Final

Data Summary Report
June 2019 Basewide Sampling
Niagara Falls Air Reserve Station, New York

Prepared for

Air Force Civil Engineer Center

Environmental Restoration Division

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Acronyms and Abbreviations

°C	Degrees Celsius
µg/L	Microgram(s) per liter
µS/cm	MicroSiemens per centimeter
AFCEC	Air Force Civil Engineer Center
CEV	Civil Engineering-Environmental
COC	Contaminant of concern
CVOC	Chlorinated volatile organic compound
DCE	Dichloroethene
DoD	Department of Defense
EA	EA Engineering, PC and its affiliate EA Science and Technology
EPA	U.S. Environmental Protection Agency
EZVI	Emulsified vegetable oil and zero valent iron
EVO	Emulsified vegetable oil
GWTS	Groundwater Treatment System
ID	Identification
IRP	Installation Restoration Program
IWGP	Installation-Wide Groundwater Monitoring Program
MS	Matrix spike
MSD	Matrix spike duplicate
NA	Not applicable
NFARS	Niagara Falls Air Reserve Station
No.	Number
NYSDEC	New York State Department of Environmental Conservation
ORC®	Oxygen release compound
PBR	Performance based remediation
PDB	Passive diffusion bag
QA	Quality assurance
QC	Quality control
RA	Remedial action
SGS Accutest	SGS Accutest New Jersey
s.u.	Standard units

TCE	Trichloroethene
VC	Vinyl chloride
VOC	Volatile organic compound
ZVI	Zero valent iron

1.0 Introduction

The United States Department of the Air Force, Air Force Civil Engineer Center (AFCEC), has retained Versar, Inc. and its teaming partner EA Engineering, P.C. and its affiliate EA Science and Technology (EA) on behalf of the 914th Air Refueling Wing Mission Support Group/Civil Engineering-Environmental (CEV) under Contract Number (No.) FA8903-09-D-8588, Task Order 0006, to perform installation-wide groundwater monitoring in support of the Performance Based Remediation (PBR) contract activities at the Niagara Falls Air Reserve Station (NFARS) in Niagara Falls, New York.

As part of the PBR, remedial actions (RAs) were conducted at 6 sites managed under the United States Department of Defense (DoD) Installation Restoration Program (IRP) in 2015. The primary objective of the 2015 RAs was to reduce chlorinated volatile organic compounds (CVOCs) in the overburden and the shallow bedrock groundwater at Site 10 (FT005), Site 13 (ST010), Site 8 (DS002), and Site 5 (DS004) using a synergistic mixture of emulsified vegetable oil (EVO) and zero valent iron (ZVI) (EZVI). The primary objective of the RA for Site 7 (SS014) was to reduce the concentrations of petroleum related volatile organic compounds (VOCs) in the overburden and shallow bedrock groundwater using an oxygen release compound (ORC®). The RA at Site 3 (LF008), which included the application of approximately 300 gallons of EZVI to the collection trench, was conducted to maintain protectiveness of a creek located downgradient of the site.

As part of the PBR, a second set of RAs were conducted at four sites (Figure 2-1) managed under the DoD IRP and in compliance with the requirements of a New York State Department of Environmental Conservation (NYSDEC) Order on Consent and Administrative Settlement (Site No. 932106, Index No. R9-20150902-65).

The primary objective of the 2018 RAs was to further reduce CVOCs in the overburden and the shallow bedrock groundwater at Sites FT005, ST010, DS002, and DS004 using a synergistic mixture of EVO and ZVI (EZVI). As a result of the 2015 and 2018 RAs, concentrations of site related COCs have been reduced at each of the 6 sites. Based on performance monitoring trends of site COCs, recommendations for each of the sites were presented in the 2018 Annual Comprehensive Sampling Monitoring Report Installation-Wide Groundwater Monitoring Program (IWGP) (EA 2019). These recommendations, which have been approved by NYSDEC are as follows:

- Quarterly operations and maintenance visits to the groundwater treatment system (GWTS) at Site 10 and the pumping well systems at Sites 10 and 13 were discontinued (June 2018) because the systems are no longer needed to remove CVOC mass from the ground following the RAs, and the systems have not been operating since 2015. The pumping wells and groundwater treatment system will remain off.
- Quarterly RA performance monitoring will continue for selected performance monitoring wells at Sites 13, 10, 8, and 5.

The work related to the IWGP is conducted under the DoD IRP and in compliance with the requirements of a NYSDEC Order on Consent and Administrative Settlement (Site No. 932106, Index No. R9-20150902-65). Unless otherwise noted, all work was performed in accordance with the Site Management Plan. As described in the 2018 Annual Comprehensive Sampling Monitoring Report IWGP (EA 2019) both the IWGP monitoring well data and the additional RA performance monitoring data will be provided for each site.

1.1 Report Organization

Section 2 of this report describes the field investigation tasks conducted in May/June 2019 under the IWGP. These tasks include the following:

- Groundwater and surface water elevation measurements performed on 28 and 29 May 2019 (Section 2 and Appendix A). As a supplement to the elevation data, daily precipitation data from May to July 2019 is presented in Appendix B.
- Sampling of groundwater and surface water for long-term monitoring at Sites 3, 5, 8, 10, and 13 performed on 18 and 19 June 2019 (Section 2 and Appendix C).
- Well inspections performed on 28 and 29 May 2019 (Section 2 and Appendix D).
- CVOC trend graphs in Appendix E, includes sampling results from the 2019 February and April RA sampling events. Data from February and April 2019 will be discussed in the 2019 Remedial Action Injection Report.

Section 2 also presents the IGWP groundwater analytical data and RA performance monitoring data collected during the Spring 2019 sampling event.

Section 3 of this report presents the RA performance monitoring data, which were collected in concurrence with the IWGP Spring sampling event. An evaluation of all the RA trend data (CVOCs) will be provided in the 2019 Annual Comprehensive Sampling/Monitoring Report. Table 1-1 presents each of the sampled monitoring wells, and clarifies which program the data is used for, as multiple wells serve dual purposes.

Table 1-1

Program Related Monitoring Wells

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Well Number	IGWP Well Sampling Frequency	IGWP Sample Analyses	RA Well Sampling Frequency	Sample Analyses
Background Well				
MW1-1DA	Annual (Fall)	VOCs	Not Sampled for RA	NA
MW8-11D	Annual (Spring)	VOCs	Not Sampled for RA	NA
Site 3				
MW3-3DA	Annual (Spring)	VOCs	Not Sampled for RA	NA
MW3-4DA	Annual (Spring)	VOCs	Not Sampled for RA	NA
PZ3-6D	Annual (Spring)	VOCs	Not Sampled for RA	NA
PZ3-7D	Annual (Spring)	VOCs	Not Sampled for RA	NA
PZ3-8D	Annual (Spring)	VOCs	Not Sampled for RA	NA
PW3-3A	Annual (Spring)	VOCs	Not Sampled for RA	NA
Site 5				
MW5-1DA	Semi-Annual	VOCs	Not Sampled for RA	NA
MW5-5D	Semi-Annual	VOCs	Quarterly	VOCs
MW5-6	Semi-Annual	VOCs	Not Sampled for RA	NA
RW5-1	Semi-Annual	VOCs	Quarterly	VOCs
RW5-2	Semi-Annual	VOCs	Quarterly	VOCs
RW5-4	Semi-Annual	VOCs	Quarterly	VOCs
Site 8				
MW8-1	Semi-Annual	VOCs	Quarterly	VOCs
MW8-10D	Semi-Annual	VOCs	Quarterly	VOCs
MW8-8	Not Sampled for IGWP	NA	Quarterly	VOCs
CH8-01	Not Sampled for IGWP	NA	Quarterly	VOCs
Site 10				
MW10-1DA	Annual (Fall)	VOCs	Quarterly	VOCs
MW10-3	Annual (Spring)	VOCs	Not Sampled for RA	NA
MW10-3D	Annual (Fall)	VOCs	Not Sampled for RA	NA
MW10-4D	Annual (Fall)	VOCs	Not Sampled for RA	NA
MW10-4E	Annual (Fall)	VOCs	Not Sampled for RA	NA
MW10-7	Annual (Spring)	VOCs	Not Sampled for RA	NA
MW10-9D	Annual (Fall)	VOCs	Not Sampled for RA	NA
MW10-10D	Annual (Fall)	VOCs	Quarterly	VOCs
PW10-1	Semi-Annual	VOCs	Not Sampled for RA	NA

Table 1-1

Program Related Monitoring Wells

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Well Number	IGWP Well Sampling Frequency	IGWP Sample Analyses	RA Well Sampling Frequency	Sample Analyses
Site 10				
PW10-2	Semi-Annual	VOCs	Quarterly	VOCs
MW10-2	Not Sampled for IGWP	NA	Quarterly	VOCs
PZ10-7	Annual (Spring)	VOCs	Quarterly	VOCs
Site 13				
MW13-3	Not Sampled for IGWP	NA	Quarterly	VOCs
MW13-4	Not Sampled for IGWP	NA	Quarterly	VOCs
MW13-4D	Semi-Annual	VOCs	Not Sampled for RA	NA
MW13-5A	Not Sampled for IGWP	NA	Quarterly	VOCs
MW13-5D	Semi-Annual	VOCs	Quarterly	VOCs
PW13-1	Semi-Annual	VOCs	Quarterly	VOCs
PZ13-3D	Not Sampled for IGWP	NA	Quarterly	VOCs
PW13-4D	Semi-Annual	VOCs	Not Sampled for RA	NA

The VOC data from samples collected during Spring (June) and Fall (October) events will be used for both the IGWP and RA programs (i.e., The VOC samples collected from the PDBs deployed in the Site 8 monitoring well MW8-10D in June and October will be included in the data set for both the IGWP and the RA programs).

NA = Not applicable

PDB = Passive diffusion bag

2.0 Installation-Wide Groundwater Monitoring Program

2.1 Groundwater and Surface Water Elevations

Groundwater and surface water level measurements were collected on 28 and 29 May 2019 from 122 of the 123 monitoring wells and 9 surface water locations (Figure 2-1 and Appendix A). The groundwater elevations were measured during passive diffusion bag (PDB) deployment, 28 and 29 May 2019. To supplement the water level data, daily precipitation data from 28 May to 08 July 2019, are presented in Appendix B.

Groundwater elevation contour maps were prepared from the May 2019 water levels after conversion to elevations in feet above mean sea level, based on North American Datum 1983 for both the overburden and shallow bedrock water-bearing zones for each site (Figures 2-2 through 2-12). Surface water data were incorporated onto the contour maps, where applicable. The May 2019 groundwater flow patterns are summarized as follows:

- Overburden and shallow bedrock groundwater flow at Site 3 is primarily directed toward Cayuga Creek (Figures 2-2 and 2-3).
- Overburden groundwater flow at Site 5 is to the southwest in the northern portion of the site, and to the south-southeast in the southern portion where groundwater recharge to the overburden may be limited under Building 920 and the parking lot (Figure 2-4). Shallow bedrock groundwater flow is primarily to the southwest (Figure 2-5).
- Overburden groundwater flow at Site 8 is to the south-southeast on the southern portion of the site and to the north on the northern part of the site. The small tributary to Cayuga Creek near the site serves as a losing stream with groundwater flowing away from the tributary creating a local groundwater divide in the overburden (Figure 2-6). General groundwater flow in the shallow bedrock is to the southeast with a very gradual gradient (Figure 2-7).
- Overburden water level elevations at Site 10 indicate radial flow toward Cayuga Creek and the drainage ditch to the southwest of the site (Figure 2-8). Shallow bedrock groundwater flow has a similar south- south eastern pattern towards Cayuga Creek on the eastern half of the site with a south-southwestern component of flow near the drainage ditch (Figure 2-9). There appears to be a groundwater high at monitoring well MW10-10D, which has been present since the injections conducted in 2015 when the pumping well was turned off. Groundwater flow in deep bedrock was to the south toward Cayuga Creek at well (Figure 2-10).
- Overburden groundwater flow at Site 13 was to the northeast and east (Figure 2-11). Shallow bedrock groundwater flow at Site 13 was toward the east (Figure 2-12).

2.2 Sampling and Analysis

Laboratory analysis was performed by SGS Accutest New Jersey (SGS Accutest) of Dayton, New Jersey, a DoD-certified laboratory, in accordance with NYSDEC Analytical Services Protocol of June 2005 and U.S Environmental Protection Agency (EPA) SW-846 Methods (2007 [with updates – updated in 2010]). These samples were analyzed for VOCs by EPA Method 8260C. The June 2019 results for the IWGP are included in the groundwater and surface water analytical discussions in Section 2.2.1 and Section 2.2.2,

respectively. A summary of the analyses performed for each groundwater sampling location is provided in Table 2-1. Table 2-2 provides details for the surface water locations.

Groundwater and surface water sample results for the June 2019 sampling period are included in SGS Accutest laboratory reports, JC90121, JC90273, and JC91309, which is provided in Appendix C of this report. SGD Environmental Services of Cazenovia, New York provided data validation reports that included data from April, and June 2019. Positive results for target compounds present in one or more groundwater samples from wells included in the IWGP are listed in Table 2-3. There were no positive results for target compounds present in the surface water samples. Analytical results for compounds with positive hits are bolded. The groundwater analytical results for the contaminants of concern (COCs) were compared to the Groundwater Protection Standards specified in the Site Management Plan(EA 2017) (Table 2-3). The analytical results for the remaining VOCs detected in the samples were compared to the Water Class GA Standards and Guidance Values, New York Codes Rules and Regulations Part 703, listed in the NYSDEC Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998).

2.2.1 Groundwater Sampling and Analysis

As part of the IWGP and RA performance monitoring, 33 wells were sampled using PDB samplers deployed on 28 and 29 May 2019, approximately 3–5 weeks prior to sampling (Table 2-2). The samplers remained, undisturbed, in the wells until retrieval on 18 and 19 June 2019. Two additional samples (MW10-10D and MW10-1DA) were taken on 8 July 2019 for the RA performance monitoring, the PDB's at these locations were deployed on 28 May 2019. Table 2-3 provides a summary of the analytical results. The June 2019 groundwater analytical data for each site are summarized as follows:

- One background well, MW8-11D, was sampled. One non-site related COC (1,2,-Dichloroethane) was detected in groundwater at a concentration above the NYSDEC Class GA Groundwater Protection Standards.
- Six Site 3 wells/piezometers were sampled and analyzed for VOCs (MW3-3DA, MW3-4DA, PZ3-6D, PZ3-7D, PW3-3A, and PZ3-8D). There were detections of two site-related COCs (vinyl chloride [VC] in 6 of the samples and cis-1,2-Dichloroethene [DCE] in 6 samples, including the field duplicate). Five of the 6 VC detections and 2 of the 6 DCE detections had concentrations exceeding the NYSDEC Class GA Groundwater Protection Standards. Two other site-related COCs (trans-1,2-DCE and trichloroethene [TCE]) were detected in PW3-3A, trans-1,2-DCE was below standards while TCE exceeded the NYSDEC Class GA Groundwater Protection Standards. No non-site related VOCs were detected at Site 3.
- Six Site 5 wells (MW5-1DA, MW5-5D, MW5-6, RW5-1, RW5-2, and RW5-4) were sampled for VOCs. Three site-related COCs were detected at concentrations exceeding NYSDEC Class GA Groundwater Protection Standards. VC concentrations exceeded NYSDEC Class GA Groundwater Protection Standards in 4 wells sampled at Site 5 (MW5-5D, MW5-6, RW5-1, and RW5-2/FD). Cis-1,2-DCE was detected above NYSDEC Class GA Groundwater Protection Standards in 3 wells (MW5-5D, RW5-1, and RW5-2/FD). Trans 1,2-DCE was detected above NYSDEC Class GA Groundwater Protection Standards in 2 wells (MW5-5D and RW5-1). Benzene and toluene were detected but were below the NYSDEC Class GA Groundwater Protection Standards in monitoring wells, RW5-1 and RW5-4. TCE was detected in 3 wells (MW5-5D, MW5-6, and RW5-1) concentrations did not exceed the NYSDEC Class GA Groundwater Protection Standards.
  Two other VOCs (acetone and chloroethane) were detected in the semi-annual samples; however, none of these compounds were detected at concentrations exceeding the NYSDEC Class GA Groundwater Protection Standards.

- Four Site 8 wells were sampled and analyzed for VOCs (CH8-01, MW8-1, MW8-8, and MW8-10D). VC was the only site related COC detected above NYSDEC Class GA Groundwater Protection Standards at one location (MW8-1). Four other site-related COCs (benzene, cis-1,2-DCE, toluene, and trans-1,2-DCE) were detected in these wells; however, concentrations were below NYSDEC Class GA Groundwater Protection Standards. No non-site-related VOCs were detected.
- Eight Site 10 wells (monitoring wells, recovery wells, and piezometer) were sampled and analyzed for VOCs (MW10-1DA, MW10-2, MW10-3, MW10-7, MW10-10D, PW10-1, PW10-2, and PZ10-7). Six site-related COCs (benzene, cis-1,2-DCE, toluene, trans-1,2-DCE, TCE, and VC) were detected at concentrations exceeding NYSDEC Glass GA Groundwater Protection Standards. Benzene was detected in exceedance of NYSDEC Class GA Groundwater Protection Standards in 2 wells (MW10-1DA and MW10-10D); cis-1,2-DCE was detected in 4 wells and exceeding in 2 wells (MW10-7 and MW10-10D); toluene and trans-1,2-DCE was detected in in 2 wells and exceeding in MW10-10D; trans-1,2-DCE was detected in exceedance in 1 well (MW10-10D); TCE was detected in 3 wells and exceeding at MW10-10D; and VC was detected in exceedance in 4 wells (MW10-1DA, MW10-2, MW10-10D, and PW10-1). One other site related COC (xylene) were detected in Site 10 wells; however, concentrations were below NYSDEC Class GA Groundwater Protection Standards. Two other non-site-related VOCs were detected in Site 10 wells (2-hexanone and2-butanone); 2-butanone exceeded NYSDEC Class GA Groundwater Protection Standards at MW10-10D.
- Eight Site 13 wells (monitoring and recovery wells) were sampled and analyzed for VOCs (MW13-3, MW13-4, MW13-4D, MW13-5A, MW13-5D, PW13-1, PZ13-3D, and PW13-4D). Two site-related site COCs, VC and cis-1,2-DCE were detected at concentrations exceeding NYSDEC Class GA Groundwater Protection Standards. Cis-1,2-DCE was detected at 6 locations and exceeding at 2 (MW13-5D and PW13-1); VC was detected at 4 locations and exceeding at 2 (MW13-5D and PW13-1). Three other site-related COCs (toluene, trans-1,2-DCE, and TCE) were detected in Site 13 wells; however, concentrations were below NYSDEC Class GA Groundwater Protection Standards. Three other VOCs were detected in the Site 13 wells, (acetone, 2 butanone, and 2-hexanone); however, concentrations did not exceed NYSDEC Class GA Groundwater Protection Standards.

2.2.2 Surface Water Sampling and Analysis

During the June 2019 sampling event, 9 surface water samples (including one duplicate) were collected at 8 locations, in support of monitoring efforts for Sites 3 and 10, to determine whether site-related contamination has entered nearby surface water bodies (Table 2-2). There were no detections in the 9 surface water samples that were analyzed on 18 June 2019. At the time of sample collection, readings of pH, temperature, and conductivity were recorded (Table 2-4).

2.2.3 Quality Assurance/Quality Control Results

All procedures were consistent with the EPA quality assurance (QA)/quality control (QC) requirements as described in SW-846 (EPA 2007 including updates). All analytical data have been reviewed for compliance with precision, accuracy, representativeness, completeness, and comparability parameters based on EPA's National Functional Guidelines for Organic Data Review (EPA 2008). Data validation reports are included in Appendix C. The number of trip blanks, duplicates, and matrix spike (MS)/matrix spike duplicate (MSD) sample sets collected during surface water and groundwater sampling are summarized in Table 2-5.

There were no QA/QC concerns that significantly affected data usability. Other minor issues were addressed by adding validation qualifiers where necessary. Results and quantitation limits are estimated values when flagged "J" or "UJ". Any "J" qualifier not explicitly explained in the QA/QC review

memorandum indicates that the level detected is below the quantitation limit, but above the method detection limit for organic compounds.

Blank contamination was not identified in the method blanks associated with the project. However, chloroform was detected at 2.9 ppb in the equipment blank for the June/July sampling (JC86604-6) and at 2.8 in the trip blank (JC86604-7). Chloroform was not detected in the associated samples, as a result, no qualification of the data was necessary.

2.3 Well Inspection and Maintenance

Well inspections of all existing IRP groundwater wells and piezometers were performed in May 2019 (Figure 2-1 and Appendix D). The purpose of these inspections was to determine and document the physical condition of the monitoring and pumping wells, and to identify maintenance actions required to keep the wells operational. The results of the inspections were documented on well inspection checklists that will be included in the annual comprehensive report to be submitted after the second semi-annual sampling event.

Well inspections included the following:

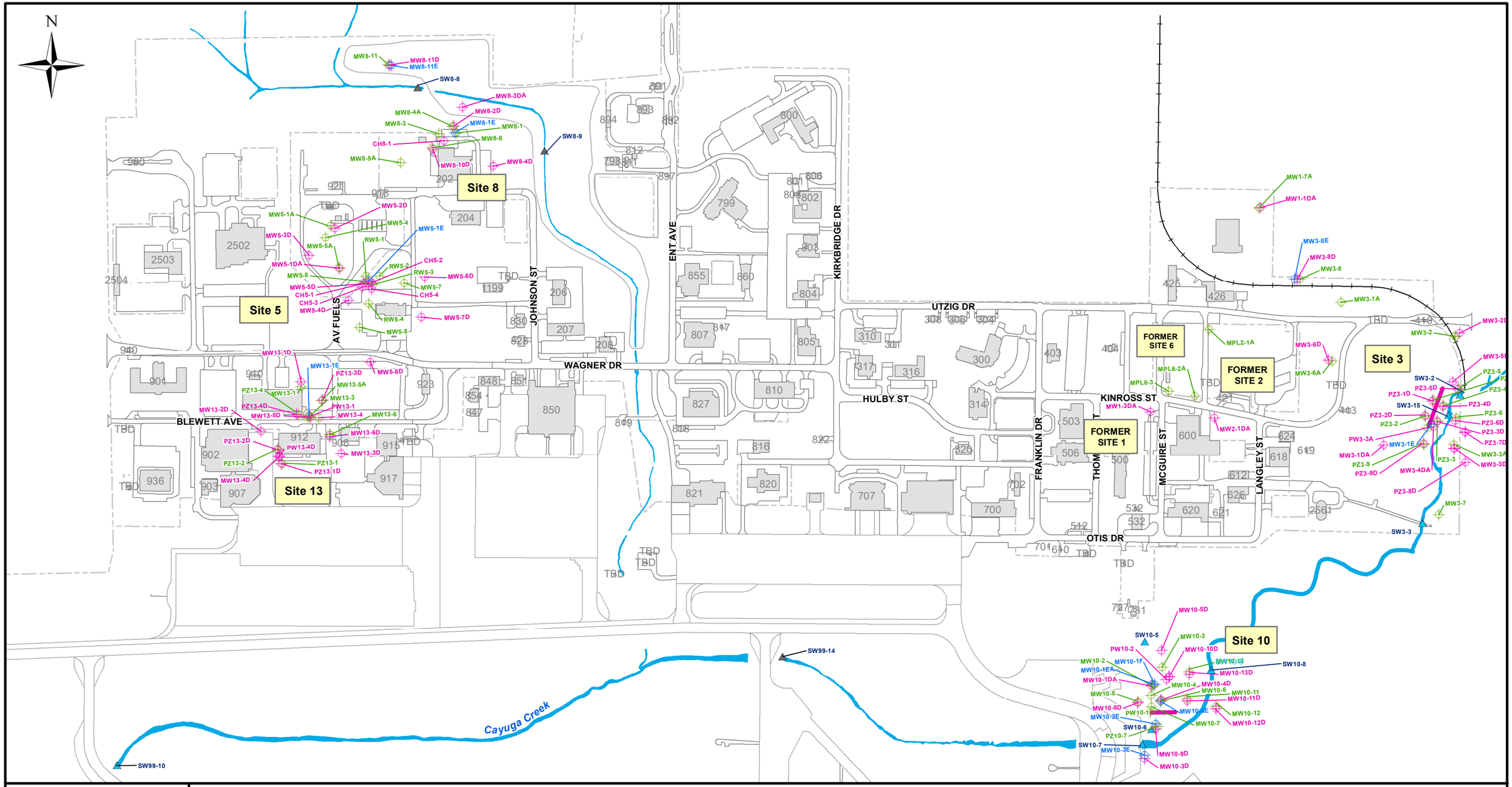
- Inspection of well identification marking and painting, protective casing lock, protective casing cover, monitoring well riser, concrete drainage pad, and guard posts
- Inspection of each well casing annulus for the presence of trapped water.

The necessity for well maintenance was determined by the results of the well inspection. The following maintenance items were identified:

- Ten wells require a new label
- One well requires patching of the concrete pad
- One well requires a new PDB weight and 5 require a new PDB wire.
- One well requires painting on associated stick-ups and/or bollards.
- Nine well covers had missing bolts or stripped bolts.
- Seven wells require a new lock.
- One well (MW5-8D) could not be located.

2.4 Decontamination and Investigation Derived Waste

All non-dedicated sampling tools were decontaminated before and after use. All solid waste generated during sampling, including PDB plastic and protective clothing used during sampling, was segregated and disposed of offsite.



Monitoring Wells

- Deep Bedrock Well
- Overburden Well/Piezometer
- Shallow Bedrock Well/Piezometer
- Groundwater Collection Trench

Surface Water Locations

- Sample and Elevation
- Elevation Only

0 375 750 1,500 2,250 3,000 Feet

2019 Data Summary Report
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-1
Installation-Wide Monitoring Well and Sample Locations

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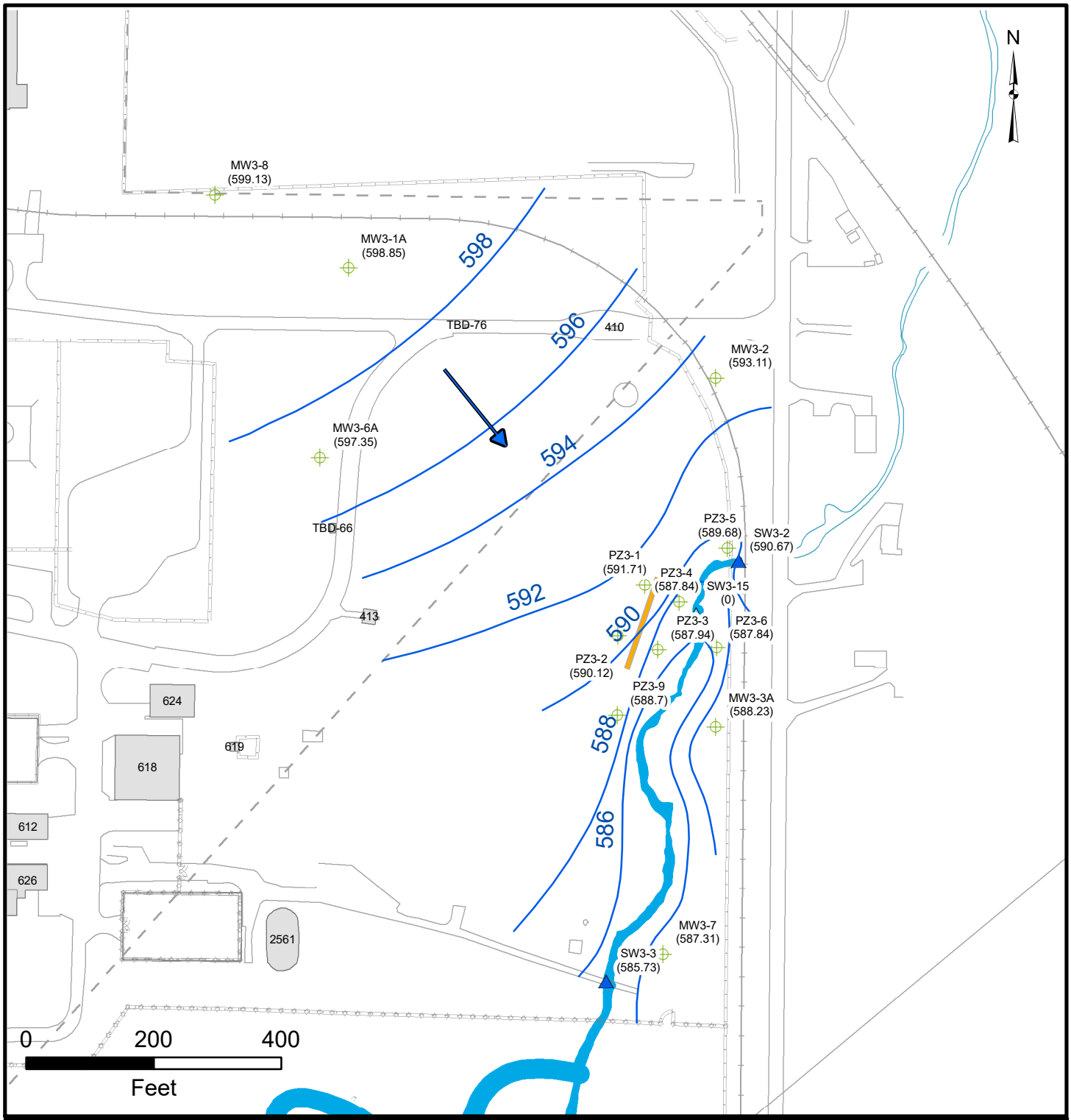

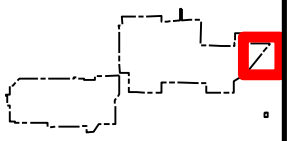

Overburden Well/Piezometer

Surface Water Sample

Surface Water Sample and Elevation Measurement

Groundwater Collection Trench

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-2
Overburden Groundwater Contour Map (May 2019)
IRP Site 3

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
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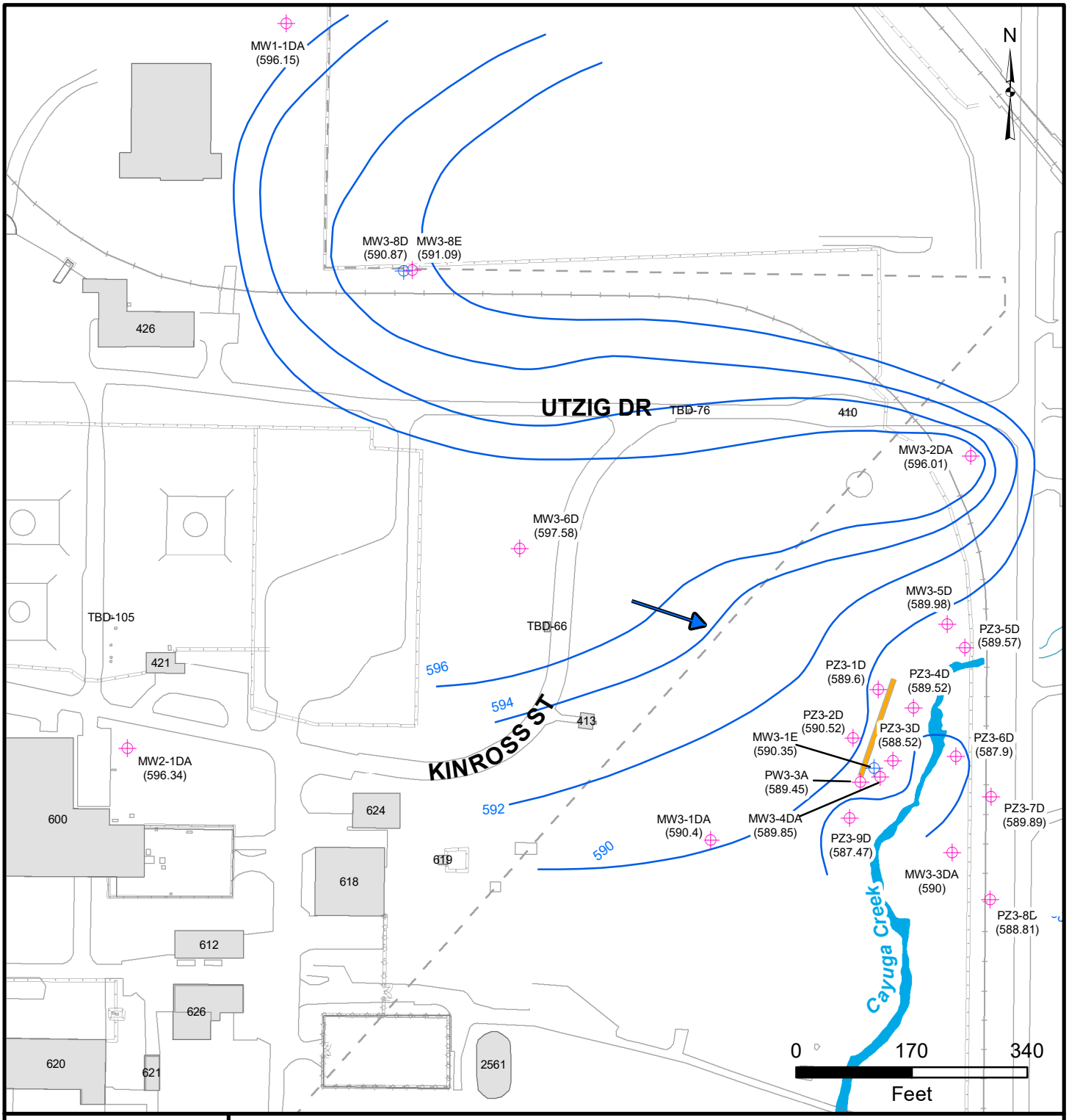

