5310B SW846 9060A	Completed	8/9/2018 9:20:10 PM	19
20	Unknown	NPOC	GP31863-S4	NPOC.met	1.000	NPOC:31.82mg/L	SM5310B SW846 9060A	Completed	8/9/2018 9:41:31 PM	20
21	Unknown	NPOC	FA56349-14	NPOC.met	1.000	NPOC:11.81mg/L	SM5310B SW846 9060A	Completed	8/9/2018 10:00:43 PM	21
22	Unknown	NPOC	FA56349-15	NPOC.met	1.000	NPOC:12.28mg/L	SM5310B SW846 9060A	Completed	8/9/2018 10:22:16 PM	22
23	Unknown	NPOC	FA56349-16	NPOC.met	1.000	NPOC:13.16mg/L	SM5310B SW846 9060A	Completed	8/9/2018 10:41:24 PM	23
24	Unknown	NPOC	FA56349-17	NPOC.met	1.000	NPOC:36.14mg/L	SM5310B SW846 9060A	Completed	8/9/2018 11:03:37 PM	24
25	Unknown	NPOC	FA56349-18	NPOC.met	1.000	NPOC:17.52mg/L	SM5310B SW846 9060A	Completed	8/9/2018 11:22:52 PM	25
26	Unknown	NPOC	CCV	NPOC.met	1.000	NPOC:14.71mg/L	SM5310B SW846 9060A	Completed	8/9/2018 11:42:07 PM	26
27	Unknown	NPOC	CCB	NPOC.met	1.000	NPOC:0.2266mg/L	SM5310B SW846 9060A	Completed	8/10/2018 12:01:20 AM	27
28	Unknown	NPOC	FA56349-19	NPOC.met	1.000	NPOC:0.2772mg/L	SM5310B SW846 9060A	Completed	8/10/2018 12:22:37 AM	28
29	Unknown	NPOC	FA56433-1	NPOC.met	1.000	NPOC:44.71mg/L	SM5310B SW846 9060A	Completed	8/10/2018 12:44:42 AM	29
30	Unknown	NPOC	FA56433-2	NPOC.met	1.000	NPOC:9.807mg/L	SM5310B SW846 9060A	Completed	8/10/2018 1:06:08 AM	30
31	Unknown	NPOC	FA56433-3	NPOC.met	1.000	NPOC:11.41mg/L	SM5310B SW846 9060A	Completed	8/10/2018 1:27:27 AM	31
32	Unknown	NPOC	FA56433-4	NPOC.met	1.000	NPOC:9.246mg/L	SM5310B SW846 9060A	Completed	8/10/2018 1:48:57 AM	32
33	Unknown	NPOC	FA56109-14	NPOC.met	1.000	NPOC:66.33mg/L	SM5310B SW846 9060A	Completed	8/10/2018 2:22:38 AM	33
34	Unknown	NPOC	FA56109-14A	NPOC.met	1.000	NPOC:60.12mg/L	SM5310B SW846 9060A	Completed	8/10/2018 2:55:50 AM	34
35	Unknown	NPOC	FA56549-1	NPOC.met	1.000	NPOC:0.7012mg/L	SM5310B SW846 9060A	Completed	8/10/2018 3:17:02 AM	35
36	Unknown	NPOC	FA56549-2	NPOC.met	1.000	NPOC:0.7632mg/L	SM5310B SW846 9060A	Completed	8/10/2018 3:38:38 AM	36
37	Unknown	NPOC	FA56549-3	NPOC.met	1.000	NPOC:3.632mg/L	SM5310B SW846 9060A	Completed	8/10/2018 4:00:12 AM	37
38	Unknown	NPOC	CCV	NPOC.met	1.000	NPOC:14.71mg/L	SM5310B SW846 9060A	Completed	8/10/2018 4:21:23 AM	38

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	Type	Analysis	Sample Name	Origin	Manual Dilution	Result	Comment	Status	Date / Time	Vial
39	Unknown	NPOC	GP31864-MB1	NPOC.met	1.000	NPOC:0.2003mg/L	SM5310B SW846 9060A	Completed	8/10/2018 4:42:35 AM	39
40	Unknown	NPOC	GP31864-B1	NPOC.met	1.000	NPOC:14.61mg/L	SM5310B SW846 9060A	Completed	8/10/2018 5:03:49 AM	40
41	Unknown	NPOC	FA56549-4	NPOC.met	1.000	NPOC:1.126mg/L	SM5310B SW846 9060A	Completed	8/10/2018 5:25:01 AM	41
42	Unknown	NPOC	GP31864-S1	NPOC.met	1.000	NPOC:15.59mg/L	SM5310B SW846 9060A	Completed	8/10/2018 5:46:19 AM	42
43	Unknown	NPOC	GP31864-S2	NPOC.met	1.000	NPOC:15.16mg/L	SM5310B SW846 9060A	Completed	8/10/2018 6:23:39 AM	42
44	Unknown	NPOC	FA56549-5	NPOC.met	1.000	NPOC:2.062mg/L	SM5310B SW846 9060A	Completed	8/10/2018 6:45:26 AM	43
45	Unknown	NPOC	FA56549-6	NPOC.met	1.000	NPOC:2.277mg/L	SM5310B SW846 9060A	Completed	8/10/2018 7:04:35 AM	44
46	Unknown	NPOC	FA56549-7	NPOC.met	1.000	NPOC:2.282mg/L	SM5310B SW846 9060A	Completed	8/10/2018 7:23:59 AM	45
47	Unknown	NPOC	FA56549-8	NPOC.met	1.000	NPOC:4.722mg/L	SM5310B SW846 9060A	Completed	8/10/2018 7:46:09 AM	46
48	Unknown	NPOC	FA56549-9	NPOC.met	1.000	NPOC:0.4550mg/L	SM5310B SW846 9060A	Completed	8/10/2018 8:07:21 AM	47
49	Unknown	NPOC	CCV	NPOC.met	1.000	NPOC:14.53mg/L	SM5310B SW846 9060A	Completed	8/10/2018 8:28:55 AM	48
50	Unknown	NPOC	CCB	NPOC.met	1.000	NPOC:0.06327mg/L	SM5310B SW846 9060A	Completed	8/10/2018 8:50:08 AM	49
51	Unknown	NPOC	FA56349-17	NPOC.met	1.000	NPOC:37.50mg/L	SM5310B SW846 9060A	Completed	8/10/2018 10:56:10 AM	24
52	Unknown	NPOC	CCV	NPOC.met	1.000	NPOC:14.81mg/L	SM5310B SW846 9060A	Completed	8/10/2018 11:19:12 AM	48
53	Unknown	NPOC	CCB	NPOC.met	1.000	NPOC:0.1281mg/L	SM5310B SW846 9060A	Completed	8/10/2018 11:40:47 AM	49

Instr.Information

System	TOC-2
Instrument Options	TOC/ASI/
Catalyst	Regular Sensitivity

Sample

Sample Name:	BLANK
Sample ID:	Untitled
Origin:	NPOC.met
Status	Completed
Chk. Result	

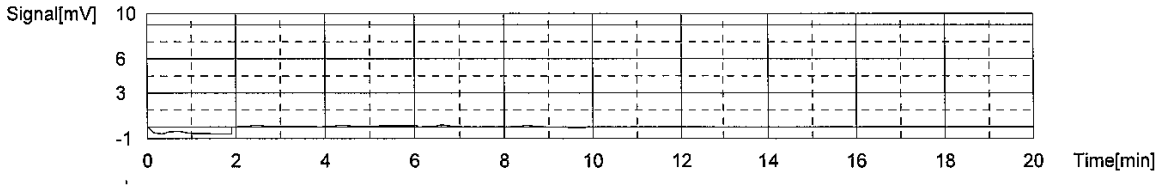
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.04358mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4631	0.02205mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 2:32:00 PM
2	0.1857	-0.06484mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 2:34:03 PM
3	0.3291	-0.01992mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 2:36:27 PM
4	0.2524	-0.04395mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 2:38:30 PM
5	0.2471	-0.04561mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 2:40:32 PM

Mean Area	0.2536
Mean Conc.	-0.04358mg/L



Sample

Sample Name: 500
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

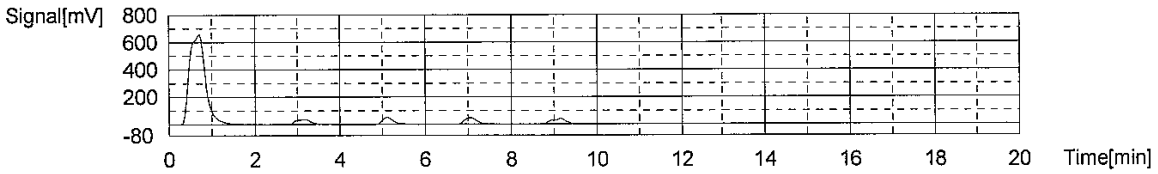
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:516.9mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1727	540.8mg/L	50uL	1	R	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 2:54:09 PM
2	97.72	518.2mg/L	50uL	17		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:06:39 PM
3	95.49	506.4mg/L	50uL	17		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:08:42 PM
4	97.91	519.2mg/L	50uL	17		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:10:49 PM
5	98.73	523.6mg/L	50uL	17		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:12:52 PM

Mean Area 97.46
Mean Conc. 516.9mg/L



Sample

Sample Name: CCV
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

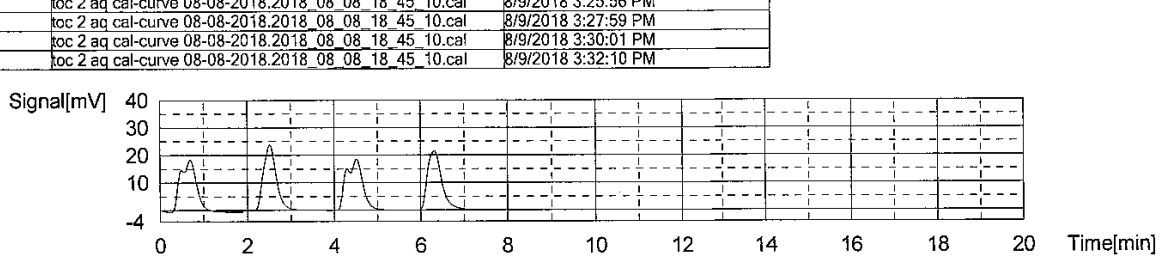
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.18mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	47.65	14.80mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:25:56 PM
2	48.81	15.16mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:27:59 PM
3	49.01	15.23mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:30:01 PM
4	49.97	15.53mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:32:10 PM

Mean Area 48.86
Mean Conc. 15.18mg/L



Sample

Sample Name: GP31863-MB1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

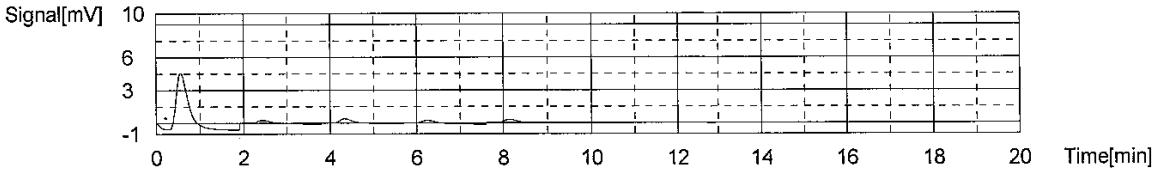
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.03774mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.766	2.936mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:45:15 PM
2	0.4850	0.02891mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:47:18 PM
3	0.6774	0.08917mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:49:20 PM
4	0.4487	0.01754mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:51:23 PM
5	0.4417	0.01534mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 3:53:26 PM

Mean Area 0.5132
Mean Conc. 0.03774mg/L



Sample

Sample Name: GP31863-B1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

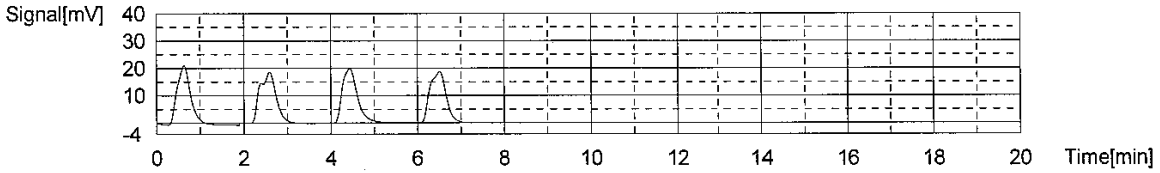
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.91mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	47.07	14.62mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:06:26 PM
2	47.76	14.84mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:08:29 PM
3	48.43	15.05mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:10:37 PM
4	48.73	15.14mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:12:40 PM

Mean Area 48.00
Mean Conc. 14.91mg/L



Sample

Sample Name: FA56349-1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

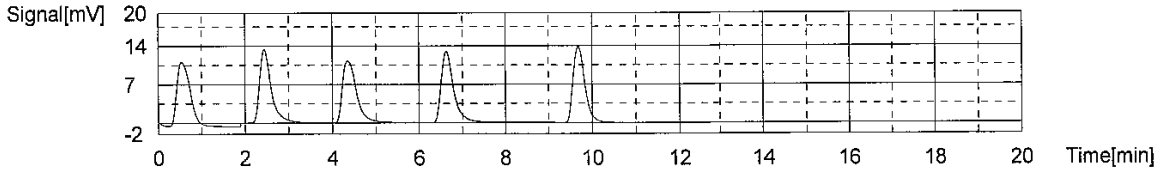
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.656mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24.24	7.469mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:25:44 PM
2	24.47	7.541mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:27:47 PM
3	24.86	7.663mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:30:12 PM
4	26.08	8.046mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:33:25 PM
5	25.78	7.952mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:35:28 PM

Mean Area 24.84
Mean Conc. 7.656mg/L



Sample

Sample Name: GP31863-S1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

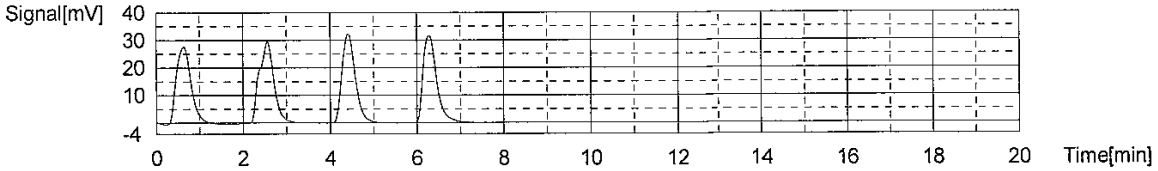
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:21.23mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.93	20.84mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:48:27 PM
2	67.84	21.13mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:50:30 PM
3	68.51	21.33mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:52:33 PM
4	69.45	21.63mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 4:54:47 PM

Mean Area 68.18
Mean Conc. 21.23mg/L



Sample

Sample Name: GP31863-S2
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

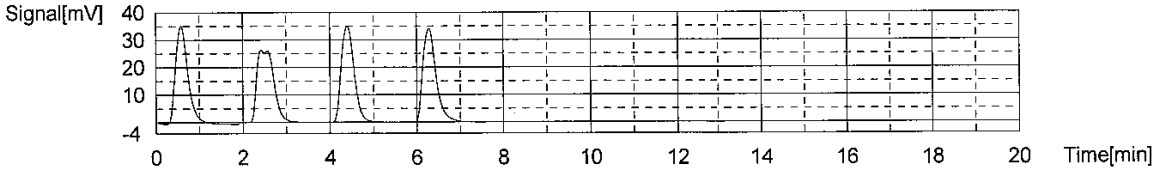
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.37mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	70.93	22.09mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:07:52 PM
2	71.01	22.12mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:09:54 PM
3	72.25	22.51mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:11:57 PM
4	73.05	22.76mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:14:00 PM

Mean Area 71.81
Mean Conc. 22.37mg/L



Sample

Sample Name: FA56349-2
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

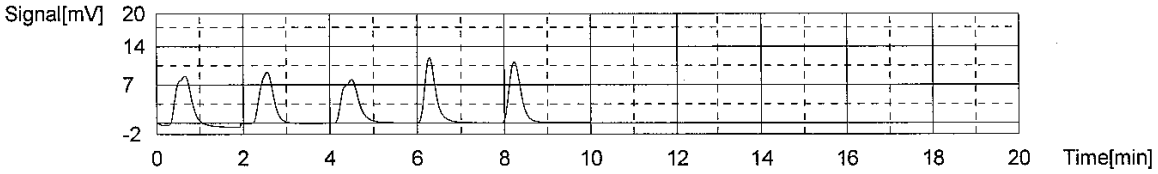
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.346mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	23.01	7.084mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:27:06 PM
2	20.24	6.216mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:29:09 PM
3	20.41	6.270mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:31:12 PM
4	20.93	6.432mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:33:17 PM
5	21.04	6.467mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:35:44 PM