Shallow Bedrock Well/Piezometer; PZ3-9D

Deep Bedrock Well

Inferred Groundwater Flow Direction

Groundwater Collection Trench

Groundwater Elevation Contours (ft)

EA®	Data Summary Report June 2019 Basewide Sampling Installation-Wide Groundwater Monitoring Program Niagara Falls Air Reserve Station Niagara Falls, New York	FIGURE 2-3 Shallow Bedrock Groundwater Contour Map (May 2019) IRP Site 3

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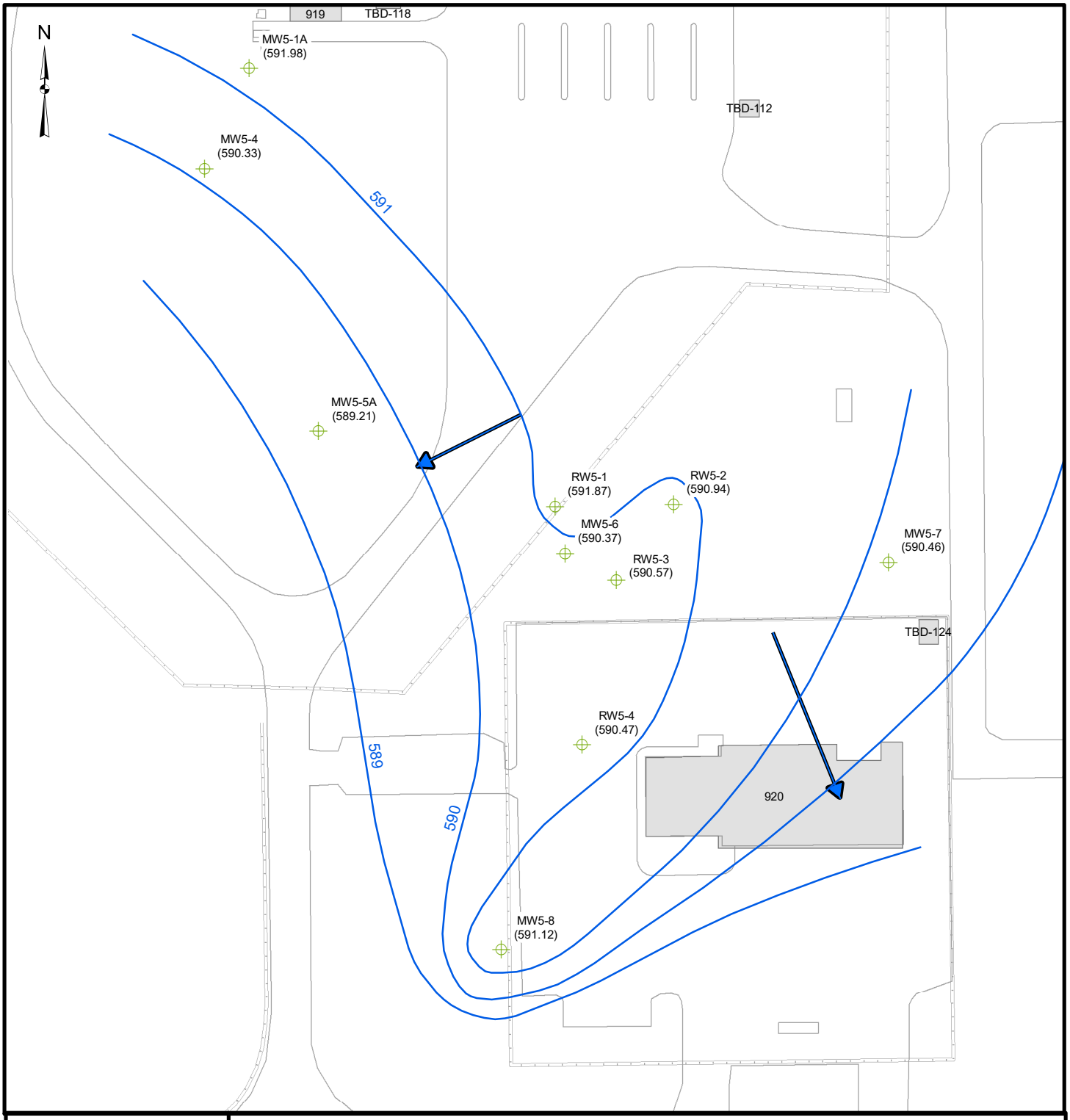

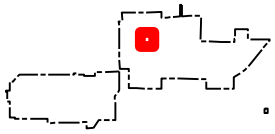

Overburden Well

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

0 50 100

Feet

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-4
Overburden Groundwater
Contour Map (May 2019)
IRP Site 5

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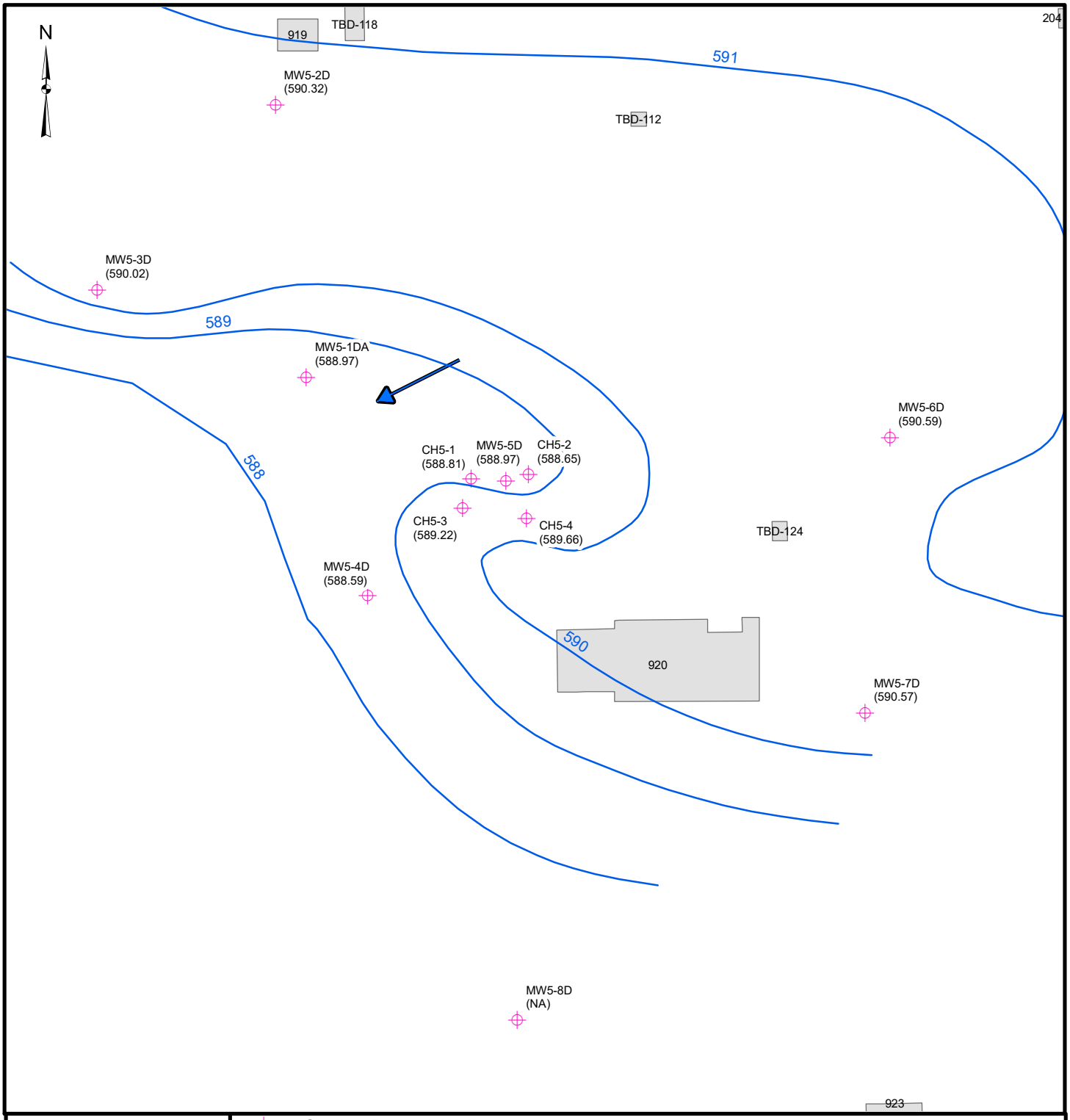
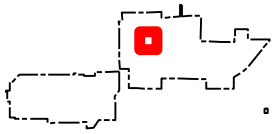




Shallow Bedrock Well

Deep Bedrock Well

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

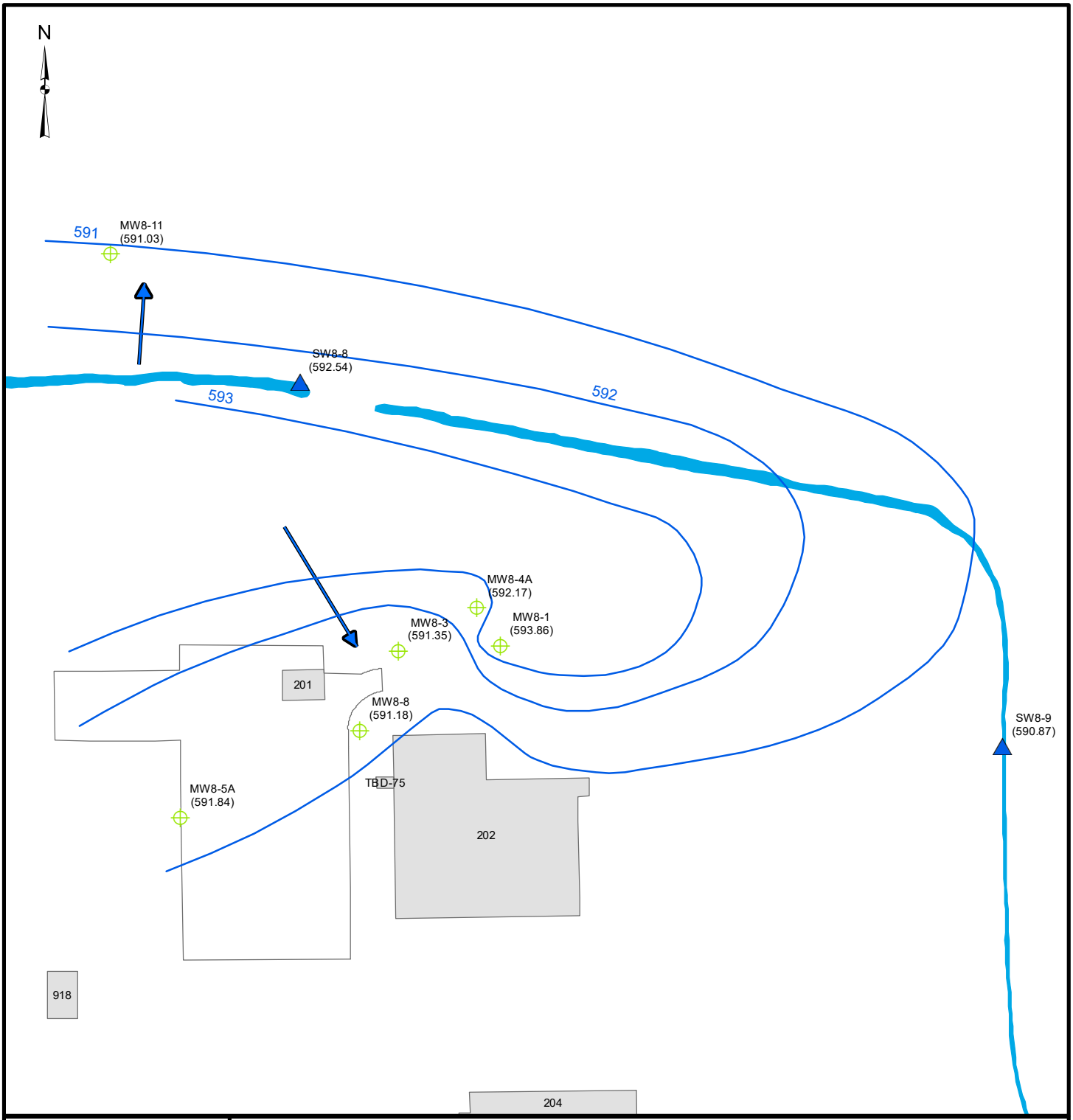
0 50 100

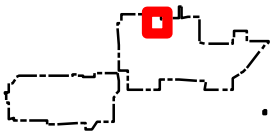
Feet

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-5
Shallow Bedrock Groundwater
Contour Map (May 2019)
IRP Site 5

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
BY	FD	AK	BY	AS SHOWN	JULY 2019	6265401	G:\Projects\Federal\DOD\6265401_AFCEC_NFARS





Surface Water Elevation

Overburden Well/Piezometer

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

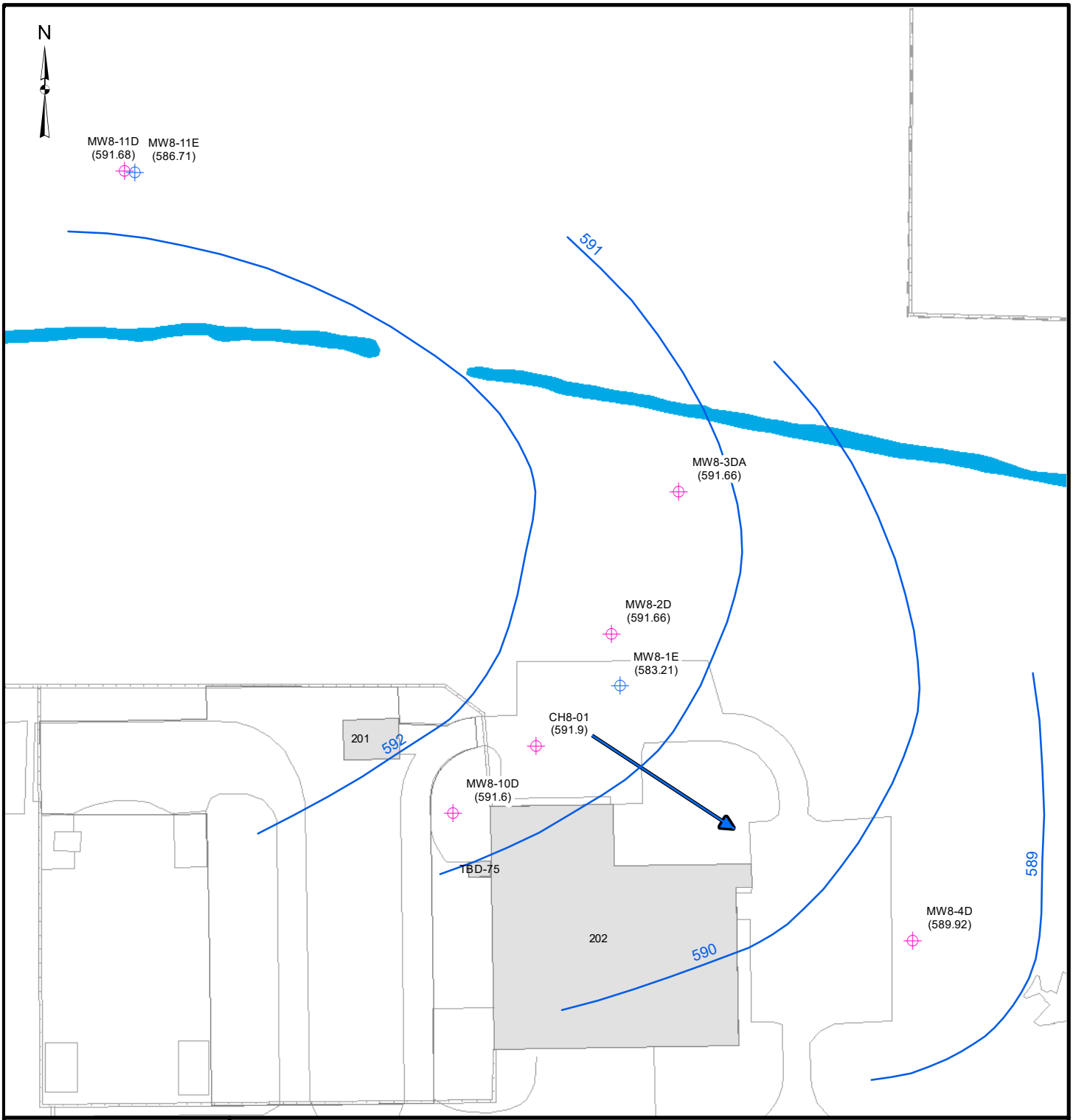
0 75 150

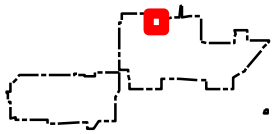
Feet

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-6
Overburden Groundwater
Contour Map (June 2019)
IRP Site 8

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
BY	FD	AK	BY	AS SHOWN	JULY 2019	6265401	G:\Projects\Federal\DOD\6265401_AFCEC_NFARS





Shallow Bedrock Well

Deep Bedrock Well

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

0 50 100

Feet

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-7
Shallow Bedrock Groundwater
Contour Map (June 2019)
IRP Site 8

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
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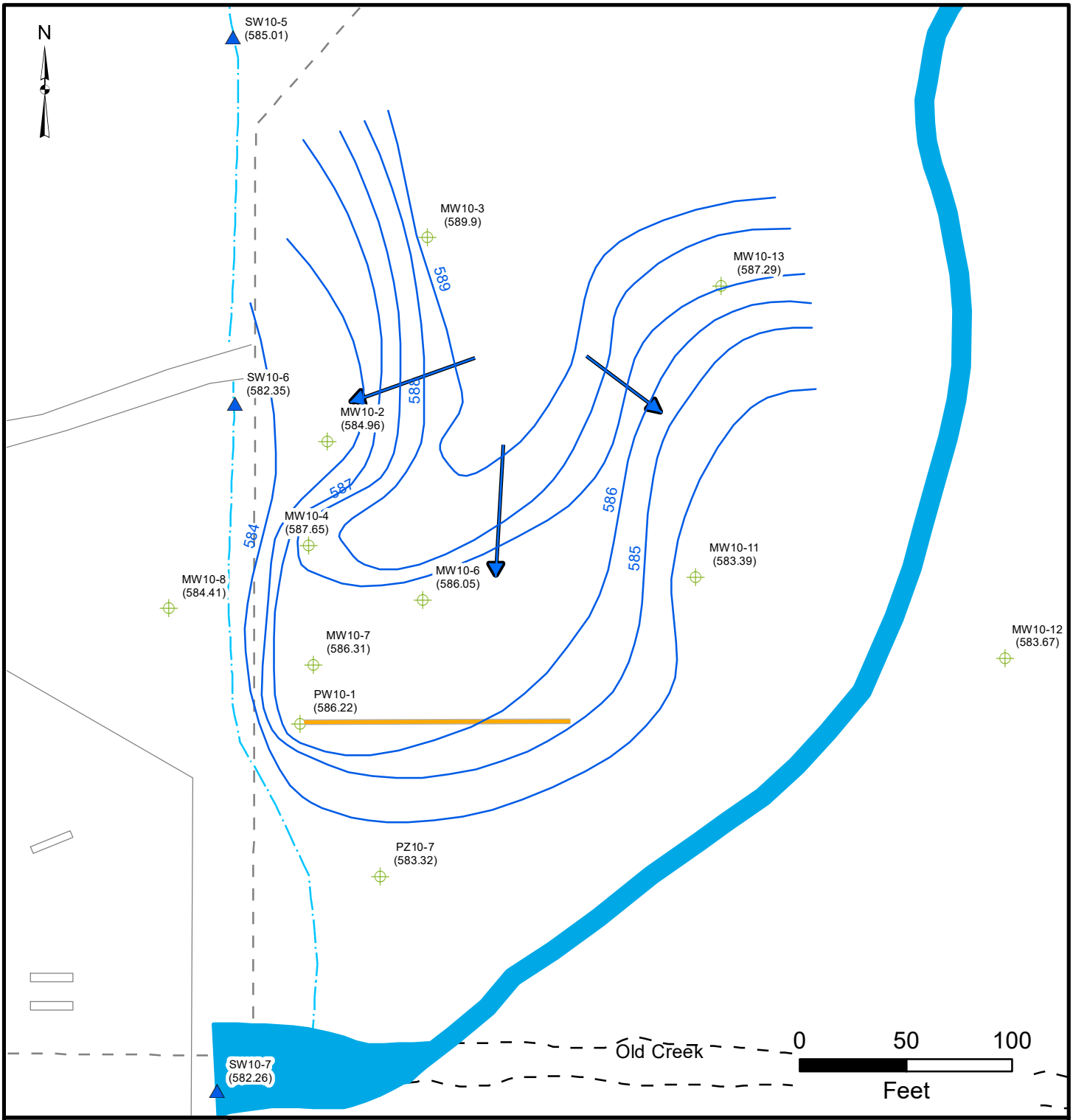

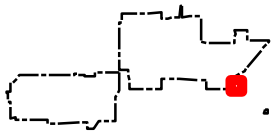

Overburden Well/Piezometer

Surface Water Sample and Elevation Measurement

Groundwater Collection Trench

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-8
Overburden Groundwater Contour Map (June 2019)
IRP Site 10

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
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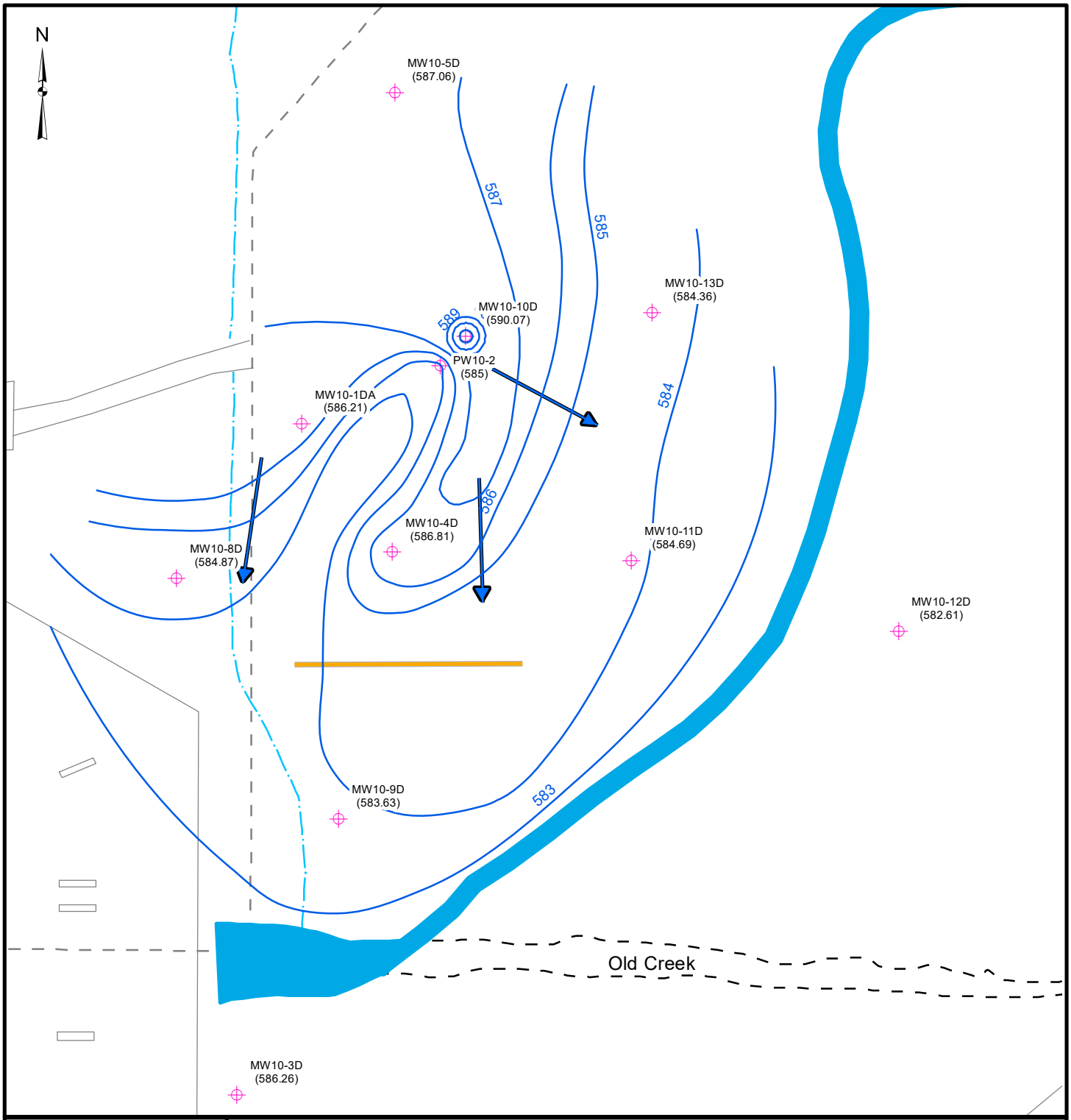
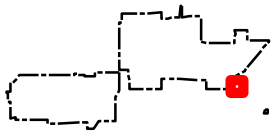




Shallow Bedrock Well

Groundwater Collection Trench

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

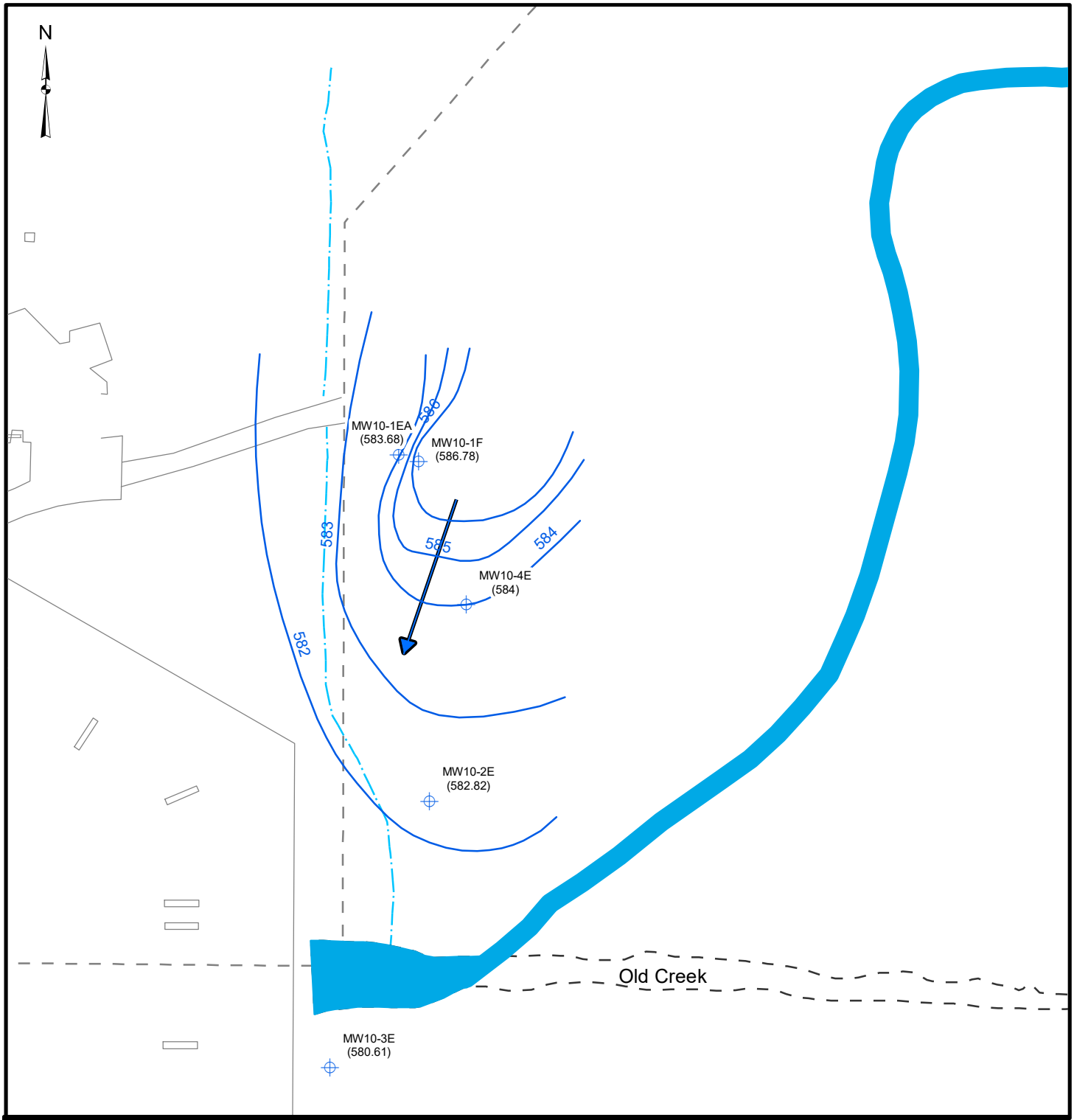
0 50 100

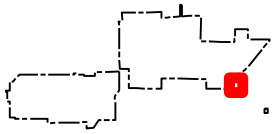
Feet

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-9
Shallow Bedrock Groundwater
Contour Map (June 2019)
IRP Site 10

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
BY	FD	AK	BY	AS SHOWN	JULY 2019	6265401	G:\Projects\Federal\DOD\ 6265401_AFCEC_NFARS





Deep Bedrock Well

Inferred Groundwater Flow Direction

Groundwater Elevation Contours (ft)