Mean Area 20.66
Mean Conc. 6.346mg/L



Sample

Sample Name: FA56349-3
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

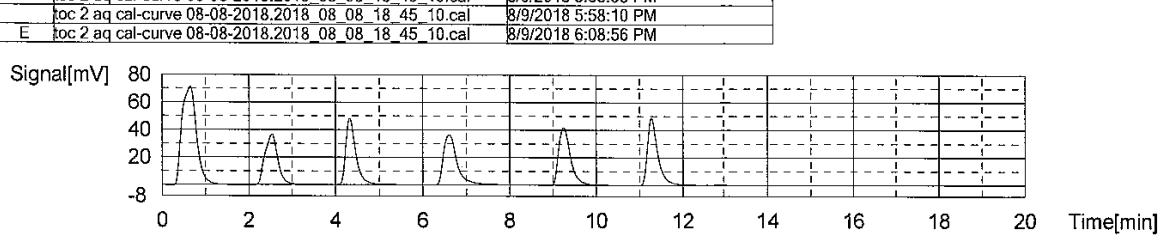
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:49.17mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	168.4	52.62mg/L	50uL	1	R	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:48:43 PM
2	75.87	47.40mg/L	25uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:50:47 PM
3	77.68	48.54mg/L	25uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:53:09 PM
4	80.25	50.15mg/L	25uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:55:58 PM
5	80.99	50.61mg/L	25uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 5:58:10 PM
6	84.24	52.65mg/L	25uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:08:56 PM

Mean Area 78.70
Mean Conc. 49.17mg/L



Sample

Sample Name: FA56349-4
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

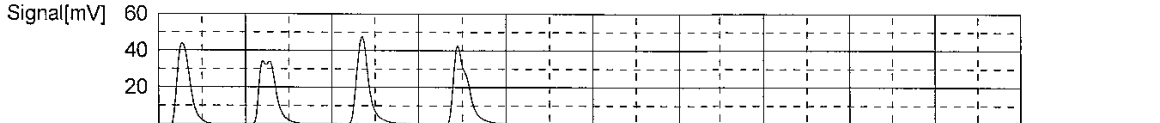
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:29.09mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	92.05	28.71mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:21:55 PM
2	91.77	28.62mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:24:17 PM
3	93.60	29.19mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:26:41 PM
4	95.67	29.84mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:28:59 PM

Mean Area 93.27
Mean Conc. 29.09mg/L



Sample

Sample Name: FA56349-5
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

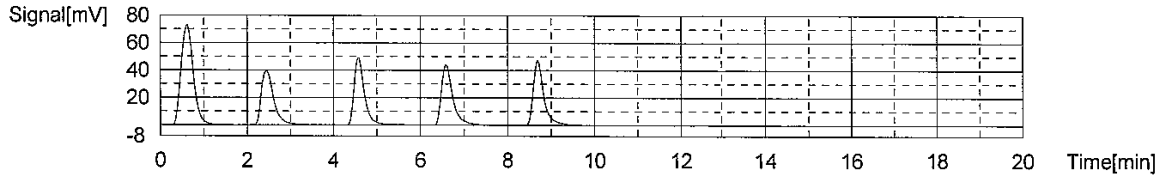
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:43.09mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	145.6	45.48mg/L	50uL	1	R	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:42:03 PM
2	78.38	42.20mg/L	29uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:44:21 PM
3	80.59	43.40mg/L	29uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:46:30 PM
4	80.22	43.20mg/L	29uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:48:45 PM
5	80.93	43.58mg/L	29uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 6:50:59 PM

Mean Area 80.03
Mean Conc. 43.09mg/L



Sample

Sample Name: FA56349-6
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

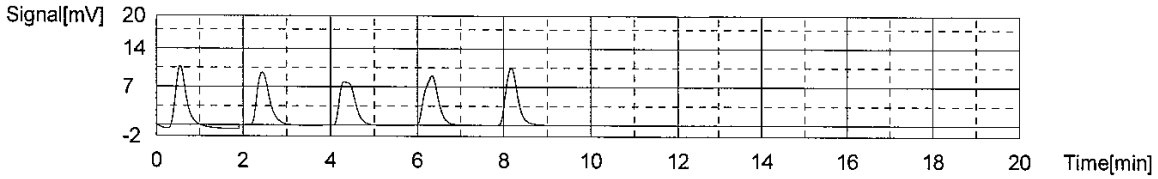
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.046mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20.94	6.436mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:03:58 PM
2	19.51	5.988mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:06:01 PM
3	19.49	5.981mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:08:04 PM
4	19.95	6.126mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:10:07 PM
5	19.83	6.088mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:12:10 PM

Mean Area 19.70
Mean Conc. 6.046mg/L



Sample

Sample Name: CCV
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

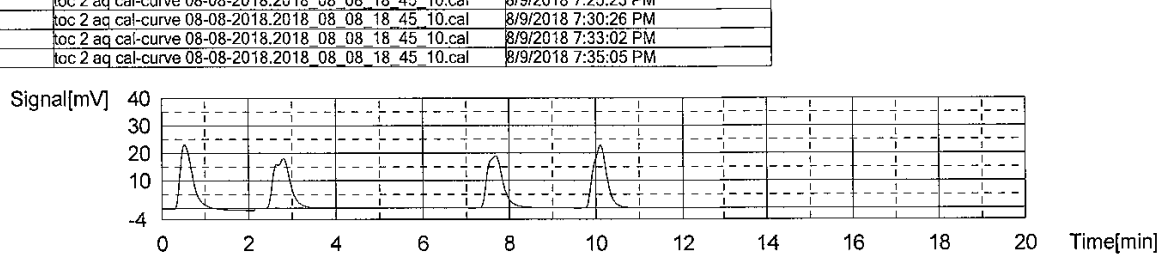
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.97mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.29	15.00mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:25:23 PM
2	47.77	14.84mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:30:26 PM
3	47.99	14.91mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:33:02 PM
4	48.76	15.15mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:35:05 PM

Mean Area 48.20
Mean Conc. 14.97mg/L



Sample

Sample Name: CCB
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

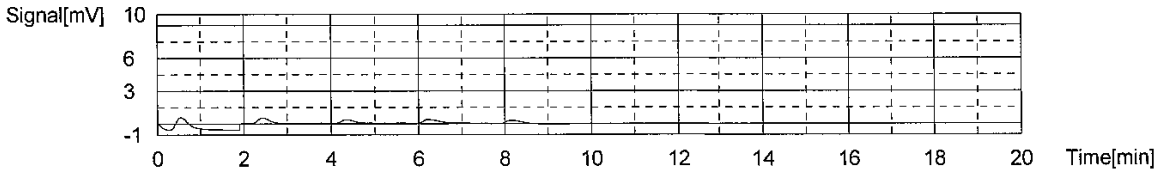
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.09817mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.200	0.5661mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:48:09 PM
2	0.8628	0.1472mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:50:12 PM
3	0.5918	0.06236mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:52:15 PM
4	0.6789	0.08964mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:54:18 PM
5	0.6910	0.09343mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 7:56:21 PM

Mean Area 0.7061
Mean Conc. 0.09817mg/L



Sample

Sample Name: FA56349-11
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

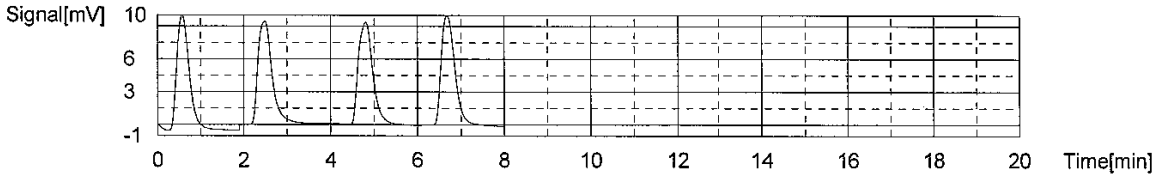
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.590mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20.92	6.429mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:09:20 PM
2	21.40	6.580mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:11:47 PM
3	21.56	6.630mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:13:50 PM
4	21.85	6.721mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:15:53 PM

Mean Area 21.43
Mean Conc. 6.590mg/L



Sample

Sample Name: FA56349-12
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

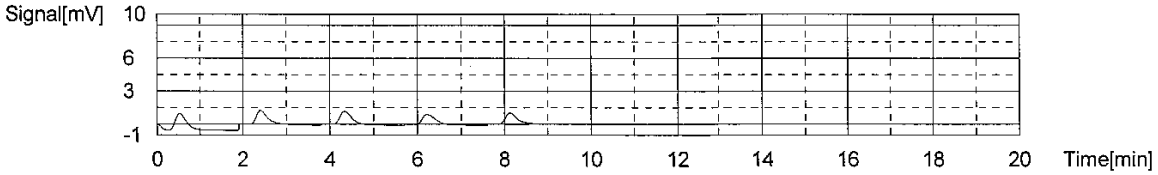
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4923mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.500	0.6600mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:28:57 PM
2	2.160	0.5535mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:31:00 PM
3	2.132	0.5448mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:33:03 PM
4	1.800	0.4408mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:35:06 PM
5	1.766	0.4301mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:37:09 PM

Mean Area 1.964
Mean Conc. 0.4923mg/L



Sample

Sample Name: FA56349-13
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

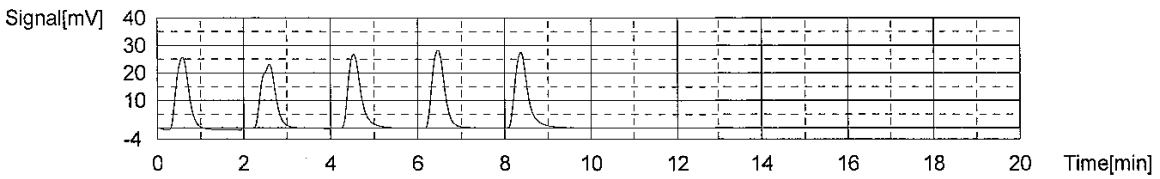
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:16.82mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.29	16.57mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:50:11 PM
2	53.61	16.67mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:52:22 PM
3	53.73	16.71mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:54:25 PM
4	55.70	17.32mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:56:28 PM
5	56.68	17.63mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 8:58:42 PM

Mean Area 54.08
Mean Conc. 16.82mg/L



Sample

Sample Name: GP31863-S3
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

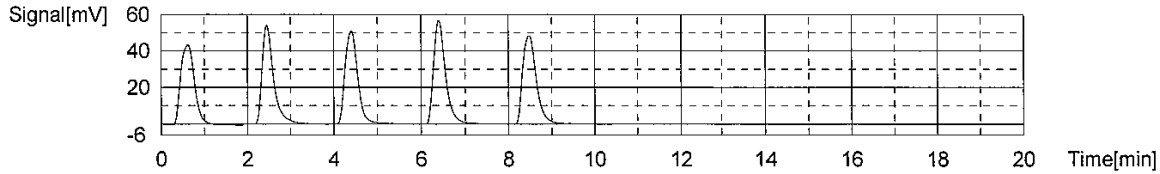
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:32.22mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	97.21	30.32mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:11:41 PM
2	100.0	31.20mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:13:44 PM
3	101.7	31.73mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:15:55 PM
4	105.4	32.89mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:18:07 PM
5	106.0	33.08mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:20:10 PM

Mean Area 103.3
Mean Conc. 32.22mg/L



Sample

Sample Name: GP31863-S4
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

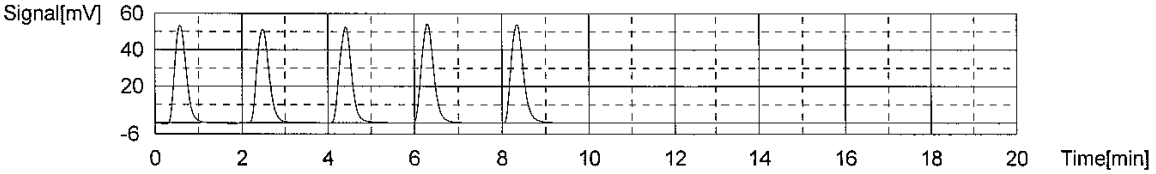
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:31.82mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	100.2	31.26mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:33:10 PM
2	100.3	31.29mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:35:13 PM
3	101.1	31.54mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:37:16 PM
4	106.3	33.17mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:39:29 PM
5	106.5	33.23mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:41:31 PM

Mean Area 102.0
Mean Conc. 31.82mg/L



Sample

Sample Name: FA56349-14
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

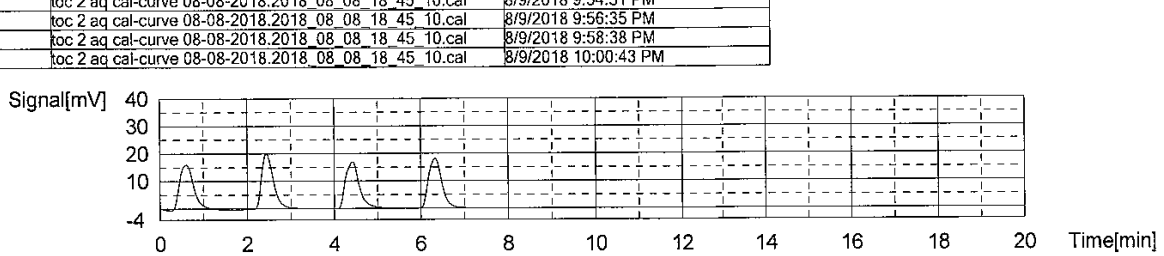
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.81mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	38.07	11.80mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:54:31 PM
2	37.81	11.72mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:56:35 PM
3	37.58	11.65mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 9:58:38 PM
4	38.88	12.05mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:00:43 PM

Mean Area 38.09
Mean Conc. 11.81mg/L



Sample

Sample Name: FA56349-15
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

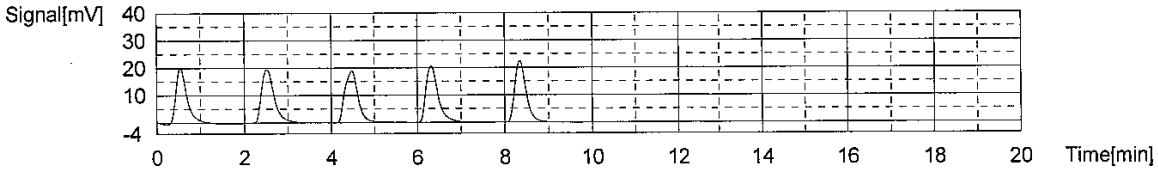
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:12.28mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	37.43	11.60mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:13:52 PM
2	38.77	12.02mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:15:55 PM
3	39.38	12.21mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:17:58 PM
4	39.90	12.37mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:20:07 PM
5	40.36	12.52mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:22:16 PM

Mean Area 39.60
Mean Conc. 12.28mg/L



Sample

Sample Name: FA56349-16
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

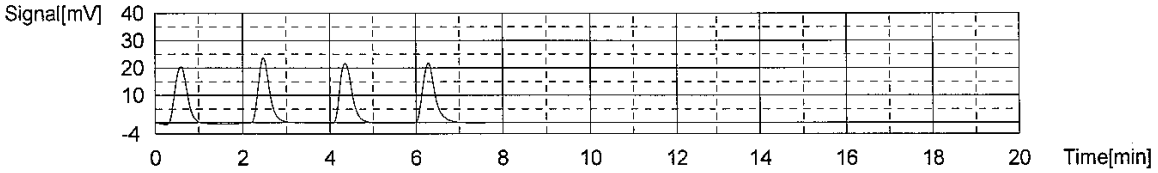
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.16mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	41.28	12.81mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:35:16 PM
2	42.42	13.16mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:37:19 PM
3	42.71	13.25mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:39:22 PM
4	43.23	13.42mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:41:24 PM

Mean Area 42.41
Mean Conc. 13.16mg/L



Sample

Sample Name: FA56349-17
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

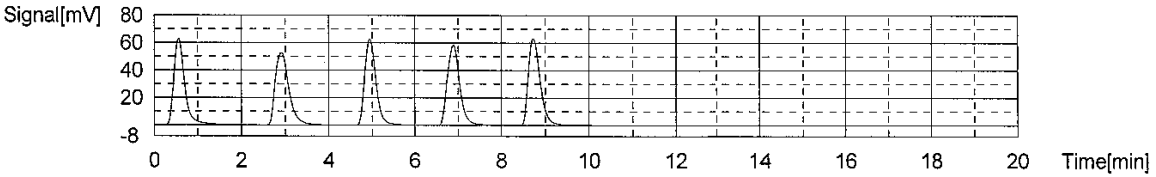
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:36.14mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	108.9	33.99mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:55:16 PM
2	114.3	35.68mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:57:28 PM
3	114.1	35.61mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 10:59:31 PM
4	116.5	36.37mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:01:34 PM
5	118.2	36.90mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:03:37 PM

Mean Area 115.8
Mean Conc. 36.14mg/L



Sample

Sample Name: FA56349-18
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

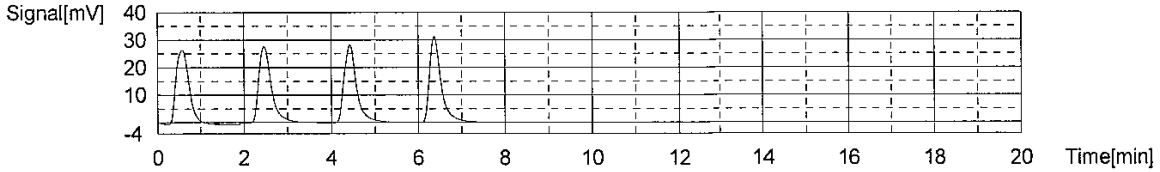
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:17.52mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.90	17.39mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:16:36 PM
2	55.62	17.30mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:18:41 PM
3	56.04	17.43mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:20:48 PM
4	57.73	17.96mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:22:52 PM

Mean Area 56.32
Mean Conc. 17.52mg/L



Sample

Sample Name: CCV
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

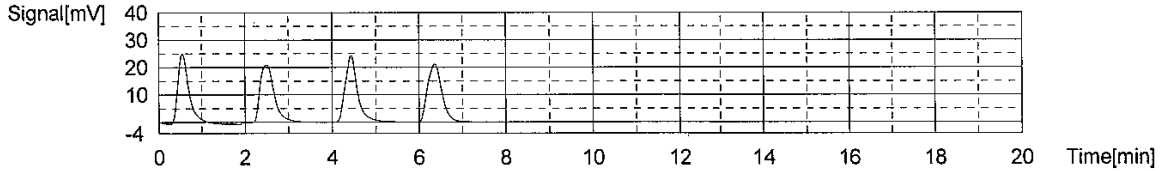
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	46.68	14.50mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:35:58 PM
2	47.21	14.66mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:38:01 PM
3	47.24	14.67mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:40:04 PM
4	48.36	15.02mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:42:07 PM

Mean Area 47.37
Mean Conc. 14.71mg/L



Sample

Sample Name: CCB
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

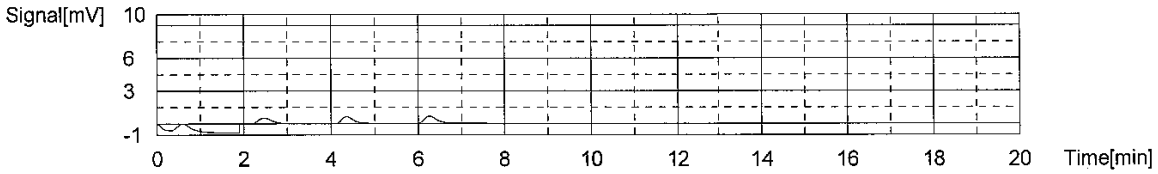
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2266mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.243	0.2530mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:55:11 PM
2	1.073	0.2024mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:57:14 PM
3	1.083	0.2054mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/9/2018 11:59:17 PM
4	1.218	0.2456mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:01:20 AM

Mean Area 1.154
Mean Conc. 0.2266mg/L



Sample

Sample Name: FA56349-19
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

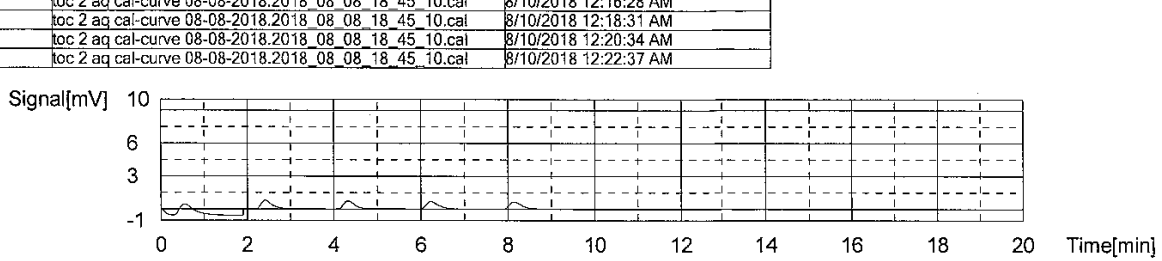
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2772mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.234	0.5767mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:14:25 AM
2	1.369	0.3058mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:16:28 AM
3	1.260	0.2716mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:18:31 AM
4	1.268	0.2741mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:20:34 AM
5	1.214	0.2572mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:22:37 AM

Mean Area 1.278
Mean Conc. 0.2772mg/L



Sample

Sample Name: FA56433-1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

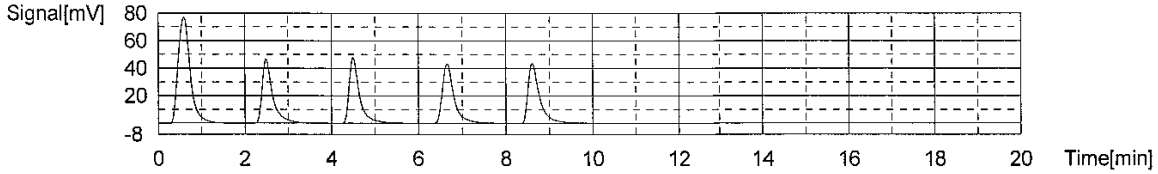
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:44.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	152.2	47.55mg/L	50uL	1	R	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:35:41 AM
2	80.22	44.74mg/L	28uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:37:51 AM
3	79.55	44.37mg/L	28uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:40:07 AM
4	79.80	44.51mg/L	28uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:42:15 AM
5	81.06	45.21mg/L	28uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:44:42 AM

Mean Area 80.16
Mean Conc. 44.71mg/L



Sample

Sample Name: FA56433-2
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

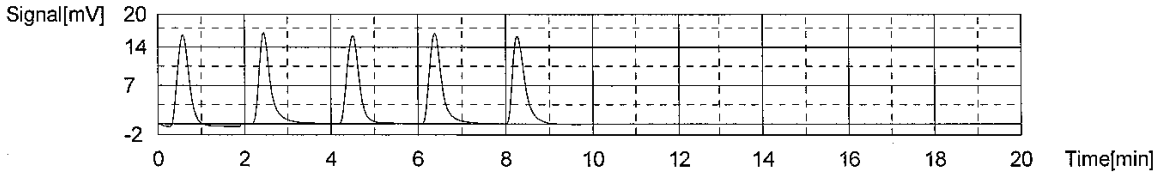
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.807mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.89	9.865mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:57:42 AM
2	30.66	9.480mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 12:59:52 AM
3	31.02	9.593mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:01:55 AM
4	31.95	9.884mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:03:59 AM
5	31.96	9.887mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:06:08 AM

Mean Area 31.71
Mean Conc. 9.807mg/L



Sample

Sample Name: FA56433-3
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

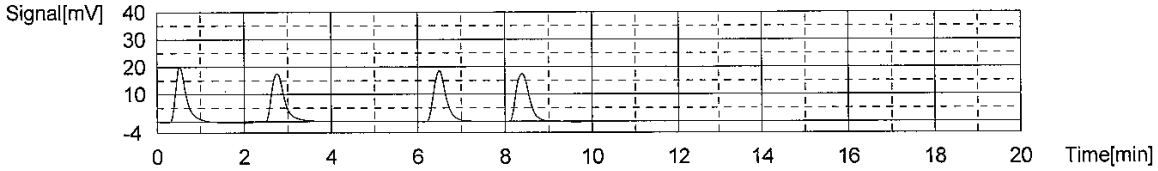
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.41mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	36.40	11.28mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:19:26 AM
2	37.42	11.60mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:23:18 AM
3	36.57	11.33mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:25:21 AM
4	36.94	11.45mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:27:27 AM

Mean Area 36.83
Mean Conc. 11.41mg/L



Sample

Sample Name: FA56433-4
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

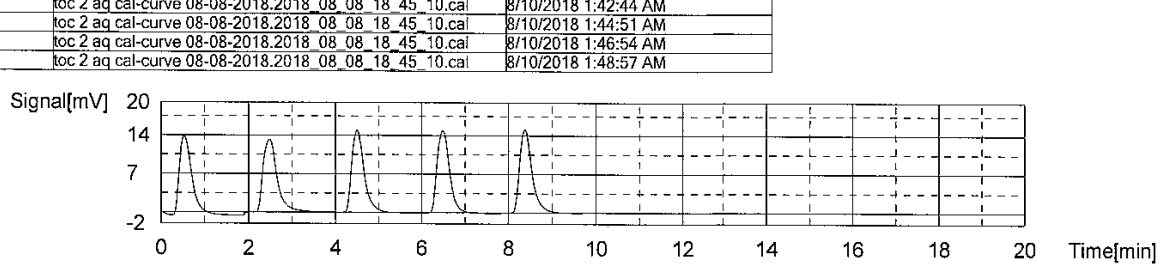
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.246mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.63	8.844mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:40:32 AM
2	29.76	9.198mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:42:44 AM
3	29.70	9.179mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:44:51 AM
4	30.20	9.336mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:46:54 AM
5	29.99	9.270mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 1:48:57 AM

Mean Area 29.91
Mean Conc. 9.246mg/L



Sample

Sample Name: FA56109-14
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

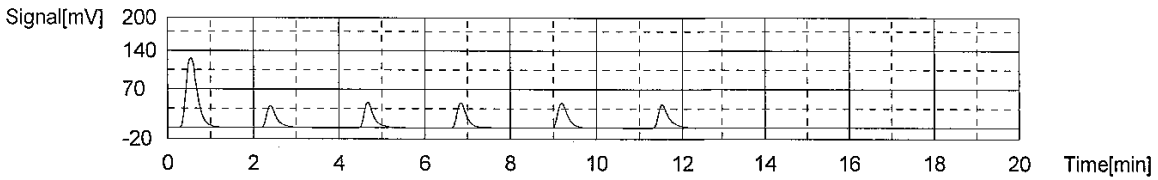
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:66.33mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	231.4	72.35mg/L	50uL	1	R	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:01:57 AM
2	66.95	58.13mg/L	18uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:04:23 AM
3	74.62	64.80mg/L	18uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:06:42 AM
4	74.95	65.09mg/L	18uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:09:11 AM
5	77.67	67.45mg/L	18uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:11:39 AM
6	78.26	67.97mg/L	18uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:22:38 AM

Mean Area 76.38
Mean Conc. 66.33mg/L



Sample

Sample Name: FA56109-14A
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

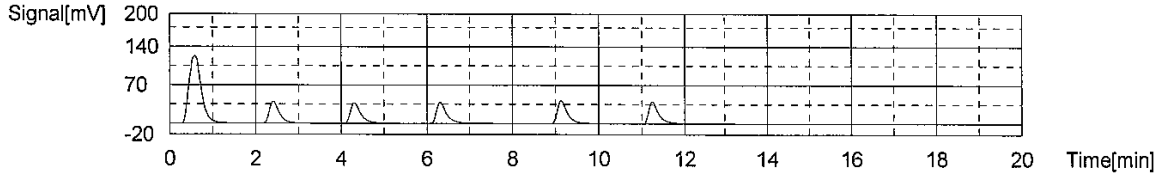
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:60.12mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	245.6	76.80mg/L	50uL	1	R	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:35:38 AM
2	64.18	59.00mg/L	17uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:37:41 AM
3	63.99	58.82mg/L	17uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:39:51 AM
4	65.56	60.27mg/L	17uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:42:48 AM
5	68.78	63.24mg/L	17uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:45:04 AM
6	67.87	62.40mg/L	17uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 2:55:50 AM

Mean Area 65.40
Mean Conc. 60.12mg/L



Sample

Sample Name: FA56549-1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

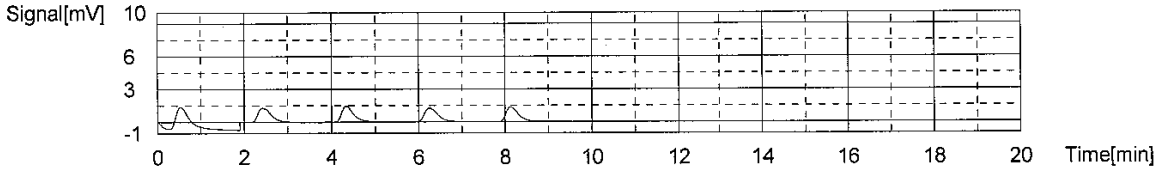
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7012mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.194	1.191mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:08:50 AM
2	2.779	0.7474mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:10:53 AM
3	2.641	0.7042mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:12:56 AM
4	2.539	0.6722mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:14:59 AM
5	2.567	0.6810mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:17:02 AM

Mean Area 2.632
Mean Conc. 0.7012mg/L



Sample

Sample Name: FA56549-2
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

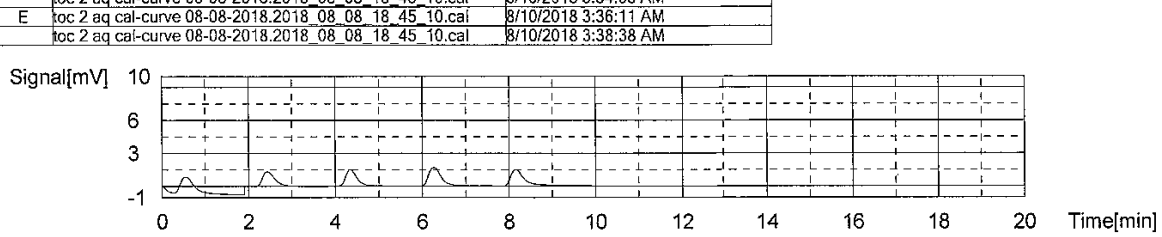
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7632mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.866	0.7747mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:30:02 AM
2	2.601	0.6917mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:32:05 AM
3	2.592	0.6888mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:34:08 AM
4	3.308	0.9131mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:36:11 AM
5	3.259	0.8977mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:38:38 AM

Mean Area 2.830
Mean Conc. 0.7632mg/L



Sample

Sample Name: FA56549-3
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

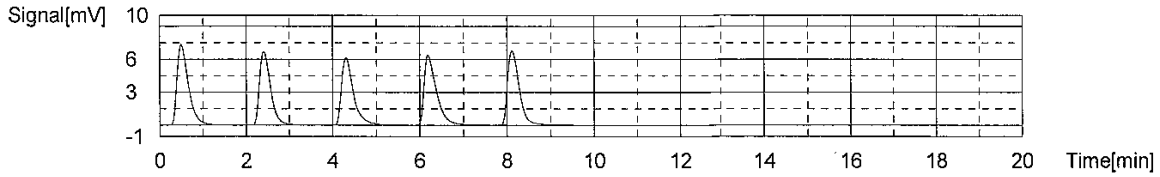
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.632mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.19	4.008mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:52:01 AM
2	11.74	3.554mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:54:04 AM
3	11.66	3.529mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:56:06 AM
4	12.26	3.717mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 3:58:09 AM
5	12.30	3.729mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:00:12 AM

Mean Area 11.99
Mean Conc. 3.632mg/L



Sample

Sample Name: CCV
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

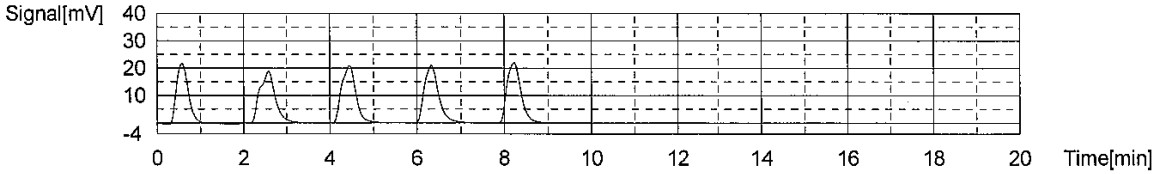
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.13	13.39mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:13:12 AM
2	46.43	14.42mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:15:15 AM
3	47.50	14.75mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:17:18 AM
4	47.12	14.64mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:19:20 AM
5	48.41	15.04mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:21:23 AM

Mean Area 47.37
Mean Conc. 14.71mg/L



Sample

Sample Name: GP31864-MB1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

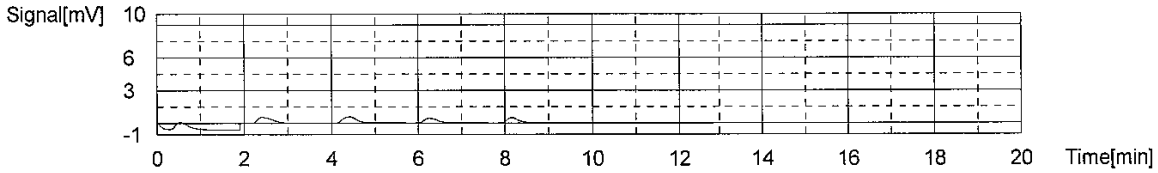
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2003mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.210	0.2560mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:34:24 AM
2	1.220	0.2591mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:36:27 AM
3	1.197	0.2519mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:38:30 AM
4	0.8357	0.1387mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:40:32 AM
5	0.8858	0.1544mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:42:35 AM

Mean Area 1.032
Mean Conc. 0.2003mg/L



Sample

Sample Name: GP31864-B1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

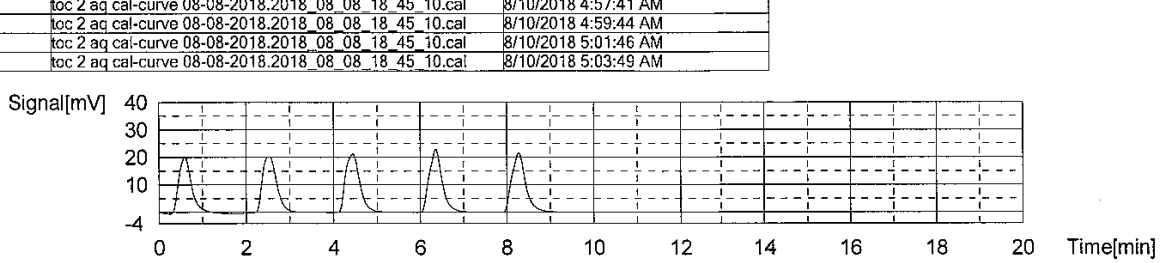
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.61mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.24	13.42mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:55:38 AM
2	45.65	14.18mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:57:41 AM
3	47.21	14.66mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 4:59:44 AM
4	47.60	14.79mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:01:46 AM
5	47.64	14.80mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:03:49 AM