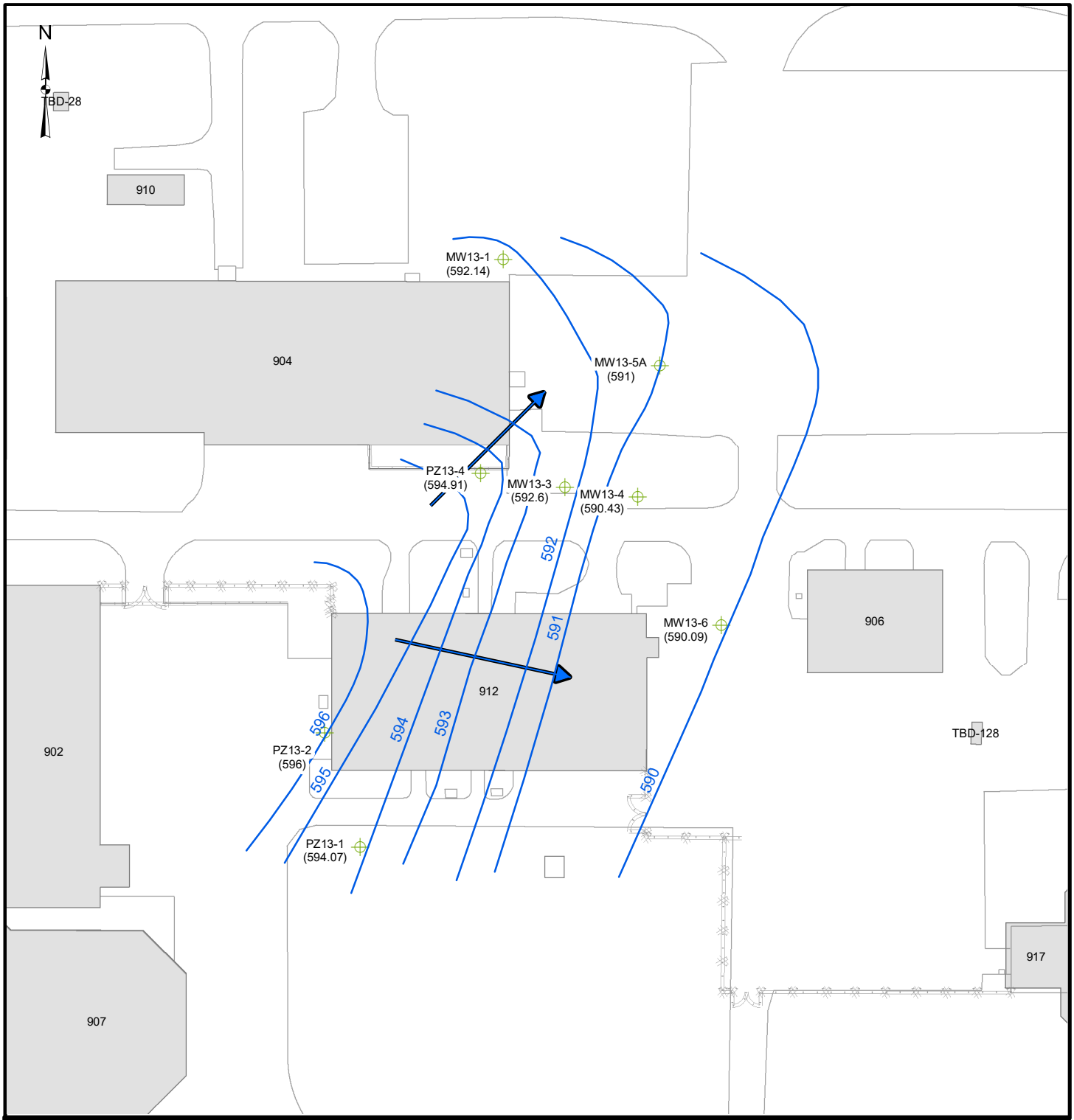
0 50 100

Feet

Data Summary Report June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

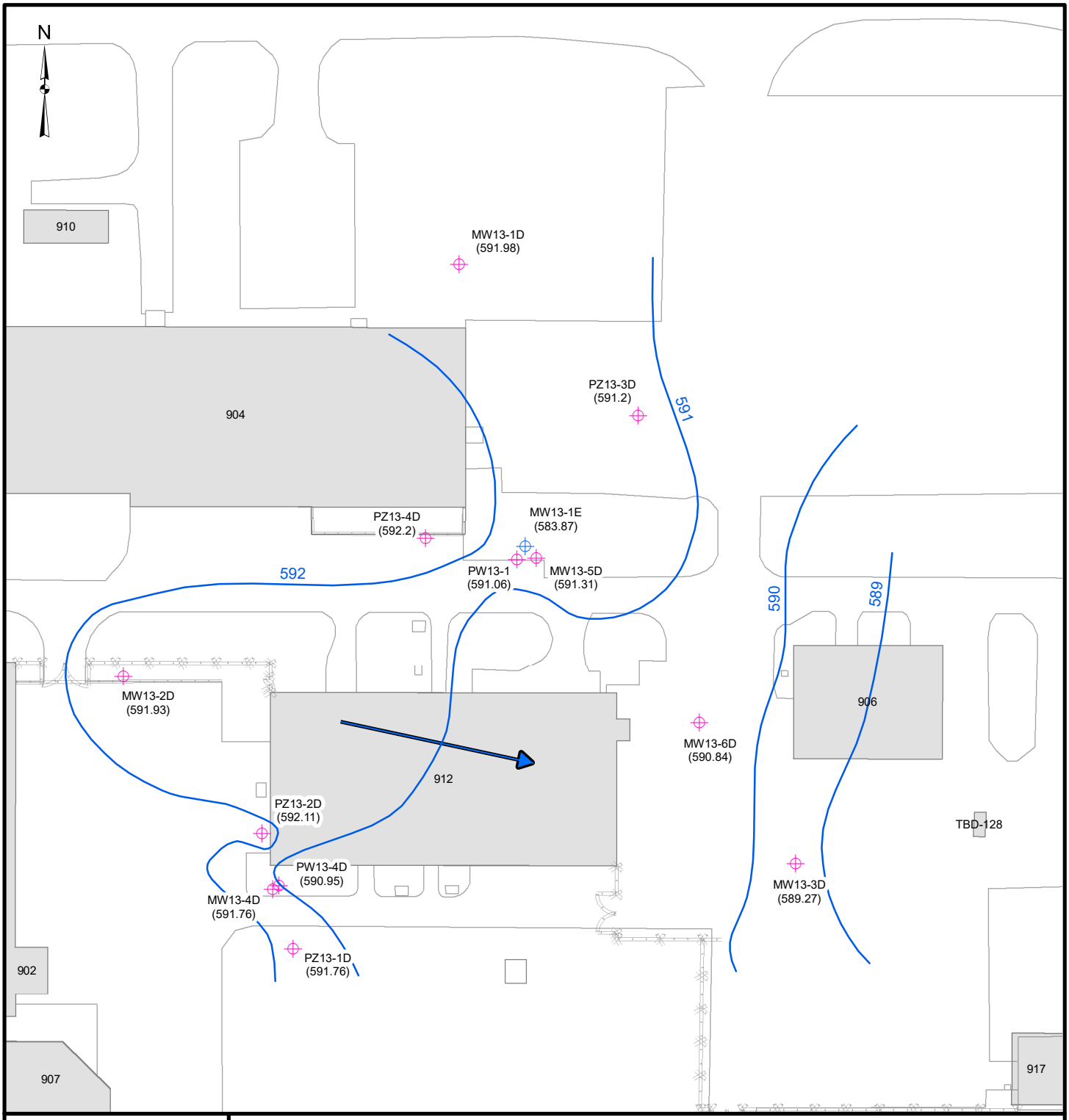
FIGURE 2-10
Deep Bedrock Groundwater
Contour Map (May 2019)
IRP Site 10

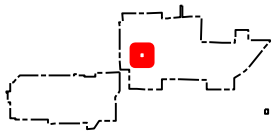
PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
BY	FD	AK	BY	AS SHOWN	JULY 2019	6265401	G:\Projects\Federal\DOD\ 6265401_AFCEC_NFARS



	Data Summary Report June 2019 Basewide Sampling Installation-Wide Groundwater Monitoring Program Niagara Falls Air Reserve Station Niagara Falls, New York	FIGURE 2-11 Overburden Groundwater Contour Map (May 2019) IRP Site 13

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:		PROJECT NO:	FILE NO:
BY	FD	NK	BY	AS SHOWN	JULY 2019	6265401	G:\Projects\Federal\DOD\6265401_AFCEC_NFARS





Shallow Bedrock Well

Deep Bedrock Well

Inferred Groundwater Flow Direction

Groundwater Elevation Contour (ft)

0 75 150

Feet

Data Summary Report, June 2019 Basewide Sampling
Installation-Wide Groundwater Monitoring Program
Niagara Falls Air Reserve Station
Niagara Falls, New York

FIGURE 2-12
Shallow Bedrock Groundwater
Contour Map (May 2019)
IRP Site 13

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
BY	FD	AK	BY	AS SHOWN	JULY 2019	6265401	G:\Projects\Federal\DOD\6265401_AFECE_NFARS

TABLE 2-1

June 2019 Installation-Wide Groundwater Program Sample Collection Summary

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Well Number	Sample Date	Purge/Sample Method	Sample Analyses	Field QC Samples[(a)]
Background Well				
MW8-11D	6/18/19	PDB	VOCs	
Site 3				
MW3-3DA	6/18/19	PDB	VOCs	MS/MSD (VOCs)
MW3-4DA / MW-FD-3-2019-06-18	6/18/19	PDB	VOCs	Duplicate (VOCs)
PZ3-6D	6/18/19	PDB	VOCs	
PZ3-7D	6/18/19	PDB	VOCs	
PZ3-8D	6/18/19	PDB	VOCs	
PW3-3A	6/18/19	PDB	VOCs	
Site 5				
MW5-1DA	6/19/19	PDB	VOCs	
MW5-5D	6/19/19	PDB	VOCs	
MW5-6	6/19/19	PDB	VOCs	
RW5-1	6/19/19	PDB	VOCs	
RW5-2 / MW-FD-2019-06-19	6/19/19	PDB	VOCs	Duplicate (VOCs)
RW5-4	6/19/19	PDB	VOCs	
Site 8				
MW8-1	6/18/19	PDB	VOCs	
MW8-8	6/18/19	PDB	VOCs	
MW8-10D	6/18/19	PDB	VOCs	
CH8-1	6/18/19	PDB	VOCs	
Site 10				
MW10-1DA / MW-FD-10-2019-07-08	7/08/19	PDB	VOCs	Duplicate (VOCs)
MW10-2	6/18/19	PDB	VOCs	
MW10-3	6/18/19	PDB	VOCs	
MW10-7	6/18/19	PDB	VOCs	
MW10-10D	7/08/19	PDB	VOCs	
PW10-1	6/18/19	PDB	VOCs	
PW10-2	6/18/19	PDB	VOCs	
PZ10-7	6/18/19	PDB	VOCs	

TABLE 2-1

June 2019 Installation-Wide Groundwater Program Sample Collection Summary

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Well Number	Sample Date	Purge/Sample Method	Sample Analyses (EPA Method 8260C)	Field QC Samples[a]
Site 13				
MW13-3	6/19/19	PDB	VOCs	
MW13-4	6/19/19	PDB	VOCs	MS/MSD (VOCs)
MW13-4D	6/19/19	PDB	VOCs	
MW13-5A	6/19/19	PDB	VOCs	
MW13-5D	6/19/19	PDB	VOCs	
PW13-1	6/19/19	PDB	VOCs	
PZ13-3D	6/19/19	PDB	VOCs	
PW13-4D	6/19/19	PDB	VOCs	
A field blank "PDB-BLANK-2019-06-18" was collected at the beginning of the sample collection event.				

TABLE 2-2

June 2019 Installation-Wide Surface Water Program Sample Collection Summary

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Location	Description	Sample Date	Analysis (EPA Method 8260C)	Field QC Samples[a]
SW3-2	Cayuga Creek as it enters the base, upstream of Site 3	6/18/19	VOCs, field parameters[b], water level[c]	MS/MSD (VOCs)
SW3-3	Cayuga Creek near gravel road crossing, downstream of Site 3	6/18/19	VOCs, field parameters[b], water level[c]	
SW3-15	Cayuga Creek between SW3-2 and SW3-3, downstream of PW3-3A and the collection trench	6/18/19	VOCs and basic field parameters	
SW10-5	Drainage ditch upstream of fire training pit	6/18/19	VOCs, field parameters[b], water level[c]	
SW10-6	Drainage ditch downstream of fire training pit at Site 10	6/18/19	VOCs, field parameters[b], water level[c]	
SW10-7	Cayuga Creek downstream of Site 10 and confluence with drainage ditch	6/18/19	VOCs and basic field parameters, and water level	
SW10-8[d] SW-FD-10-2019-06-18	Cayuga Creek upstream of Site 10	6/18/19	VOCs and basic field parameters	Duplicate (VOCs)
SW99-10	Cayuga Creek near taxiway A2 just before it flows off base	6/18/19	VOCs, field parameters[b], water level[c]	

[a] A trip blank was also shipped with the field samples.

[b] Basic field parameters include temperature, pH, and conductivity.

[c] Surface water elevation reference points:

SW3-2 = PK nail in wooden railroad tie.
SW3-3 = East end of west gate (top edge of the bottom rail of gate over creek).
SW8-8 = Top of west culvert pipe and cut.
SW8-9 = Top of stake.
SW10-5 = Top of concrete junction box.
SW10-6 = Top of pipe.
SW10-7 = Top of south culvert pipe and cut.
SW99-10 = Top of concrete culvert.
SW99-14 = Top of east culvert pipe and cut.

[d] Location added as part of 2015 Remedial Action to monitor protectiveness of creek following suspension of groundwater pumping.

Table 2-3

Summary of Positive Validated June 2019 Installation-wide Groundwater Program Groundwater Analytical Results

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Analyte	Screening Criteria [a]	Background	Site 3							
		MW8-11D	MW3-3DA	MW3-4DA	MW-FD-3-2019-06-18	PW3-3A	PZ3-6D	PZ3-7D	PZ3-8D	PDB-BLANK
		6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019
Volatile Organic Compounds by Method SW8260 (µg/L)										
BENZENE	1	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
CIS-1,2-DICHLOROETHENE	5	0.75 U	**4.9**	**4.7**	**4.2**	**34.2**	**2.0**	**11.1**	0.75 U	0.75 U
TOLUENE	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
TRANS-1,2-DICHLOROETHENE	5	0.75 U	0.75 U	0.75 U	0.75 U	**0.71 J**	0.75 U	0.75 U	0.75 U	0.75 U
TRICHLOROETHENE	5	0.75 U	0.75 U	0.75 U	0.75 U	**6.2**	0.75 U	0.75 U	0.75 U	0.75 U
VINYL CHLORIDE	2	0.8 U	**9.3**	**5.5**	**4.6**	**27.2**	**1.4**	**9.2**	0.8 U	0.8 U
XYLENE (TOTAL)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Other Volatile Organic Compounds Detected by Method SW8260 (µg/L)										
ACETONE	50	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
2 BUTANONE (MEK)	50	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
CHLOROETHANE	---	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-DICHLOROETHANE	0.6	**1.4**	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U
2-HEXANONE	50	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

(a) NYS regulation 6 NYCRR Part 703, New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, 1998 (with updates), Class GA Groundwater Standards and Guidance Values.

(b) Field Duplicates MW-FD-3-2019-06-18, MW-FD-2019-06-19, and MW-FD-10-2019-07-08 collected from MW3-4DA, RW5-2, and MW10-1DA, respectively.

(c) MW-5P was a Lab quality sample.

NOTE: µg/L = Microgram(s) per liter.

U = Analyte was analyzed for but not detected, method reporting limit provided.

J = Analyte detected, estimated concentration.

--- = No Screening Criteria.

Shaded cells exceed the screening value.

Bold values denote detections.

Table 2-3

Summary of Positive Validated June 2019 Installation-wide Groundwater Program Groundwater Analytical Results

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Analyte	Screening Criteria [a]	Background	Site 5							Trip Blanks		
		MW8-11D	MW5-1DA	MW5-5D	MW5-6	RW5-1	RW5-2	MW-FD-2019-06-19	RW5-4	TB-1	TB-2	TB-3
		6/18/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/18/2019	6/19/2019	7/18/2019
Volatile Organic Compounds by Method SW8260 (µg/L)												
BENZENE	1	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.67	0.45 U	0.45 U	0.45 U
CIS-1,2-DICHLOROETHENE	5	0.75 U	0.75 U	90.3	2.3	32.3	59.7	59.4	2.1	0.75 U	0.75 U	0.75 U
TOLUENE	5	0.75 U	0.75 U	0.75 U	0.75 U	1.1	0.75 U	0.75 U	1.6	0.75 U	0.75 U	0.75 U
TRANS-1,2-DICHLOROETHENE	5	0.75 U	0.75 U	19.6	0.75 U	9.5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
TRICHLOROETHENE	5	0.75 U	0.75 U	0.62 J	1.0	2.5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
VINYL CHLORIDE	2	0.8 U	0.8 U	869	2.0	42.4	71.5	71.0	0.8 U	0.8 U	0.8 U	0.8 U
XYLENE (TOTAL)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Other Volatile Organic Compounds Detected by Method SW8260 (µg/L)												
ACETONE	50	7.5 U	7.5 U	6.7 J	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
2 BUTANONE (MEK)	50	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
CHLOROETHANE	---	0.75 U	0.75 U	0.75 U	0.75 U	3.0	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-DICHLOROETHANE	0.6	1.4	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U	1.75 U
2-HEXANONE	50	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

Table 2-3

Summary of Positive Validated June 2019 Installation-wide Groundwater Program Groundwater Analytical Results

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Analyte	Screening Criteria [(a)]	Background	Site 8				Site 10								
		MW8-11D	CH8-01	MW8-1	MW8-8	MW8-10D	MW10-1DA	MW10-1FD-2019-07-08	MW10-2	MW10-3	MW10-7	MW10-10D	PW10-1	PW10-2	PZ10-7
		6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	7/8/2019	7/8/2019	6/18/2019	6/18/2019	6/18/2019	7/8/2019	6/18/2019	6/18/2019	6/18/2019
Volatile Organic Compounds by Method SW8260 (µg/L)															
BENZENE	1	0.45 U	0.5	2.1	0.45 U	0.45 U	2.9	3.0	0.45 U	0.45 U	0.45 U	1.7	0.45 U	0.45 U	0.45 U
CIS-1,2-DICHLOROETHENE	5	0.75 U	0.6 J	2.9	0.75 U	1.9	0.75 U	0.75 U	3.0	0.75 U	18.9	921	4.5	0.75 U	0.75 U
TOLUENE	5	0.75 U	0.75 U	1.3	0.75 U	0.75 U	0.94 J	0.96 J	0.75 U	0.75 U	0.75 U	5.7	0.75 U	0.75 U	0.75 U
TRANS-1,2-DICHLOROETHENE	5	0.75 U	0.75 U	0.58 J	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	5.8	1.1	0.75 U	0.75 U
TRICHLOROETHENE	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	1.6	0.75 U	0.75 U	12.6	0.94 J	0.75 U	0.75 U
VINYL CHLORIDE	2	0.8 U	0.8 U	3.6	0.8 U	0.86 J	3.1	2.8	2.9	0.8 U	0.8 U	191	13.8	0.8 U	0.8 U
XYLENE (TOTAL)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.80 J	1.5	0.75 U	0.75 U	0.75 U	1.9 U	0.75 U	0.75 U	0.75 U
Other Volatile Organic Compounds Detected by Method SW8260 (µg/L)															
ACETONE	50	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	19 U	7.5 U	7.5 U	7.5 U
2 BUTANONE (MEK)	50	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	83.4	7.5 U	7.5 U	7.5 U
CHLOROETHANE	---	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	1.9 U	0.75 U	0.75 U	0.75 U
1,2-DICHLOROETHANE	0.6	1.4	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	1.75 U	1.75 U	1.75 U	1.9 U	1.75 U	1.75 U	1.75 U
2-HEXANONE	50	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	25.1	2.5 U	2.5 U	2.5 U

Table 2-3

Summary of Positive Validated June 2019 Installation-wide Groundwater Program Groundwater Analytical Results

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Analyte	Screening Criteria [(a)]	Background	Site 13							
		MW8-11D	MW13-3	MW13-4	MW13-4D	MW13-5A	MW13-5D	PW13-1	PW13-4D	PZ13-3D
		6/18/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019	6/19/2019
Volatile Organic Compounds by Method SW8260 (µg/L)										
BENZENE	1	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
CIS-1,2-DICHLOROETHENE	5	0.75 U	**0.62 J**	0.75 U	**4.5**	0.75 U	**63.7**	**15.9**	**2.1**	**2.5**
TOLUENE	5	0.75 U	0.75 U	0.75 U	0.75 U	**1.1**	0.75 U	0.75 U	0.75 U	0.75 U
TRANS-1,2-DICHLOROETHENE	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.56 J**	**2.2**	0.75 U	0.75 U
TRICHLOROETHENE	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**4.4**	0.75 U	0.75 U	0.75 U
VINYL CHLORIDE	2	0.8 U	0.80 U	0.80 U	**1.6**	0.80 U	**4.5**	**4.1**	0.80 U	**1.3**
XYLENE (TOTAL)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Other Volatile Organic Compounds Detected by Method SW8260B (µg/L)										
ACETONE	50	7.5 U	**6.3 J**	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
2 BUTANONE (MEK)	50	7.5 U	**31.0**	**13.8**	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
CHLOROETHANE	---	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-DICHLOROETHANE	0.6	**1.4**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
2-HEXANONE	50	2.5 U	**29.6**	**5.9**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

Table 2-4

Summary of June 2019 Field Measurements of Surface Water Samples

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Location ID	Date Sampled	pH (s.u.)	Temperature (°C)	Conductivity (µS/cm)
SW3-2	6/18/19	7.79	19.01	0.849
SW3-3	6/18/19	7.74	18.87	0.758
SW3-15	6/18/19	7.99	18.30	0.848
SW10-5	6/18/19	7.76	17.23	1.35
SW10-6	6/18/19	7.57	17.08	1.32
SW10-7	6/18/19	7.55	17.13	1.30
SW10-8	6/18/19	7.77	15.98	0.789
SW99-10	6/18/19	7.84	17.71	0.845

NOTE: ID = Identification
s.u. = Standard units
°C = Degrees Celsius
µS/cm = MicroSiemens per centimeter

Table 2-5

June 2019 Installation-Wide Groundwater Monitoring Program Sampling and Analysis Summary

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Matrix	Analysis	Number of Field Samples	Number of QA/QC Samples		
			Duplicates	Matrix Spike/Matrix Spike Duplicates	Trip Blanks[(a)]
Surface Water	EPA Method 8260C Volatile Organic Compounds	8	1	1/1	1
Groundwater		33	3	2/2	3

(a) Trip blanks collected at the rate of one per shipping cooler. Number includes one passive diffusion bag blank for groundwater.

3.0 Performance Monitoring

The performance monitoring wells for the 2019 RAs are presented on Table 3-1. The RA performance monitoring results and associated CVOC trend graphs for Sites 5, 8, 10, and 13 have been updated with February, April, and June 2019 data and are included in Appendix E. A summary of the 2018 RAs will be included in the 2019 Remedial Action 2018 Injection Summary Memorandum Sites FT005 – Site 10, ST010 – Site 13, DS002 – Site 8, and DS004 – Site 5. An evaluation of all the RA trend data (CVOCs) will be provided in the 2019 Annual Comprehensive Sampling /Monitoring Report.

TABLE 3-1

June 2019 Remedial Action Performance Monitoring Sample Collection Summary

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Well Number	Sample Date	Purge/Sample Method	Sample Analyses	Field QC Samples[(a)]
Site 5 – Quarterly				
MW5-5D	6/19/19	PDB	VOCs	
RW5-1	6/19/19	PDB	VOCs	
RW5-2 / MW-FD-2019-06-19	6/19/19	PDB	VOCs	Duplicate (VOCs)
RW5-4	6/19/19	PDB	VOCs	
Site 8 – Quarterly				
MW8-1	6/18/19	PDB	VOCs	
MW8-10D	6/18/19	PDB	VOCs	
MW8-8	6/18/19	PDB	VOCs	
CH8-1	6/18/19	PDB	VOCs	
Site 10 – Quarterly				
MW10-10D (b)	7/08/19	PDB	VOCs	
MW10-1DA / MW-FD-10-2019-07-08 (b)	7/08/19	PDB	VOCs	Duplicate (VOCs)
PW10-2	6/18/19	PDB	VOCs	
MW10-2	6/18/19	PDB	VOCs	
PZ10-7	6/18/19	PDB	VOCs	
Site 13 – Quarterly				
MW13-3	6/19/19	PDB	VOCs	
MW13-4	6/19/19	PDB	VOCs	MS/MSD (VOCs)
MW13-5A	6/19/19	PDB	VOCs	
MW13-5D	6/19/19	PDB	VOCs	
PW13-1	6/19/19	PDB	VOCs	
PZ13-3D	6/19/19	PDB	VOCs	

(a) A field blank was collected at the beginning of the sample collection event.

(b) RA Sample was missed during the June 2019 IWGP sampling event, sample was collected immediately after the error was discovered.

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4.0 References

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APPENDIX A
WATER LEVEL DATA

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TABLE A-1

Groundwater Elevations, May 2019

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Location	Ground Elevation (ft AMSL)	TOIC Elevation (ft AMSL)	Well Depth (05/28/19-05/29/19)	Depth to Water (05/28/19-05/29/19)	Groundwater Elevation (05/28/19-05/29/19)
MW1-1DA	603.05	605.61	24.04	9.46	596.15
MW1-7A	603.04	605.71	12.96	5.62	600.09
MPL2-1A	602.2	603.29	14.50	4.41	598.88
MW2-1DA	597.36	599.39	14.49	3.05	596.34
MW3-1A	601.60	603.65	13.40	4.80	598.85
MW3-1DA	590.70	593.29	16.05	2.89	590.40
MW3-1E	589.00	591.51	44.20	1.16	590.35
MW3-2	596.90	598.44	10.00	5.33	593.11
MW3-2DA	596.80	599.02	22.02	3.01	596.01
MW3-3DA	588.30	590.10	16.99	0.10	590.00
MW3-3A	588.30	588.23	5.10	0.00	588.23
MW3-4DA	588.50	590.99	15.64	1.14	589.85
MW3-5D	593.00	594.96	25.70	4.98	589.98
MW3-6A	599.80	602.26	10.98	4.91	597.35
MW3-6D	600.70	602.05	19.04	4.47	597.58
MW3-7	588.10	591.14	7.27	3.83	587.31
MW3-8	601.50	603.84	12.75	4.71	599.13
MW3-8D	601.50	603.67	24.73	12.80	590.87
MW3-8E	601.60	603.69	46.40	12.60	591.09
PW3-3A	589.40	589.95	13.24	0.50	589.45
PZ3-1	592.10	591.71	5.64	0.00	591.71
PZ3-1D	592.20	591.75	12.24	2.15	589.60
PZ3-2	590.90	590.12	4.10	0.00	590.12
PZ3-2D	590.90	590.52	12.64	0.00	590.52
PZ3-3	588.90	588.14	2.30	0.20	587.94
PZ3-3D	588.80	588.62	9.35	0.10	588.52
PZ3-4	590.50	589.95	3.31	2.11	587.84
PZ3-4D	590.60	590.52	11.51	1.00	589.52
PZ3-5	590.03	589.68	2.85	0.00	589.68
PZ3-5D	589.80	589.57	10.00	0.00	589.57
PZ3-6	585.09	588.34	3.28	0.50	587.84
PZ3-6D	588.30	587.90	2.80	0.10	587.90
PZ3-7D	593.40	593.01	21.60	3.12	589.89
PZ3-8D	592.40	592.12	18.18	3.31	588.81
PZ3-9	588.76	588.7	4.12	0.00	588.70
PZ3-9D	591.06	588.5	24.26	1.03	587.47
CH5-01	597.36	597.21	30.00	8.40	588.81
CH5-02	597.21	597.07	32.00	8.42	588.65
CH5-03	597.73	597.74	32.55	8.52	589.22
CH5-04	597.67	597.6	33.78	7.94	589.66
MW5-1A	-------	600.42	15.98	8.44	591.98
MW5-1DA	598.12	600.07	28.72	11.10	588.97
MW5-1E	596.56	596.39	57.20	11.75	584.64
MW5-2D	598.55	600.8	26.35	10.48	590.32
MW5-3D	598.61	600.5	25.00	10.48	590.02
MW5-4	596.96	599.42	15.48	9.09	590.33

TABLE A-1

Groundwater Elevations, May 2019

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Location	Ground Elevation (ft AMSL)	TOIC Elevation (ft AMSL)	Well Depth (05/28/19-05/29/19)	Depth to Water (05/28/19-05/29/19)	Groundwater Elevation (05/28/19-05/29/19)
MW5-4D	597.90	597.34	25.98	8.75	588.59
MW5-5A	598.00	600.8	19.98	11.59	589.21
MW5-5D	597.50	597.12	20.50	8.15	588.97
MW5-6	596.64	596.42	13.55	6.05	590.37
MW5-6D	595.18	594.94	22.95	4.35	590.59
MW5-7	596.63	596.46	12.92	6.00	590.46
MW5-7D	595.38	595.14	17.53	4.57	590.57
MW5-8	594.55	594.14	10.52	3.02	591.12
MW5-8D	594.10	593.95	--	--	--
RW5-1	597.12	596.88	14.58	5.01	591.87
RW5-2	595.79	595.46	11.00	4.52	590.94
RW5-3	597.79	597.5	14.15	6.93	590.57
RW5-4	597.52	597.16	14.57	6.69	590.47
MPL6-2A	599.1	601.3	14.25	7.38	593.92
MPL6-3	599.46	601.58	15.62	7.46	594.12
CH8-01	597.94	597.93	30.94	6.03	591.9
MW8-1	597.63	598.87	13.61	5.01	593.86
MW8-1E	598.57	598.52	50.31	15.31	583.21
MW8-2D	598.48	600.57	30.00	8.91	591.66
MW8-3	597.36	599.06	14.58	7.71	591.35
MW8-3DA	598.94	601.24	26.62	9.58	591.66
MW8-4A	598.49	600.4	14.93	8.23	592.17
MW8-4D	596.11	598.41	22.41	8.49	589.92
MW8-5A	597.9	600.02	14.99	8.18	591.84
MW8-8	598.1	600.18	14.91	9.00	591.18
MW8-10D	598.32	600.17	24.73	8.57	591.60
MW8-11	599.58	602.28	16.55	11.25	591.03
MW8-11D	599.53	601.99	27.52	10.31	591.68
MW8-11E	599.48	602.02	50.31	15.31	586.71
MW10-1DA	587.5	588.55	22.90	2.34	586.21
MW10-1EA	587.96	588.9	39.81	5.22	583.68
MW10-1F	588.11	588.73	8.78	1.95	586.78
MW10-2	588	590.38	59.20	5.42	584.96
MW10-2E	586.6	587.33	47.12	4.51	582.82
MW10-3	588.37	590.5	9.48	0.60	589.9
MW10-3D	586.5	586.26	25.88	0.00	586.26
MW10-3E	586.4	586.19	43.27	5.58	580.61
MW10-4	586.96	589.37	8.07	1.72	587.65
MW10-4D	587.00	587.76	19.95	0.95	586.81
MW10-4E	587.00	588.15	40.69	4.15	584.00
MW10-5D	588.08	589.05	19.70	1.99	587.06
MW10-6	587.00	586.35	9.63	0.30	586.05
MW10-7	586.95	587.29	9.05	0.98	586.31

TABLE A-1

Groundwater Elevations, May 2019

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Location	Ground Elevation (ft AMSL)	TOIC Elevation (ft AMSL)	Well Depth (05/28/19-05/29/19)	Depth to Water (05/28/19-05/29/19)	Groundwater Elevation (05/28/19-05/29/19)
MW10-8	587.49	588.02	9.41	3.61	584.41
MW10-8D	587.30	588.33	23.72	3.46	584.87
MW10-9D	586.52	587.03	19.72	3.40	583.63
MW10-10D	588.20	591.39	10.81	1.32	590.07
MW10-11	---	586.51	7.40	3.12	583.39
MW10-11D	---	586.58	17.38	1.89	584.69
MW10-12	---	587.76	8.35	4.09	583.67
MW10-12D	---	587.76	18.84	5.15	582.61
MW10-13	587.64	587.29	6.99	0.00	587.29
MW10-13D	587.66	587.38	16.81	3.02	584.36
PW10-1	587.02	587.47	14.10	1.25	586.22
PW10-2	588.48	586.51	24.30	1.51	585.00
PZ10-7	586.90	586.80	10.05	3.48	583.32
MW13-1	595.79	598.91	10.05	6.77	592.14
MW13-1D	596.00	598.03	20.68	6.05	591.98
MW13-1E	595.80	598.02	43.88	14.15	583.87
MW13-2D	598.00	601.11	23.64	9.18	591.93
MW13-3	595.98	598.67	10.89	6.07	592.60
MW13-3D	592.10	591.94	15.97	2.67	589.27
MW13-4	595.36	598.38	10.95	7.95	590.43
MW13-4D	597.70	599.96	18.75	8.20	591.76
MW13-5A	596.01	595.72	7.66	4.72	591.00
MW13-5D	595.60	597.49	20.70	6.18	591.31
MW13-6	594.64	594.06	6.87	3.97	590.09
MW13-6D	594.64	594.17	8.89	3.33	590.84
PW13-1	595.96	596.41	27.38	5.35	591.06
PW13-4D	598.13	598.50	22.78	7.55	590.95
PZ13-1	596.00	595.60	4.29	1.53	594.07
PZ13-1D	595.90	595.61	16.81	3.85	591.76
PZ13-2	598.70	598.37	5.87	2.37	596.00
PZ13-2D	598.60	598.00	17.06	5.89	592.11
PZ13-3D	595.98	595.44	17.55	4.24	591.20
PZ13-4	597.10	596.26	9.62	1.35	594.91
PZ13-4D	597.10	596.61	22.18	4.41	592.20

NOTE:
AMSL = Above mean sea level
TOIC = Top of inner casing
-- = Measurement not available

TABLE A-2

Surface Water Elevations, May 2019

Data Summary Report June 2019 Basewide Sampling

Niagara Falls Air Reserve Station, New York

Location	Reference Point Elevation (ft AMSL)	Water Level (5/28/19-5/29/19)	Elevation (5/28/19-5/29/19)
SW3-2	594.55	3.88	590.67
SW3-3	587.78	2.05	585.73
SW10-5	589.49	4.48	585.01
SW10-6	582.65	0.30	582.35
SW10-7	589.56	7.30	582.26
SW8-8	596.84	4.30	592.54
SW8-9	591.17	0.30	590.87
*SW99-10	585.58	11.78	573.80
SW99-14	585.93	7.61	578.32

NOTE: AMSL = Above mean sea level

* Measurement taken in June 2019 during sampling event

APPENDIX B
CLIMATE DATA

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2019 Weather History for Niagara Falls NY - Weather Underground (www.wunderground.com)