Mean Area 47.03
Mean Conc. 14.61mg/L



Sample

Sample Name: FA56549-4
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

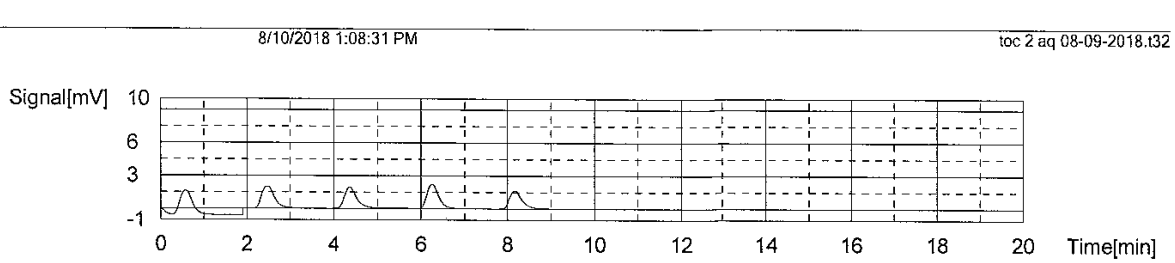
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.126mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.153	1.178mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:16:50 AM
2	4.082	1.156mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:18:53 AM
3	3.653	1.021mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:20:55 AM
4	4.066	1.151mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:22:58 AM
5	3.206	0.8811mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:25:01 AM

Mean Area 3.989
Mean Conc. 1.126mg/L



Sample

Sample Name: GP31864-S1
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

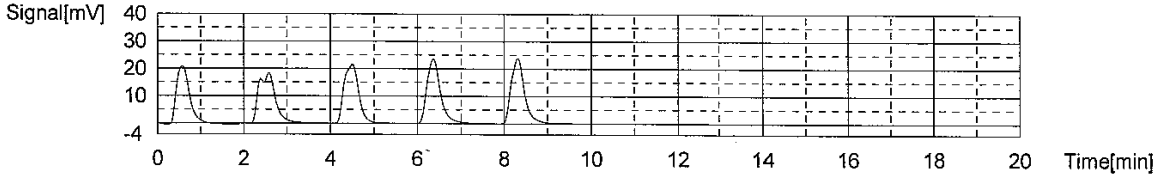
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.59mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	45.81	14.23mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:38:02 AM
2	48.77	15.15mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:40:08 AM
3	50.01	15.54mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:42:10 AM
4	50.78	15.78mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:44:16 AM
5	51.13	15.89mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:46:19 AM

Mean Area 50.17
Mean Conc. 15.59mg/L



Sample

Sample Name: GP31864-S2
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

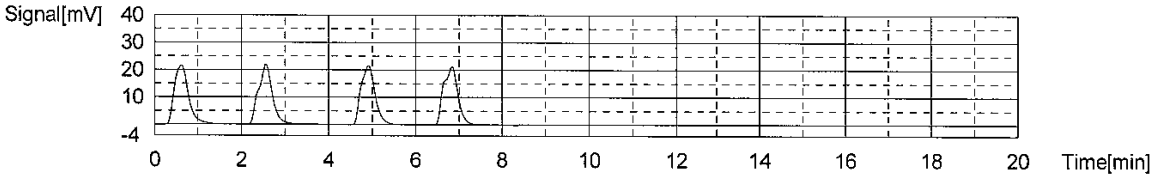
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.16mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.20	15.29mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 5:55:29 AM
2	48.31	15.01mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:05:07 AM
3	48.17	14.96mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:14:17 AM
4	49.51	15.38mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:23:39 AM

Mean Area 48.80
Mean Conc. 15.16mg/L



Sample

Sample Name: FA56549-5
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

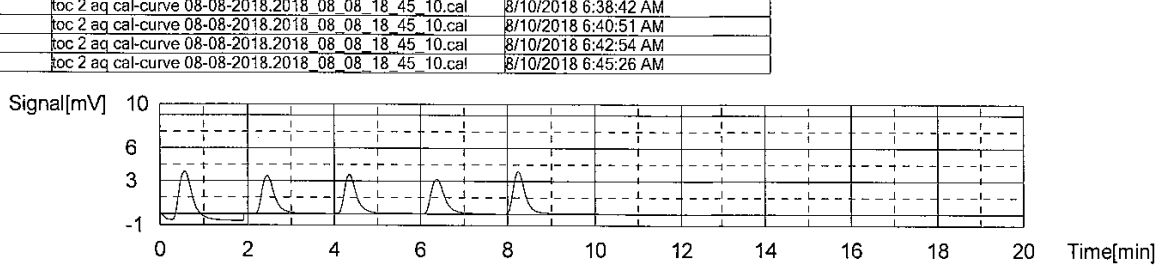
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.062mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.105	2.729mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:36:40 AM
2	6.754	1.992mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:38:42 AM
3	6.805	2.008mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:40:51 AM
4	6.798	2.006mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:42:54 AM
5	7.549	2.241mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:45:26 AM

Mean Area 6.976
Mean Conc. 2.062mg/L



Sample

Sample Name: FA56549-6
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

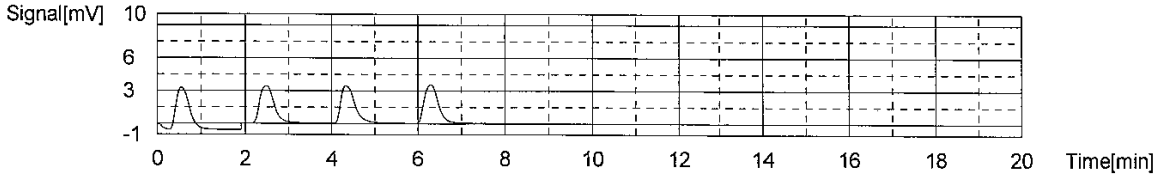
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.277mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.693	2.287mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 6:58:26 AM
2	7.516	2.231mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:00:29 AM
3	7.631	2.267mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:02:32 AM
4	7.807	2.322mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:04:35 AM

Mean Area 7.662
Mean Conc. 2.277mg/L



Sample

Sample Name: FA56549-7
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

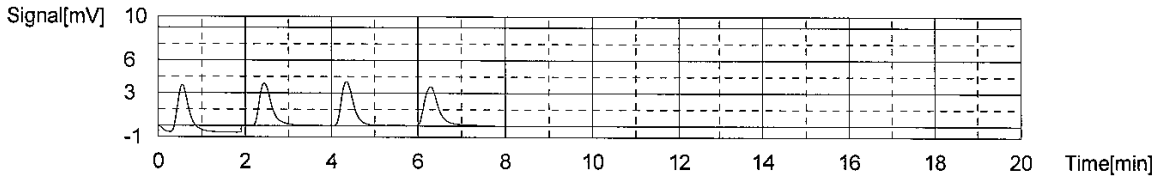
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.282mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.594	2.256mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:17:40 AM
2	7.652	2.274mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:19:43 AM
3	7.679	2.282mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:21:46 AM
4	7.787	2.316mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:23:59 AM

Mean Area 7.678
Mean Conc. 2.282mg/L



Sample

Sample Name: FA56549-8
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

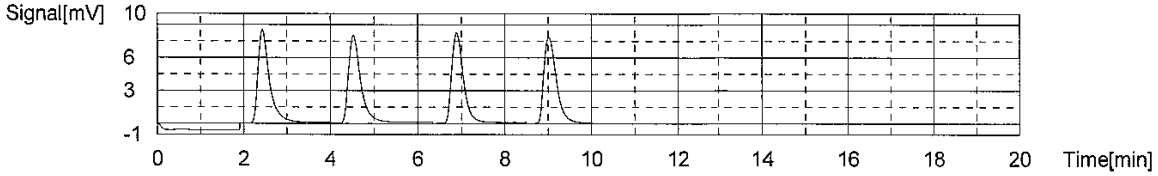
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.722mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1412	-0.07877mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:37:04 AM
2	15.60	4.763mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:39:18 AM
3	15.29	4.666mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:41:48 AM
4	15.37	4.691mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:44:06 AM
5	15.62	4.769mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:46:09 AM

Mean Area 15.47
Mean Conc. 4.722mg/L



Sample

Sample Name: FA56549-9
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

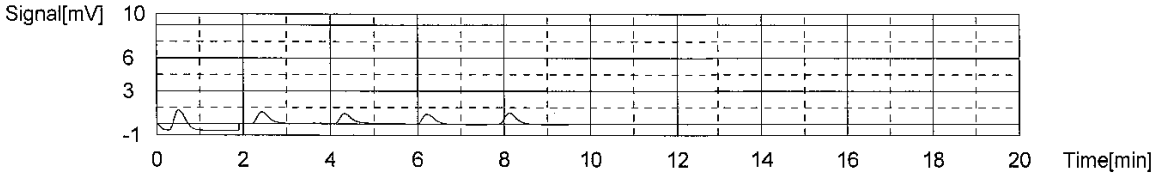
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4550mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.189	0.8758mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 7:59:09 AM
2	1.957	0.4900mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:01:12 AM
3	1.756	0.4270mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:03:15 AM
4	1.722	0.4163mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:05:18 AM
5	1.947	0.4868mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:07:21 AM

Mean Area 1.846
Mean Conc. 0.4550mg/L



Sample

Sample Name: CCV
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

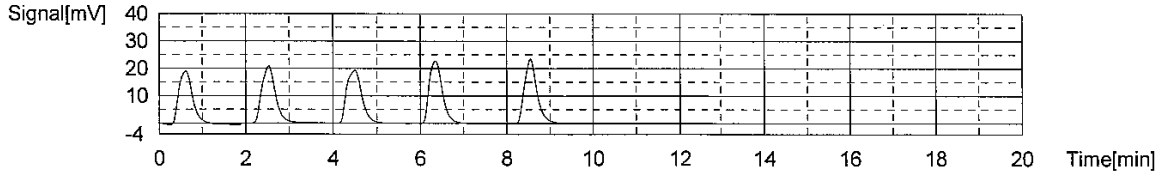
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.53mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.87	13.62mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:20:22 AM
2	45.56	14.15mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:22:29 AM
3	46.06	14.30mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:24:32 AM
4	48.28	15.00mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:26:52 AM
5	47.17	14.65mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:28:55 AM

Mean Area 46.77
Mean Conc. 14.53mg/L



Sample

Sample Name: CCB
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

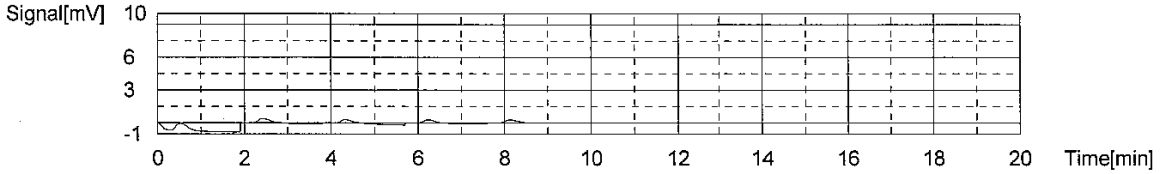
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.06327mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.007	0.1924mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:41:57 AM
2	0.7923	0.1252mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:44:00 AM
3	0.6072	0.06718mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:46:03 AM
4	0.4914	0.03091mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:48:05 AM
5	0.4879	0.02981mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 8:50:08 AM

Mean Area 0.5947
Mean Conc. 0.06327mg/L



Sample

Sample Name: FA56349-17
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

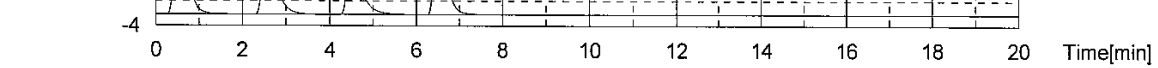
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:37.50mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.99	37.96mg/L	50uL	2		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 10:49:47 AM
2	58.58	36.45mg/L	50uL	2		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 10:51:53 AM
3	60.60	37.71mg/L	50uL	2		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 10:54:02 AM
4	60.83	37.86mg/L	50uL	2		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 10:56:10 AM

Mean Area 60.25
Mean Conc. 37.50mg/L



Sample

Sample Name: CCV
Sample ID: Untitled
Origin: NPOC.met
Status Completed
Chk. Result

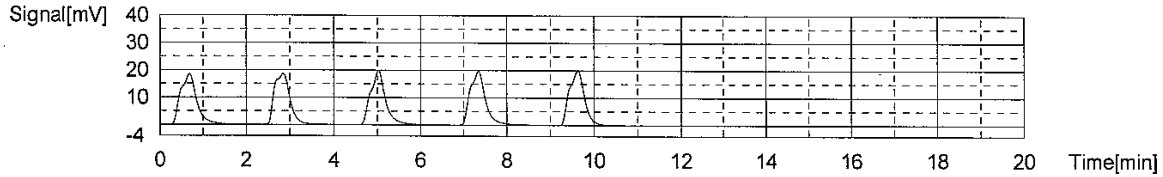
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.81mg/L

1. Det

Anal.: NPOC

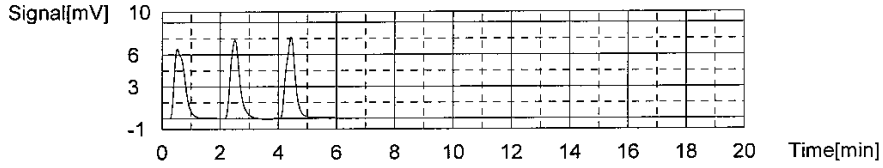
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	46.99	14.59mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 11:09:58 AM
2	45.88	14.25mg/L	50uL	1	E	toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 11:12:16 AM
3	47.02	14.60mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 11:14:43 AM
4	48.55	15.08mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 11:17:09 AM
5	48.09	14.94mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18_45_10.cal	8/10/2018 11:19:12 AM

Mean Area 47.66
Mean Conc. 14.81mg/L



No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	16.01	50uL	10	*******	E	8/8/2018 8:25:43 PM
2	16.57	50uL	10	*******		8/8/2018 8:36:10 PM
3	16.52	50uL	10	*******		8/8/2018 8:46:51 PM

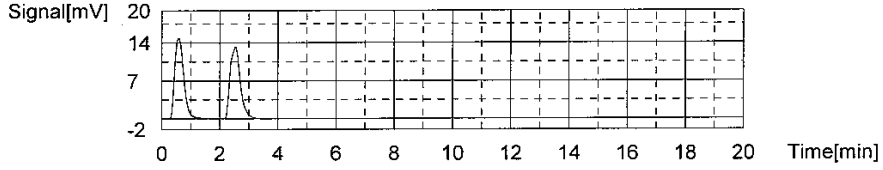
Acid Add. 0.000%
Sp. Time 360.0sec
Mean Area 16.55



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	32.08	50uL	10	*******		8/8/2018 9:00:53 PM
2	32.70	50uL	10	*******		8/8/2018 9:11:21 PM

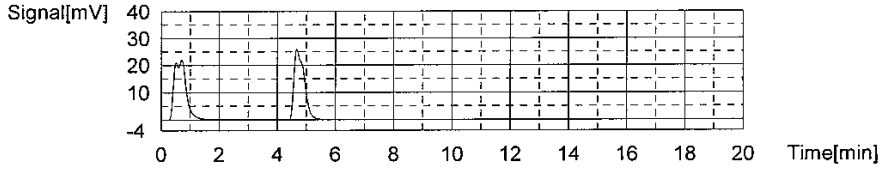
Acid Add. 0.000%
Sp. Time 360.0sec
Mean Area 32.39



Conc: 20.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	63.97	50uL	5	*******		8/8/2018 9:25:44 PM
2	63.23	50uL	5	*******		8/8/2018 9:35:01 PM

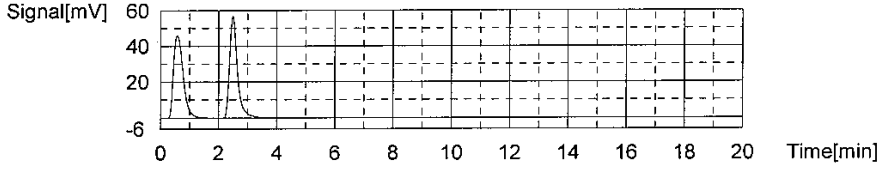
Acid Add. 0.000%
Sp. Time 360.0sec
Mean Area 63.60



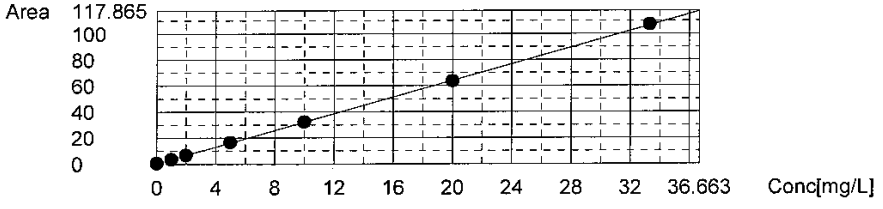
Conc: 33.33mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	106.8	50uL	3	*******		8/8/2018 9:47:11 PM
2	107.5	50uL	3	*******		8/8/2018 9:57:40 PM