Weather History and Observations

2019	Temp. (°F)			Dew Point (°F)			Humidity (%)		Wind (mph)		Sea Level Press. (in)		Precip. (in)
Date	high	avg	low	high	avg	low	high	low	high	low	high	low	sum
5/27/2019	73	60	48	52	49	45	97	37	12	0	30.06	29.89	0
5/28/2019	60	56	51	54	51	48	97	69	12	5	29.89	29.66	0.17
5/29/2019	59	55	51	52	50	49	96	72	13	4	29.82	29.72	0.02
5/30/2019	71	60	51	60	55	49	100	68	13	4	29.8	29.64	0
5/31/2019	70	60	50	54	49	43	100	48	14	0	29.86	29.73	0
6/1/2019	75	65	55	62	56	46	97	64	17	5	29.79	29.69	0.08
6/2/2019	66	59	50	57	50	30	97	35	21	5	29.88	29.68	0.17
6/3/2019	62	52	42	45	36	29	71	38	18	5	30.12	29.87	0
6/4/2019	68	56	43	51	44	39	93	43	20	0	30.11	29.83	0
6/5/2019	73	66	59	63	60	51	100	59	14	0	29.83	29.68	0.72
6/6/2019	73	63	53	59	55	46	100	38	9	0	29.94	29.71	0
6/7/2019	78	64	52	56	51	46	100	33	10	0	30.07	29.94	0
6/8/2019	79	65	52	52	48	42	86	31	15	0	30.17	30.07	0
6/9/2019	84	68	54	54	49	42	72	34	13	0	30.2	30.06	0
6/10/2019	73	64	55	66	59	49	97	44	25	0	30.05	29.76	0.71
6/11/2019	70	60	53	51	48	44	83	45	18	0	30.15	29.94	0
6/12/2019	75	60	46	53	46	43	97	34	13	0	30.15	29.87	0
6/13/2019	66	60	56	56	52.9	47	90	52	15	0	29.5	29.2	0.01
6/14/2019	71	60.8	54	53	48.7	44	90	38	28	7	29.6	29.2	0.46
6/15/2019	75	67.2	60	60	51.4	44	90	40	23	3	29.6	29.4	0
6/16/2019	63	59	54	0	0	0	100	67	14	0	0	0	0.12
6/17/2019	76	64	52	0	0	0	96	50	13	0	0	0	0
6/18/2019	80	70	60	0	0	0	78	52	13	0	0	0	0
6/19/2019	82	71	59	0	0	0	87	49	12	0	0	0	0
6/20/2019	69	65	61	0	0	0	93	76	15	0	0	0	0.58
6/21/2019	70	65	59	0	0	0	97	57	20	0	0	0	0.04
6/22/2019	75	65	54	0	0	0	83	33	16	0	0	0	0
6/23/2019	79	68.3	57	56	51.1	47	78	33	14	0	29.6	29.5	0
6/24/2019	79	69.3	54	60	55.3	49	86	42	13	0	29.4	29.3	0
6/25/2019	83	74.7	68	67	62.3	56	90	41	21	0	29.5	29.3	0.09
6/26/2019	87	74.9	61	65	59.8	56	84	40	17	0	29.6	29.5	0
6/27/2019	84	74.3	62	61	58.5	55	86	39	9	0	29.7	29.6	0
6/28/2019	88	76	61	64	59.5	53	87	30	9	0	29.8	29.6	0
6/29/2019	83	75.8	69	67	63.8	61	78	51	16	0	29.6	29.4	0
6/30/2019	72	68	63	62	57.3	52	87	51	18	0	29.5	29.4	0.01
7/1/2019	80	69.4	56	59	56.2	52	90	45	9	0	29.6	29.4	0
7/2/2019	81	70.8	63	66	62.4	58	87	60	13	0	29.4	29.4	0
7/3/2019	88	75.6	63	66	62.6	60	93	42	8	0	29.5	29.4	0.01
7/4/2019	91	79.3	64	68	64.8	61	90	41	8	0	29.6	29.6	0
7/5/2019	90	81.7	77	73	69.5	67	82	48	14	0	29.6	29.5	0
7/6/2019	84	78.1	71	73	70	67	87	65	12	0	29.5	29.4	0.02
7/7/2019	82	71.1	62	65	55.8	51	90	36	12	0	29.6	29.5	0.01
7/8/2019	83	69.3	54	56	54	52	93	37	12	0	29.6	29.5	0

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APPENDIX C

LABORATORY DATA AND VALIDATION SUMMARIES

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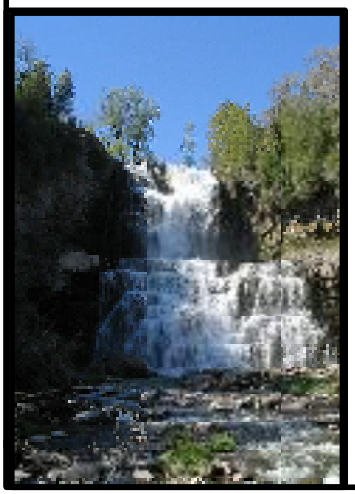
Data Validation Report
SDGs: JC86604, JC90121, JC90273 and JC91309

Sites 3, 5, 8, 10, and 13
April, June, and July 2019 Sampling Events
Niagara Falls Air Reserve Station
Niagara Falls, New York

Prepared for:

EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York

August 2019



Prepared by:

SGD Environmental Services
Cazenovia, New York

2159.001-024

Data Validation Report
Niagara Falls Air Reserve Station
Niagara Falls, New York

SDGs: JC86604, JC90121, JC90273, and JC91309
Sites 3, 5, 8, 10, and 13

April, June, and July 2019 Sampling Events

Prepared for:
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
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August 27, 2019

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A Data Validated (Qualified) Forms

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1.0 Introduction

SGD Environmental Services (SGD Environmental) (Cazenovia, New York) was retained by EA Science and Technology (EA) located in Syracuse, New York to review analytical data generated from EA sampling efforts at the Niagara Falls Air Reserve Station (NFARS) in Niagara Falls, New York. Specifically, the sampling efforts involved the collection of water samples associated with April, June, and July 2019 sampling events at Sites 3, 5, 8, 10 and 13. This report represents the validation of the analyses of these samples.

1.1 Field sampling summary

Tables 1 – 3 provide a summary of the samples collected during the April, June, and July 2019 sampling events. The samples collected by EA were analyzed by SGS North America (Dayton, New Jersey) for volatile organic compounds (VOCs) using Solid Waste (SW) 846 Method 8260C.

1.2 Data validation process

The data contained in the laboratory sampling delivery groups (SDGs) were validated using guidance and quality control (QC) criteria identified in the following documents (as appropriate):

- *Pre-Design Investigation Quality Assurance Project Plan for Sites FT005, LF008, ST010, SS014, DS002, and DS004 Performance-based Remediation for Niagara Falls ARS, New York*. Versar, Inc. (Mt. Pleasant, SC) and EA Engineering, Science, and Technology, Inc. (Hunt Valley, MD). January 2014.

- *Department of Defense (DoD) Department of Energy (DOE) Quality Systems Manual (QSM) for Environmental Laboratories. Department of Defense Quality Systems Manual Version 5, Department of Energy Quality Systems for Analytical Services Version 3*. July 2013.

- *USEPA Hazardous Waste Support Section Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C. SOP No. HW-24. Revision 4*. September 2014.

- *FAQs: Quality Systems Manual (QSM) Version 5.0. http://www.denix.osd.mil/edqw/home/what-s-new/unassigned/dod-quality-systems-for-environmental-laboratories-dod-qsm-faqs-version-5/*

- *United States Environmental Protection Agency (USEPA) Hazardous Waste Support Section SOP No. HW-34 Revision 3 Trace Volatile Data Validation*. February 2013.

Areas reviewed included completeness of data, chain of custody, holding times, preservation, blank spike/laboratory control samples, matrix spike/matrix spike duplicate (MS/MSD) samples, laboratory duplicates, field duplicates, surrogate recoveries, preparation/calibration blanks, initial and continuing calibrations, instrument tunes, and detection limits.

Table 1 – April 2019 Sampling matrix summary.

EA field identification	*Laboratory identification*	*Notes*
SDG JC86604 (April 2019 sampling event)		
MW10-2-2019-04-17	JC86604-1	
MW10-10A-2019-04-17	JC86604-2	
MW10-10D-2019-04-17	JC86604-3	
PW10-2-2019-04-17	JC86604-4	
PZ10-7-2019-04-17	JC86604-5	
PDB-BLANK-2019-04-17	JC86604-6	Equipment blank
TRIP BLANK	JC86604-7	Trip blank
MW13-4-2019-04-17	JC86604-8	Used for MS/MSD samples
MW13-5A-2019-04-17	JC86604-9	
MW13-3-2019-04-17	JC86604-10	
PZ13-3D-2019-04-17	JC86604-11	
PW13-1-2019-04-17	JC86604-12	
MW13-5D-2019-04-17	JC86604-13	
FD-5-2019-04-17	JC86604-14	Field duplicate
RW5-2-2019-04-17	JC86604-15	Parent to field duplicate
RW5-1-2019-04-17	JC86604-16	
MW5-5D-2019-04-17	JC86604-17	
RW5-4-2019-04-17	JC86604-18	
MW8-1-2019-04-17	JC86604-19	
MW8-8-2019-04-17	JC86604-20	
MW8-10D-2019-04-17	JC86604-21	
CH8-01-2019-04-17	JC86604-22	

Table 2 – June 2019 Sampling matrix summary.

EA field identification	*Laboratory identification*	*Notes*
SDG JC90121 (June 2019 sampling event)		
PDB-BLANK-2019-06-18	JC90121-1	Equipment blank
TRIP-BLANK-2019-06-18	JC90121-2	Trip blank
MW10-3-2019-06-18	JC90121-3	
SW10-5-2019-06-18	JC90121-4	
SW10-8-2019-06-18	JC90121-5	Parent to field duplicate JC90121-6
SW-FD-10-2019-06-18	JC90121-6	Field duplicate
SW-10-7-2019-06-18	JC90121-7	
SW-10-6-2019-06-18	JC90121-8	
PZ10-7-2019-06-18	JC90121-9	
PW10-1-2019-06-18	JC90121-10	
MW10-7-2019-06-18	JC90121-11	
MW10-2-2019-06-18	JC90121-12	
PW10-2-2019-06-18	JC90121-13	
SW99-10-2019-06-18	JC90121-14	
SW99-14-2019-06-18	JC90121-15	

Table 2 – June 2019 Sampling matrix summary (continued).

EA field identification	*Laboratory identification*	*Notes*
SDG JC90121 (June 2019 sampling event) (continued)		
SW3-2-2019-06-18	JC90121-16	Used for MS/MSD samples
SW3-15-2019-06-18	JC90121-17	
SW3-3-2019-06-18	JC90121-18	
MW3-3DA-2019-06-18	JC90121-19	Used for MS/MSD samples
MW3-4DA-2019-06-18	JC90121-20	Parent to field duplicate JC90121-21
MW-FD-3-2019-06-18	JC90121-21	Field duplicate
PW3-3A-2019-06-18	JC90121-22	
PZ3-6D-2019-06-18	JC90121-23	
PZ3-7D-2019-06-18	JC90121-24	
PZ2-8D-2019-06-18	JC90121-25	
MW8-11D-2019-06-18	JC90121-26	
MW8-10D-2019-06-18	JC90121-27	
MW8-8-2019-06-18	JC90121-28	
CH8-01-2019-06-18	JC90121-29	
MW8-1-2019-06-18	JC90121-30	
SDG JC90273 (June 2019 sampling event)		
MW13-5A-2019-06-19	JC90273-1	
PZ13-3D-2019-06-19	JC90273-2	
PW13-1-2019-06-19	JC90273-3	
MW13-3-2019-06-19	JC90273-4	
MW13-5D-2019-06-19	JC90273-5	
MW13-4-2019-06-19	JC90273-6	Used for MS/MSD samples
MW13-4D-2019-06-19	JC90273-7	
PW13-4D-2019-06-19	JC90273-8	
RW5-1-2019-06-19	JC90273-9	
MW5-1DA-2019-06-19	JC90273-10	
RW5-4-2019-06-19	JC90273-11	
RW5-2-2019-06-19	JC90273-12	Parent to field duplicate
MW-FD-2019-06-19	JC90273-13	Field duplicate
MW5-6-2019-06-19	JC90273-14	
MW5-5D-2019-06-19	JC90273-15	
TRIP BLANK 2019-06-19	JC90273-16	Trip blank
MW5-P-2019-06-19	JC90273-17	

Table 3 – July 2019 Sampling matrix summary.

EA field identification	*Laboratory identification*	*Notes*
SDG JC91309 (July 2019 sampling event)		
MW10-10D-2019-07-08	JC91309-1	Used for MS/MSD samples
MW10-1DA-2019-07-08	JC91309-2	Parent to field duplicate
MW10-FD-2019-07-08	JC91309-3	Field duplicate
TRIP BLANK-07-08	JC91309-4	Trip blank

The summary of this review is presented in the following section and outlines data which are considered non-compliant with method requirements. It is recognized that depending on validation requirements, an analyte associated with a particular sample could receive multiple qualifiers; samples were qualified based on the most conservative qualifier.

Where necessary, the sample results are hand-qualified with data qualifiers to reflect data deficiencies on the accompanying sample result reports (Appendix A). A summary list of qualifiers used to flag the data and associated definitions accompany the reports.

1.3 Chain of custody and holding times

Tracking documentation (*e.g.*, chain of custody, laboratory sample receipt documents, *etc*.) accompanied the samples and was included in the laboratory deliverables. The following observations and inconsistencies relative to the samples collected and requested analyses were noted:

- Information (such as billing information, *etc*.) was not filled out in entirety on the chain of custodies. No qualification of the data was required.

- Samples in the SDGs were analyzed within the required 14-day holding time.

- Samples in the SDGs were reported as received by the laboratory within the required temperature range (less than 4ºC).

- EA noted on the chain of custody that only 8.5 vials were filled for sample JC90121-19. The number of vials was sufficient to complete the analysis for this sample, therefore, no qualification of the data was required.

- EA requested a job change order from the laboratory to revise the sample identifications for sample JC91309-1 from MW10-10A-2019-07-08 to MW10-10D-2019-07-08 and for sample JC91309-2 from MW10-10D-2019-07-08 to MW10-10A-2019-07-08. No qualification of the data was required.

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2.0 Volatile organic compound validation

2.1 Data completeness and deliverables

A narrative summarizing the analyses was included in the SDGs prepared by the laboratory. Tables 1 - 3 summarize the samples analyzed for VOCs using Method 8260C. The results were summarized on standardized laboratory report forms listing each individual VOC. In summary, based on the scope of the validation efforts as described herein, the data were deemed complete and useable (as qualified).

2.2 Surrogate recoveries

Surrogate compounds (Dibromofluoromethane, 1,2-Dichloroethane-D4, Toluene-D8, and 4-Bromofluorobenzene) appear to have been analyzed consistent with method requirements. Surrogate recoveries for the samples were within the control limits. No qualification of the data relative to surrogate recoveries was required.

No transcription/calculation errors between the raw data and the reported data were identified in the surrogates reviewed.

2.3 Blank spike samples

Blank spike samples appear to have been prepared, extracted, and analyzed consistent with method requirements. The blank spike analyte recoveries were between the established lower control limits (LCLs) and upper control limits (UCLs) with the exception of V2E6740-BS. Vinyl chloride passed the internal control limits for percent recovery, but exceeded the DoD QSM-5 UCL, indicating a high bias. The associated samples did not have vinyl chloride detected, therefore, no qualification was necessary.

No transcription/calculation errors between the blank spike raw data and the reported data were identified in the samples reviewed.

2.4 Matrix spike/matrix spike duplicate samples

The VOC MS/MSD recoveries were within DoD specified limits for the spiked analytes except for those listed below in Table 4. As noted in the table below, qualification of the data was based upon whether the LCL or the UCL was exceeded and whether the compound was detected in the MS/MSD sample. The relative percent difference (RPD) between the MS/MSD samples were within established control limits except for those listed below in Table 4.

Table 4 - MS/MSD outliers.

MS/MSD / VOC	*Qualifier in parent sample*
JC86604-17 MS/MSD	
cis-1,2-Dichloroethene	Exceeded LCL; no qualification, high parent sample concentration
Vinyl Chloride	Exceeded UCL; no qualification, high parent sample concentration
1,4-Dioxane (MS only)	Exceeded UCL; no qualification, not detected in parent sample
JC90121-16 MS/MSD	
1,4-Dioxane	Exceeded RPD; no qualification, not detected in parent sample
JC91309-1 MS	
cis-1,2-Dichloroethene	Exceeded LCL; no qualification, high parent sample concentration

No transcription/calculation errors between the raw data and the reported data were identified in the MS/MSD samples reviewed.

2.5 Blank contamination

Method blank samples appear to have been prepared, extracted, analyzed, and reported consistent with method requirements. One equipment blank (JC86604-6) and four trip blanks (JC86604-7, JC90121-2, JC90273-16, and JC91309-4) were collected for analyses. Blank contamination was not identified in the method blanks associated with the project. Chloroform was detected at 2.9 parts per billion (ppb) in equipment blank JC86604-6 and at 2.8 ppb in trip blank JC86604-7. Chloroform was not detected in the associated samples, therefore, no qualification of the data was necessary.

2.6 Instrument performance checks

Instrument performance check samples (Bromofluorobenzene) appear to have been analyzed and reported consistent with method requirements. No transcription/calculation errors between the raw data and the reported data were identified in the instrument check samples reviewed and the spectra of the mass calibration compounds were acceptable. Therefore, qualification of the data with respect to instrument performance checks was not required.

2.7 Target analytes

Report forms (sample and blank), data system reports (quantitation reports), chromatograms, and mass spectra for identified analytes were prepared by the laboratory. Collective review of standard and sample mass spectra as well as the relative intensities of the characteristic ions for both the sample and reference spectra appears to support the majority of the laboratory reported analytes. Relative retention times (RRTs) of reported analytes were acceptable (0.06 RRT units). The relative intensity of the characteristic ions in some samples exceeded the 20% relative intensity of the reference spectra and/or the

ions present in the reference spectra at greater than 10% relative intensity were missing in the sample spectrum. It is, however, the validator's opinion that the laboratory correctly reported the detected analytes and qualification of the data is not necessary.

2.8 Compound quantitation

Transcription/calculation errors between the raw data and the reported data were not identified in the samples reviewed; qualification of the data was not required.

2.9 Initial and continuing calibration verifications

Reporting forms, quantitation reports, chromatograms, and mass spectra for the initial and continuing calibrations were prepared by the laboratory. The percent relative standard deviation (%RSD) for initial calibration (IC) analytes met established criteria and, therefore, no qualification with respect to ICs was required.

Volatile organic compounds with a percent difference (%D) not meeting DoD method criteria between the initial and continuing calibrations [including initial verification calibrations (ICV)] occurred with the continuing calibration associated with the samples noted below. Consistent with data validation requirements, the outlying volatile compound in the samples associated with the corresponding calibration sample were qualified as estimated ("UJ") (see below).

VA9738-CC9645-20 (JC91309-4):

- Vinyl Chloride

V4B3811-CC3793-20 (JC86604-1 through JC86604-14):

- Chloromethane

V2E6740-CC6722-20 (JC86604-15 through JC86604-22):

- 1,4-Dioxane
- Freon 113

The average relative response factors (RRFs) associated with initial and continuing calibrations met established minimum RRF criteria.

No transcription/calculation errors between the raw data and the reported data were identified in the calibrations reviewed.

2.10 Internal standards

Internal standards were within established limits and, therefore, no qualification of the data relative to internal standard criteria was required.

2.11 Sampling duplicates

Field duplicate samples were collected (JC86604-14, JC90121-6, JC90121-21, JC90273-13 and JC91309-3). The parent samples associated with the blind field duplicates were provided by EA; the parent samples were identified as JC86604-15, JC90121-5, JC90121-20, JC90273-12 and JC91309-2, respectively. Compared to the parent sample, the calculated RPDs for the field duplicate samples were within the control limit (<50%) and, therefore, no qualification of the data relative to field duplicate precision criteria was required.

APPENDICES

Data Validation Report

Niagara Falls Air Reserve Station
Niagara Falls, New York

SDGs: JC86604, JC90121, JC90273, and JC91309
Sites 3, 5, 8, 10, and 13

April, June, and July 2019 Sampling Events

Appendices Table of Contents

Appendix A – Data Validated (Qualified) Forms – *Report of Analysis*

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

Source: *USEPA Hazardous Waste Support Section Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C. SOP No. HW-24. Revision 4.* September 2014.

SDG: JC86604

Report of Analysis

Client Sample ID:	MW10-2-2019-04-17		
Lab Sample ID:	JC86604-1	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90112.D	1	04/23/19 10:09	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.91	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.2	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW10-10A-2019-04-17		
Lab Sample ID:	JC86604-2	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90113.D	1	04/23/19 10:37	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	2.7	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW10-10D-2019-04-17		
Lab Sample ID:	JC86604-3	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90117.D	1	04/23/19 12:29	CSF	n/a	n/a	V4B3811
Run #2	4B90120.D	20	04/23/19 13:53	CSF	n/a	n/a	V4B3811

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

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	1.6	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	19.0	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	1.3	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	826 [b]	20	15	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	6.2	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

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

Report of Analysis

Client Sample ID:	PW10-2-2019-04-17		
Lab Sample ID:	JC86604-4	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90114.D	1	04/23/19 11:05	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ10-7-2019-04-17		
Lab Sample ID:	JC86604-5	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90115.D	1	04/23/19 11:33	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	3J
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PDB-BLANK-2019-04-17		
Lab Sample ID:	JC86604-6	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90116.D	1	04/23/19 12:01	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	2.9	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	WJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	JC86604-7	Date Sampled:	04/17/19
Matrix:	AQ - Trip Blank Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90110.D	1	04/23/19 09:13	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	2.8	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	U J
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW13-4-2019-04-17		
Lab Sample ID:	JC86604-8	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90111.D	1	04/23/19 09:41	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	8.9	10	7.5	6.9	ug/l	J
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW13-5A-2019-04-17		
Lab Sample ID:	JC86604-9	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90121.D	1	04/23/19 14:21	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.46	0.50	0.45	0.43	ug/l	J
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.3	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW13-3-2019-04-17		
Lab Sample ID:	JC86604-10	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90122.D	1	04/23/19 14:49	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.54	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	24.0	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.3	2.0	1.0	0.95	ug/l	J
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.84	1.0	0.75	0.51	ug/l	J
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ13-3D-2019-04-17		
Lab Sample ID:	JC86604-11	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90123.D	1	04/23/19 15:17	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PW13-1-2019-04-17		
Lab Sample ID:	JC86604-12	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90124.D	1	04/23/19 15:46	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	17.2	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.0	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW13-5D-2019-04-17		
Lab Sample ID:	JC86604-13	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90125.D	1	04/23/19 16:13	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	55.3	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.3	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

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

Report of Analysis

Client Sample ID:	FD-5-2019-04-17		
Lab Sample ID:	JC86604-14	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B90126.D	1	04/23/19 16:42	CSF	n/a	n/a	V4B3811
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane [a]	0.85 U	1.0	0.85	0.76	ug/l	UJ
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	28.2	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	ug/l	

U = Not detected LOD = Limit of Detection
LOQ = Limit of Quantitation DL = Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW5-2-2019-04-17		
Lab Sample ID:	JC86604-15	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152087.D	1	04/23/19 11:15	ED	n/a	n/a	V2E6740
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	28.9	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [a]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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

4.16 4

Client Sample ID:	RW5-1-2019-04-17		
Lab Sample ID:	JC86604-16	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152094.D	1	04/23/19 14:49	ED	n/a	n/a	V2E6740
Run #2	2E152097.D	10	04/23/19 16:20	ED	n/a	n/a	V2E6740

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

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	2.6	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	228 [a]	10	7.5	5.1	ug/l	
156-60-5	trans-1,2-Dichloroethene	11.6	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [b]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [b]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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

Report of Analysis

Client Sample ID:	MW5-5D-2019-04-17		
Lab Sample ID:	JC86604-17	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2E152086.D	5	04/23/19 10:44	ED	n/a	n/a	V2E6740
Run #2	2E152098.D	50	04/23/19 16:50	ED	n/a	n/a	V2E6740

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

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	38 U	50	38	30	ug/l	
71-43-2	Benzene	2.3 U	2.5	2.3	2.1	ug/l	
74-97-5	Bromochloromethane	2.5 U	5.0	2.5	2.4	ug/l	
75-27-4	Bromodichloromethane	3.8 U	5.0	3.8	2.9	ug/l	
75-25-2	Bromoform	3.8 U	5.0	3.8	3.2	ug/l	
74-83-9	Bromomethane	8.8 U	10	8.8	8.2	ug/l	
78-93-3	2-Butanone (MEK)	38 U	50	38	34	ug/l	
75-15-0	Carbon disulfide	5.0 U	10	5.0	4.8	ug/l	
56-23-5	Carbon tetrachloride	3.8 U	5.0	3.8	2.8	ug/l	
108-90-7	Chlorobenzene	3.8 U	5.0	3.8	2.8	ug/l	
75-00-3	Chloroethane	3.8 U	5.0	3.8	3.6	ug/l	
67-66-3	Chloroform	3.8 U	5.0	3.8	2.5	ug/l	
74-87-3	Chloromethane	4.3 U	5.0	4.3	3.8	ug/l	
110-82-7	Cyclohexane	10 U	25	10	3.9	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	7.5 U	10	7.5	6.0	ug/l	
124-48-1	Dibromochloromethane	3.8 U	5.0	3.8	2.8	ug/l	
106-93-4	1,2-Dibromoethane	2.5 U	5.0	2.5	2.4	ug/l	
95-50-1	1,2-Dichlorobenzene	3.8 U	5.0	3.8	2.7	ug/l	
541-73-1	1,3-Dichlorobenzene	3.8 U	5.0	3.8	2.7	ug/l	
106-46-7	1,4-Dichlorobenzene	3.8 U	5.0	3.8	2.5	ug/l	
75-71-8	Dichlorodifluoromethane	7.5 U	10	7.5	6.8	ug/l	
75-34-3	1,1-Dichloroethane	3.8 U	5.0	3.8	2.8	ug/l	
107-06-2	1,2-Dichloroethane	3.8 U	5.0	3.8	3.0	ug/l	
75-35-4	1,1-Dichloroethene	3.8 U	5.0	3.8	3.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	712	5.0	3.8	2.5	ug/l	
156-60-5	trans-1,2-Dichloroethene	33.4	5.0	3.8	2.7	ug/l	
78-87-5	1,2-Dichloropropane	3.8 U	5.0	3.8	2.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.5 U	5.0	2.5	2.4	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.5 U	5.0	2.5	2.2	ug/l	
123-91-1	1,4-Dioxane [b]	380 U	630	380	350	ug/l	UJ
100-41-4	Ethylbenzene	3.8 U	5.0	3.8	3.0	ug/l	
76-13-1	Freon 113 [b]	13 U	25	13	9.7	ug/l	UJ

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:	RW5-4-2019-04-17		
Lab Sample ID:	JC86604-18	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152088.D	1	04/23/19 11:45	ED	n/a	n/a	V2E6740
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.44	0.50	0.45	0.43	ug/l	J
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.7	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [a]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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:	MW8-1-2019-04-17		
Lab Sample ID:	JC86604-19	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152089.D	1	04/23/19 12:16	ED	n/a	n/a	V2E6740
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	2.4	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	17.2	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.1	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [a]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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

Report of Analysis

Client Sample ID:	MW8-8-2019-04-17		
Lab Sample ID:	JC86604-20	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152090.D	1	04/23/19 12:46	ED	n/a	n/a	V2E6740
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [a]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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:	MW8-10D-2019-04-17		
Lab Sample ID:	JC86604-21	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152091.D	1	04/23/19 13:17	ED	n/a	n/a	V2E6740
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.7	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [a]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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:	CH8-01-2019-04-17		
Lab Sample ID:	JC86604-22	Date Sampled:	04/17/19
Matrix:	AQ - Ground Water	Date Received:	04/18/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E152092.D	1	04/23/19 13:48	ED	n/a	n/a	V2E6740
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.71	1.0	0.75	0.51	ug/l	J
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane [a]	75 U	130	75	69	ug/l	UJ
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113 [a]	2.5 U	5.0	2.5	1.9	ug/l	UJ

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

SDG: JC91309

Report of Analysis

Client Sample ID:	TRIP BLANK-07-08		
Lab Sample ID:	JC91309-4	Date Sampled:	07/08/19
Matrix:	AQ - Trip Blank Water	Date Received:	07/09/19
Method:	SW846 8260C	Percent Solids:	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride [a]	0.80 U	1.0	0.80	0.79	ug/l	UJ
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

(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

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

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

6265401

SGS Job Number: JC90121

Sampling Date: 06/18/19

Report to:

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Total number of pages in report: 504

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.

Brian McGuire
General Manager

Client Service contact: Beth Wasserman 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC90121-1	06/18/19	07:30	LM	06/19/19	AQ	Ground Water	PDB-BLANK-2019-06-18
JC90121-2	06/18/19	15:25	LM	06/19/19	AQ	Trip Blank Water	TRIP-BLANK-1
JC90121-3	06/18/19	10:35	LM	06/19/19	AQ	Ground Water	MW10-3-2019-06-18
JC90121-4	06/18/19	09:40	LM	06/19/19	AQ	Ground Water	SW10-5-2019-06-18
JC90121-5	06/18/19	10:00	LM	06/19/19	AQ	Ground Water	SW10-8-2019-06-18
JC90121-6	06/18/19	00:00	LM	06/19/19	AQ	Ground Water	SW-FD-10-2019-06-18
JC90121-7	06/18/19	09:50	LM	06/19/19	AQ	Ground Water	SW-10-7-2019-06-18
JC90121-8	06/18/19	09:45	LM	06/19/19	AQ	Ground Water	SW-10-6-2019-06-18
JC90121-9	06/18/19	11:05	LM	06/19/19	AQ	Ground Water	PZ10-7-2019-06-18
JC90121-10	06/18/19	11:00	LM	06/19/19	AQ	Ground Water	PW10-1-2019-06-18
JC90121-11	06/18/19	10:50	LM	06/19/19	AQ	Ground Water	MW10-7-2019-06-18
JC90121-12	06/18/19	10:45	LM	06/19/19	AQ	Ground Water	MW10-2-2019-06-18
JC90121-13	06/18/19	10:40	LM	06/19/19	AQ	Ground Water	PW10-2-2019-06-18

Sample Summary
(continued)

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC90121-14	06/18/19	08:48	LM	06/19/19	AQ	Ground Water	SW99-10-2019-06-18
JC90121-16	06/18/19	13:10	LM	06/19/19	AQ	Ground Water	SW3-2-2019-06-18
JC90121-16D	06/18/19	13:10	LM	06/19/19	AQ	Water Dup/MSD	SW3-2-2019-06-18
JC90121-16S	06/18/19	13:10	LM	06/19/19	AQ	Water Matrix Spike	SW3-2-2019-06-18
JC90121-17	06/18/19	13:25	LM	06/19/19	AQ	Ground Water	SW3-15-2019-06-18
JC90121-18	06/18/19	13:20	LM	06/19/19	AQ	Ground Water	SW3-3-2019-06-18
JC90121-19	06/18/19	13:35	LM	06/19/19	AQ	Ground Water	MW3-3DA-2019-06-18
JC90121-19D	06/18/19	13:35	LM	06/19/19	AQ	Water Dup/MSD	MW3-3DA-2019-06-18
JC90121-19S	06/18/19	13:35	LM	06/19/19	AQ	Water Matrix Spike	MW3-3DA-2019-06-18
JC90121-20	06/18/19	14:10	LM	06/19/19	AQ	Ground Water	MW3-4DA-2019-06-18
JC90121-21	06/18/19	00:00	LM	06/19/19	AQ	Ground Water	MWFD-3-2019-06-18
JC90121-22	06/18/19	13:55	LM	06/19/19	AQ	Ground Water	PW3-3A-2019-06-18
JC90121-23	06/18/19	13:45	LM	06/19/19	AQ	Ground Water	PZ3-6D-2019-06-18

Sample Summary
(continued)

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JC90121-24	06/18/19	11:45	LM	06/19/19	AQ	Ground Water	PZ3-7D-2019-06-18
JC90121-25	06/18/19	11:55	LM	06/19/19	AQ	Ground Water	PZ3-8D-2019-06-18
JC90121-26	06/18/19	15:00	LM	06/19/19	AQ	Ground Water	MW8-11D-2019-06-18
JC90121-27	06/18/19	15:15	LM	06/19/19	AQ	Ground Water	MW8-10D-2019-06-18
JC90121-28	06/18/19	15:10	LM	06/19/19	AQ	Ground Water	MW8-8-2019-06-18
JC90121-29	06/18/19	15:40	LM	06/19/19	AQ	Ground Water	CH8-01-2019-06-18
JC90121-30	06/18/19	15:25	LM	06/19/19	AQ	Ground Water	MW8-1-2019-06-18

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EA Engineering	**Job No**	JC90121
Site:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY	**Report Date**	6/27/2019 9:30:37 AM

On 06/19/2019, 28 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC90121 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** V4B3896

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC90121-16MS, JC90121-16MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** VA9710

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC90121-19MS, JC90121-19MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** VX7807

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC90273-6MS, JC90273-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC90121-1	**PDB-BLANK-2019-06-18**					
No hits reported in this sample.						
JC90121-2	**TRIP-BLANK-1**					
No hits reported in this sample.						
JC90121-3	**MW10-3-2019-06-18**					
No hits reported in this sample.						
JC90121-4	**SW10-5-2019-06-18**					
No hits reported in this sample.						
JC90121-5	**SW10-8-2019-06-18**					
No hits reported in this sample.						
JC90121-6	**SW-FD-10-2019-06-18**					
No hits reported in this sample.						
JC90121-7	**SW-10-7-2019-06-18**					
No hits reported in this sample.						
JC90121-8	**SW-10-6-2019-06-18**					
No hits reported in this sample.						
JC90121-9	**PZ10-7-2019-06-18**					
No hits reported in this sample.						
JC90121-10	**PW10-1-2019-06-18**					
cis-1,2-Dichloroethene		4.5	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		1.1	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		0.94 J	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		13.8	1.0	0.80	ug/l	SW846 8260C

Summary of Hits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC90121-11	**MW10-7-2019-06-18**					
cis-1,2-Dichloroethene		18.9	1.0	0.75	ug/l	SW846 8260C
JC90121-12	**MW10-2-2019-06-18**					
cis-1,2-Dichloroethene		3.0	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		1.6	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		2.9	1.0	0.80	ug/l	SW846 8260C
JC90121-13	**PW10-2-2019-06-18**					
No hits reported in this sample.						
JC90121-14	**SW99-10-2019-06-18**					
No hits reported in this sample.						
JC90121-16	**SW3-2-2019-06-18**					
No hits reported in this sample.						
JC90121-17	**SW3-15-2019-06-18**					
No hits reported in this sample.						
JC90121-18	**SW3-3-2019-06-18**					
No hits reported in this sample.						
JC90121-19	**MW3-3DA-2019-06-18**					
cis-1,2-Dichloroethene		4.9	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		9.3	1.0	0.80	ug/l	SW846 8260C
JC90121-20	**MW3-4DA-2019-06-18**					
cis-1,2-Dichloroethene		4.7	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		5.5	1.0	0.80	ug/l	SW846 8260C
JC90121-21	**MWFD-3-2019-06-18**					
cis-1,2-Dichloroethene		4.2	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		4.6	1.0	0.80	ug/l	SW846 8260C

Summary of Hits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC90121-22	**PW3-3A-2019-06-18**					
cis-1,2-Dichloroethene		34.2	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		0.71 J	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		6.2	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		27.2	1.0	0.80	ug/l	SW846 8260C
JC90121-23	**PZ3-6D-2019-06-18**					
cis-1,2-Dichloroethene		2.0	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		1.4	1.0	0.80	ug/l	SW846 8260C
JC90121-24	**PZ3-7D-2019-06-18**					
cis-1,2-Dichloroethene		11.1	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		9.2	1.0	0.80	ug/l	SW846 8260C
JC90121-25	**PZ3-8D-2019-06-18**					
No hits reported in this sample.						
JC90121-26	**MW8-11D-2019-06-18**					
1,2-Dichloroethane		1.4	1.0	0.75	ug/l	SW846 8260C
JC90121-27	**MW8-10D-2019-06-18**					
cis-1,2-Dichloroethene		1.9	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		0.86 J	1.0	0.80	ug/l	SW846 8260C
JC90121-28	**MW8-8-2019-06-18**					
No hits reported in this sample.						
JC90121-29	**CH8-01-2019-06-18**					
Benzene		0.50	0.50	0.45	ug/l	SW846 8260C
cis-1,2-Dichloroethene		0.60 J	1.0	0.75	ug/l	SW846 8260C
JC90121-30	**MW8-1-2019-06-18**					
Benzene		2.1	0.50	0.45	ug/l	SW846 8260C
cis-1,2-Dichloroethene		2.9	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		0.58 J	1.0	0.75	ug/l	SW846 8260C
Toluene		1.3	1.0	0.75	ug/l	SW846 8260C

Summary of Hits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Vinyl chloride		3.6	1.0	0.80	ug/l	SW846 8260C

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	PDB-BLANK-2019-06-18		
Lab Sample ID:	JC90121-1	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91840.D	1	06/24/19 11:45	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PDB-BLANK-2019-06-18		
Lab Sample ID:	JC90121-1	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

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: TRIP-BLANK-1
Lab Sample ID: JC90121-2 **Date Sampled:** 06/18/19
Matrix: AQ - Trip Blank Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182403.D	1	06/26/19 12:21	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	TRIP-BLANK-1		
Lab Sample ID:	JC90121-2	**Date Sampled:**	06/18/19
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

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:	MW10-3-2019-06-18		
Lab Sample ID:	JC90121-3	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91841.D	1	06/24/19 12:13	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW10-3-2019-06-18		
Lab Sample ID:	JC90121-3	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

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:	SW10-5-2019-06-18		
Lab Sample ID:	JC90121-4	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91842.D	1	06/24/19 12:41	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	SW10-5-2019-06-18		
Lab Sample ID:	JC90121-4	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

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:	SW10-8-2019-06-18		
Lab Sample ID:	JC90121-5	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91843.D	1	06/24/19 13:09	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	SW10-8-2019-06-18		
Lab Sample ID:	JC90121-5	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

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-FD-10-2019-06-18
Lab Sample ID: JC90121-6 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91844.D	1	06/24/19 13:37	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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-FD-10-2019-06-18		
Lab Sample ID:	JC90121-6	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

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-10-7-2019-06-18
Lab Sample ID: JC90121-7 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91845.D	1	06/24/19 14:05	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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-10-7-2019-06-18		
Lab Sample ID:	JC90121-7	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

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-10-6-2019-06-18
Lab Sample ID: JC90121-8 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91846.D	1	06/24/19 14:34	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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-10-6-2019-06-18		
Lab Sample ID:	JC90121-8	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

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:	PZ10-7-2019-06-18		
Lab Sample ID:	JC90121-9	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91847.D	1	06/24/19 15:02	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ10-7-2019-06-18		
Lab Sample ID:	JC90121-9	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

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: PW10-1-2019-06-18
Lab Sample ID: JC90121-10 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91848.D	1	06/24/19 15:30	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.5	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.1	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PW10-1-2019-06-18		
Lab Sample ID:	JC90121-10	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.94	1.0	0.75	0.53	ug/l	J
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	13.8	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

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: MW10-7-2019-06-18
Lab Sample ID: JC90121-11 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91849.D	1	06/24/19 15:58	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	18.9	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW10-7-2019-06-18		
Lab Sample ID:	JC90121-11	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		80-120%
17060-07-0	1,2-Dichloroethane-D4	112%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

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:	MW10-2-2019-06-18		
Lab Sample ID:	JC90121-12	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91850.D	1	06/24/19 16:26	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.0	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW10-2-2019-06-18		
Lab Sample ID:	JC90121-12	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	1.6	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	2.9	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

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: PW10-2-2019-06-18
Lab Sample ID: JC90121-13 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91851.D	1	06/24/19 16:54	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PW10-2-2019-06-18		
Lab Sample ID:	JC90121-13	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

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: SW99-10-2019-06-18
Lab Sample ID: JC90121-14 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91852.D	1	06/24/19 17:22	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	SW99-10-2019-06-18		
Lab Sample ID:	JC90121-14	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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:	SW3-2-2019-06-18		
Lab Sample ID:	JC90121-16	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B91836.D	1	06/24/19 09:53	ED	n/a	n/a	V4B3896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	SW3-2-2019-06-18		
Lab Sample ID:	JC90121-16	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

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:	SW3-15-2019-06-18		
Lab Sample ID:	JC90121-17	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251083.D	1	06/25/19 21:56	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	SW3-15-2019-06-18		
Lab Sample ID:	JC90121-17	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

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: SW3-3-2019-06-18
Lab Sample ID: JC90121-18 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251084.D	1	06/25/19 22:24	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	SW3-3-2019-06-18		
Lab Sample ID:	JC90121-18	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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: MW3-3DA-2019-06-18
Lab Sample ID: JC90121-19 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251082.D	1	06/25/19 21:27	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.9	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW3-3DA-2019-06-18		
Lab Sample ID:	JC90121-19	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	9.3	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

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: MW3-4DA-2019-06-18
Lab Sample ID: JC90121-20 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251085.D	1	06/25/19 22:53	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.7	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW3-4DA-2019-06-18		
Lab Sample ID:	JC90121-20	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	5.5	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

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:	MWFD-3-2019-06-18		
Lab Sample ID:	JC90121-21	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251086.D	1	06/25/19 23:22	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.2	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MWFD-3-2019-06-18		
Lab Sample ID:	JC90121-21	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	4.6	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

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:	PW3-3A-2019-06-18		
Lab Sample ID:	JC90121-22	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251087.D	1	06/25/19 23:51	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	34.2	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.71	1.0	0.75	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PW3-3A-2019-06-18		
Lab Sample ID:	JC90121-22	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	6.2	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	27.2	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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:	PZ3-6D-2019-06-18		
Lab Sample ID:	JC90121-23	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251088.D	1	06/26/19 00:19	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.0	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ3-6D-2019-06-18		
Lab Sample ID:	JC90121-23	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	1.4	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

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: PZ3-7D-2019-06-18
Lab Sample ID: JC90121-24 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251089.D	1	06/26/19 00:48	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	11.1	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ3-7D-2019-06-18		
Lab Sample ID:	JC90121-24	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	9.2	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

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: PZ3-8D-2019-06-18
Lab Sample ID: JC90121-25 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251090.D	1	06/26/19 01:17	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ3-8D-2019-06-18		
Lab Sample ID:	JC90121-25	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

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: MW8-11D-2019-06-18
Lab Sample ID: JC90121-26 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251091.D	1	06/26/19 01:45	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	1.4	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW8-11D-2019-06-18		
Lab Sample ID:	JC90121-26	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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: MW8-10D-2019-06-18
Lab Sample ID: JC90121-27 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251092.D	1	06/26/19 02:14	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.9	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW8-10D-2019-06-18		
Lab Sample ID:	JC90121-27	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.86	1.0	0.80	0.79	ug/l	J
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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: MW8-8-2019-06-18
Lab Sample ID: JC90121-28 **Date Sampled:** 06/18/19
Matrix: AQ - Ground Water **Date Received:** 06/19/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251093.D	1	06/26/19 02:42	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW8-8-2019-06-18		
Lab Sample ID:	JC90121-28	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

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:	CH8-01-2019-06-18		
Lab Sample ID:	JC90121-29	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251094.D	1	06/26/19 03:11	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.50	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.60	1.0	0.75	0.51	ug/l	J
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	CH8-01-2019-06-18		
Lab Sample ID:	JC90121-29	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

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:	MW8-1-2019-06-18		
Lab Sample ID:	JC90121-30	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251095.D	1	06/26/19 03:39	BK	n/a	n/a	VA9710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	2.1	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.9	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.58	1.0	0.75	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW8-1-2019-06-18		
Lab Sample ID:	JC90121-30	**Date Sampled:**	06/18/19
Matrix:	AQ - Ground Water	**Date Received:**	06/19/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	1.3	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	3.6	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

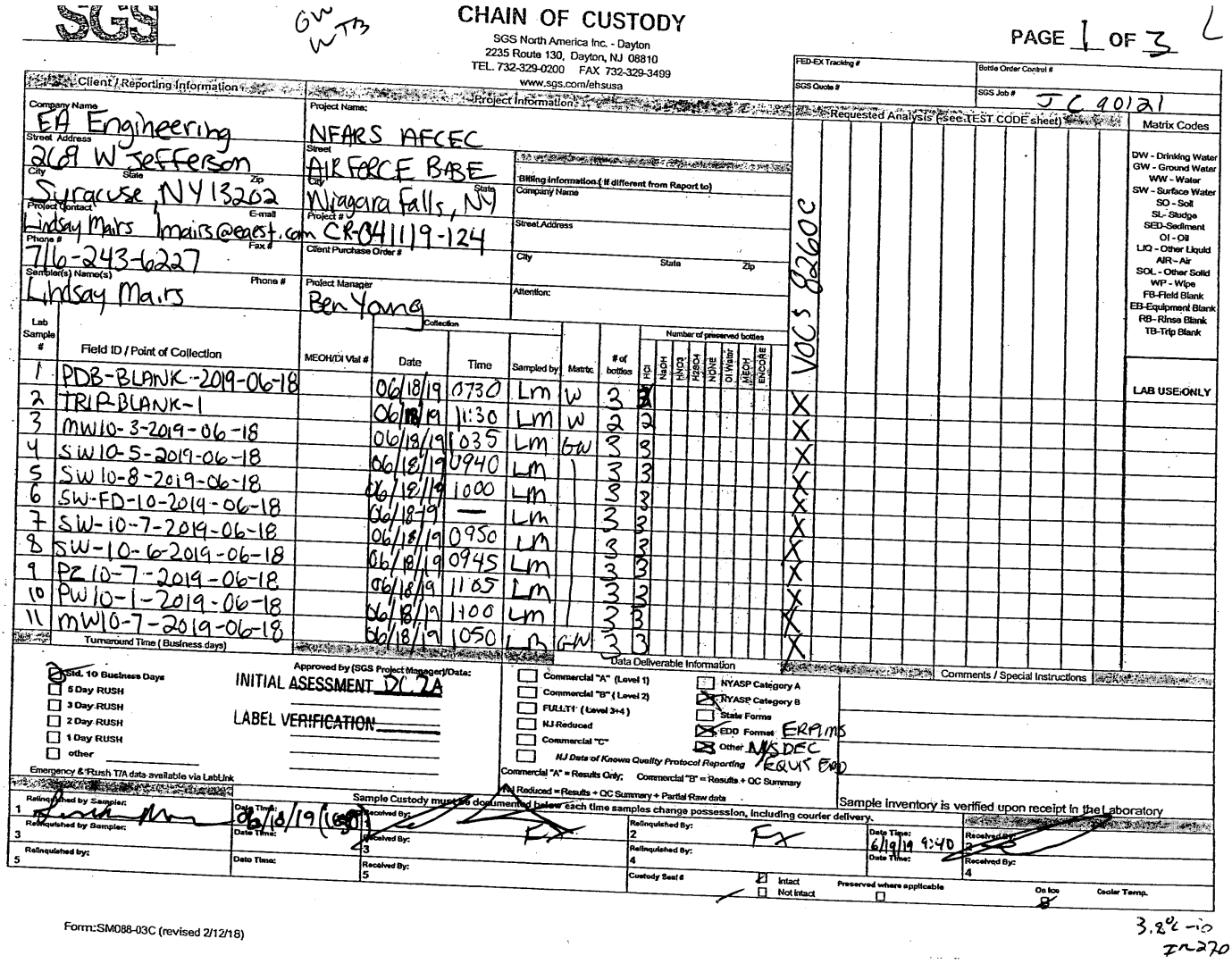
U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody
- QC Evaluation: DOD QSM5 Limits



CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

GW WTB

PAGE 1 OF 3

FED-EX Tracking #
Bottle Order Control #
SGS Quote #
SGS Job # JC90121

Client / Reporting Information
Company Name: EA Engineering
Street Address: 268 W Jefferson
City: Syracuse State: NY Zip: 13202
Project Contact: Lindsay Mairs E-mail: lmairs@eaest.com
Phone #: 716-243-6227 Fax #:
Sampler(s) Name(s): Lindsay Mairs Phone #:

Project Information
Project Name: NFARS AFCEC
Street: AIR FORCE BASE
City: Niagara Falls State: NY
Project #: CR-041119-124
Client Purchase Order #:
Project Manager: Ben Young

Billing Information (If different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - 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

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VOCs 8260C	LAB USE ONLY
1	PDB-BLANK-2019-06-18		06/18/19	0730	Lm	W	3	X								X	
2	TRIP BLANK-1		06/18/19	11:30	Lm	W	2	2								X	
3	MW10-3-2019-06-18		06/18/19	1035	Lm	GW	3	3								X	
4	SW10-5-2019-06-18		06/18/19	0940	Lm		3	3								X	
5	SW10-8-2019-06-18		06/18/19	1000	Lm		3	3								X	
6	SW-FD-10-2019-06-18		06/18/19	—	Lm		3	3								X	
7	SW-10-7-2019-06-18		06/18/19	0950	Lm		3	3								X	
8	SW-10-6-2019-06-18		06/18/19	0945	Lm		3	3								X	
9	PZ10-7-2019-06-18		06/18/19	1105	Lm		3	3								X	
10	PW10-1-2019-06-18		06/18/19	1100	Lm		3	3								X	
11	MW10-7-2019-06-18		06/18/19	1050	Lm	GW	3	3								X	

Turnaround Time (Business days)
- Std. 10 Business Days
- 5 Day RUSH
- 3 Day RUSH
- 2 Day RUSH
- 1 Day RUSH
- other

Approved by (SGS Project Manager)/Date:
INITIAL ASESSMENT DC 2A
LABEL VERIFICATION

Emergency & Rush T/A data available via LabLink

Data Deliverable Information
- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- 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 ERAMS
- Other NYSDEC REQUIREMENTS

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary; NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Sample inventory is verified upon receipt in the Laboratory

	Relinquished by Sampler:	Date Time:	Received By:
1		06/18/19 (1630)	
2			
3	Relinquished by Sampler:	Date Time:	Received By:
4			
5	Relinquished by:	Date Time:	Received By:

Custody Seal # Intact Not Intact Preserved where applicable On Ice Cooler Temp.

3.8°C - i0 IR270

Form:SM088-03C (revised 2/12/18)

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 2 OF 3

FED-EX Tracking #:
Bottle Order Control #:
SGS Quote #:
SGS Job #: JC90121

Client / Reporting Information

Company Name: EA Engineering
Street Address: 268 W Jefferson
City / State / Zip: Syracuse, NY 13202
Project Contact / E-mail: Lindsay Mairs lmairs@eaest.com
Phone # / Fax #: 716-243-6227
Sampler(s) Name(s) / Phone #: Lindsay Mairs

Project Information

Project Name: NFARS AFCEC
Street: AIR FORCE BASE
City / State: Niagara Falls, NY
Project # / PO #: CR-041119-124
Client Purchase Order #:
Project Manager: Ben Young

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

VOCs 8260C

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - 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

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved bottles: HCl	MeOH	NaHSO4	H2SO4	HNO3	DI Water	MeOH	Encore	LAB USE ONLY
12	MW10-2-2019-06-18		06/18/19	1045	LM	GW	3	3								X
13	PW10-2-2019-06-18			1040			3	3								X
14	SW99-10-2019-06-18			0848			3	3								X
15	SW99-14-2019-06-18			0832			3	3								X
16	SW3-2-2019-06-18			1310			9	9								X
17	SW3-15-2019-06-18			1325			3	3								X
18	SW3-3-2019-06-18			1320			3	3								X
19	MW3-3DA-2019-06-18			1335			9	9								X
20	MW3-4DA-2019-06-18			1410			3	2								X
21	MW3D-3-2019-06-18			—			3	3								X
22	PW3-3A-2019-06-18		06/18/19	1355	LM	GW	3	3								X

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved by (SGS Project Manager) / Date: INITIAL ASESSMENT 6/19

LABEL VERIFICATION

Emergency & Rush T/A data available via LabLink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLY (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [X] NYASP Category A
- [X] NYASP Category B
- [ ] State Forms
- [X] EDD Format ERAMS
- [X] Other NYSDEC EQUIS EDD

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary; NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

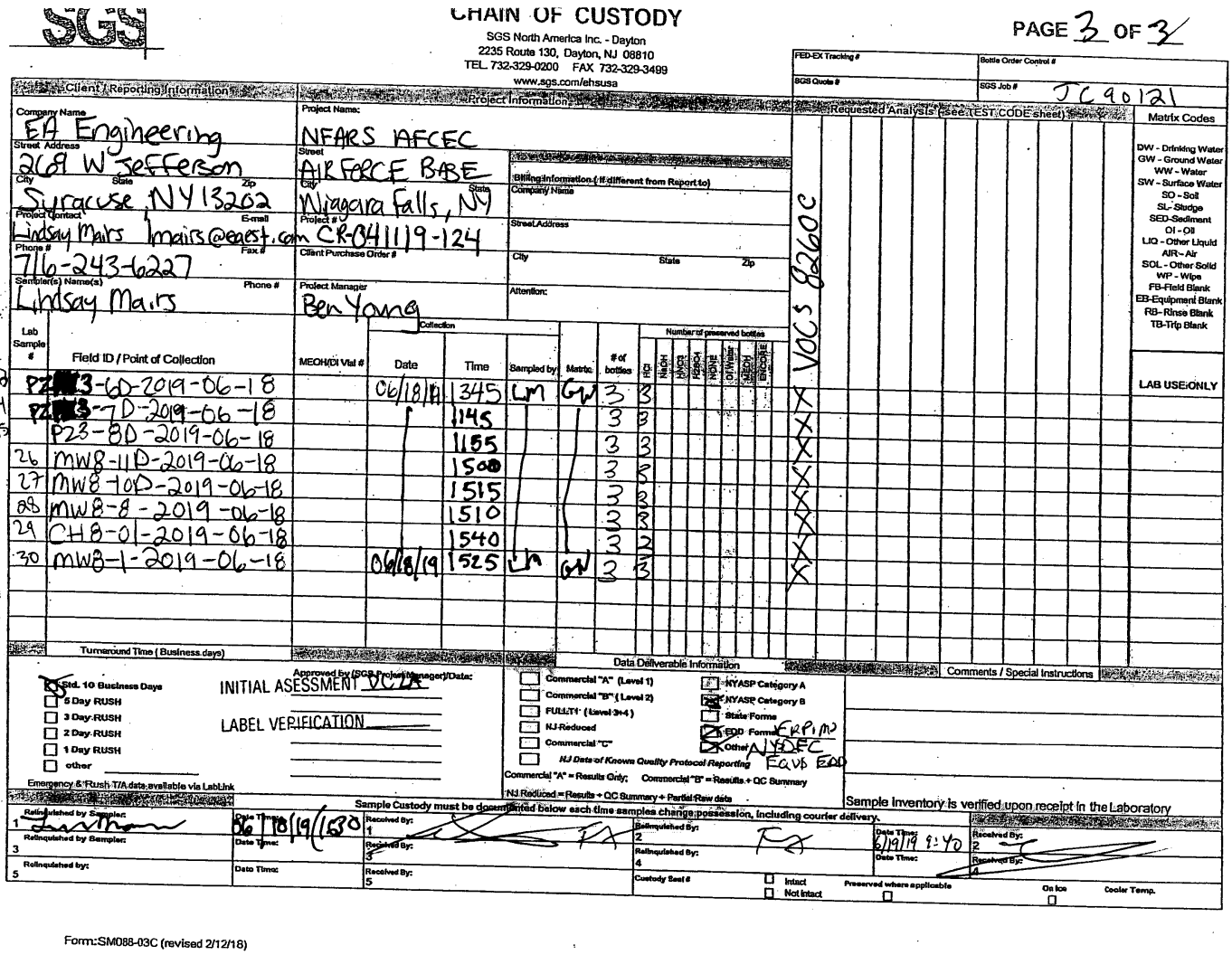
SW3-2-2019-06-18 (MS/MSD)
MW3-3DA-2019-06-18 (MS/MSD) Please note
I was sampling using a PPB and there was not enough water to completely fill bottle #9 therefore there are 8½ bottles for MW3-3DA-2019-06-18
Sample Inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:
1		06/18/19 16:30	
2			
3			
4			
5			

Custody Seal # — [ ] Intact [ ] Not Intact — Preserved where applicable — On Ice — Cooler Temp.

Form:SM088-03C (revised 2/12/18)



CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

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SGS Job # JC90121

Client / Reporting Information
Company Name: EA Engineering
Street Address: 208 W Jefferson
City State Zip: Syracuse, NY 13202
Project Contact: Lindsay Mairs
E-mail: lmairs@eaest.com
Phone #: 716-243-6227
Fax #:
Sampler(s) Name(s): Lindsay Mairs
Phone #:

Project Information
Project Name: NFARS AFCEC
Street: AIR FORCE BASE
City State: Niagara Falls, NY
Project #: CR-041119-124
Client Purchase Order #:
Project Manager: Ben Young

Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - 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

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	VOCs 8260C	LAB USE ONLY
23	PZ[redacted]3-6D-2019-06-18		06/18/19	1345	LM	GW	3	X	
24	PZ[redacted]3-7D-2019-06-18			1145			3	X	
25	P23-8D-2019-06-18			1155			3	X	
26	MW8-11D-2019-06-18			1500			3	X	
27	MW8-10D-2019-06-18			1515			3	X	
28	MW8-8-2019-06-18			1510			3	X	
29	CH8-01-2019-06-18			1540			3	X	
30	MW8-1-2019-06-18		06/18/19	1525	LM	GW	3	X	

Turnaround Time (Business days)
- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available via LabLink

Approved By (SGS Project Manager)/Date:
INITIAL ASESSMENT VCZA
LABEL VERIFICATION

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ-Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format EQUIS
- [X] Other NYSDEC EQUIS EDD

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

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		06/18/19 1530	1	2	6/19/19 9:40	2
3			3	4		4
5			5			

Custody Seal # — [ ] Intact [ ] Not Intact — Preserved where applicable — On Ice — Cooler Temp.

Sample Inventory is verified upon receipt in the Laboratory

Form:SM088-03C (revised 2/12/18)

SGS Sample Receipt Summary

Job Number: JC90121 **Client:** EA ENGINEERING **Project:** NIAGARA FALLS AIR RESERVE STATION (NFA

Date / Time Received: 6/19/2019 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 206717 pH 12+: 208717 Other: (Specify)

Comments -19: Client comments state that only 8.5 vials were filled instead of 9.

SM089-03
Rev. Date 12/7/17

Responded to by: CSR: N/A

Response Date: Response Date: 6/19/2019

Response:

Response: Proceed with analysis

Job Change Order: JC90121

Requested Date:	6/25/2019	**Received Date:**	6/19/2019
Account Name:	EA Engineering	**Due Date:**	6/26/2019
Project Description:	Niagara Falls Air Reserve Station (NFARS), Niagar	**Deliverable:**	NYASPB
C/O Initiated By:	BW **PM:** BW	**TAT (Days):**	7

==========

Sample #: JC90121-15 **Change:**
Cancel analysis.

Dept:

TAT: 7

SW99-14-2019-06-18

==========

Above Changes Per: Lindsay Mairs **Date/Time:** 6/25/2019 10:33:13 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

JC90121: Chain of Custody
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Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90121-1 Collected: 18-JUN-19 07:30 By: LM PDB-BLANK-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-1	SW846 8260C	24-JUN-19 11:45	ED			V8260SL
JC90121-2 Collected: 18-JUN-19 15:25 By: LM TRIP-BLANK-1			Received: 19-JUN-19 By: DG			
JC90121-2	SW846 8260C	26-JUN-19 12:21	DG			V8260SL
JC90121-3 Collected: 18-JUN-19 10:35 By: LM MW10-3-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-3	SW846 8260C	24-JUN-19 12:13	ED			V8260SL
JC90121-4 Collected: 18-JUN-19 09:40 By: LM SW10-5-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-4	SW846 8260C	24-JUN-19 12:41	ED			V8260SL
JC90121-5 Collected: 18-JUN-19 10:00 By: LM SW10-8-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-5	SW846 8260C	24-JUN-19 13:09	ED			V8260SL
JC90121-6 Collected: 18-JUN-19 00:00 By: LM SW-FD-10-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-6	SW846 8260C	24-JUN-19 13:37	ED			V8260SL
JC90121-7 Collected: 18-JUN-19 09:50 By: LM SW-10-7-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-7	SW846 8260C	24-JUN-19 14:05	ED			V8260SL
JC90121-8 Collected: 18-JUN-19 09:45 By: LM SW-10-6-2019-06-18			Received: 19-JUN-19 By: DG			
JC90121-8	SW846 8260C	24-JUN-19 14:34	ED			V8260SL

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90121-9 Collected: 18-JUN-19 11:05 By: LM PZ10-7-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-9	SW846 8260C	24-JUN-19 15:02	ED			V8260SL
JC90121-10 Collected: 18-JUN-19 11:00 By: LM PW10-1-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-10	SW846 8260C	24-JUN-19 15:30	ED			V8260SL
JC90121-11 Collected: 18-JUN-19 10:50 By: LM MW10-7-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-11	SW846 8260C	24-JUN-19 15:58	ED			V8260SL
JC90121-12 Collected: 18-JUN-19 10:45 By: LM MW10-2-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-12	SW846 8260C	24-JUN-19 16:26	ED			V8260SL
JC90121-13 Collected: 18-JUN-19 10:40 By: LM PW10-2-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-13	SW846 8260C	24-JUN-19 16:54	ED			V8260SL
JC90121-14 Collected: 18-JUN-19 08:48 By: LM SW99-10-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-14	SW846 8260C	24-JUN-19 17:22	ED			V8260SL
JC90121-16 Collected: 18-JUN-19 13:10 By: LM SW3-2-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-16	SW846 8260C	24-JUN-19 09:53	ED			V8260SL
JC90121-17 Collected: 18-JUN-19 13:25 By: LM SW3-15-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-17	SW846 8260C	25-JUN-19 21:56	BK			V8260SL

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90121-18 Collected: 18-JUN-19 13:20 By: LM SW3-3-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-18	SW846 8260C	25-JUN-19 22:24	BK			V8260SL
JC90121-19 Collected: 18-JUN-19 13:35 By: LM MW3-3DA-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-19	SW846 8260C	25-JUN-19 21:27	BK			V8260SL
JC90121-20 Collected: 18-JUN-19 14:10 By: LM MW3-4DA-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-20	SW846 8260C	25-JUN-19 22:53	BK			V8260SL
JC90121-21 Collected: 18-JUN-19 00:00 By: LM MWFD-3-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-21	SW846 8260C	25-JUN-19 23:22	BK			V8260SL
JC90121-22 Collected: 18-JUN-19 13:55 By: LM PW3-3A-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-22	SW846 8260C	25-JUN-19 23:51	BK			V8260SL
JC90121-23 Collected: 18-JUN-19 13:45 By: LM PZ3-6D-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-23	SW846 8260C	26-JUN-19 00:19	BK			V8260SL
JC90121-24 Collected: 18-JUN-19 11:45 By: LM PZ3-7D-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-24	SW846 8260C	26-JUN-19 00:48	BK			V8260SL
JC90121-25 Collected: 18-JUN-19 11:55 By: LM PZ3-8D-2019-06-18				Received: 19-JUN-19	By: DG	
JC90121-25	SW846 8260C	26-JUN-19 01:17	BK			V8260SL

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90121

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90121-26 Collected: 18-JUN-19 15:00 By: LM MW8-11D-2019-06-18			Received: 19-JUN-19		By: DG	
JC90121-26	SW846 8260C	26-JUN-19 01:45	BK			V8260SL
JC90121-27 Collected: 18-JUN-19 15:15 By: LM MW8-10D-2019-06-18			Received: 19-JUN-19		By: DG	
JC90121-27	SW846 8260C	26-JUN-19 02:14	BK			V8260SL
JC90121-28 Collected: 18-JUN-19 15:10 By: LM MW8-8-2019-06-18			Received: 19-JUN-19		By: DG	
JC90121-28	SW846 8260C	26-JUN-19 02:42	BK			V8260SL
JC90121-29 Collected: 18-JUN-19 15:40 By: LM CH8-01-2019-06-18			Received: 19-JUN-19		By: DG	
JC90121-29	SW846 8260C	26-JUN-19 03:11	BK			V8260SL
JC90121-30 Collected: 18-JUN-19 15:25 By: LM MW8-1-2019-06-18			Received: 19-JUN-19		By: DG	
JC90121-30	SW846 8260C	26-JUN-19 03:39	BK			V8260SL