Acid Add. 0.000%
Sp. Time 360.0sec
Mean Area 107.2



Slope: 3.193
Intercept 0.3927
r^2 0.9999
r 1.0000
Zero Shift No



Sample

Sample Name:	ICV
Sample ID:	Untitled
Origin:	NPOC.met
Status	Completed
Chk. Result	

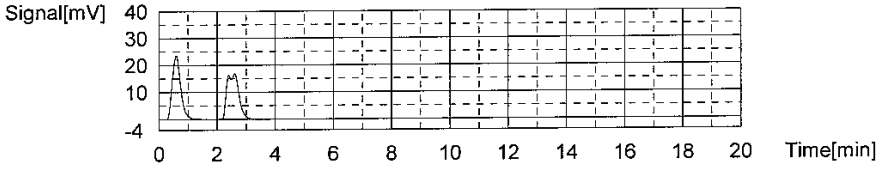
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.01mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.13	14.95mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18	8/9/2018 11:52:33 AM
2	48.53	15.08mg/L	50uL	1		toc 2 aq cal-curve 08-08-2018.2018_08_08_18	8/9/2018 11:54:36 AM

Mean Area	48.33
Mean Conc.	15.01mg/L



MCGI

USEPA Data Validation

Organic & Inorganic

Data Validation Report

Area B
Picatinny Arsenal
Route 15, NJ

Lab SDG No. FA56349

MCGI Project No. EA881802-6349

Prepared for:

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September 2018

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the **Organic** Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CCCs	Calibration Check Compounds
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture

QA/QC Quality Assurance/Quality Control
QAPjP Quality Assurance Project Plan
QC Quality Control
%R Percent Recovery of spiked amount
RF Response Factor
RIC Reconstructed Ion Chromatogram
RPD Relative Percent Difference
RRF Relative Response Factor
RSD Relative Standard Deviation
RT Retention Time
RTW Retention Time Window
SDG Sample Delivery Group
SMC System Monitoring Compound
SOP Standard Operation Procedures
SOW Statement of Work
SPCCs System Performance Check Compounds
SSL Samples Shipping Log
SVOA Semivolatile Organic Analyte
TCL Target Compound List
TCX Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC Tentatively Identified Compound
TPH Total Petroleum Hydrocarbons
UCL Upper Control Limit
VOA Volatile Organic Analyte
VTSR Validated Time of Sample Receipt

Terms:

Associated Samples
Any sample related to a particular QC analysis.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contractual Holding Time
The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Performance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:
- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the **Inorganic** Data Validation.

Acronyms:

AA	Atomic Absorption
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

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Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:
- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES

CODES RELATED TO IDENTIFICATION:
(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
U1	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:
(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
J+	=	Analyte present. Reported value may be biased high. Result is estimated high.
J-	=	Analyte present. Reported value may be biased low. Result is estimated low.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise (Estimated).
UJ-	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

Meridian Consultant Group, Inc.
Environmental Services & Data Validation
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Annapolis, MD 21401

(301)803-9207 Phone
(410)972-4701 Fax
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DATE: September 20, 2018

SUBJECT: USEPA Organic & Inorganic Data Validation Report
Volatile, Dissolved Gases & Total Organic Carbon (TOC)
Lab SDG No. FA56349
Site: Area B - Picatinny Arsenal, Route 15, NJ
MCGI Project No. EA881802-6349

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Frank DeSantis
EA Engineering, Science & Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of nineteen (19) aqueous samples submitted to SGS Laboratories, Orlando, Fl, for Volatile, Dissolved Gases & TOC analyses according to SW-846 Methods 8260B-SIM/8260C, RSK-175 & 5310B, respectively. The samples were analyzed in accordance with the Chain-of-Custody (COC).

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review & USEPA National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "U1" qualifier to clearly indicate blank contamination on the EDDs.

Calibrations: SW-846 Method 8260C was used for the volatile analysis. For the data validation purpose, a 30% RSD for the initial calibrations & 25% D for the continuing calibrations were used as the QC limits for all compounds of concern, as the basis for qualifying the data.

GENERAL NOTES

- ***Electronic Data Deliverable (EDD):*** Several rows in the electronic data deliverable (EDD) are marked with an "X" and hidden from the EDDs by the validator. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- ***Data Validation Qualifier (DVQ)*:**This refers to the column on the data summary form in which EPA and other qualifiers have been placed by the data validator.

- ***Data Validation Result (DVR):***This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- ***Tentatively Identified Compounds (TICs):*** The TICs, if applicable, were reviewed during data validation.

- ***Compound Quantitation:*** Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

SDG: FA56349

This SDG consisted of nineteen (19) aqueous samples submitted to SGS Laboratories, Orlando, Fl, for Volatile, Dissolved Gases & TOC analyses according to SW-846 Methods 8260B-SIM/8260C, RSK-175 & 5310B, respectively. One (1) trip & two (2) field blanks; and two (2) aqueous field duplicate pairs were identified in this sample set. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION				Analysis			
Field ID	**Lab ID**	**SDG**	**Matrix**	**Vb**	**Vc**	**G**	**T**
20/24IW-3	FA56349-01	FA56349	Aqueous		x	x	x
20/24IW-10	FA56349-02		Aqueous		x	x	x
20/24MW-6	FA56349-03		Aqueous		x	x	x
20/24MW-6B	FA56349-04		Aqueous		x	x	x
20/24MW-8	FA56349-05		Aqueous		x	x	x
20/24MW-18	FA56349-06		Aqueous		x	x	x
20/24IW-1B	FA56349-07		Aqueous		x		
20/24IW-3B	FA56349-08		Aqueous		x		
20/24IW-09	FA56349-09		Aqueous		x		
TB	FA56349-10		Aqueous		x		
FD-B-GW	FA56349-11		Aqueous		x	x	x
FB-GW	FA56349-12		Aqueous		x	x	x
SW-1	FA56349-13		Aqueous	x	x		x
SW-2	FA56349-14		Aqueous	x	x		x
SW-3	FA56349-15		Aqueous	x	x		x
SW-4	FA56349-16		Aqueous	x	x		x
SW-5	FA56349-17		Aqueous	x	x		x
FD-B-SW	FA56349-18		Aqueous	x	x		x
FB-B-SW	FA56349-19		Aqueous	x	x		x

Vb=Volatile 8260B-SIM, Vc=Volatile 8260C, G=Dissolved Gases, T=TOC

Duplicates: FD-B-GW/20/24IW-3
FD-B-SW/SW-1

- ***Field Duplicates:*** For the associated aqueous & soil field duplicate pairs, an RPD of 50% was used as the QC limit for results that are at or above the CRQL, no qualification was applied based on the RPD when results are less than CRQL. Whenever a positive result for a compound is detected in one sample but not in the other, regardless of the CRQL, "J" & "UJ" qualifiers were applied to that compound in the field duplicate pair. A table summarizing the RPDs for the associated aqueous field duplicate pair is provided below.

Compound	**FD-B-GW**	**20/24IW-3**	**RPD**	**Qualifier**
Volatile 8260C				
Acetone	109	ND	NA	J, UJ
Dissolved Gases				
Ethane	ND	0.35 J	NA	J, UJ
Methane	365	350	4	
TOC	6.6	7.7	15	
	FG-B-SW	**SW-1**		
Volatile 8260B SIM & 8260C	ND	ND		
TOC	17.5	16.8	4	

ORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods, except as noted in the Major Problem section. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

Parameters		Vb			Vc			G		
		q	t	a				q	t	a
*	Data Completeness		7	0		19	0		8	0
*	Holding Time		7	0		19	0		8	0
*	Instrument Performance (BFB/DFTPP)		7	0		19	0		8	0
	Calibrations		7	0	x	19	19		8	0
	Laboratory and Field Blanks analyses	x	7	1		19	0		8	0
*	Surrogate Recoveries		7	0		19	0		8	0
	Matrix Spike/Matrix Spike Duplicate	x	7	1		19	0		8	0
*	Laboratory Control Sample(LCS)		7	0		19	0		8	0
	Laboratory and/or Field Duplicates		7	0	x	19	2	x	8	2
*	Internal Standards		7	0		19	0		8	0
*	Compound Identification		7	0		19	0		8	0
*	Compound Quantitation		7	0		19	0		8	0
	Sample Preservation		7	0		19	0	x	8	1

* All Criteria were met for that Parameter. Vb=Volatile 8260B SIM, Vc=Volatile 8260C, G=Dissolved Gases

q=qualified; t=total number of samples analyzed; a=number of samples affected

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

Volatile:

- ***Calibrations:*** The volatile 8260C initial calibration, 7/25/18, associated with all samples , failed the %RSD precision criteria of 30% for Chloroethane. Quantitation limits for this compound in the associated samples were qualified "UJ".

  The volatile 8260C continuing calibration CC1683-5, 8/10/18 (8:36 am) & end calibration ECC1683-5, 8/10/18 (7:39 pm), associated with samples FA56349-12 thru -19, failed the %D precision criteria of 25%, for 2,2-Dichloropropane. Quantitation limits for this compound in the associated samples were qualified "UJ".

- ***Matrix Spike/Matrix Spike Duplicate (MS/MSD):*** The volatile 8260C MS/MSD of sample FA56349-13 displayed low recoveries for 1,1-Dichloroethylene & Methyl Iodide. No positive results for these compounds were detected in the parent sample. Quantitation limits for these compounds in the parent sample was qualified "UJ".

Dissolved Gases:

- ***Sample Preservation:*** Sample FA536349-5 was not preserved to a pH<2. The samples were analyzed on the 9th day of sample collection. Positive results in these sample were qualified "J".

NOTES

- ***Blank Contaminants:*** The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Organic Data Review, dated August 2014.

Analytical Fraction	**Compound**	Maximum Concentration	Units	Blank Type	Associated Samples
Volatile	Chloroform	0.52	ug/L	Field	All - 8260B SIM
	Methylene Chloride *	0.55	ug/L	Method	All - 8260B SIM
	Hexachlorobutadiene	0.43	ug/L	Method	All - 8260 C
Dissolved Gases	None				

*Common lab contaminant

Volatile:

- ***Surrogate Recovery:*** The volatile 8260B SIM analyses of samples FA56349-13, -17 & -18 displayed high recovery for surrogate 1,2-Dichloroethane-d4. No positive results were detected in these samples. No data were qualified.

- ***Surrogate Recovery & Internal Standards (IS):*** The volatile 8260B SIM re-analysis of sample FA56349-14 displayed an area count outside the QC limits for IS2 (Chlorobenzene-d5) & high recovery for surrogate 1,2-Dichloroethane-d4. The initial analysis of this sample displayed all IS areas & surrogate recoveries within the QC limits. Results were reported from the initial analysis. No data were qualified.

- ***Blank Spike:*** The volatile 8260C blank spike VI16969-BS, associated with samples FA56349-12 thru -19, displayed high recovery for 2,2-Dichloropropane. No positive results were detected for this compound in the associated sample. No data were qualified.

- ***Matrix Spike/Matrix Spike Duplicate (MS/MSD):*** The volatile 8260C MS/MSD of sample FA56349-1 displayed high recoveries for Acetone. No positive result was detected for this compound in the parent sample. No data were qualified.

Dissolved Gases:

- None noted.

INORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. Refer to Minor Problems for information regarding biases identified during data validation.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Inorganic Data Review, dated August 2014.

Analyte	Blank Type
TOC	FB

CB = Container Blank
PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
FB = Field Blank
EB = Equipment Blank

NOTES

- None noted.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review & USEPA National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

1) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: EA881802-6349

Respectfully Submitted,

Sherif N. Mina Date: September 20, 2018
Sherif N. Mina

QA/Review: SM

Appendix C

Volatile Organic Compound Concentration Charts for Groundwater and Surface Water

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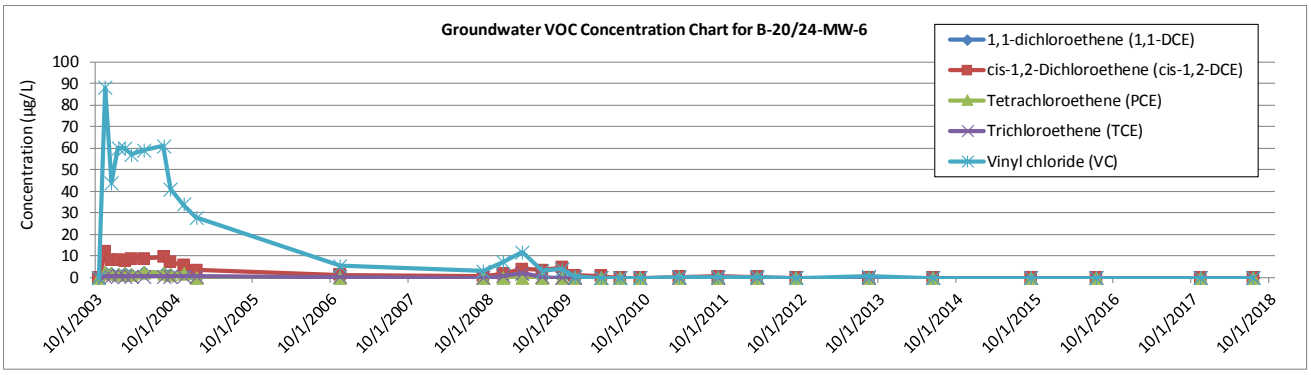
Appendix C
VOC Concentration Charts

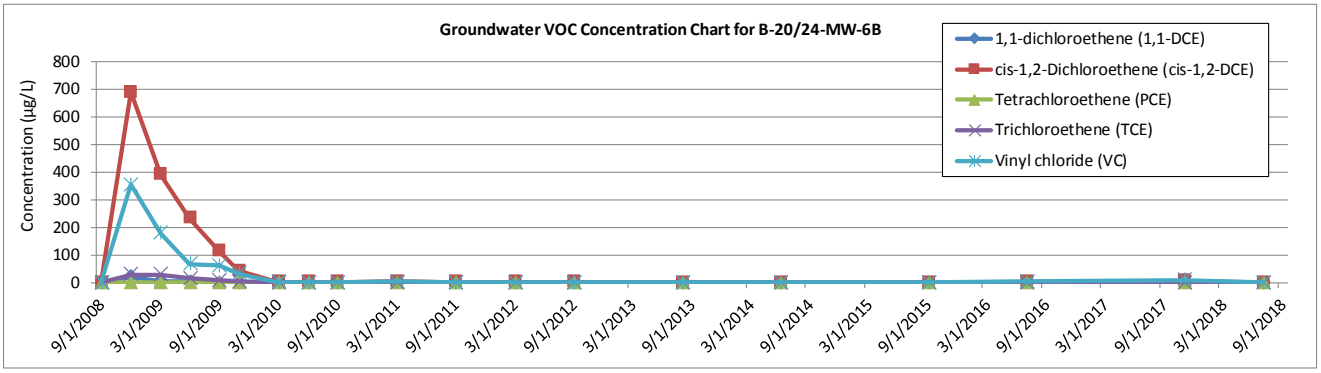
2018 Annual Monitoring Report
Area B (PICA-205) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	10/27/2003	11/3/2003	12/11/2003	1/22/2004	2/18/2004	3/17/2004	5/19/2004	8/3/2004	9/23/2004	11/15/2004	1/6/2005
1,1-DCE	1	0	2.5	2	1.7	2	1.7	2.5	2	1.7	2	0.18
cis-1,2-DCE	70	0	12	8.3	8.3	7.7	8.9	8.8	9.6	7.3	6	3.6
PCE	1	0	2.5	2	1.7	2	1.7	2.5	2	1.7	2	0
TCE	1	0	0.74	0.73	0.76	0.74	0.63	0.6	0.69	0.65	0.69	0.54
VC	1	0	88	44	60	60	57	59	61	41	34	28

Analyte	SCL	11/15/2006	9/12/2008	12/12/2008	3/30/2009	6/18/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011
1,1-DCE	1	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	1.31	0.924	1.91	4.1	3.61	4.7	1.15	0.808	0	0	0.3
PCE	1	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0.33	0	0.834	2.15	0.431	0	0	0	0	0	0
VC	1	5.42	3.06	7.26	11.8	3.04	3.98	0.739	0	0	0	0.286

Analyte	SCL	9/2/2011	3/21/2012	9/20/2012	8/30/2013	6/23/2014	9/23/2015	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	1	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	0.597	0.332	0	0	0	0	0	0	0
PCE	1	0	0	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0	0	0
VC	1	0.48	0.305	0	0.544	0	0	0	0	0