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-1.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-1.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-1.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-1.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-1.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-1.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-1.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-2.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-2.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-2.2	Secured Storage	Jessica Potts	06/26/19 11:57	Retrieve from Storage
JC90121-2.2	Jessica Potts	GCMSX	06/26/19 11:58	Load on Instrument
JC90121-2.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90121-2.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90121-3.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-3.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-3.2	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-3.2	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-3.2	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-3.2	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-3.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-4.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-4.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-4.2	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-4.2	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-4.2	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-4.2	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-4.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-5.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-5.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-5.2	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-5.2	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-5.2	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-5.2	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-5.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-6.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-6.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-6.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-6.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-6.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-6.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-6.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-7.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-7.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-7.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-7.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-7.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-7.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-7.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-8.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-8.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-8.2	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-8.2	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-8.2	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-8.2	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-8.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-9.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-9.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-9.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-9.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-9.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-9.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-9.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-10.1	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-10.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-10.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-10.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-10.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-10.2	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-10.3	James Kwon	Secured Storage	06/19/19 13:31	Return to Storage
JC90121-11.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-11.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-11.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-11.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-11.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-11.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-11.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-12.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-12.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-12.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-12.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-12.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-12.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-12.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-13.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-13.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-13.2	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-13.2	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-13.2	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-13.2	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-13.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-14.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-14.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-14.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-14.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-14.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-14.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-14.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-15.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-15.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-15.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.1	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-16.1	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-16.1	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-16.1	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-16.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.2	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-16.2	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-16.2	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-16.2	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-16.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.3	Secured Storage	Edward Durner	06/24/19 09:27	Retrieve from Storage
JC90121-16.3	Edward Durner	GCMS4B	06/24/19 09:27	Load on Instrument
JC90121-16.3	GCMS4B	Eddie Huang	06/25/19 11:59	Unload from Instrument
JC90121-16.3	Eddie Huang	Secured Storage	06/25/19 11:59	Return to Storage
JC90121-16.4	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.5	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.6	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.7	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.8	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-16.9	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-17.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-17.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-17.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-17.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-17.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-17.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-17.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-18.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-18.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-18.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-18.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-18.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-18.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-18.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-19.1	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-19.2	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-19.3	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-19.3	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-19.3	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-19.3	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-19.3	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-19.4	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-19.4	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-19.4	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-19.4	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-19.4	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-19.5	James Kwon	Secured Storage	06/19/19 13:35	Return to Storage
JC90121-19.6	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-19.6	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-19.6	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-19.6	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-19.6	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-19.7	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-19.8	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-19.9	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-20.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-20.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-20.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-20.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-20.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-20.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-20.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-21.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-21.1	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-21.1	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-21.1	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-21.1	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-21.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-21.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-22.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-22.1	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-22.1	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-22.1	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-22.1	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-22.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-22.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-23.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-23.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-23.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-23.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-23.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-23.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-23.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-24.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-24.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-24.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-24.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-24.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-24.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-24.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-25.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-25.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-25.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-25.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-25.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-25.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-25.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-26.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-26.1	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-26.1	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-26.1	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-26.1	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-26.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-26.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-27.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-27.1	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-27.1	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-27.1	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-27.1	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-27.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-27.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-28.1	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-28.2	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-28.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/19/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90121-28.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-28.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-28.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-28.3	James Kwon	Secured Storage	06/19/19 13:37	Return to Storage
JC90121-29.1	James Kwon	Secured Storage	06/19/19 13:39	Return to Storage
JC90121-29.2	James Kwon	Secured Storage	06/19/19 13:39	Return to Storage
JC90121-29.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-29.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-29.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-29.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-29.3	James Kwon	Secured Storage	06/19/19 13:39	Return to Storage
JC90121-30.1	James Kwon	Secured Storage	06/19/19 13:39	Return to Storage
JC90121-30.2	James Kwon	Secured Storage	06/19/19 13:39	Return to Storage
JC90121-30.2	Secured Storage	Brittany Klimek	06/25/19 20:46	Retrieve from Storage
JC90121-30.2	Brittany Klimek	GCMSA	06/25/19 20:46	Load on Instrument
JC90121-30.2	GCMSA	Edward Durner	06/26/19 06:41	Unload from Instrument
JC90121-30.2	Edward Durner	Secured Storage	06/26/19 06:41	Return to Storage
JC90121-30.3	James Kwon	Secured Storage	06/19/19 13:39	Return to Storage

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V4B3896	SW846 8260C						
V4B3896-BS	67-64-1	Acetone	BSP	REC	107	%	39-160
V4B3896-BS	71-43-2	Benzene	BSP	REC	96	%	79-120
V4B3896-BS	74-97-5	Bromochloromethane	BSP	REC	99	%	78-123
V4B3896-BS	75-27-4	Bromodichloromethane	BSP	REC	107	%	79-125
V4B3896-BS	75-25-2	Bromoform	BSP	REC	115	%	66-130
V4B3896-BS	74-83-9	Bromomethane	BSP	REC	92	%	53-141
V4B3896-BS	78-93-3	2-Butanone (MEK)	BSP	REC	97	%	56-143
V4B3896-BS	75-15-0	Carbon disulfide	BSP	REC	87	%	64-133
V4B3896-BS	56-23-5	Carbon tetrachloride	BSP	REC	104	%	72-136
V4B3896-BS	108-90-7	Chlorobenzene	BSP	REC	101	%	82-118
V4B3896-BS	75-00-3	Chloroethane	BSP	REC	92	%	60-138
V4B3896-BS	67-66-3	Chloroform	BSP	REC	95	%	79-124
V4B3896-BS	74-87-3	Chloromethane	BSP	REC	87	%	50-139
V4B3896-BS	110-82-7	Cyclohexane	BSP	REC	92	%	71-130
V4B3896-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	97	%	62-128
V4B3896-BS	124-48-1	Dibromochloromethane	BSP	REC	111	%	74-126
V4B3896-BS	106-93-4	1,2-Dibromoethane	BSP	REC	90	%	77-121
V4B3896-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	98	%	80-119
V4B3896-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	99	%	80-119
V4B3896-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	99	%	79-118
V4B3896-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	82	%	32-152
V4B3896-BS	75-34-3	1,1-Dichloroethane	BSP	REC	94	%	77-125
V4B3896-BS	107-06-2	1,2-Dichloroethane	BSP	REC	98	%	73-128
V4B3896-BS	75-35-4	1,1-Dichloroethene	BSP	REC	94	%	71-131
V4B3896-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	96	%	78-123
V4B3896-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	95	%	75-124
V4B3896-BS	78-87-5	1,2-Dichloropropane	BSP	REC	100	%	78-122
V4B3896-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	103	%	75-124
V4B3896-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	103	%	73-127
V4B3896-BS	123-91-1	1,4-Dioxane	BSP	REC	102	%	59-139
V4B3896-BS	100-41-4	Ethylbenzene	BSP	REC	98	%	79-121
V4B3896-BS	76-13-1	Freon 113	BSP	REC	93	%	70-136
V4B3896-BS	591-78-6	2-Hexanone	BSP	REC	92	%	57-139
V4B3896-BS	74-88-4	Iodomethane	BSP	REC	97	%	69-131
V4B3896-BS	98-82-8	Isopropylbenzene	BSP	REC	97	%	72-131
V4B3896-BS	79-20-9	Methyl Acetate	BSP	REC	88	%	56-136
V4B3896-BS	108-87-2	Methylcyclohexane	BSP	REC	92	%	72-132
V4B3896-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	88	%	71-124
V4B3896-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	93	%	67-130
V4B3896-BS	75-09-2	Methylene chloride	BSP	REC	95	%	74-124
V4B3896-BS	100-42-5	Styrene	BSP	REC	101	%	78-123
V4B3896-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	97	%	71-121

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V4B3896-BS	127-18-4	Tetrachloroethene	BSP	REC	100	%	74-129
V4B3896-BS	108-88-3	Toluene	BSP	REC	97	%	80-121
V4B3896-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	98	%	69-129
V4B3896-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	99	%	69-130
V4B3896-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	99	%	74-131
V4B3896-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	101	%	80-119
V4B3896-BS	79-01-6	Trichloroethene	BSP	REC	102	%	79-123
V4B3896-BS	75-69-4	Trichlorofluoromethane	BSP	REC	97	%	65-141
V4B3896-BS	75-01-4	Vinyl chloride	BSP	REC	92	%	58-137
V4B3896-BS	1330-20-7	Xylene (total)	BSP	REC	99	%	79-121
V4B3896-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	98	%	80-119
V4B3896-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	99	%	81-118
V4B3896-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	89-112
V4B3896-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	99	%	85-114
JC90121-16MS	67-64-1	Acetone	MS	REC	84	%	39-160
JC90121-16MS	71-43-2	Benzene	MS	REC	89	%	79-120
JC90121-16MS	74-97-5	Bromochloromethane	MS	REC	92	%	78-123
JC90121-16MS	75-27-4	Bromodichloromethane	MS	REC	96	%	79-125
JC90121-16MS	75-25-2	Bromoform	MS	REC	100	%	66-130
JC90121-16MS	74-83-9	Bromomethane	MS	REC	91	%	53-141
JC90121-16MS	78-93-3	2-Butanone (MEK)	MS	REC	83	%	56-143
JC90121-16MS	75-15-0	Carbon disulfide	MS	REC	85	%	64-133
JC90121-16MS	56-23-5	Carbon tetrachloride	MS	REC	101	%	72-136
JC90121-16MS	108-90-7	Chlorobenzene	MS	REC	93	%	82-118
JC90121-16MS	75-00-3	Chloroethane	MS	REC	93	%	60-138
JC90121-16MS	67-66-3	Chloroform	MS	REC	88	%	79-124
JC90121-16MS	74-87-3	Chloromethane	MS	REC	89	%	50-139
JC90121-16MS	110-82-7	Cyclohexane	MS	REC	97	%	71-130
JC90121-16MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	85	%	62-128
JC90121-16MS	124-48-1	Dibromochloromethane	MS	REC	97	%	74-126
JC90121-16MS	106-93-4	1,2-Dibromoethane	MS	REC	83	%	77-121
JC90121-16MS	95-50-1	1,2-Dichlorobenzene	MS	REC	89	%	80-119
JC90121-16MS	541-73-1	1,3-Dichlorobenzene	MS	REC	92	%	80-119
JC90121-16MS	106-46-7	1,4-Dichlorobenzene	MS	REC	92	%	79-118
JC90121-16MS	75-71-8	Dichlorodifluoromethane	MS	REC	105	%	32-152
JC90121-16MS	75-34-3	1,1-Dichloroethane	MS	REC	89	%	77-125
JC90121-16MS	107-06-2	1,2-Dichloroethane	MS	REC	88	%	73-128
JC90121-16MS	75-35-4	1,1-Dichloroethene	MS	REC	95	%	71-131
JC90121-16MS	156-59-2	cis-1,2-Dichloroethene	MS	REC	91	%	78-123
JC90121-16MS	156-60-5	trans-1,2-Dichloroethene	MS	REC	91	%	75-124
JC90121-16MS	78-87-5	1,2-Dichloropropane	MS	REC	92	%	78-122
JC90121-16MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	95	%	75-124
JC90121-16MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	93	%	73-127
JC90121-16MS	123-91-1	1,4-Dioxane	MS	REC	92	%	59-139
JC90121-16MS	100-41-4	Ethylbenzene	MS	REC	92	%	79-121

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-16MS	76-13-1	Freon 113	MS	REC	96	%	70-136
JC90121-16MS	591-78-6	2-Hexanone	MS	REC	79	%	57-139
JC90121-16MS	74-88-4	Iodomethane	MS	REC	95	%	69-131
JC90121-16MS	98-82-8	Isopropylbenzene	MS	REC	91	%	72-131
JC90121-16MS	79-20-9	Methyl Acetate	MS	REC	78	%	56-136
JC90121-16MS	108-87-2	Methylcyclohexane	MS	REC	91	%	72-132
JC90121-16MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	79	%	71-124
JC90121-16MS	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	83	%	67-130
JC90121-16MS	75-09-2	Methylene chloride	MS	REC	88	%	74-124
JC90121-16MS	100-42-5	Styrene	MS	REC	91	%	78-123
JC90121-16MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	89	%	71-121
JC90121-16MS	127-18-4	Tetrachloroethene	MS	REC	96	%	74-129
JC90121-16MS	108-88-3	Toluene	MS	REC	91	%	80-121
JC90121-16MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	85	%	69-129
JC90121-16MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	87	%	69-130
JC90121-16MS	71-55-6	1,1,1-Trichloroethane	MS	REC	96	%	74-131
JC90121-16MS	79-00-5	1,1,2-Trichloroethane	MS	REC	90	%	80-119
JC90121-16MS	79-01-6	Trichloroethene	MS	REC	99	%	79-123
JC90121-16MS	75-69-4	Trichlorofluoromethane	MS	REC	107	%	65-141
JC90121-16MS	75-01-4	Vinyl chloride	MS	REC	99	%	58-137
JC90121-16MS	1330-20-7	Xylene (total)	MS	REC	91	%	79-121
JC90121-16MS	1868-53-7	Dibromofluoromethane	MS	SURR	99	%	80-119
JC90121-16MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	97	%	81-118
JC90121-16MS	2037-26-5	Toluene-D8	MS	SURR	96	%	89-112
JC90121-16MS	460-00-4	4-Bromofluorobenzene	MS	SURR	101	%	85-114
JC90121-16MSD	67-64-1	Acetone	MSD	REC	91	%	39-160
JC90121-16MSD	67-64-1	Acetone	MSD	RPD	7	%	20
JC90121-16MSD	71-43-2	Benzene	MSD	REC	93	%	79-120
JC90121-16MSD	71-43-2	Benzene	MSD	RPD	4	%	20
JC90121-16MSD	74-97-5	Bromochloromethane	MSD	REC	95	%	78-123
JC90121-16MSD	74-97-5	Bromochloromethane	MSD	RPD	4	%	20
JC90121-16MSD	75-27-4	Bromodichloromethane	MSD	REC	99	%	79-125
JC90121-16MSD	75-27-4	Bromodichloromethane	MSD	RPD	3	%	20
JC90121-16MSD	75-25-2	Bromoform	MSD	REC	104	%	66-130
JC90121-16MSD	75-25-2	Bromoform	MSD	RPD	5	%	20
JC90121-16MSD	74-83-9	Bromomethane	MSD	REC	95	%	53-141
JC90121-16MSD	74-83-9	Bromomethane	MSD	RPD	4	%	20
JC90121-16MSD	78-93-3	2-Butanone (MEK)	MSD	REC	89	%	56-143
JC90121-16MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	6	%	20
JC90121-16MSD	75-15-0	Carbon disulfide	MSD	REC	91	%	64-133
JC90121-16MSD	75-15-0	Carbon disulfide	MSD	RPD	8	%	20
JC90121-16MSD	56-23-5	Carbon tetrachloride	MSD	REC	107	%	72-136
JC90121-16MSD	56-23-5	Carbon tetrachloride	MSD	RPD	5	%	20
JC90121-16MSD	108-90-7	Chlorobenzene	MSD	REC	95	%	82-118
JC90121-16MSD	108-90-7	Chlorobenzene	MSD	RPD	3	%	20

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-16MSD	75-00-3	Chloroethane	MSD	REC	97	%	60-138
JC90121-16MSD	75-00-3	Chloroethane	MSD	RPD	4	%	20
JC90121-16MSD	67-66-3	Chloroform	MSD	REC	92	%	79-124
JC90121-16MSD	67-66-3	Chloroform	MSD	RPD	4	%	20
JC90121-16MSD	74-87-3	Chloromethane	MSD	REC	94	%	50-139
JC90121-16MSD	74-87-3	Chloromethane	MSD	RPD	5	%	20
JC90121-16MSD	110-82-7	Cyclohexane	MSD	REC	99	%	71-130
JC90121-16MSD	110-82-7	Cyclohexane	MSD	RPD	3	%	20
JC90121-16MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	90	%	62-128
JC90121-16MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	6	%	20
JC90121-16MSD	124-48-1	Dibromochloromethane	MSD	REC	100	%	74-126
JC90121-16MSD	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
JC90121-16MSD	106-93-4	1,2-Dibromoethane	MSD	REC	84	%	77-121
JC90121-16MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	1	%	20
JC90121-16MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	94	%	80-119
JC90121-16MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	5	%	20
JC90121-16MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	95	%	80-119
JC90121-16MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	4	%	20
JC90121-16MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	96	%	79-118
JC90121-16MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	5	%	20
JC90121-16MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	107	%	32-152
JC90121-16MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
JC90121-16MSD	75-34-3	1,1-Dichloroethane	MSD	REC	96	%	77-125
JC90121-16MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	8	%	20
JC90121-16MSD	107-06-2	1,2-Dichloroethane	MSD	REC	91	%	73-128
JC90121-16MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	3	%	20
JC90121-16MSD	75-35-4	1,1-Dichloroethene	MSD	REC	102	%	71-131
JC90121-16MSD	75-35-4	1,1-Dichloroethene	MSD	RPD	7	%	20
JC90121-16MSD	156-59-2	cis-1,2-Dichloroethene	MSD	REC	95	%	78-123
JC90121-16MSD	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	4	%	20
JC90121-16MSD	156-60-5	trans-1,2-Dichloroethene	MSD	REC	100	%	75-124
JC90121-16MSD	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	9	%	20
JC90121-16MSD	78-87-5	1,2-Dichloropropane	MSD	REC	95	%	78-122
JC90121-16MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	3	%	20
JC90121-16MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	98	%	75-124
JC90121-16MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	3	%	20
JC90121-16MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	96	%	73-127
JC90121-16MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	3	%	20
JC90121-16MSD	123-91-1	1,4-Dioxane	MSD	REC	114	%	59-139
JC90121-16MSD	123-91-1	1,4-Dioxane	MSD	RPD	21	%	20
JC90121-16MSD	100-41-4	Ethylbenzene	MSD	REC	94	%	79-121
JC90121-16MSD	100-41-4	Ethylbenzene	MSD	RPD	2	%	20
JC90121-16MSD	76-13-1	Freon 113	MSD	REC	99	%	70-136
JC90121-16MSD	76-13-1	Freon 113	MSD	RPD	2	%	20
JC90121-16MSD	591-78-6	2-Hexanone	MSD	REC	82	%	57-139

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-16MSD	591-78-6	2-Hexanone	MSD	RPD	4	%	20
JC90121-16MSD	74-88-4	Iodomethane	MSD	REC	97	%	69-131
JC90121-16MSD	74-88-4	Iodomethane	MSD	RPD	2	%	20
JC90121-16MSD	98-82-8	Isopropylbenzene	MSD	REC	94	%	72-131
JC90121-16MSD	98-82-8	Isopropylbenzene	MSD	RPD	4	%	20
JC90121-16MSD	79-20-9	Methyl Acetate	MSD	REC	87	%	56-136
JC90121-16MSD	79-20-9	Methyl Acetate	MSD	RPD	11	%	20
JC90121-16MSD	108-87-2	Methylcyclohexane	MSD	REC	96	%	72-132
JC90121-16MSD	108-87-2	Methylcyclohexane	MSD	RPD	6	%	20
JC90121-16MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	85	%	71-124
JC90121-16MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	7	%	20
JC90121-16MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	87	%	67-130
JC90121-16MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	4	%	20
JC90121-16MSD	75-09-2	Methylene chloride	MSD	REC	94	%	74-124
JC90121-16MSD	75-09-2	Methylene chloride	MSD	RPD	6	%	20
JC90121-16MSD	100-42-5	Styrene	MSD	REC	94	%	78-123
JC90121-16MSD	100-42-5	Styrene	MSD	RPD	3	%	20
JC90121-16MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	90	%	71-121
JC90121-16MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	0	%	20
JC90121-16MSD	127-18-4	Tetrachloroethene	MSD	REC	100	%	74-129
JC90121-16MSD	127-18-4	Tetrachloroethene	MSD	RPD	4	%	20
JC90121-16MSD	108-88-3	Toluene	MSD	REC	94	%	80-121
JC90121-16MSD	108-88-3	Toluene	MSD	RPD	3	%	20
JC90121-16MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	93	%	69-129
JC90121-16MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	10	%	20
JC90121-16MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	95	%	69-130
JC90121-16MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	9	%	20
JC90121-16MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	100	%	74-131
JC90121-16MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	4	%	20
JC90121-16MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	94	%	80-119
JC90121-16MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	5	%	20
JC90121-16MSD	79-01-6	Trichloroethene	MSD	REC	101	%	79-123
JC90121-16MSD	79-01-6	Trichloroethene	MSD	RPD	2	%	20
JC90121-16MSD	75-69-4	Trichlorofluoromethane	MSD	REC	113	%	65-141
JC90121-16MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	5	%	20
JC90121-16MSD	75-01-4	Vinyl chloride	MSD	REC	104	%	58-137
JC90121-16MSD	75-01-4	Vinyl chloride	MSD	RPD	6	%	20
JC90121-16MSD	1330-20-7	Xylene (total)	MSD	REC	94	%	79-121
JC90121-16MSD	1330-20-7	Xylene (total)	MSD	RPD	3	%	20
JC90121-16MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	100	%	80-119
JC90121-16MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	99	%	81-118
JC90121-16MSD	2037-26-5	Toluene-D8	MSD	SURR	98	%	89-112
JC90121-16MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	100	%	85-114
V4B3896-MB	1868-53-7	Dibromofluoromethane	MB	SURR	106	%	80-119
V4B3896-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	109	%	81-118

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V4B3896-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	89-112
V4B3896-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	104	%	85-114
JC90121-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	109	%	80-119
JC90121-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	109	%	81-118
JC90121-1	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	104	%	85-114
JC90121-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90121-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90121-3	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
JC90121-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	102	%	85-114
JC90121-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90121-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90121-4	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
JC90121-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	101	%	85-114
JC90121-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	80-119
JC90121-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90121-5	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
JC90121-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	103	%	85-114
JC90121-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90121-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	109	%	81-118
JC90121-6	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
JC90121-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	101	%	85-114
JC90121-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90121-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90121-7	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
JC90121-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	106	%	85-114
JC90121-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90121-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90121-8	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
JC90121-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
JC90121-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	80-119
JC90121-9	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90121-9	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
JC90121-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	85-114
JC90121-10	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
JC90121-10	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90121-10	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
JC90121-10	460-00-4	4-Bromofluorobenzene	SAMP	SURR	102	%	85-114
JC90121-11	1868-53-7	Dibromofluoromethane	SAMP	SURR	113	%	80-119
JC90121-11	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	112	%	81-118
JC90121-11	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
JC90121-11	460-00-4	4-Bromofluorobenzene	SAMP	SURR	102	%	85-114
JC90121-12	1868-53-7	Dibromofluoromethane	SAMP	SURR	107	%	80-119
JC90121-12	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90121-12	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-12	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	85-114
JC90121-13	1868-53-7	Dibromofluoromethane	SAMP	SURR	108	%	80-119
JC90121-13	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90121-13	2037-26-5	Toluene-D8	SAMP	SURR	97	%	89-112
JC90121-13	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	85-114
JC90121-14	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90121-14	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
JC90121-14	2037-26-5	Toluene-D8	SAMP	SURR	95	%	89-112
JC90121-14	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
JC90121-16	1868-53-7	Dibromofluoromethane	SAMP	SURR	101	%	80-119
JC90121-16	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	81-118
JC90121-16	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
JC90121-16	460-00-4	4-Bromofluorobenzene	SAMP	SURR	105	%	85-114
VA9710	SW846 8260C						
VA9710-BS	67-64-1	Acetone	BSP	REC	98	%	39-160
VA9710-BS	71-43-2	Benzene	BSP	REC	95	%	79-120
VA9710-BS	74-97-5	Bromochloromethane	BSP	REC	99	%	78-123
VA9710-BS	75-27-4	Bromodichloromethane	BSP	REC	104	%	79-125
VA9710-BS	75-25-2	Bromoform	BSP	REC	109	%	66-130
VA9710-BS	74-83-9	Bromomethane	BSP	REC	83	%	53-141
VA9710-BS	78-93-3	2-Butanone (MEK)	BSP	REC	103	%	56-143
VA9710-BS	75-15-0	Carbon disulfide	BSP	REC	92	%	64-133
VA9710-BS	56-23-5	Carbon tetrachloride	BSP	REC	98	%	72-136
VA9710-BS	108-90-7	Chlorobenzene	BSP	REC	98	%	82-118
VA9710-BS	75-00-3	Chloroethane	BSP	REC	90	%	60-138
VA9710-BS	67-66-3	Chloroform	BSP	REC	93	%	79-124
VA9710-BS	74-87-3	Chloromethane	BSP	REC	76	%	50-139
VA9710-BS	110-82-7	Cyclohexane	BSP	REC	91	%	71-130
VA9710-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	103	%	62-128
VA9710-BS	124-48-1	Dibromochloromethane	BSP	REC	103	%	74-126
VA9710-BS	106-93-4	1,2-Dibromoethane	BSP	REC	106	%	77-121
VA9710-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	101	%	80-119
VA9710-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	101	%	80-119
VA9710-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	98	%	79-118
VA9710-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	79	%	32-152
VA9710-BS	75-34-3	1,1-Dichloroethane	BSP	REC	96	%	77-125
VA9710-BS	107-06-2	1,2-Dichloroethane	BSP	REC	91	%	73-128
VA9710-BS	75-35-4	1,1-Dichloroethene	BSP	REC	95	%	71-131
VA9710-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	98	%	78-123
VA9710-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	99	%	75-124
VA9710-BS	78-87-5	1,2-Dichloropropane	BSP	REC	103	%	78-122
VA9710-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	110	%	75-124
VA9710-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	106	%	73-127

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9710-BS	123-91-1	1,4-Dioxane	BSP	REC	114	%	59-139
VA9710-BS	100-41-4	Ethylbenzene	BSP	REC	95	%	79-121
VA9710-BS	76-13-1	Freon 113	BSP	REC	90	%	70-136
VA9710-BS	591-78-6	2-Hexanone	BSP	REC	95	%	57-139
VA9710-BS	74-88-4	Iodomethane	BSP	REC	99	%	69-131
VA9710-BS	98-82-8	Isopropylbenzene	BSP	REC	98	%	72-131
VA9710-BS	79-20-9	Methyl Acetate	BSP	REC	97	%	56-136
VA9710-BS	108-87-2	Methylcyclohexane	BSP	REC	89	%	72-132
VA9710-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	98	%	71-124
VA9710-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	100	%	67-130
VA9710-BS	75-09-2	Methylene chloride	BSP	REC	102	%	74-124
VA9710-BS	100-42-5	Styrene	BSP	REC	96	%	78-123
VA9710-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	112	%	71-121
VA9710-BS	127-18-4	Tetrachloroethene	BSP	REC	90	%	74-129
VA9710-BS	108-88-3	Toluene	BSP	REC	96	%	80-121
VA9710-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	102	%	69-129
VA9710-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	101	%	69-130
VA9710-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	100	%	74-131
VA9710-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	104	%	80-119
VA9710-BS	79-01-6	Trichloroethene	BSP	REC	97	%	79-123
VA9710-BS	75-69-4	Trichlorofluoromethane	BSP	REC	89	%	65-141
VA9710-BS	75-01-4	Vinyl chloride	BSP	REC	86	%	58-137
VA9710-BS	1330-20-7	Xylene (total)	BSP	REC	97	%	79-121
VA9710-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	104	%	80-119
VA9710-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	102	%	81-118
VA9710-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	89-112
VA9710-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	108	%	85-114
JC90121-19MS	67-64-1	Acetone	MS	REC	91	%	39-160
JC90121-19MS	71-43-2	Benzene	MS	REC	88	%	79-120
JC90121-19MS	74-97-5	Bromochloromethane	MS	REC	91	%	78-123
JC90121-19MS	75-27-4	Bromodichloromethane	MS	REC	93	%	79-125
JC90121-19MS	75-25-2	Bromoform	MS	REC	99	%	66-130
JC90121-19MS	74-83-9	Bromomethane	MS	REC	105	%	53-141
JC90121-19MS	78-93-3	2-Butanone (MEK)	MS	REC	90	%	56-143
JC90121-19MS	75-15-0	Carbon disulfide	MS	REC	86	%	64-133
JC90121-19MS	56-23-5	Carbon tetrachloride	MS	REC	98	%	72-136
JC90121-19MS	108-90-7	Chlorobenzene	MS	REC	90	%	82-118
JC90121-19MS	75-00-3	Chloroethane	MS	REC	110	%	60-138
JC90121-19MS	67-66-3	Chloroform	MS	REC	86	%	79-124
JC90121-19MS	74-87-3	Chloromethane	MS	REC	103	%	50-139
JC90121-19MS	110-82-7	Cyclohexane	MS	REC	113	%	71-130
JC90121-19MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	91	%	62-128
JC90121-19MS	124-48-1	Dibromochloromethane	MS	REC	92	%	74-126
JC90121-19MS	106-93-4	1,2-Dibromoethane	MS	REC	97	%	77-121
JC90121-19MS	95-50-1	1,2-Dichlorobenzene	MS	REC	89	%	80-119

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-19MS	541-73-1	1,3-Dichlorobenzene	MS	REC	87	%	80-119
JC90121-19MS	106-46-7	1,4-Dichlorobenzene	MS	REC	85	%	79-118
JC90121-19MS	75-71-8	Dichlorodifluoromethane	MS	REC	120	%	32-152
JC90121-19MS	75-34-3	1,1-Dichloroethane	MS	REC	90	%	77-125
JC90121-19MS	107-06-2	1,2-Dichloroethane	MS	REC	81	%	73-128
JC90121-19MS	75-35-4	1,1-Dichloroethene	MS	REC	89	%	71-131
JC90121-19MS	156-59-2	cis-1,2-Dichloroethene	MS	REC	88	%	78-123
JC90121-19MS	156-60-5	trans-1,2-Dichloroethene	MS	REC	93	%	75-124
JC90121-19MS	78-87-5	1,2-Dichloropropane	MS	REC	93	%	78-122
JC90121-19MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	92	%	75-124
JC90121-19MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	90	%	73-127
JC90121-19MS	123-91-1	1,4-Dioxane	MS	REC	95	%	59-139
JC90121-19MS	100-41-4	Ethylbenzene	MS	REC	91	%	79-121
JC90121-19MS	76-13-1	Freon 113	MS	REC	93	%	70-136
JC90121-19MS	591-78-6	2-Hexanone	MS	REC	90	%	57-139
JC90121-19MS	74-88-4	Iodomethane	MS	REC	88	%	69-131
JC90121-19MS	98-82-8	Isopropylbenzene	MS	REC	95	%	72-131
JC90121-19MS	79-20-9	Methyl Acetate	MS	REC	81	%	56-136
JC90121-19MS	108-87-2	Methylcyclohexane	MS	REC	90	%	72-132
JC90121-19MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	89	%	71-124
JC90121-19MS	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	92	%	67-130
JC90121-19MS	75-09-2	Methylene chloride	MS	REC	86	%	74-124
JC90121-19MS	100-42-5	Styrene	MS	REC	89	%	78-123
JC90121-19MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	96	%	71-121
JC90121-19MS	127-18-4	Tetrachloroethene	MS	REC	86	%	74-129
JC90121-19MS	108-88-3	Toluene	MS	REC	90	%	80-121
JC90121-19MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	88	%	69-129
JC90121-19MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	89	%	69-130
JC90121-19MS	71-55-6	1,1,1-Trichloroethane	MS	REC	97	%	74-131
JC90121-19MS	79-00-5	1,1,2-Trichloroethane	MS	REC	94	%	80-119
JC90121-19MS	79-01-6	Trichloroethene	MS	REC	88	%	79-123
JC90121-19MS	75-69-4	Trichlorofluoromethane	MS	REC	118	%	65-141
JC90121-19MS	75-01-4	Vinyl chloride	MS	REC	119	%	58-137
JC90121-19MS	1330-20-7	Xylene (total)	MS	REC	92	%	79-121
JC90121-19MS	1868-53-7	Dibromofluoromethane	MS	SURR	103	%	80-119
JC90121-19MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	102	%	81-118
JC90121-19MS	2037-26-5	Toluene-D8	MS	SURR	101	%	89-112
JC90121-19MS	460-00-4	4-Bromofluorobenzene	MS	SURR	103	%	85-114
JC90121-19MSD	67-64-1	Acetone	MSD	REC	91	%	39-160
JC90121-19MSD	67-64-1	Acetone	MSD	RPD	1	%	20
JC90121-19MSD	71-43-2	Benzene	MSD	REC	87	%	79-120
JC90121-19MSD	71-43-2	Benzene	MSD	RPD	1	%	20
JC90121-19MSD	74-97-5	Bromochloromethane	MSD	REC	90	%	78-123
JC90121-19MSD	74-97-5	Bromochloromethane	MSD	RPD	1	%	20
JC90121-19MSD	75-27-4	Bromodichloromethane	MSD	REC	91	%	79-125

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-19MSD	75-27-4	Bromodichloromethane	MSD	RPD	1	%	20
JC90121-19MSD	75-25-2	Bromoform	MSD	REC	96	%	66-130
JC90121-19MSD	75-25-2	Bromoform	MSD	RPD	2	%	20
JC90121-19MSD	74-83-9	Bromomethane	MSD	REC	97	%	53-141
JC90121-19MSD	74-83-9	Bromomethane	MSD	RPD	8	%	20
JC90121-19MSD	78-93-3	2-Butanone (MEK)	MSD	REC	91	%	56-143
JC90121-19MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	1	%	20
JC90121-19MSD	75-15-0	Carbon disulfide	MSD	REC	89	%	64-133
JC90121-19MSD	75-15-0	Carbon disulfide	MSD	RPD	3	%	20
JC90121-19MSD	56-23-5	Carbon tetrachloride	MSD	REC	96	%	72-136
JC90121-19MSD	56-23-5	Carbon tetrachloride	MSD	RPD	1	%	20
JC90121-19MSD	108-90-7	Chlorobenzene	MSD	REC	89	%	82-118
JC90121-19MSD	108-90-7	Chlorobenzene	MSD	RPD	0	%	20
JC90121-19MSD	75-00-3	Chloroethane	MSD	REC	104	%	60-138
JC90121-19MSD	75-00-3	Chloroethane	MSD	RPD	6	%	20
JC90121-19MSD	67-66-3	Chloroform	MSD	REC	86	%	79-124
JC90121-19MSD	67-66-3	Chloroform	MSD	RPD	0	%	20
JC90121-19MSD	74-87-3	Chloromethane	MSD	REC	95	%	50-139
JC90121-19MSD	74-87-3	Chloromethane	MSD	RPD	7	%	20
JC90121-19MSD	110-82-7	Cyclohexane	MSD	REC	104	%	71-130
JC90121-19MSD	110-82-7	Cyclohexane	MSD	RPD	9	%	20
JC90121-19MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	95	%	62-128
JC90121-19MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	5	%	20
JC90121-19MSD	124-48-1	Dibromochloromethane	MSD	REC	94	%	74-126
JC90121-19MSD	124-48-1	Dibromochloromethane	MSD	RPD	2	%	20
JC90121-19MSD	106-93-4	1,2-Dibromoethane	MSD	REC	97	%	77-121
JC90121-19MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	0	%	20
JC90121-19MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	89	%	80-119
JC90121-19MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	0	%	20
JC90121-19MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	87	%	80-119
JC90121-19MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	0	%	20
JC90121-19MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	87	%	79-118
JC90121-19MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	2	%	20
JC90121-19MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	111	%	32-152
JC90121-19MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	7	%	20
JC90121-19MSD	75-34-3	1,1-Dichloroethane	MSD	REC	88	%	77-125
JC90121-19MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	2	%	20
JC90121-19MSD	107-06-2	1,2-Dichloroethane	MSD	REC	80	%	73-128
JC90121-19MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	1	%	20
JC90121-19MSD	75-35-4	1,1-Dichloroethene	MSD	REC	91	%	71-131
JC90121-19MSD	75-35-4	1,1-Dichloroethene	MSD	RPD	2	%	20
JC90121-19MSD	156-59-2	cis-1,2-Dichloroethene	MSD	REC	89	%	78-123
JC90121-19MSD	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	1	%	20
JC90121-19MSD	156-60-5	trans-1,2-Dichloroethene	MSD	REC	94	%	75-124
JC90121-19MSD	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	0	%	20

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-19MSD	78-87-5	1,2-Dichloropropane	MSD	REC	91	%	78-122
JC90121-19MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
JC90121-19MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	91	%	75-124
JC90121-19MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	1	%	20
JC90121-19MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	91	%	73-127
JC90121-19MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	2	%	20
JC90121-19MSD	123-91-1	1,4-Dioxane	MSD	REC	95	%	59-139
JC90121-19MSD	123-91-1	1,4-Dioxane	MSD	RPD	0	%	20
JC90121-19MSD	100-41-4	Ethylbenzene	MSD	REC	88	%	79-121
JC90121-19MSD	100-41-4	Ethylbenzene	MSD	RPD	3	%	20
JC90121-19MSD	76-13-1	Freon 113	MSD	REC	91	%	70-136
JC90121-19MSD	76-13-1	Freon 113	MSD	RPD	2	%	20
JC90121-19MSD	591-78-6	2-Hexanone	MSD	REC	89	%	57-139
JC90121-19MSD	591-78-6	2-Hexanone	MSD	RPD	1	%	20
JC90121-19MSD	74-88-4	Iodomethane	MSD	REC	94	%	69-131
JC90121-19MSD	74-88-4	Iodomethane	MSD	RPD	6	%	20
JC90121-19MSD	98-82-8	Isopropylbenzene	MSD	REC	92	%	72-131
JC90121-19MSD	98-82-8	Isopropylbenzene	MSD	RPD	3	%	20
JC90121-19MSD	79-20-9	Methyl Acetate	MSD	REC	82	%	56-136
JC90121-19MSD	79-20-9	Methyl Acetate	MSD	RPD	2	%	20
JC90121-19MSD	108-87-2	Methylcyclohexane	MSD	REC	87	%	72-132
JC90121-19MSD	108-87-2	Methylcyclohexane	MSD	RPD	4	%	20
JC90121-19MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	90	%	71-124
JC90121-19MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	1	%	20
JC90121-19MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	88	%	67-130
JC90121-19MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	4	%	20
JC90121-19MSD	75-09-2	Methylene chloride	MSD	REC	89	%	74-124
JC90121-19MSD	75-09-2	Methylene chloride	MSD	RPD	4	%	20
JC90121-19MSD	100-42-5	Styrene	MSD	REC	87	%	78-123
JC90121-19MSD	100-42-5	Styrene	MSD	RPD	2	%	20
JC90121-19MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	100	%	71-121
JC90121-19MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	3	%	20
JC90121-19MSD	127-18-4	Tetrachloroethene	MSD	REC	86	%	74-129
JC90121-19MSD	127-18-4	Tetrachloroethene	MSD	RPD	0	%	20
JC90121-19MSD	108-88-3	Toluene	MSD	REC	89	%	80-121
JC90121-19MSD	108-88-3	Toluene	MSD	RPD	1	%	20
JC90121-19MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	92	%	69-129
JC90121-19MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	4	%	20
JC90121-19MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	89	%	69-130
JC90121-19MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	0	%	20
JC90121-19MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	95	%	74-131
JC90121-19MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	1	%	20
JC90121-19MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	96	%	80-119
JC90121-19MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	2	%	20
JC90121-19MSD	79-01-6	Trichloroethene	MSD	REC	86	%	79-123

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-19MSD	79-01-6	Trichloroethene	MSD	RPD	2	%	20
JC90121-19MSD	75-69-4	Trichlorofluoromethane	MSD	REC	109	%	65-141
JC90121-19MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	7	%	20
JC90121-19MSD	75-01-4	Vinyl chloride	MSD	REC	106	%	58-137
JC90121-19MSD	75-01-4	Vinyl chloride	MSD	RPD	10	%	20
JC90121-19MSD	1330-20-7	Xylene (total)	MSD	REC	90	%	79-121
JC90121-19MSD	1330-20-7	Xylene (total)	MSD	RPD	2	%	20
JC90121-19MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	103	%	80-119
JC90121-19MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	100	%	81-118
JC90121-19MSD	2037-26-5	Toluene-D8	MSD	SURR	102	%	89-112
JC90121-19MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	104	%	85-114
VA9710-MB	1868-53-7	Dibromofluoromethane	MB	SURR	103	%	80-119
VA9710-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	103	%	81-118
VA9710-MB	2037-26-5	Toluene-D8	MB	SURR	100	%	89-112
VA9710-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	99	%	85-114
JC90121-17	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
JC90121-17	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90121-17	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-17	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
JC90121-18	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
JC90121-18	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	106	%	81-118
JC90121-18	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
JC90121-18	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
JC90121-19	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
JC90121-19	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
JC90121-19	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-19	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
JC90121-20	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
JC90121-20	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90121-20	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-20	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
JC90121-21	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
JC90121-21	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
JC90121-21	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-21	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
JC90121-22	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
JC90121-22	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90121-22	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
JC90121-22	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
JC90121-23	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
JC90121-23	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
JC90121-23	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-23	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	85-114
JC90121-24	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90121-24	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90121-24	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-24	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
JC90121-25	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
JC90121-25	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90121-25	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-25	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
JC90121-26	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
JC90121-26	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
JC90121-26	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90121-26	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
JC90121-27	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
JC90121-27	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90121-27	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-27	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
JC90121-28	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
JC90121-28	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90121-28	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
JC90121-28	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
JC90121-29	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	80-119
JC90121-29	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90121-29	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-29	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
JC90121-30	1868-53-7	Dibromofluoromethane	SAMP	SURR	103	%	80-119
JC90121-30	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90121-30	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90121-30	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
VX7807	SW846 8260C						
VX7807-BS	67-64-1	Acetone	BSP	REC	101	%	39-160
VX7807-BS	71-43-2	Benzene	BSP	REC	103	%	79-120
VX7807-BS	74-97-5	Bromochloromethane	BSP	REC	107	%	78-123
VX7807-BS	75-27-4	Bromodichloromethane	BSP	REC	101	%	79-125
VX7807-BS	75-25-2	Bromoform	BSP	REC	102	%	66-130
VX7807-BS	74-83-9	Bromomethane	BSP	REC	103	%	53-141
VX7807-BS	78-93-3	2-Butanone (MEK)	BSP	REC	116	%	56-143
VX7807-BS	75-15-0	Carbon disulfide	BSP	REC	100	%	64-133
VX7807-BS	56-23-5	Carbon tetrachloride	BSP	REC	107	%	72-136
VX7807-BS	108-90-7	Chlorobenzene	BSP	REC	101	%	82-118
VX7807-BS	75-00-3	Chloroethane	BSP	REC	98	%	60-138
VX7807-BS	67-66-3	Chloroform	BSP	REC	103	%	79-124
VX7807-BS	74-87-3	Chloromethane	BSP	REC	89	%	50-139
VX7807-BS	110-82-7	Cyclohexane	BSP	REC	102	%	71-130
VX7807-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	108	%	62-128
VX7807-BS	124-48-1	Dibromochloromethane	BSP	REC	101	%	74-126

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VX7807-BS	106-93-4	1,2-Dibromoethane	BSP	REC	105	%	77-121
VX7807-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	101	%	80-119
VX7807-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	98	%	80-119
VX7807-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	102	%	79-118
VX7807-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	99	%	32-152
VX7807-BS	75-34-3	1,1-Dichloroethane	BSP	REC	105	%	77-125
VX7807-BS	107-06-2	1,2-Dichloroethane	BSP	REC	91	%	73-128
VX7807-BS	75-35-4	1,1-Dichloroethene	BSP	REC	103	%	71-131
VX7807-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	106	%	78-123
VX7807-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	107	%	75-124
VX7807-BS	78-87-5	1,2-Dichloropropane	BSP	REC	101	%	78-122
VX7807-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	103	%	75-124
VX7807-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	98	%	73-127
VX7807-BS	123-91-1	1,4-Dioxane	BSP	REC	115	%	59-139
VX7807-BS	100-41-4	Ethylbenzene	BSP	REC	97	%	79-121
VX7807-BS	76-13-1	Freon 113	BSP	REC	111	%	70-136
VX7807-BS	591-78-6	2-Hexanone	BSP	REC	103	%	57-139
VX7807-BS	74-88-4	Iodomethane	BSP	REC	101	%	69-131
VX7807-BS	98-82-8	Isopropylbenzene	BSP	REC	99	%	72-131
VX7807-BS	79-20-9	Methyl Acetate	BSP	REC	89	%	56-136
VX7807-BS	108-87-2	Methylcyclohexane	BSP	REC	116	%	72-132
VX7807-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	95	%	71-124
VX7807-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	109	%	67-130
VX7807-BS	75-09-2	Methylene chloride	BSP	REC	104	%	74-124
VX7807-BS	100-42-5	Styrene	BSP	REC	99	%	78-123
VX7807-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	107	%	71-121
VX7807-BS	127-18-4	Tetrachloroethene	BSP	REC	102	%	74-129
VX7807-BS	108-88-3	Toluene	BSP	REC	99	%	80-121
VX7807-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	119	%	69-129
VX7807-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	118	%	69-130
VX7807-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	108	%	74-131
VX7807-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	102	%	80-119
VX7807-BS	79-01-6	Trichloroethene	BSP	REC	109	%	79-123
VX7807-BS	75-69-4	Trichlorofluoromethane	BSP	REC	110	%	65-141
VX7807-BS	75-01-4	Vinyl chloride	BSP	REC	98	%	58-137
VX7807-BS	1330-20-7	Xylene (total)	BSP	REC	97	%	79-121
VX7807-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	107	%	80-119
VX7807-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	81-118
VX7807-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	89-112
VX7807-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	105	%	85-114
JC90273-6MS*	67-64-1	Acetone	MS	REC	73	%	39-160
JC90273-6MS*	71-43-2	Benzene	MS	REC	94	%	79-120
JC90273-6MS*	74-97-5	Bromochloromethane	MS	REC	99	%	78-123
JC90273-6MS*	75-27-4	Bromodichloromethane	MS	REC	93	%	79-125
JC90273-6MS*	75-25-2	Bromoform	MS	REC	90	%	66-130

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MS*	74-83-9	Bromomethane	MS	REC	115	%	53-141
JC90273-6MS*	78-93-3	2-Butanone (MEK)	MS	REC	95	%	56-143
JC90273-6MS*	75-15-0	Carbon disulfide	MS	REC	104	%	64-133
JC90273-6MS*	56-23-5	Carbon tetrachloride	MS	REC	102	%	72-136
JC90273-6MS*	108-90-7	Chlorobenzene	MS	REC	96	%	82-118
JC90273-6MS*	75-00-3	Chloroethane	MS	REC	113	%	60-138
JC90273-6MS*	67-66-3	Chloroform	MS	REC	96	%	79-124
JC90273-6MS*	74-87-3	Chloromethane	MS	REC	88	%	50-139
JC90273-6MS*	110-82-7	Cyclohexane	MS	REC	111	%	71-130
JC90273-6MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	95	%	62-128
JC90273-6MS*	124-48-1	Dibromochloromethane	MS	REC	85	%	74-126
JC90273-6MS*	106-93-4	1,2-Dibromoethane	MS	REC	92	%	77-121
JC90273-6MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	92	%	80-119
JC90273-6MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	90	%	80-119
JC90273-6MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	94	%	79-118
JC90273-6MS*	75-71-8	Dichlorodifluoromethane	MS	REC	101	%	32-152
JC90273-6MS*	75-34-3	1,1-Dichloroethane	MS	REC	97	%	77-125
JC90273-6MS*	107-06-2	1,2-Dichloroethane	MS	REC	82	%	73-128
JC90273-6MS*	75-35-4	1,1-Dichloroethene	MS	REC	105	%	71-131
JC90273-6MS*	156-59-2	cis-1,2-Dichloroethene	MS	REC	97	%	78-123
JC90273-6MS*	156-60-5	trans-1,2-Dichloroethene	MS	REC	101	%	75-124
JC90273-6MS*	78-87-5	1,2-Dichloropropane	MS	REC	86	%	78-122
JC90273-6MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	96	%	75-124
JC90273-6MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	87	%	73-127
JC90273-6MS*	123-91-1	1,4-Dioxane	MS	REC	100	%	59-139
JC90273-6MS*	100-41-4	Ethylbenzene	MS	REC	92	%	79-121
JC90273-6MS*	76-13-1	Freon 113	MS	REC	115	%	70-136
JC90273-6MS*	591-78-6	2-Hexanone	MS	REC	93	%	57-139
JC90273-6MS*	74-88-4	Iodomethane	MS	REC	98	%	69-131
JC90273-6MS*	98-82-8	Isopropylbenzene	MS	REC	94	%	72-131
JC90273-6MS*	79-20-9	Methyl Acetate	MS	REC	71	%	56-136
JC90273-6MS*	108-87-2	Methylcyclohexane	MS	REC	106	%	72-132
JC90273-6MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	83	%	71-124
JC90273-6MS*	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	98	%	67-130
JC90273-6MS*	75-09-2	Methylene chloride	MS	REC	97	%	74-124
JC90273-6MS*	100-42-5	Styrene	MS	REC	92	%	78-123
JC90273-6MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	94	%	71-121
JC90273-6MS*	127-18-4	Tetrachloroethene	MS	REC	98	%	74-129
JC90273-6MS*	108-88-3	Toluene	MS	REC	93	%	80-121
JC90273-6MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	107	%	69-129
JC90273-6MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	107	%	69-130
JC90273-6MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	105	%	74-131
JC90273-6MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	92	%	80-119
JC90273-6MS*	79-01-6	Trichloroethene	MS	REC	101	%	79-123
JC90273-6MS*	75-69-4	Trichlorofluoromethane	MS	REC	132	%	65-141

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MS*	75-01-4	Vinyl chloride	MS	REC	102	%	58-137
JC90273-6MS*	1330-20-7	Xylene (total)	MS	REC	91	%	79-121
JC90273-6MS*	1868-53-7	Dibromofluoromethane	MS	SURR	109	%	80-119
JC90273-6MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	95	%	81-118
JC90273-6MS*	2037-26-5	Toluene-D8	MS	SURR	99	%	89-112
JC90273-6MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	104	%	85-114
JC90273-6MSD*	67-64-1	Acetone	MSD	REC	69	%	39-160
JC90273-6MSD*	67-64-1	Acetone	MSD	RPD	6	%	20
JC90273-6MSD*	71-43-2	Benzene	MSD	REC	94	%	79-120
JC90273-6MSD*	71-43-2	Benzene	MSD	RPD	1	%	20
JC90273-6MSD*	74-97-5	Bromochloromethane	MSD	REC	98	%	78-123
JC90273-6MSD*	74-97-5	Bromochloromethane	MSD	RPD	1	%	20
JC90273-6MSD*	75-27-4	Bromodichloromethane	MSD	REC	91	%	79-125
JC90273-6MSD*	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
JC90273-6MSD*	75-25-2	Bromoform	MSD	REC	89	%	66-130
JC90273-6MSD*	75-25-2	Bromoform	MSD	RPD	1	%	20
JC90273-6MSD*	74-83-9	Bromomethane	MSD	REC	114	%	53-141
JC90273-6MSD*	74-83-9	Bromomethane	MSD	RPD	0	%	20
JC90273-6MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	96	%	56-143
JC90273-6MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	1	%	20
JC90273-6MSD*	75-15-0	Carbon disulfide	MSD	REC	102	%	64-133
JC90273-6MSD*	75-15-0	Carbon disulfide	MSD	RPD	2	%	20
JC90273-6MSD*	56-23-5	Carbon tetrachloride	MSD	REC	100	%	72-136
JC90273-6MSD*	56-23-5	Carbon tetrachloride	MSD	RPD	2	%	20
JC90273-6MSD*	108-90-7	Chlorobenzene	MSD	REC	95	%	82-118
JC90273-6MSD*	108-90-7	Chlorobenzene	MSD	RPD	1	%	20
JC90273-6MSD*	75-00-3	Chloroethane	MSD	REC	114	%	60-138
JC90273-6MSD*	75-00-3	Chloroethane	MSD	RPD	1	%	20
JC90273-6MSD*	67-66-3	Chloroform	MSD	REC	95	%	79-124
JC90273-6MSD*	67-66-3	Chloroform	MSD	RPD	1	%	20
JC90273-6MSD*	74-87-3	Chloromethane	MSD	REC	90	%	50-139
JC90273-6MSD*	74-87-3	Chloromethane	MSD	RPD	2	%	20
JC90273-6MSD*	110-82-7	Cyclohexane	MSD	REC	119	%	71-130
JC90273-6MSD*	110-82-7	Cyclohexane	MSD	RPD	7	%	20
JC90273-6MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	94	%	62-128
JC90273-6MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	1	%	20
JC90273-6MSD*	124-48-1	Dibromochloromethane	MSD	REC	85	%	74-126
JC90273-6MSD*	124-48-1	Dibromochloromethane	MSD	RPD	0	%	20
JC90273-6MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	93	%	77-121
JC90273-6MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	1	%	20
JC90273-6MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	91	%	80-119
JC90273-6MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	0	%	20
JC90273-6MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	90	%	80-119
JC90273-6MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	0	%	20
JC90273-6MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	93	%	79-118

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
JC90273-6MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	95	%	32-152
JC90273-6MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	6	%	20
JC90273-6MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	96	%	77-125
JC90273-6MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	0	%	20
JC90273-6MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	81	%	73-128
JC90273-6MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	1	%	20
JC90273-6MSD*	75-35-4	1,1-Dichloroethene	MSD	REC	103	%	71-131
JC90273-6MSD*	75-35-4	1,1-Dichloroethene	MSD	RPD	2	%	20
JC90273-6MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	REC	96	%	78-123
JC90273-6MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	1	%	20
JC90273-6MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	REC	100	%	75-124
JC90273-6MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	1	%	20
JC90273-6MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	84	%	78-122
JC90273-6MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
JC90273-6MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	96	%	75-124
JC90273-6MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	0	%	20
JC90273-6MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	86	%	73-127
JC90273-6MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	1	%	20
JC90273-6MSD*	123-91-1	1,4-Dioxane	MSD	REC	98	%	59-139
JC90273-6MSD*	123-91-1	1,4-Dioxane	MSD	RPD	2	%	20
JC90273-6MSD*	100-41-4	Ethylbenzene	MSD	REC	91	%	79-121
JC90273-6MSD*	100-41-4	Ethylbenzene	MSD	RPD	1	%	20
JC90273-6MSD*	76-13-1	Freon 113	MSD	REC	112	%	70-136
JC90273-6MSD*	76-13-1	Freon 113	MSD	RPD	3	%	20
JC90273-6MSD*	591-78-6	2-Hexanone	MSD	REC	94	%	57-139
JC90273-6MSD*	591-78-6	2-Hexanone	MSD	RPD	1	%	20
JC90273-6MSD*	74-88-4	Iodomethane	MSD	REC	96	%	69-131
JC90273-6MSD*	74-88-4	Iodomethane	MSD	RPD	2	%	20
JC90273-6MSD*	98-82-8	Isopropylbenzene	MSD	REC	92	%	72-131
JC90273-6MSD*	98-82-8	Isopropylbenzene	MSD	RPD	2	%	20
JC90273-6MSD*	79-20-9	Methyl Acetate	MSD	REC	69	%	56-136
JC90273-6MSD*	79-20-9	Methyl Acetate	MSD	RPD	4	%	20
JC90273-6MSD*	108-87-2	Methylcyclohexane	MSD	REC	103	%	72-132
JC90273-6MSD*	108-87-2	Methylcyclohexane	MSD	RPD	3	%	20
JC90273-6MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	84	%	71-124
JC90273-6MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	1	%	20
JC90273-6MSD*	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	99	%	67-130
JC90273-6MSD*	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	1	%	20
JC90273-6MSD*	75-09-2	Methylene chloride	MSD	REC	95	%	74-124
JC90273-6MSD*	75-09-2	Methylene chloride	MSD	RPD	2	%	20
JC90273-6MSD*	100-42-5	Styrene	MSD	REC	91	%	78-123
JC90273-6MSD*	100-42-5	Styrene	MSD	RPD	2	%	20
JC90273-6MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	94	%	71-121
JC90273-6MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	0	%	20

* Sample used for QC is not from job JC90121

QC Evaluation: DOD QSM5 Limits

Job Number: JC90121
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/18/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MSD*	127-18-4	Tetrachloroethene	MSD	REC	98	%	74-129
JC90273-6MSD*	127-18-4	Tetrachloroethene	MSD	RPD	0	%	20
JC90273-6MSD*	108-88-3	Toluene	MSD	REC	93	%	80-121
JC90273-6MSD*	108-88-3	Toluene	MSD	RPD	0	%	20
JC90273-6MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	107	%	69-129
JC90273-6MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	1	%	20
JC90273-6MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	104	%	69-130
JC90273-6MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	3	%	20
JC90273-6MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	102	%	74-131
JC90273-6MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
JC90273-6MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	91	%	80-119
JC90273-6MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	0	%	20
JC90273-6MSD*	79-01-6	Trichloroethene	MSD	REC	102	%	79-123
JC90273-6MSD*	79-01-6	Trichloroethene	MSD	RPD	1	%	20
JC90273-6MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	128	%	65-141
JC90273-6MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	3	%	20
JC90273-6MSD*	75-01-4	Vinyl chloride	MSD	REC	104	%	58-137
JC90273-6MSD*	75-01-4	Vinyl chloride	MSD	RPD	2	%	20
JC90273-6MSD*	1330-20-7	Xylene (total)	MSD	REC	91	%	79-121
JC90273-6MSD*	1330-20-7	Xylene (total)	MSD	RPD	1	%	20
JC90273-6MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	106	%	80-119
JC90273-6MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	93	%	81-118
JC90273-6MSD*	2037-26-5	Toluene-D8	MSD	SURR	99	%	89-112
JC90273-6MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	107	%	85-114
VX7807-MB	1868-53-7	Dibromofluoromethane	MB	SURR	111	%	80-119
VX7807-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	102	%	81-118
VX7807-MB	2037-26-5	Toluene-D8	MB	SURR	102	%	89-112
VX7807-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	91	%	85-114
JC90121-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90121-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90121-2	2037-26-5	Toluene-D8	SAMP	SURR	103	%	89-112
JC90121-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	92	%	85-114

* Sample used for QC is not from job JC90121

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: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3896-MB	4B91834.D	1	06/24/19	ED	n/a	n/a	V4B3896

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-1, JC90121-3, JC90121-4, JC90121-5, JC90121-6, JC90121-7, JC90121-8, JC90121-9, JC90121-10, JC90121-11, JC90121-12, JC90121-13, JC90121-14, JC90121-16

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3896-MB	4B91834.D	1	06/24/19	ED	n/a	n/a	V4B3896

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-1, JC90121-3, JC90121-4, JC90121-5, JC90121-6, JC90121-7, JC90121-8, JC90121-9, JC90121-10, JC90121-11, JC90121-12, JC90121-13, JC90121-14, JC90121-16

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	109%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	104%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9710-MB	A251081.D	1	06/25/19	BK	n/a	n/a	VA9710

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-17, JC90121-18, JC90121-19, JC90121-20, JC90121-21, JC90121-22, JC90121-23, JC90121-24, JC90121-25, JC90121-26, JC90121-27, JC90121-28, JC90121-29, JC90121-30

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9710-MB	A251081.D	1	06/25/19	BK	n/a	n/a	VA9710

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-17, JC90121-18, JC90121-19, JC90121-20, JC90121-21, JC90121-22, JC90121-23, JC90121-24, JC90121-25, JC90121-26, JC90121-27, JC90121-28, JC90121-29, JC90121-30

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	81-124%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	99%	80-120%

Method Blank Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-MB	X182397.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-MB	X182397.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-2

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	111%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	81-124%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	91%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3896-BS	4B91832.D	1	06/24/19	ED	n/a	n/a	V4B3896

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-1, JC90121-3, JC90121-4, JC90121-5, JC90121-6, JC90121-7, JC90121-8, JC90121-9, JC90121-10, JC90121-11, JC90121-12, JC90121-13, JC90121-14, JC90121-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	213	107	42-150
71-43-2	Benzene	50	47.8	96	80-120
74-97-5	Bromochloromethane	50	49.3	99	84-121
75-27-4	Bromodichloromethane	50	53.4	107	83-120
75-25-2	Bromoform	50	57.3	115	76-129
74-83-9	Bromomethane	50	45.9	92	57-138
78-93-3	2-Butanone (MEK)	200	194	97	64-137
75-15-0	Carbon disulfide	50	43.5	87	64-137
56-23-5	Carbon tetrachloride	50	52.2	104	75-135
108-90-7	Chlorobenzene	50	50.4	101	84-117
75-00-3	Chloroethane	50	46.2	92	63-132
67-66-3	Chloroform	50	47.3	95	80-119
74-87-3	Chloromethane	50	43.4	87	46-136
110-82-7	Cyclohexane	50	46.0	92	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	48.3	97	72-127
124-48-1	Dibromochloromethane	50	55.4	111	80-123
106-93-4	1,2-Dibromoethane	50	44.8	90	84-117
95-50-1	1,2-Dichlorobenzene	50	48.9	98	84-119
541-73-1	1,3-Dichlorobenzene	50	49.3	99	81-117
106-46-7	1,4-Dichlorobenzene	50	49.7	99	82-117
75-71-8	Dichlorodifluoromethane	50	40.9	82	36-149
75-34-3	1,1-Dichloroethane	50	47.1	94	79-120
107-06-2	1,2-Dichloroethane	50	49.2	98	78-126
75-35-4	1,1-Dichloroethene	50	46.8	94	69-126
156-59-2	cis-1,2-Dichloroethene	50	47.9	96	80-120
156-60-5	trans-1,2-Dichloroethene	50	47.5	95	76-120
78-87-5	1,2-Dichloropropane	50	50.2	100	82-121
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	83-120
10061-02-6	trans-1,3-Dichloropropene	50	51.4	103	82-121
123-91-1	1,4-Dioxane	1250	1270	102	52-147
100-41-4	Ethylbenzene	50	48.9	98	80-120
76-13-1	Freon 113	50	46.4	93	62-182
591-78-6	2-Hexanone	200	183	92	65-132
74-88-4	Iodomethane	50	48.7	97	72-128
98-82-8	Isopropylbenzene	50	48.6	97	83-120
79-20-9	Methyl Acetate	50	43.9	88	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3896-BS	4B91832.D	1	06/24/19	ED	n/a	n/a	V4B3896

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-1, JC90121-3, JC90121-4, JC90121-5, JC90121-6, JC90121-7, JC90121-8, JC90121-9, JC90121-10, JC90121-11, JC90121-12, JC90121-13, JC90121-14, JC90121-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	45.9	92	71-134
1634-04-4	Methyl Tert Butyl Ether	50	43.8	88	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	186	93	71-131
75-09-2	Methylene chloride	50	47.4	95	77-120
100-42-5	Styrene	50	50.7	101	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	48.3	97	76-119
127-18-4	Tetrachloroethene	50	50.2	100	70-131
108-88-3	Toluene	50	48.5	97	80-120
87-61-6	1,2,3-Trichlorobenzene	50	49.0	98	76-134
120-82-1	1,2,4-Trichlorobenzene	50	49.7	99	79-132
71-55-6	1,1,1-Trichloroethane	50	49.3	99	81-128
79-00-5	1,1,2-Trichloroethane	50	50.5	101	83-118
79-01-6	Trichloroethene	50	51.0	102	80-120
75-69-4	Trichlorofluoromethane	50	48.7	97	64-136
75-01-4	Vinyl chloride	50	46.2	92	51-135
1330-20-7	Xylene (total)	150	148	99	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	99%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9710-BS	A251079.D	1	06/25/19	BK	n/a	n/a	VA9710

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-17, JC90121-18, JC90121-19, JC90121-20, JC90121-21, JC90121-22, JC90121-23, JC90121-24, JC90121-25, JC90121-26, JC90121-27, JC90121-28, JC90121-29, JC90121-30

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	196	98	42-150
71-43-2	Benzene	50	47.5	95	80-120
74-97-5	Bromochloromethane	50	49.7	99	84-121
75-27-4	Bromodichloromethane	50	52.1	104	83-120
75-25-2	Bromoform	50	54.3	109	76-129
74-83-9	Bromomethane	50	41.3	83	57-138
78-93-3	2-Butanone (MEK)	200	206	103	64-137
75-15-0	Carbon disulfide	50	46.2	92	64-137
56-23-5	Carbon tetrachloride	50	48.9	98	75-135
108-90-7	Chlorobenzene	50	49.0	98	84-117
75-00-3	Chloroethane	50	44.8	90	63-132
67-66-3	Chloroform	50	46.6	93	80-119
74-87-3	Chloromethane	50	38.0	76	46-136
110-82-7	Cyclohexane	50	45.4	91	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	51.7	103	72-127
124-48-1	Dibromochloromethane	50	51.3	103	80-123
106-93-4	1,2-Dibromoethane	50	53.2	106	84-117
95-50-1	1,2-Dichlorobenzene	50	50.7	101	84-119
541-73-1	1,3-Dichlorobenzene	50	50.3	101	81-117
106-46-7	1,4-Dichlorobenzene	50	48.8	98	82-117
75-71-8	Dichlorodifluoromethane	50	39.4	79	36-149
75-34-3	1,1-Dichloroethane	50	47.9	96	79-120
107-06-2	1,2-Dichloroethane	50	45.4	91	78-126
75-35-4	1,1-Dichloroethene	50	47.6	95	69-126
156-59-2	cis-1,2-Dichloroethene	50	49.0	98	80-120
156-60-5	trans-1,2-Dichloroethene	50	49.6	99	76-120
78-87-5	1,2-Dichloropropane	50	51.3	103	82-121
10061-01-5	cis-1,3-Dichloropropene	50	55.1	110	83-120
10061-02-6	trans-1,3-Dichloropropene	50	52.8	106	82-121
123-91-1	1,4-Dioxane	1250	1420	114	52-147
100-41-4	Ethylbenzene	50	47.6	95	80-120
76-13-1	Freon 113	50	45.0	90	62-182
591-78-6	2-Hexanone	200	190	95	65-132
74-88-4	Iodomethane	50	49.7	99	72-128
98-82-8	Isopropylbenzene	50	49.0	98	83-120
79-20-9	Methyl Acetate	50	48.7	97	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9710-BS	A251079.D	1	06/25/19	BK	n/a	n/a	VA9710

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-17, JC90121-18, JC90121-19, JC90121-20, JC90121-21, JC90121-22, JC90121-23, JC90121-24, JC90121-25, JC90121-26, JC90121-27, JC90121-28, JC90121-29, JC90121-30