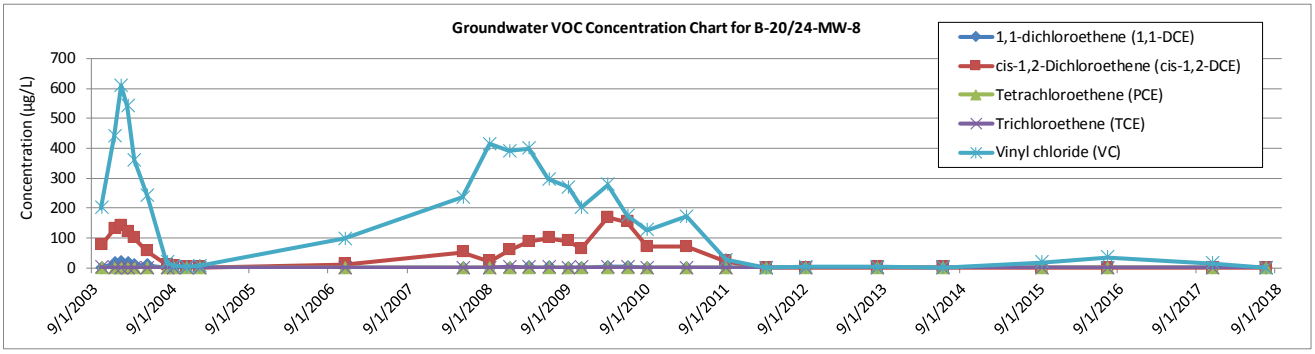


Analyte	SCL	9/12/2008	12/12/2008	3/30/2009	6/18/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011	9/2/2011
1,1-DCE	1	0	21.3	6.46	3.83	0	0	0	0	0	0	0
cis-1,2-DCE	70	0	689	391	232	114	42.6	2.32	1.78	1.57	3.76	1.36
PCE	1	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0	28.6	28.2	15.2	7.13	3.68	0.284	0	0	0	0
VC	1	0	354	178	66.7	61.3	32.5	1.16	0.293	0	3.02	0.263

Analyte	SCL	3/21/2012	9/20/2012	8/30/2013	6/23/2014	9/23/2015	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	1	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	1.18	1.1	0.673	0.604	0	2.9	6	0.35
PCE	1	0	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0	0
VC	1	0	0	0	0	0	4.5	8.8	0.54

Appendix C
VOC Concentration Charts

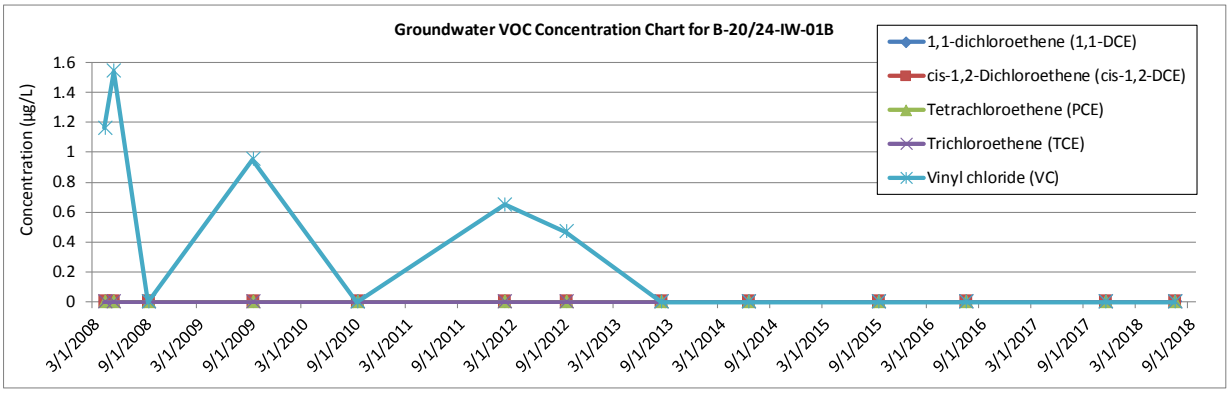
2018 Annual Monitoring Report
Area B (PICA-205) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	10/28/2003	12/11/2003	1/22/2004	2/18/2004	3/17/2004	5/19/2004	8/3/2004	9/23/2004	11/15/2004	1/6/2005	11/15/2006
1,1-DCE	1	0.8	15	20	15	10	8	0	0	2	0	0
cis-1,2-DCE	70	75	130	140	120	100	55	9.7	4.5	3	2.3	12
PCE	1	0	0	0	0	0	0	0	0	0	0	0
TCE	1	1.9	0	0	0	0	0	0.39	0.36	0	0	0.595
VC	1	200	440	610	540	360	240	19	6.2	4.2	6.4	97

Analyte	SCL	5/29/2008	9/12/2008	12/12/2008	3/30/2009	6/18/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011
1,1-DCE	1	0	0	0	1.28	1.69	0	0.752	3.66	3.27	0.777	0.563
cis-1,2-DCE	70	51.8	21.6	58.9	87.5	100	89.7	64.5	169	153	71.2	70.4
PCE	1	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0.754	0	2.63	1.01	1.51	0	1.32	2.22	1.66	0.848	0.555
VC	1	236	414	390	399	296	270	202	278	175	127	171

Analyte	SCL	9/2/2011	3/21/2012	9/20/2012	8/30/2013	6/23/2014	9/23/2015	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	1	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	21.1	0.264	0.539	1.45	1.62	0	0	0	0
PCE	1	0	0	0	0	0	0	0	0	0
TCE	1	0.281	0	0	0	0	0	0	0	0
VC	1	27.1	0	4.07	2.69	1.03	18.6	35.4	15.3	0



Analyte	SCL	4/17/2008	5/29/2008	9/11/2008	9/1/2009	9/10/2010	2/17/2012	9/20/2012	8/30/2013	6/23/2014	9/23/2015
1,1-DCE	1	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	0	0	0	0	0	0	0	0	0	0
PCE	1	0	0	0	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0	0	0	0
VC	1	1.16	1.54	0	0.951	0	0.65	0.469	0	0	0

Analyte	SCL	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	1	0	0	0
cis-1,2-DCE	70	0	0	0
PCE	1	0	0	0
TCE	1	0	0	0
VC	1	0	0	0

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VOC Concentration Charts

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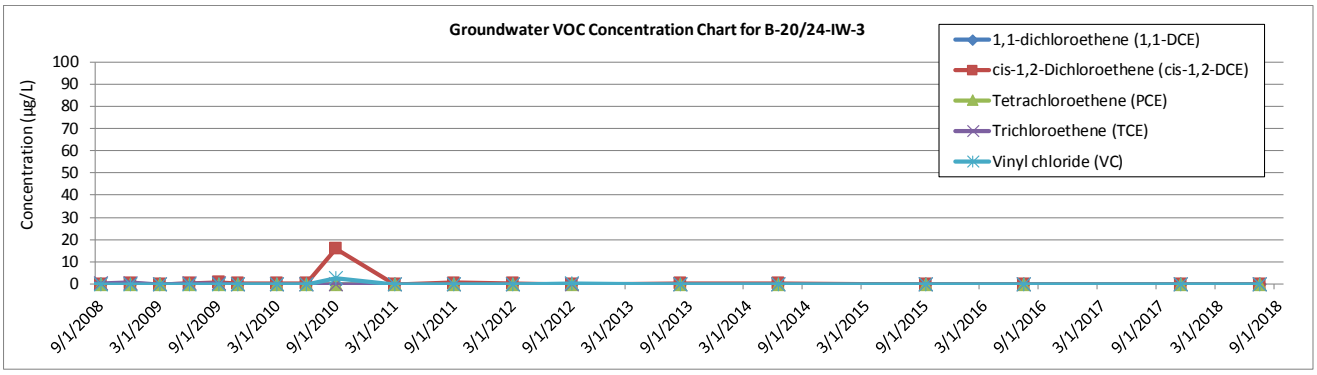
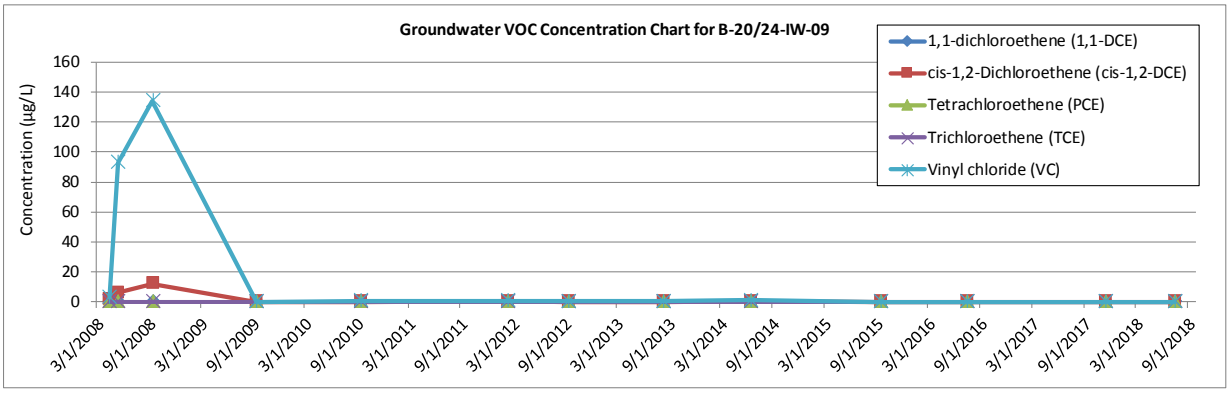
Area B (PICA-205) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	5/29/2008	9/11/2008	12/12/2008	3/30/2009	6/18/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011
1,1-DCE	1	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	1.03	0	0.273	0	0.324	0.828	0.434	0.272	0.345	16	0
PCE	1	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0.407	0.468	0.492	0	0.332	0.333	0	0	0	0	0
VC	1	1	0	0	0	0	0	0	0	0	2.74	0

Analyte	SCL	9/2/2011	3/21/2012	9/20/2012	8/30/2013	6/23/2014	9/23/2015	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	1	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	0.615	0.271	0	0.394	0.349	0	0	0	0
PCE	1	0	0	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0	0	0
VC	1	0	0	0.254	0	0	0	0	0	0



Analyte	SCL	4/17/2008	5/29/2008	9/11/2008	9/1/2009	9/10/2010	2/17/2012	9/20/2012	8/30/2013	6/23/2014	9/23/2015
1,1-DCE	1	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	70	1.72	6.09	12	0	0	0.343	0	0	0.449	0
PCE	1	0	0	0	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0	0	0	0
VC	1	3.23	92.9	134	0	0.552	0.718	0.463	0.303	0.985	0

Analyte	SCL	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	1	0	0	0
cis-1,2-DCE	70	0	0	0
PCE	1	0	0	0
TCE	1	0	0	0
VC	1	0	0	0

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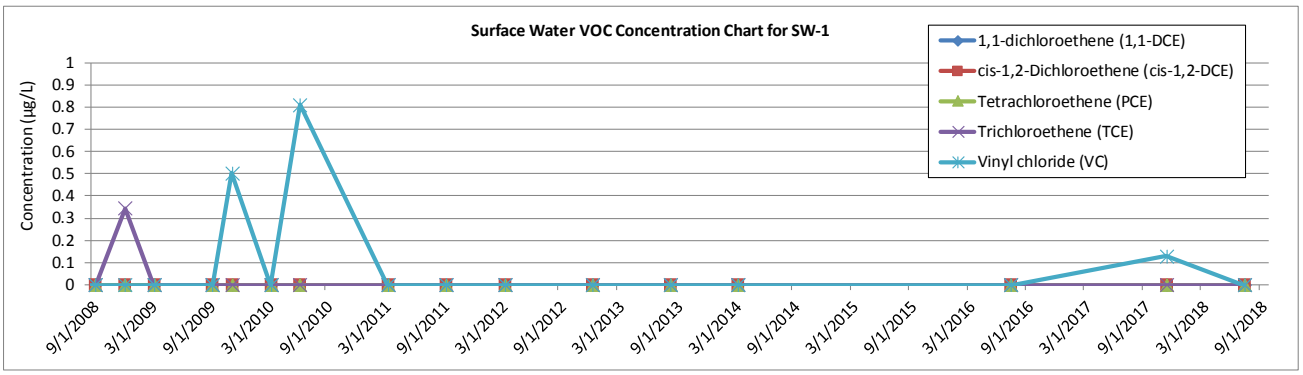
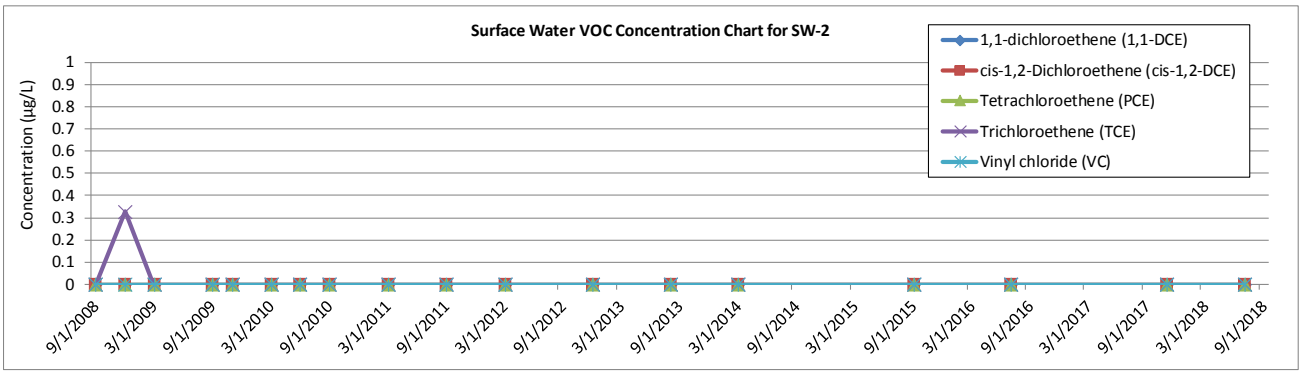


Analyte	SCL	5/28/2008	9/11/2008	12/12/2008	3/30/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	3/24/2011	9/2/2011	3/9/2012
1,1-DCE	4.7	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	---	0	0	0	0	0	0	0	0	0	0	0
PCE	0.34	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0	0	0.345	0	0	0	0	0	0	0	0
VC	0.082	0	0	0	0	0	0.503	0	0.809	0	0	0

Analyte	SCL	12/18/2012	8/16/2013	3/26/2014	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	4.7	0	0	0	0	0	0
cis-1,2-DCE	---	0	0	0	0	0	0
PCE	0.34	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0
VC	0.082	0	0	0	0	0.13	0



Analyte	SCL	9/11/2008	12/12/2008	3/30/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011	9/2/2011	3/9/2012
1,1-DCE	4.7	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	---	0	0	0	0	0	0	0	0	0	0	0
PCE	0.34	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0	0.328	0	0	0	0	0	0	0	0	0
VC	0.082	0	0	0	0	0	0	0	0	0	0	0

Analyte	SCL	12/18/2012	8/16/2013	3/26/2014	9/24/2015	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	4.7	0	0	0	0	0	0	0
cis-1,2-DCE	---	0	0	0	0	0	0	0
PCE	0.34	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0
VC	0.082	0	0	0	0	0	0	0

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VOC Concentration Charts

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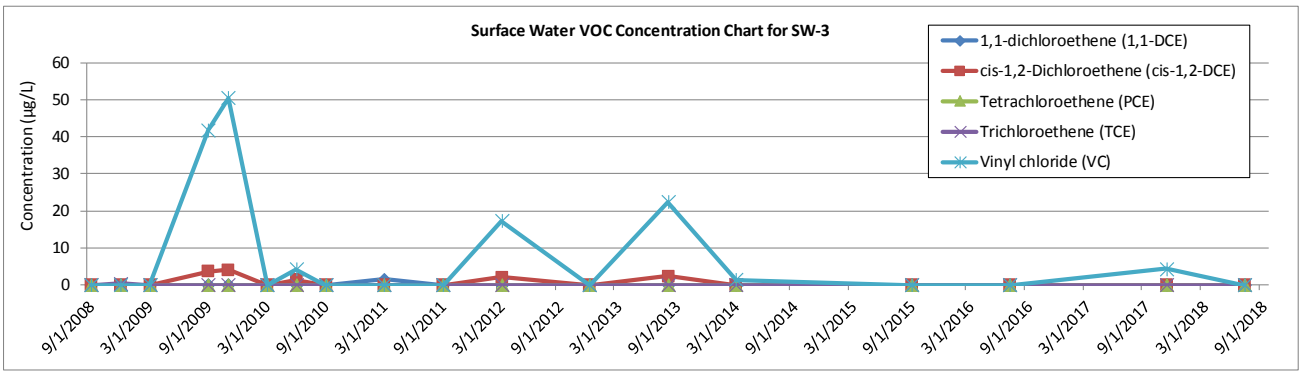
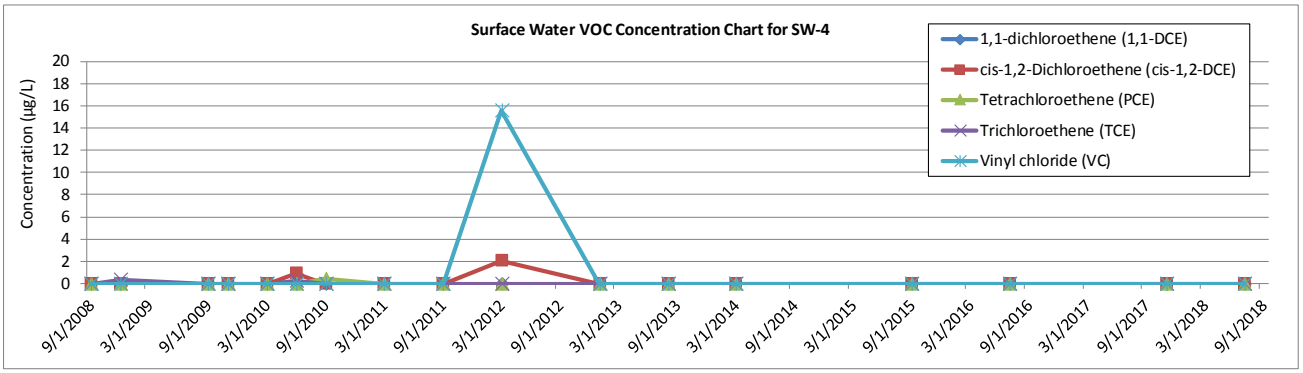
Picatinny Arsenal, New Jersey



Analyte	SCL	9/11/2008	12/12/2008	3/30/2009	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011	9/2/2011	3/9/2012
1,1-DCE	4.7	0	0	0	0	0	0	0	0	1.48	0	0
cis-1,2-DCE	---	0	0	0	3.56	4.06	0	1.33	0	0	0	2.13
PCE	0.34	0	0	0	0	0	0	0	0	0	0	0
TCE	1	0	0.358	0	0	0	0	0	0	0	0	0
VC	0.082	0	0	0	41.8	50.4	0	4.23	0	0	0	17.3

Analyte	SCL	12/18/2012	8/16/2013	3/26/2014	9/24/2015	7/12/2016	11/9/2017	7/31/2018
1,1-DCE	4.7	0	0	0	0	0	0	0
cis-1,2-DCE	---	0	2.32	0	0	0	0	0
PCE	0.34	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0
VC	0.082	0	22.4	1.33	0	0	4.4	0



SCL	9/11/2008	12/12/2008	9/1/2009	11/16/2009	3/30/2010	6/8/2010	9/10/2010	3/24/2011	9/2/2011	3/9/2012	1/2/2013
4.7	0	0	0	0	0	0	0	0	0	0	0
---	0	0	0	0	0	0.915	0	0	0	2.08	0
0.34	0	0	0	0	0	0	0.47	0	0	0	0
1	0	0.375	0	0	0	0.281	0	0	0	0	0
0.082	0	0	0	0	0	0	0	0	0	15.6	0

SCL	8/16/2013	3/26/2014	9/24/2015	7/12/2016	11/9/2017	7/31/2018
4.7	0	0	0	0	0	0
---	0	0	0	0	0	0
0.34	0	0	0	0	0	0
1	0	0	0	0	0	0
0.082	0	0	0	0	0	0

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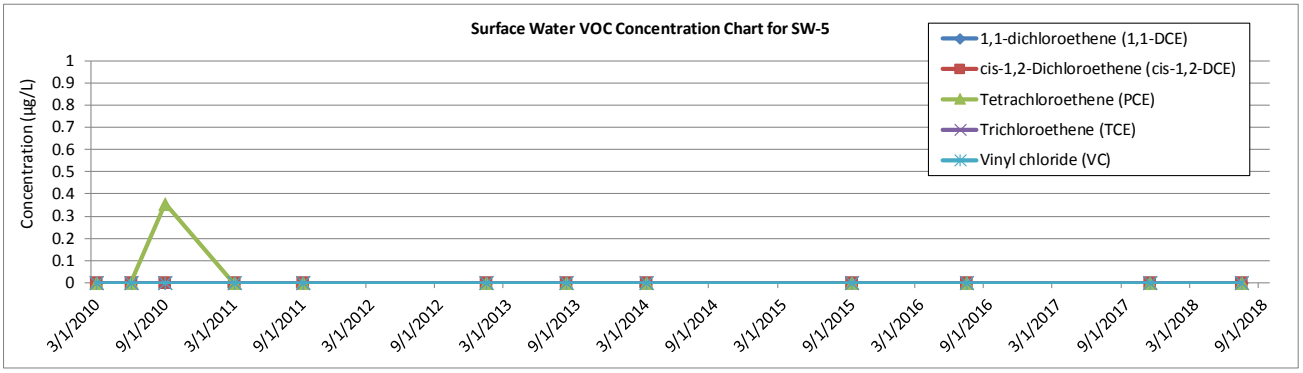

Analyte	SCL	3/30/2010	6/8/2010	9/10/2010	3/24/2011	9/2/2011	1/2/2013	8/16/2013	3/26/2014	9/24/2015	7/12/2016	11/9/2017
1,1-DCE	4.7	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-DCE	---	0	0	0	0	0	0	0	0	0	0	0
PCE	0.34	0	0	0.357	0	0	0	0	0	0	0	0
TCE	1	0	0	0	0	0	0	0	0	0	0	0
VC	0.082	0	0	0	0	0	0	0	0	0	0	0

Analyte	SCL	7/31/2018
1,1-DCE	4.7	0
cis-1,2-DCE	---	0
PCE	0.34	0
TCE	1	0
VC	0.082	0

Appendix D

Data Trend Charts

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Appendix D
Data Trend Charts

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Area B (PICA-205) Groundwater
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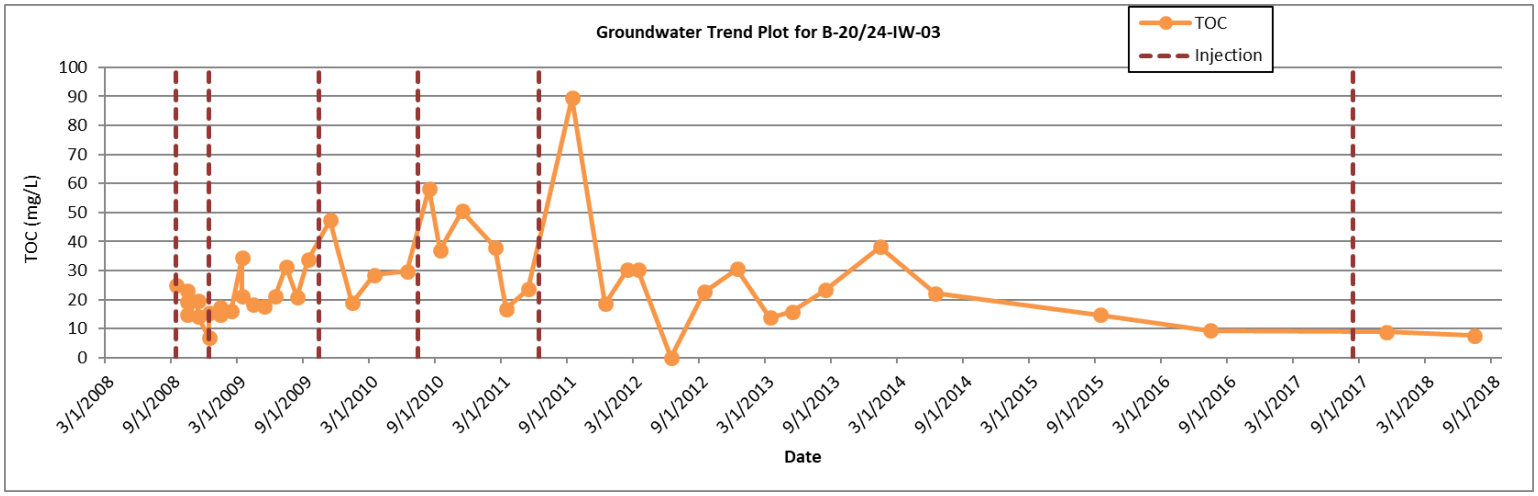

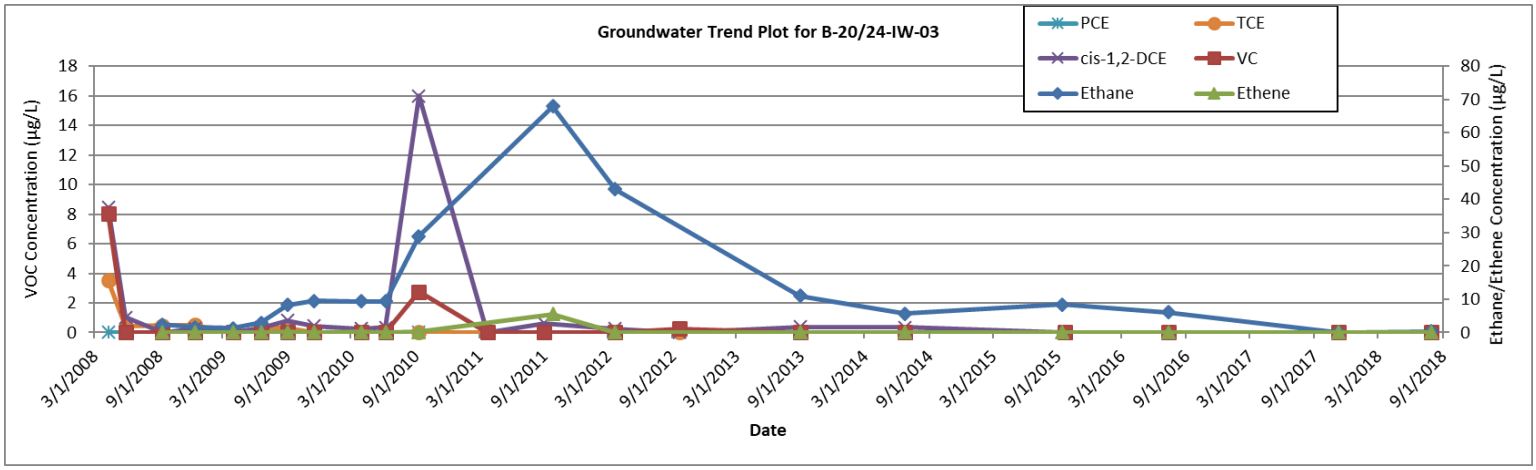

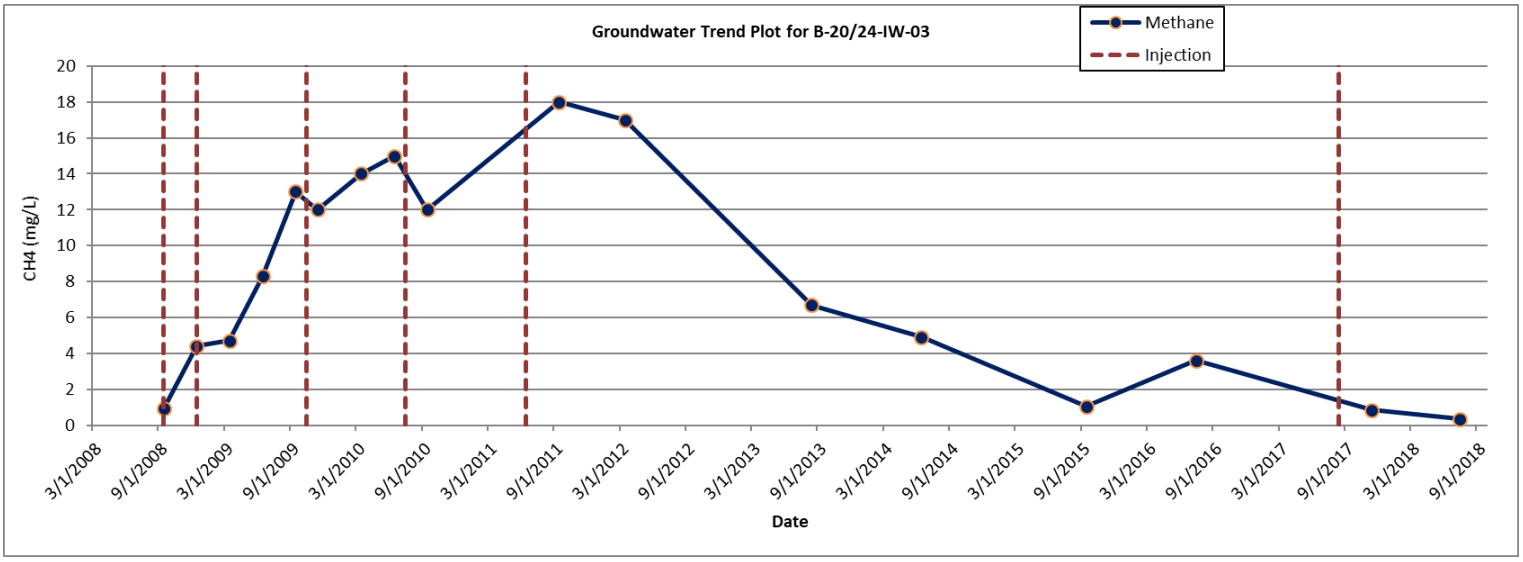

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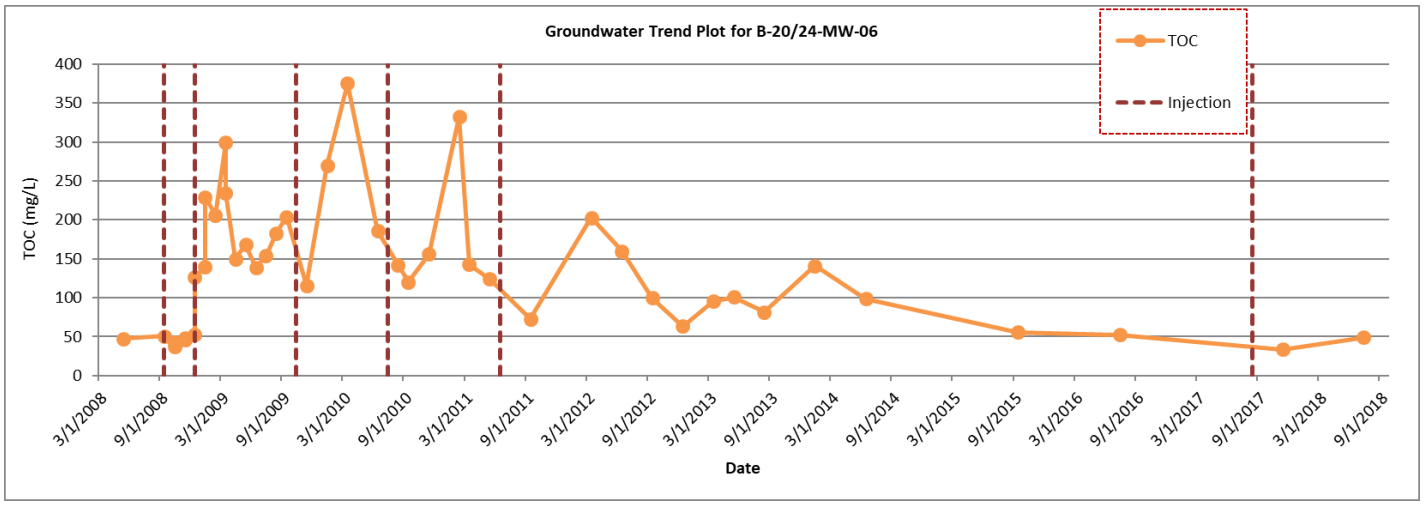

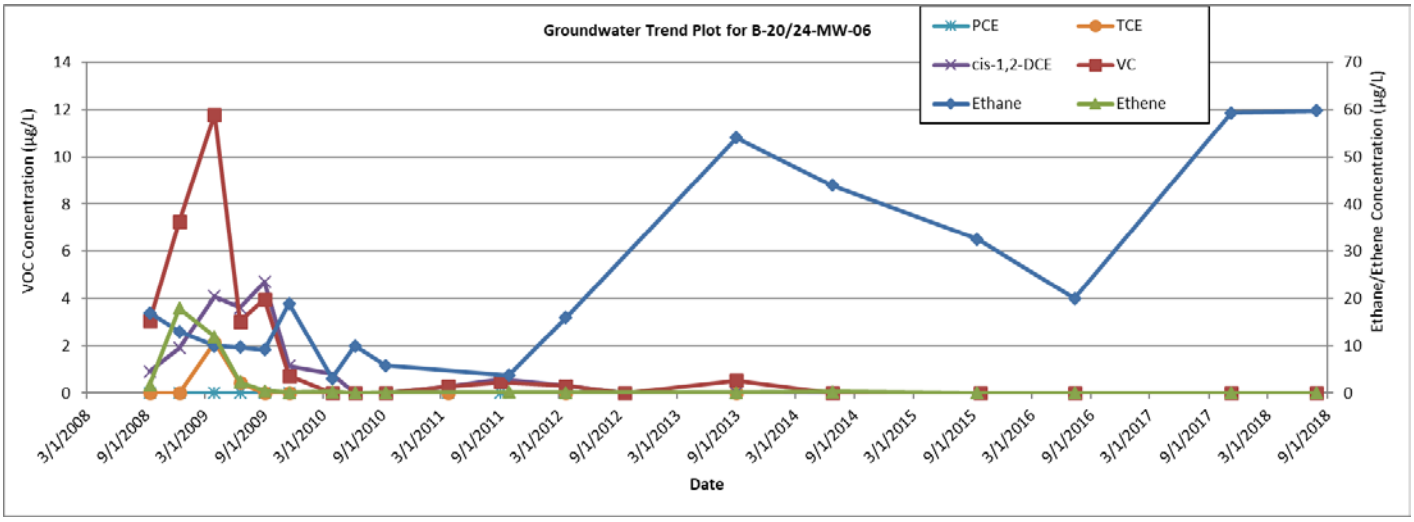

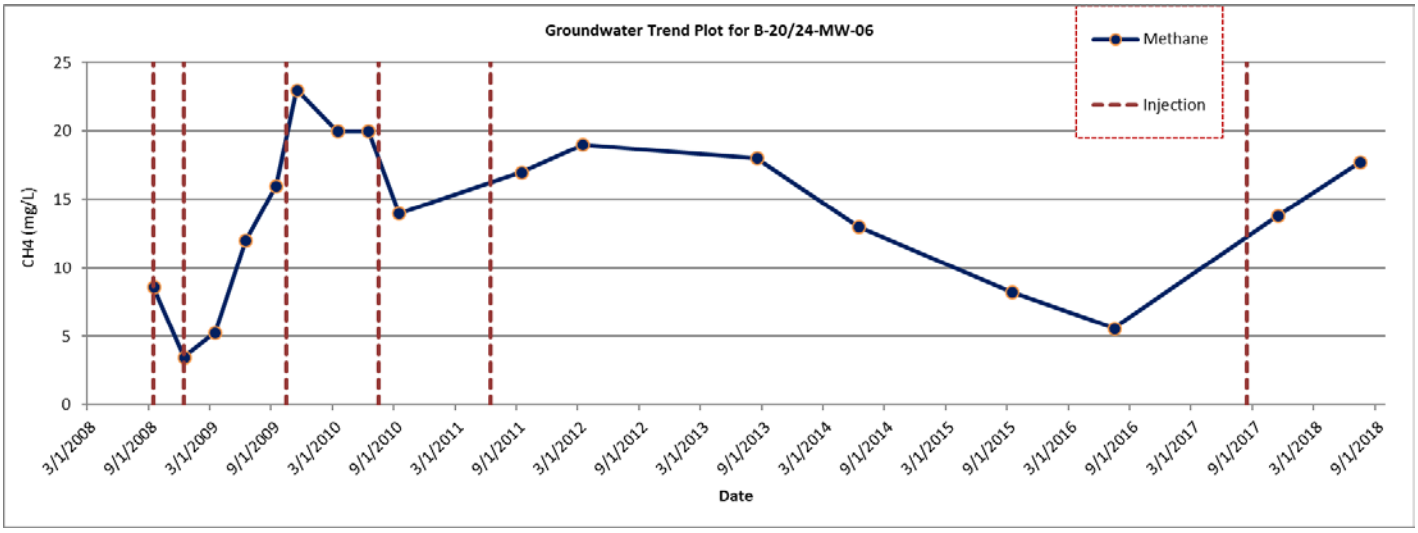

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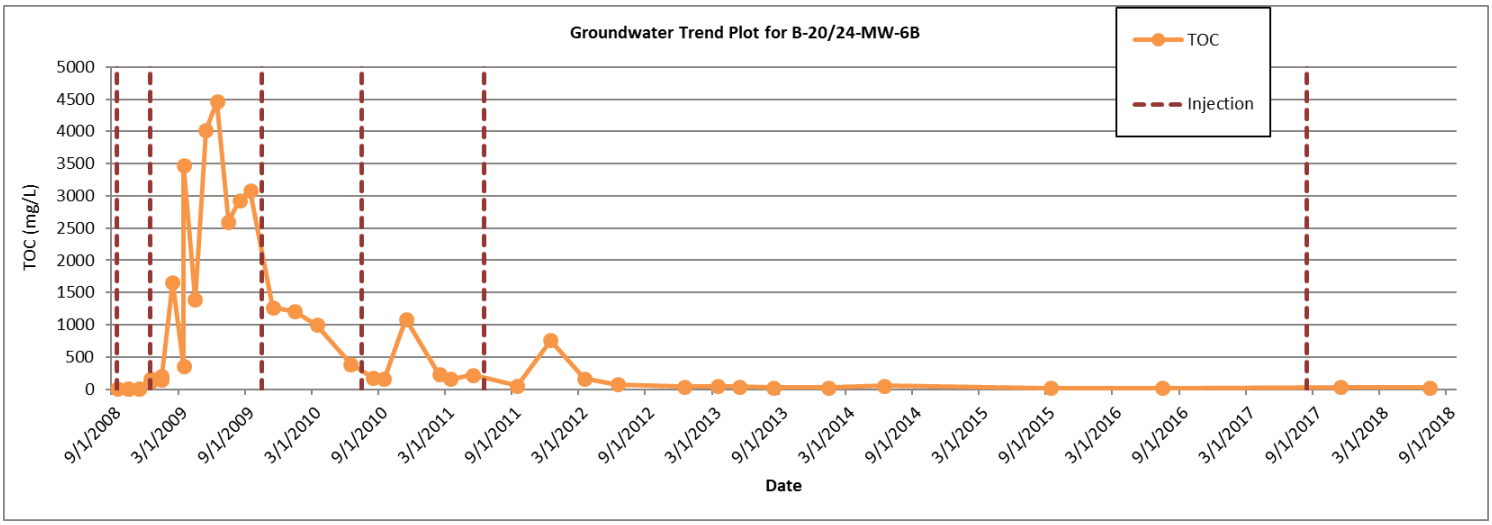

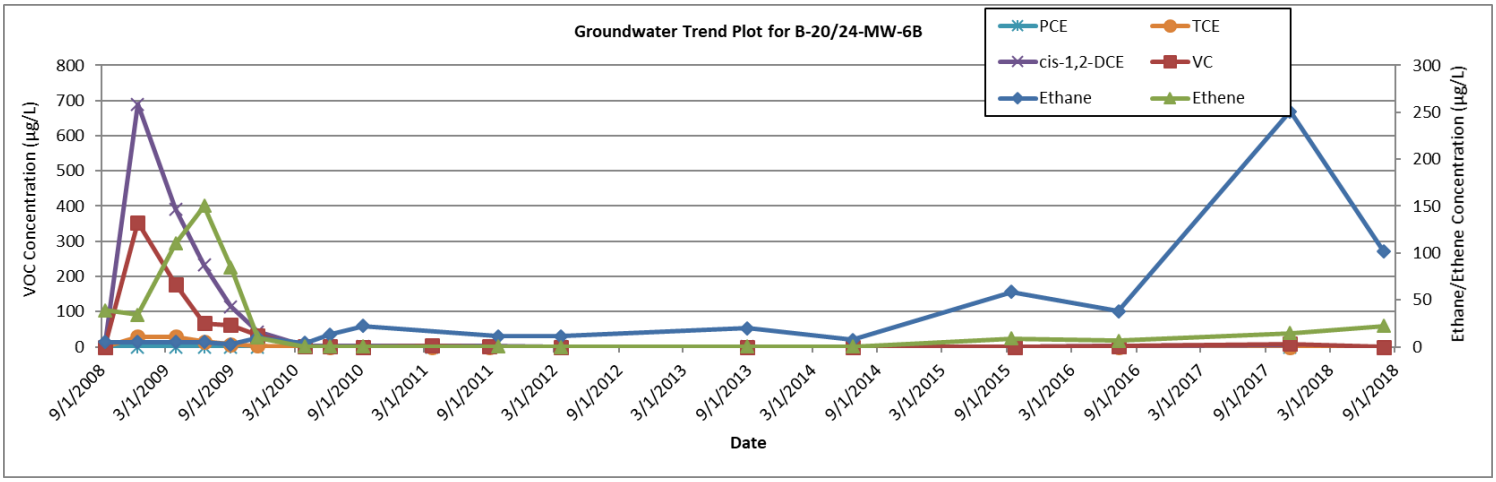

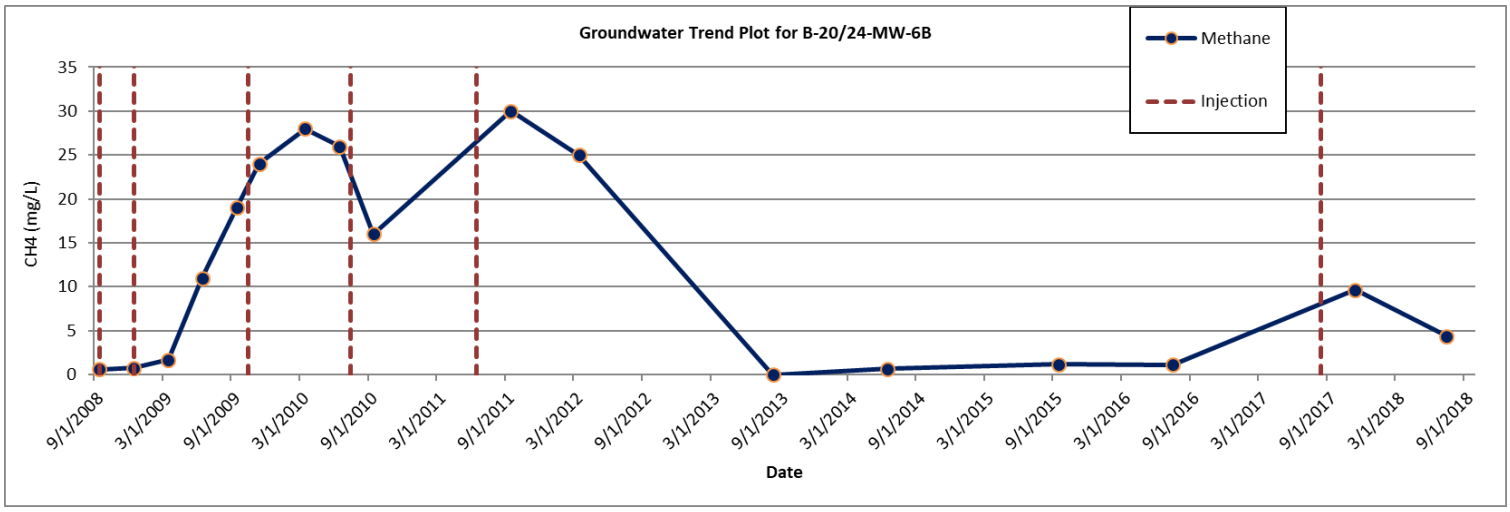

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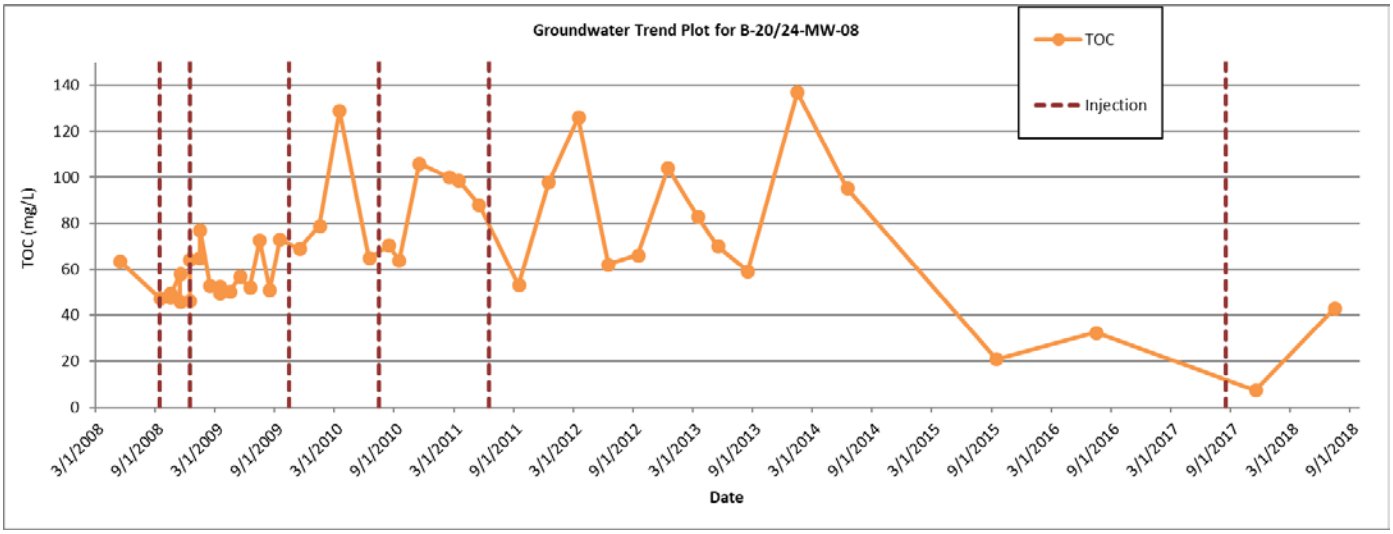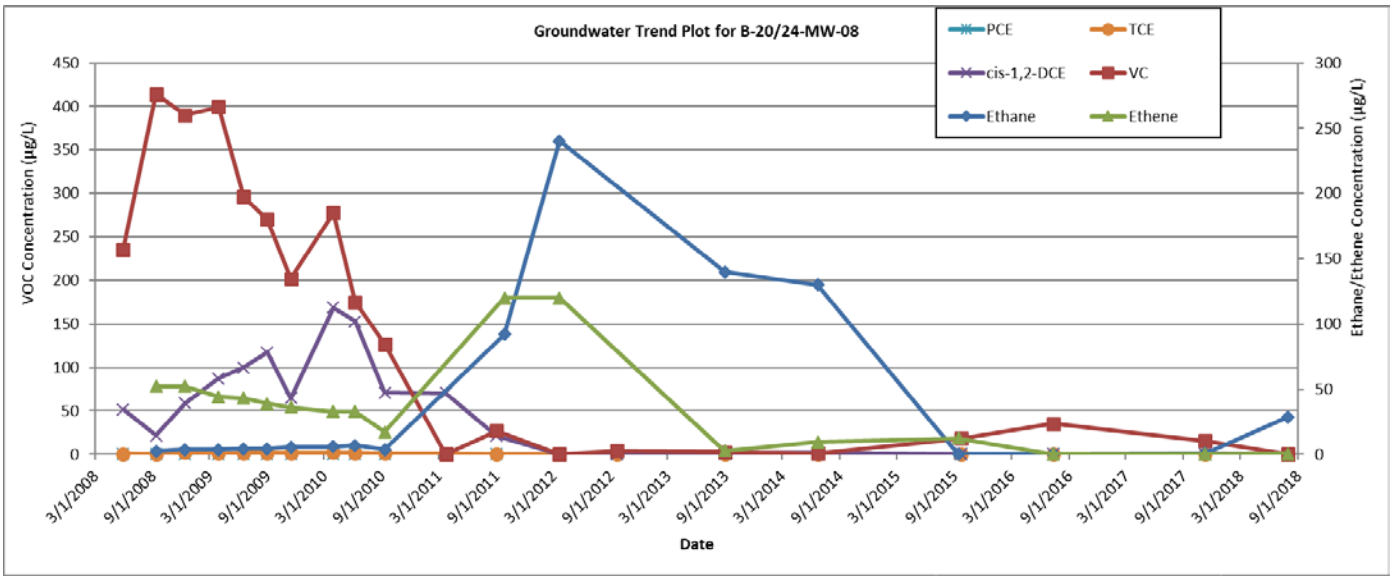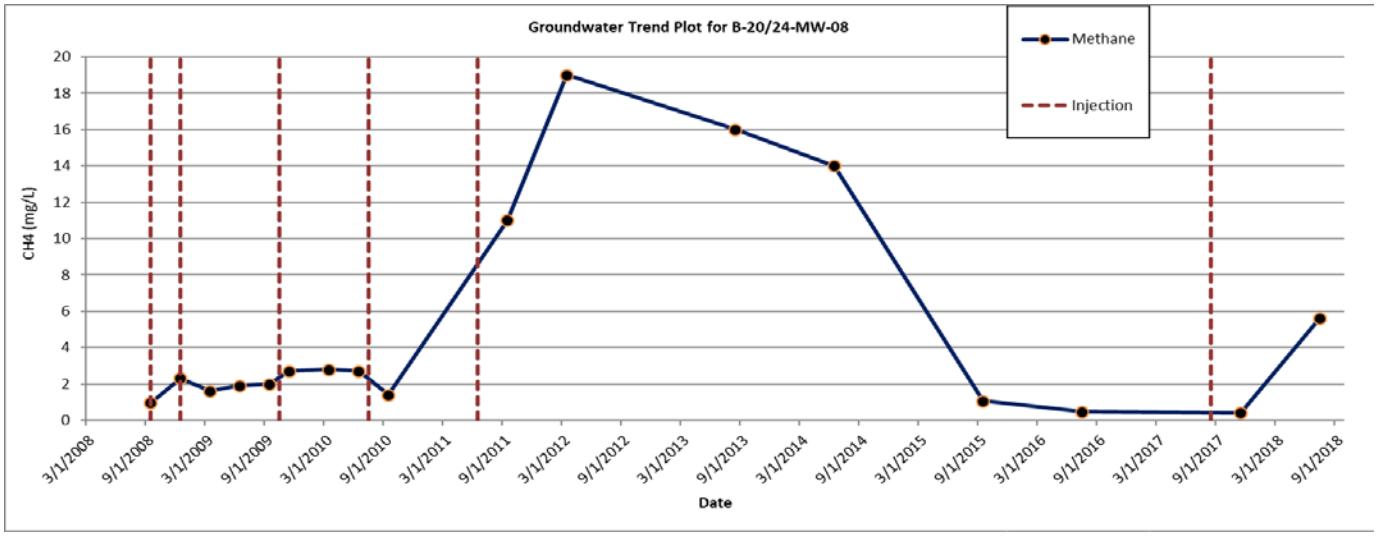
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