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	44.4	89	71-134
1634-04-4	Methyl Tert Butyl Ether	50	49.0	98	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	199	100	71-131
75-09-2	Methylene chloride	50	51.1	102	77-120
100-42-5	Styrene	50	48.0	96	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	55.9	112	76-119
127-18-4	Tetrachloroethene	50	44.8	90	70-131
108-88-3	Toluene	50	48.1	96	80-120
87-61-6	1,2,3-Trichlorobenzene	50	51.1	102	76-134
120-82-1	1,2,4-Trichlorobenzene	50	50.4	101	79-132
71-55-6	1,1,1-Trichloroethane	50	49.9	100	81-128
79-00-5	1,1,2-Trichloroethane	50	51.9	104	83-118
79-01-6	Trichloroethene	50	48.4	97	80-120
75-69-4	Trichlorofluoromethane	50	44.6	89	64-136
75-01-4	Vinyl chloride	50	43.2	86	51-135
1330-20-7	Xylene (total)	150	145	97	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	108%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-BS	X182395.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	202	101	42-150
71-43-2	Benzene	50	51.4	103	80-120
74-97-5	Bromochloromethane	50	53.4	107	84-121
75-27-4	Bromodichloromethane	50	50.7	101	83-120
75-25-2	Bromoform	50	51.0	102	76-129
74-83-9	Bromomethane	50	51.3	103	57-138
78-93-3	2-Butanone (MEK)	200	232	116	64-137
75-15-0	Carbon disulfide	50	49.9	100	64-137
56-23-5	Carbon tetrachloride	50	53.6	107	75-135
108-90-7	Chlorobenzene	50	50.6	101	84-117
75-00-3	Chloroethane	50	49.2	98	63-132
67-66-3	Chloroform	50	51.3	103	80-119
74-87-3	Chloromethane	50	44.7	89	46-136
110-82-7	Cyclohexane	50	50.9	102	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	54.0	108	72-127
124-48-1	Dibromochloromethane	50	50.4	101	80-123
106-93-4	1,2-Dibromoethane	50	52.5	105	84-117
95-50-1	1,2-Dichlorobenzene	50	50.4	101	84-119
541-73-1	1,3-Dichlorobenzene	50	48.9	98	81-117
106-46-7	1,4-Dichlorobenzene	50	51.1	102	82-117
75-71-8	Dichlorodifluoromethane	50	49.5	99	36-149
75-34-3	1,1-Dichloroethane	50	52.4	105	79-120
107-06-2	1,2-Dichloroethane	50	45.5	91	78-126
75-35-4	1,1-Dichloroethene	50	51.5	103	69-126
156-59-2	cis-1,2-Dichloroethene	50	53.2	106	80-120
156-60-5	trans-1,2-Dichloroethene	50	53.4	107	76-120
78-87-5	1,2-Dichloropropane	50	50.5	101	82-121
10061-01-5	cis-1,3-Dichloropropene	50	51.7	103	83-120
10061-02-6	trans-1,3-Dichloropropene	50	48.8	98	82-121
123-91-1	1,4-Dioxane	1250	1440	115	52-147
100-41-4	Ethylbenzene	50	48.7	97	80-120
76-13-1	Freon 113	50	55.4	111	62-182
591-78-6	2-Hexanone	200	205	103	65-132
74-88-4	Iodomethane	50	50.5	101	72-128
98-82-8	Isopropylbenzene	50	49.4	99	83-120
79-20-9	Methyl Acetate	50	44.5	89	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-BS	X182395.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	57.9	116	71-134
1634-04-4	Methyl Tert Butyl Ether	50	47.3	95	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	217	109	71-131
75-09-2	Methylene chloride	50	52.0	104	77-120
100-42-5	Styrene	50	49.5	99	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	53.7	107	76-119
127-18-4	Tetrachloroethene	50	51.0	102	70-131
108-88-3	Toluene	50	49.5	99	80-120
87-61-6	1,2,3-Trichlorobenzene	50	59.5	119	76-134
120-82-1	1,2,4-Trichlorobenzene	50	58.9	118	79-132
71-55-6	1,1,1-Trichloroethane	50	54.0	108	81-128
79-00-5	1,1,2-Trichloroethane	50	51.1	102	83-118
79-01-6	Trichloroethene	50	54.7	109	80-120
75-69-4	Trichlorofluoromethane	50	55.1	110	64-136
75-01-4	Vinyl chloride	50	48.8	98	51-135
1330-20-7	Xylene (total)	150	146	97	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	105%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90121-16MS	4B91837.D	1	06/24/19	ED	n/a	n/a	V4B3896
JC90121-16MSD	4B91838.D	1	06/24/19	ED	n/a	n/a	V4B3896
JC90121-16	4B91836.D	1	06/24/19	ED	n/a	n/a	V4B3896

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-1, JC90121-3, JC90121-4, JC90121-5, JC90121-6, JC90121-7, JC90121-8, JC90121-9, JC90121-10, JC90121-11, JC90121-12, JC90121-13, JC90121-14, JC90121-16

CAS No.	Compound	JC90121-16 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	10 U		200	168	84	200	181	91	7	34-149/17
71-43-2	Benzene	0.50 U		50	44.7	89	50	46.4	93	4	54-136/10
74-97-5	Bromochloromethane	1.0 U		50	45.8	92	50	47.5	95	4	79-124/11
75-27-4	Bromodichloromethane	1.0 U		50	48.2	96	50	49.5	99	3	79-124/11
75-25-2	Bromoform	1.0 U		50	49.8	100	50	52.2	104	5	71-130/11
74-83-9	Bromomethane	2.0 U		50	45.7	91	50	47.4	95	4	53-142/14
78-93-3	2-Butanone (MEK)	10 U		200	166	83	200	177	89	6	54-142/15
75-15-0	Carbon disulfide	2.0 U		50	42.3	85	50	45.7	91	8	59-145/17
56-23-5	Carbon tetrachloride	1.0 U		50	50.7	101	50	53.3	107	5	70-143/12
108-90-7	Chlorobenzene	1.0 U		50	46.3	93	50	47.6	95	3	78-123/10
75-00-3	Chloroethane	1.0 U		50	46.6	93	50	48.6	97	4	57-141/14
67-66-3	Chloroform	1.0 U		50	44.2	88	50	46.1	92	4	76-123/11
74-87-3	Chloromethane	1.0 U		50	44.4	89	50	46.9	94	5	43-141/16
110-82-7	Cyclohexane	5.0 U		50	48.3	97	50	49.7	99	3	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U		50	42.4	85	50	45.0	90	6	66-130/13
124-48-1	Dibromochloromethane	1.0 U		50	48.5	97	50	50.2	100	3	76-125/11
106-93-4	1,2-Dibromoethane	1.0 U		50	41.4	83	50	42.0	84	1	78-119/11
95-50-1	1,2-Dichlorobenzene	1.0 U		50	44.7	89	50	46.8	94	5	77-123/11
541-73-1	1,3-Dichlorobenzene	1.0 U		50	45.8	92	50	47.7	95	4	76-122/11
106-46-7	1,4-Dichlorobenzene	1.0 U		50	45.8	92	50	48.0	96	5	76-122/11
75-71-8	Dichlorodifluoromethane	2.0 U		50	52.4	105	50	53.7	107	2	31-159/16
75-34-3	1,1-Dichloroethane	1.0 U		50	44.5	89	50	48.0	96	8	73-126/11
107-06-2	1,2-Dichloroethane	1.0 U		50	44.1	88	50	45.4	91	3	72-131/11
75-35-4	1,1-Dichloroethene	1.0 U		50	47.6	95	50	51.1	102	7	63-136/14
156-59-2	cis-1,2-Dichloroethene	1.0 U		50	45.6	91	50	47.4	95	4	60-136/11
156-60-5	trans-1,2-Dichloroethene	1.0 U		50	45.7	91	50	50.1	100	9	70-126/11
78-87-5	1,2-Dichloropropane	1.0 U		50	46.0	92	50	47.4	95	3	78-124/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		50	47.7	95	50	49.2	98	3	79-123/11
10061-02-6	trans-1,3-Dichloropropene	1.0 U		50	46.3	93	50	47.8	96	3	77-123/11
123-91-1	1,4-Dioxane	130 U		1250	1150	92	1250	1420	114	21	49-146/26
100-41-4	Ethylbenzene	1.0 U		50	46.1	92	50	46.8	94	2	51-140/20
76-13-1	Freon 113	5.0 U		50	48.2	96	50	49.3	99	2	60-192/14
591-78-6	2-Hexanone	5.0 U		200	158	79	200	164	82	4	56-139/14
74-88-4	Iodomethane	2.0 U		50	47.3	95	50	48.4	97	2	67-132/14
98-82-8	Isopropylbenzene	1.0 U		50	45.3	91	50	47.1	94	4	75-129/11
79-20-9	Methyl Acetate	5.0 U		50	39.1	78	50	43.5	87	11	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90121-16MS	4B91837.D	1	06/24/19	ED	n/a	n/a	V4B3896
JC90121-16MSD	4B91838.D	1	06/24/19	ED	n/a	n/a	V4B3896
JC90121-16	4B91836.D	1	06/24/19	ED	n/a	n/a	V4B3896

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-1, JC90121-3, JC90121-4, JC90121-5, JC90121-6, JC90121-7, JC90121-8, JC90121-9, JC90121-10, JC90121-11, JC90121-12, JC90121-13, JC90121-14, JC90121-16

CAS No.	Compound	JC90121-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	5.0 U		50	45.4	91	50	48.2	96	6	57-155/13
1634-04-4	Methyl Tert Butyl Ether	1.0 U		50	39.3	79	50	42.3	85	7	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	5.0 U		200	166	83	200	173	87	4	66-136/13
75-09-2	Methylene chloride	2.0 U		50	44.2	88	50	47.1	94	6	73-125/13
100-42-5	Styrene	1.0 U		50	45.5	91	50	46.9	94	3	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		50	44.6	89	50	44.8	90	0	71-122/11
127-18-4	Tetrachloroethene	1.0 U		50	48.0	96	50	49.8	100	4	61-139/11
108-88-3	Toluene	1.0 U		50	45.6	91	50	47.2	94	3	60-135/10
87-61-6	1,2,3-Trichlorobenzene	1.0 U		50	42.3	85	50	46.7	93	10	70-138/13
120-82-1	1,2,4-Trichlorobenzene	1.0 U		50	43.4	87	50	47.4	95	9	72-137/13
71-55-6	1,1,1-Trichloroethane	1.0 U		50	47.8	96	50	50.0	100	4	74-138/12
79-00-5	1,1,2-Trichloroethane	1.0 U		50	45.1	90	50	47.2	94	5	78-121/11
79-01-6	Trichloroethene	1.0 U		50	49.3	99	50	50.4	101	2	62-141/10
75-69-4	Trichlorofluoromethane	2.0 U		50	53.7	107	50	56.6	113	5	57-149/14
75-01-4	Vinyl chloride	1.0 U		50	49.3	99	50	52.2	104	6	43-146/15
1330-20-7	Xylene (total)	1.0 U		150	137	91	150	141	94	3	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC90121-16	Limits
1868-53-7	Dibromofluoromethane	99%	100%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	97%	99%	101%	81-124%
2037-26-5	Toluene-D8	96%	98%	98%	80-120%
460-00-4	4-Bromofluorobenzene	101%	100%	105%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90121-19MS	A251097.D	1	06/26/19	BK	n/a	n/a	VA9710
JC90121-19MSD	A251098.D	1	06/26/19	BK	n/a	n/a	VA9710
JC90121-19	A251082.D	1	06/25/19	BK	n/a	n/a	VA9710

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-17, JC90121-18, JC90121-19, JC90121-20, JC90121-21, JC90121-22, JC90121-23, JC90121-24, JC90121-25, JC90121-26, JC90121-27, JC90121-28, JC90121-29, JC90121-30

CAS No.	Compound	JC90121-19 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	10 U		200	182	91	200	181	91	1	34-149/17
71-43-2	Benzene	0.50 U		50	43.9	88	50	43.3	87	1	54-136/10
74-97-5	Bromochloromethane	1.0 U		50	45.7	91	50	45.1	90	1	79-124/11
75-27-4	Bromodichloromethane	1.0 U		50	46.3	93	50	45.7	91	1	79-124/11
75-25-2	Bromoform	1.0 U		50	49.3	99	50	48.1	96	2	71-130/11
74-83-9	Bromomethane	2.0 U		50	52.4	105	50	48.3	97	8	53-142/14
78-93-3	2-Butanone (MEK)	10 U		200	180	90	200	182	91	1	54-142/15
75-15-0	Carbon disulfide	2.0 U		50	42.8	86	50	44.3	89	3	59-145/17
56-23-5	Carbon tetrachloride	1.0 U		50	48.8	98	50	48.1	96	1	70-143/12
108-90-7	Chlorobenzene	1.0 U		50	44.9	90	50	44.7	89	0	78-123/10
75-00-3	Chloroethane	1.0 U		50	55.1	110	50	51.8	104	6	57-141/14
67-66-3	Chloroform	1.0 U		50	43.0	86	50	43.0	86	0	76-123/11
74-87-3	Chloromethane	1.0 U		50	51.3	103	50	47.6	95	7	43-141/16
110-82-7	Cyclohexane	5.0 U		50	56.7	113	50	51.8	104	9	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U		50	45.3	91	50	47.4	95	5	66-130/13
124-48-1	Dibromochloromethane	1.0 U		50	46.2	92	50	46.9	94	2	76-125/11
106-93-4	1,2-Dibromoethane	1.0 U		50	48.4	97	50	48.4	97	0	78-119/11
95-50-1	1,2-Dichlorobenzene	1.0 U		50	44.5	89	50	44.3	89	0	77-123/11
541-73-1	1,3-Dichlorobenzene	1.0 U		50	43.5	87	50	43.3	87	0	76-122/11
106-46-7	1,4-Dichlorobenzene	1.0 U		50	42.6	85	50	43.6	87	2	76-122/11
75-71-8	Dichlorodifluoromethane	2.0 U		50	59.9	120	50	55.6	111	7	31-159/16
75-34-3	1,1-Dichloroethane	1.0 U		50	45.0	90	50	44.1	88	2	73-126/11
107-06-2	1,2-Dichloroethane	1.0 U		50	40.5	81	50	40.2	80	1	72-131/11
75-35-4	1,1-Dichloroethene	1.0 U		50	44.5	89	50	45.6	91	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	4.9		50	49.0	88	50	49.5	89	1	60-136/11
156-60-5	trans-1,2-Dichloroethene	1.0 U		50	46.6	93	50	46.8	94	0	70-126/11
78-87-5	1,2-Dichloropropane	1.0 U		50	46.4	93	50	45.4	91	2	78-124/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		50	45.8	92	50	45.5	91	1	79-123/11
10061-02-6	trans-1,3-Dichloropropene	1.0 U		50	45.0	90	50	45.7	91	2	77-123/11
123-91-1	1,4-Dioxane	130 U		1250	1190	95	1250	1190	95	0	49-146/26
100-41-4	Ethylbenzene	1.0 U		50	45.4	91	50	44.2	88	3	51-140/20
76-13-1	Freon 113	5.0 U		50	46.4	93	50	45.6	91	2	60-192/14
591-78-6	2-Hexanone	5.0 U		200	180	90	200	178	89	1	56-139/14
74-88-4	Iodomethane	2.0 U		50	44.2	88	50	47.0	94	6	67-132/14
98-82-8	Isopropylbenzene	1.0 U		50	47.7	95	50	46.2	92	3	75-129/11
79-20-9	Methyl Acetate	5.0 U		50	40.4	81	50	41.2	82	2	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90121-19MS	A251097.D	1	06/26/19	BK	n/a	n/a	VA9710
JC90121-19MSD	A251098.D	1	06/26/19	BK	n/a	n/a	VA9710
JC90121-19	A251082.D	1	06/25/19	BK	n/a	n/a	VA9710

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-17, JC90121-18, JC90121-19, JC90121-20, JC90121-21, JC90121-22, JC90121-23, JC90121-24, JC90121-25, JC90121-26, JC90121-27, JC90121-28, JC90121-29, JC90121-30

CAS No.	Compound	JC90121-19 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	5.0 U		50	45.2	90	50	43.5	87	4	57-155/13
1634-04-4	Methyl Tert Butyl Ether	1.0 U		50	44.4	89	50	44.9	90	1	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	5.0 U		200	183	92	200	176	88	4	66-136/13
75-09-2	Methylene chloride	2.0 U		50	43.1	86	50	44.7	89	4	73-125/13
100-42-5	Styrene	1.0 U		50	44.6	89	50	43.7	87	2	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		50	48.1	96	50	49.8	100	3	71-122/11
127-18-4	Tetrachloroethene	1.0 U		50	43.1	86	50	43.1	86	0	61-139/11
108-88-3	Toluene	1.0 U		50	45.1	90	50	44.6	89	1	60-135/10
87-61-6	1,2,3-Trichlorobenzene	1.0 U		50	44.2	88	50	46.1	92	4	70-138/13
120-82-1	1,2,4-Trichlorobenzene	1.0 U		50	44.5	89	50	44.7	89	0	72-137/13
71-55-6	1,1,1-Trichloroethane	1.0 U		50	48.3	97	50	47.6	95	1	74-138/12
79-00-5	1,1,2-Trichloroethane	1.0 U		50	47.0	94	50	48.0	96	2	78-121/11
79-01-6	Trichloroethene	1.0 U		50	43.9	88	50	43.1	86	2	62-141/10
75-69-4	Trichlorofluoromethane	2.0 U		50	58.8	118	50	54.7	109	7	57-149/14
75-01-4	Vinyl chloride	9.3		50	68.9	119	50	62.1	106	10	43-146/15
1330-20-7	Xylene (total)	1.0 U		150	138	92	150	135	90	2	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC90121-19	Limits
1868-53-7	Dibromofluoromethane	103%	103%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	100%	105%	81-124%
2037-26-5	Toluene-D8	101%	102%	100%	80-120%
460-00-4	4-Bromofluorobenzene	103%	104%	99%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90273-6MS	X182407.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6MSD	X182408.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6	X182402.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-2

CAS No.	Compound	JC90273-6 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	10	U	200	146	73	200	138	69	6	34-149/17
71-43-2	Benzene	0.50	U	50	47.2	94	50	46.9	94	1	54-136/10
74-97-5	Bromochloromethane	1.0	U	50	49.3	99	50	48.8	98	1	79-124/11
75-27-4	Bromodichloromethane	1.0	U	50	46.6	93	50	45.7	91	2	79-124/11
75-25-2	Bromoform	1.0	U	50	45.0	90	50	44.7	89	1	71-130/11
74-83-9	Bromomethane	2.0	U	50	57.4	115	50	57.2	114	0	53-142/14
78-93-3	2-Butanone (MEK)	13.8		200	203	95	200	205	96	1	54-142/15
75-15-0	Carbon disulfide	2.0	U	50	51.8	104	50	50.8	102	2	59-145/17
56-23-5	Carbon tetrachloride	1.0	U	50	50.9	102	50	50.1	100	2	70-143/12
108-90-7	Chlorobenzene	1.0	U	50	47.9	96	50	47.5	95	1	78-123/10
75-00-3	Chloroethane	1.0	U	50	56.5	113	50	57.2	114	1	57-141/14
67-66-3	Chloroform	1.0	U	50	47.9	96	50	47.4	95	1	76-123/11
74-87-3	Chloromethane	1.0	U	50	44.2	88	50	45.1	90	2	43-141/16
110-82-7	Cyclohexane	5.0	U	50	55.4	111	50	59.7	119	7	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	2.0	U	50	47.5	95	50	46.8	94	1	66-130/13
124-48-1	Dibromochloromethane	1.0	U	50	42.7	85	50	42.7	85	0	76-125/11
106-93-4	1,2-Dibromoethane	1.0	U	50	46.2	92	50	46.7	93	1	78-119/11
95-50-1	1,2-Dichlorobenzene	1.0	U	50	45.8	92	50	45.7	91	0	77-123/11
541-73-1	1,3-Dichlorobenzene	1.0	U	50	45.0	90	50	44.8	90	0	76-122/11
106-46-7	1,4-Dichlorobenzene	1.0	U	50	47.1	94	50	46.6	93	1	76-122/11
75-71-8	Dichlorodifluoromethane	2.0	U	50	50.7	101	50	47.6	95	6	31-159/16
75-34-3	1,1-Dichloroethane	1.0	U	50	48.4	97	50	48.2	96	0	73-126/11
107-06-2	1,2-Dichloroethane	1.0	U	50	40.8	82	50	40.4	81	1	72-131/11
75-35-4	1,1-Dichloroethene	1.0	U	50	52.4	105	50	51.4	103	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	1.0	U	50	48.7	97	50	48.0	96	1	60-136/11
156-60-5	trans-1,2-Dichloroethene	1.0	U	50	50.5	101	50	50.0	100	1	70-126/11
78-87-5	1,2-Dichloropropane	1.0	U	50	43.1	86	50	42.1	84	2	78-124/10
10061-01-5	cis-1,3-Dichloropropene	1.0	U	50	47.9	96	50	47.9	96	0	79-123/11
10061-02-6	trans-1,3-Dichloropropene	1.0	U	50	43.6	87	50	43.1	86	1	77-123/11
123-91-1	1,4-Dioxane	130	U	1250	1250	100	1250	1230	98	2	49-146/26
100-41-4	Ethylbenzene	1.0	U	50	46.1	92	50	45.6	91	1	51-140/20
76-13-1	Freon 113	5.0	U	50	57.7	115	50	56.1	112	3	60-192/14
591-78-6	2-Hexanone	5.9		200	192	93	200	193	94	1	56-139/14
74-88-4	Iodomethane	2.0	U	50	49.0	98	50	48.2	96	2	67-132/14
98-82-8	Isopropylbenzene	1.0	U	50	46.8	94	50	45.8	92	2	75-129/11
79-20-9	Methyl Acetate	5.0	U	50	35.7	71	50	34.3	69	4	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90273-6MS	X182407.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6MSD	X182408.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6	X182402.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90121-2

CAS No.	Compound	JC90273-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	5.0	U	50	53.1	106	50	51.4	103	3	57-155/13
1634-04-4	Methyl Tert Butyl Ether	1.0	U	50	41.7	83	50	42.2	84	1	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	5.0	U	200	195	98	200	197	99	1	66-136/13
75-09-2	Methylene chloride	2.0	U	50	48.3	97	50	47.5	95	2	73-125/13
100-42-5	Styrene	1.0	U	50	46.2	92	50	45.4	91	2	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	50	47.1	94	50	47.2	94	0	71-122/11
127-18-4	Tetrachloroethene	1.0	U	50	48.9	98	50	48.8	98	0	61-139/11
108-88-3	Toluene	1.0	U	50	46.7	93	50	46.5	93	0	60-135/10
87-61-6	1,2,3-Trichlorobenzene	1.0	U	50	53.6	107	50	53.3	107	1	70-138/13
120-82-1	1,2,4-Trichlorobenzene	1.0	U	50	53.6	107	50	51.8	104	3	72-137/13
71-55-6	1,1,1-Trichloroethane	1.0	U	50	52.6	105	50	51.2	102	3	74-138/12
79-00-5	1,1,2-Trichloroethane	1.0	U	50	45.8	92	50	45.6	91	0	78-121/11
79-01-6	Trichloroethene	1.0	U	50	50.4	101	50	50.8	102	1	62-141/10
75-69-4	Trichlorofluoromethane	2.0	U	50	65.9	132	50	63.9	128	3	57-149/14
75-01-4	Vinyl chloride	1.0	U	50	51.1	102	50	52.0	104	2	43-146/15
1330-20-7	Xylene (total)	1.0	U	150	137	91	150	136	91	1	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC90273-6	Limits
1868-53-7	Dibromofluoromethane	109%	106%	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	93%	102%	81-124%
2037-26-5	Toluene-D8	99%	99%	105%	80-120%
460-00-4	4-Bromofluorobenzene	104%	107%	97%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: V4B3793-BFB
Lab File ID: 4B89751.D
Instrument ID: GCMS4B
Injection Date: 04/06/19
Injection Time: 17:47

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	16461	16.6		Pass
75	30.0 - 60.0% of mass 95	43936	44.2		Pass
95	Base peak, 100% relative abundance	99336	100.0		Pass
96	5.0 - 9.0% of mass 95	6566	6.61		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	91778	92.4		Pass
175	5.0 - 9.0% of mass 174	7111	7.16	(7.75) [a]	Pass
176	95.0 - 101.0% of mass 174	88976	89.6	(96.9) [a]	Pass
177	5.0 - 9.0% of mass 176	6193	6.23	(6.96) [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
V4B3793-IC3793	4B89752.D	04/06/19	18:21	00:34	Initial cal 0.2
V4B3793-IC3793	4B89753.D	04/06/19	18:50	01:03	Initial cal 0.5
V4B3793-IC3793	4B89754.D	04/06/19	19:17	01:30	Initial cal 1
V4B3793-IC3793	4B89755.D	04/06/19	19:45	01:58	Initial cal 2
V4B3793-IC3793	4B89756.D	04/06/19	20:13	02:26	Initial cal 4
V4B3793-IC3793	4B89757.D	04/06/19	20:41	02:54	Initial cal 8
V4B3793-IC3793	4B89758.D	04/06/19	21:09	03:22	Initial cal 20
V4B3793-ICC3793	4B89759.D	04/06/19	21:37	03:50	Initial cal 50
V4B3793-IC3793	4B89760.D	04/06/19	22:05	04:18	Initial cal 100
V4B3793-IC3793	4B89761.D	04/06/19	22:33	04:46	Initial cal 200
V4B3793-ICV3793	4B89764.D	04/06/19	23:57	06:10	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: V4B3896-BFB
Lab File ID: 4B91830.D
Instrument ID: GCMS4B
Injection Date: 06/24/19
Injection Time: 07:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20344	16.3		Pass
75	30.0 - 60.0% of mass 95	55179	44.3		Pass
95	Base peak, 100% relative abundance	124531	100.0		Pass
96	5.0 - 9.0% of mass 95	8184	6.57		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	123483	99.2		Pass
175	5.0 - 9.0% of mass 174	9212	7.40	(7.46) [a]	Pass
176	95.0 - 101.0% of mass 174	119925	96.3	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	8306	6.67	(6.93) [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
V4B3896-CC3793	4B91830.D	06/24/19	07:01	00:00	Continuing cal 20
V4B3896-BS	4B91832.D	06/24/19	07:57	00:56	Blank Spike
V4B3896-MB	4B91834.D	06/24/19	08:53	01:52	Method Blank
JC90121-16	4B91836.D	06/24/19	09:53	02:52	SW3-2-2019-06-18
JC90121-16MS	4B91837.D	06/24/19	10:21	03:20	Matrix Spike
JC90121-16MSD	4B91838.D	06/24/19	10:49	03:48	Matrix Spike Duplicate
JC90121-1	4B91840.D	06/24/19	11:45	04:44	PDB-BLANK-2019-06-18
JC90121-3	4B91841.D	06/24/19	12:13	05:12	MW10-3-2019-06-18
JC90121-4	4B91842.D	06/24/19	12:41	05:40	SW10-5-2019-06-18
JC90121-5	4B91843.D	06/24/19	13:09	06:08	SW10-8-2019-06-18
JC90121-6	4B91844.D	06/24/19	13:37	06:36	SW-FD-10-2019-06-18
JC90121-7	4B91845.D	06/24/19	14:05	07:04	SW-10-7-2019-06-18
JC90121-8	4B91846.D	06/24/19	14:34	07:33	SW-10-6-2019-06-18
JC90121-9	4B91847.D	06/24/19	15:02	08:01	PZ10-7-2019-06-18
JC90121-10	4B91848.D	06/24/19	15:30	08:29	PW10-1-2019-06-18
JC90121-11	4B91849.D	06/24/19	15:58	08:57	MW10-7-2019-06-18
JC90121-12	4B91850.D	06/24/19	16:26	09:25	MW10-2-2019-06-18
JC90121-13	4B91851.D	06/24/19	16:54	09:53	PW10-2-2019-06-18
JC90121-14	4B91852.D	06/24/19	17:22	10:21	SW99-10-2019-06-18
V4B3896-ECC3793	4B91853.D	06/24/19	17:50	10:49	Ending cal 50

Instrument Performance Check (BFB)

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9645-BFB
Lab File ID: A249730.D
Instrument ID: GCMSA
Injection Date: 05/11/19
Injection Time: 14:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	8968	17.1		Pass
75	30.0 - 60.0% of mass 95	24730	47.2		Pass
95	Base peak, 100% relative abundance	52402	100.0		Pass
96	5.0 - 9.0% of mass 95	3491	6.66		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	49818	95.1		Pass
175	5.0 - 9.0% of mass 174	4035	7.70	(8.10) [a]	Pass
176	95.0 - 101.0% of mass 174	48597	92.7	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3296	6.29	(6.78) [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
VA9645-IC9645	A249731.D	05/11/19	15:31	00:39	Initial cal 0.2
VA9645-IC9645	A249732.D	05/11/19	16:00	01:08	Initial cal 0.5
VA9645-IC9645	A249733.D	05/11/19	16:29	01:37	Initial cal 1
VA9645-IC9645	A249734.D	05/11/19	16:57	02:05	Initial cal 2
VA9645-IC9645	A249735.D	05/11/19	17:26	02:34	Initial cal 4
VA9645-IC9645	A249736.D	05/11/19	17:55	03:03	Initial cal 8
VA9645-IC9645	A249737.D	05/11/19	18:24	03:32	Initial cal 20
VA9645-ICC9645	A249738.D	05/11/19	18:53	04:01	Initial cal 50
VA9645-IC9645	A249739.D	05/11/19	19:21	04:29	Initial cal 100
VA9645-IC9645	A249740.D	05/11/19	19:50	04:58	Initial cal 200
VA9645-ICV9645	A249743.D	05/11/19	21:17	06:25	Initial cal verification 50
VA9645-ICV9645	A249744.D	05/11/19	21:46	06:54	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9710-BFB
Lab File ID: A251078.D
Instrument ID: GCMSA
Injection Date: 06/25/19
Injection Time: 19:20

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	9165	16.0		Pass
75	30.0 - 60.0% of mass 95	26133	45.6		Pass
95	Base peak, 100% relative abundance	57360	100.0		Pass
96	5.0 - 9.0% of mass 95	4001	6.98		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	55373	96.5		Pass
175	5.0 - 9.0% of mass 174	4548	7.93	(8.21) [a]	Pass
176	95.0 - 101.0% of mass 174	53925	94.0	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	3497	6.10	(6.48) [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
VA9710-CC9645	A251078.D	06/25/19	19:20	00:00	Continuing cal 50
VA9710-BS	A251079.D	06/25/19	20:00	00:40	Blank Spike
VA9710-MB	A251081.D	06/25/19	20:58	01:38	Method Blank
JC90121-19	A251082.D	06/25/19	21:27	02:07	MW3-3DA-2019-06-18
JC90121-17	A251083.D	06/25/19	21:56	02:36	SW3-15-2019-06-18
JC90121-18	A251084.D	06/25/19	22:24	03:04	SW3-3-2019-06-18
JC90121-20	A251085.D	06/25/19	22:53	03:33	MW3-4DA-2019-06-18
JC90121-21	A251086.D	06/25/19	23:22	04:02	MWFD-3-2019-06-18
JC90121-22	A251087.D	06/25/19	23:51	04:31	PW3-3A-2019-06-18
JC90121-23	A251088.D	06/26/19	00:19	04:59	PZ3-6D-2019-06-18
JC90121-24	A251089.D	06/26/19	00:48	05:28	PZ3-7D-2019-06-18
JC90121-25	A251090.D	06/26/19	01:17	05:57	PZ3-8D-2019-06-18
JC90121-26	A251091.D	06/26/19	01:45	06:25	MW8-11D-2019-06-18
JC90121-27	A251092.D	06/26/19	02:14	06:54	MW8-10D-2019-06-18
JC90121-28	A251093.D	06/26/19	02:42	07:22	MW8-8-2019-06-18
JC90121-29	A251094.D	06/26/19	03:11	07:51	CH8-01-2019-06-18
JC90121-30	A251095.D	06/26/19	03:39	08:19	MW8-1-2019-06-18
ZZZZZZ	A251096.D	06/26/19	04:08	08:48	(unrelated sample)
JC90121-19MS	A251097.D	06/26/19	04:36	09:16	Matrix Spike
JC90121-19MSD	A251098.D	06/26/19	05:05	09:45	Matrix Spike Duplicate
VA9710-ECC9645	A251099.D	06/26/19	05:33	10:13	Ending cal 50

Instrument Performance Check (BFB)

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VX7749-BFB
Lab File ID: X181279.D
Instrument ID: GCMSX
Injection Date: 05/02/19
Injection Time: 16:28

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14769	17.6		Pass
75	30.0 - 60.0% of mass 95	38133	45.6		Pass
95	Base peak, 100% relative abundance	83690	100.0		Pass
96	5.0 - 9.0% of mass 95	5531	6.61		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	80445	96.1		Pass
175	5.0 - 9.0% of mass 174	6070	7.25	(7.55) [a]	Pass
176	95.0 - 101.0% of mass 174	79192	94.6	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	5418	6.47	(6.84) [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
VX7749-IC7749	X181280.D	05/02/19	17:02	00:34	Initial cal 0.2
VX7749-IC7749	X181281.D	05/02/19	17:31	01:03	Initial cal 0.5
VX7749-IC7749	X181282.D	05/02/19	17:59	01:31	Initial cal 1
VX7749-IC7749	X181283.D	05/02/19	18:28	02:00	Initial cal 2
VX7749-IC7749	X181284.D	05/02/19	18:56	02:28	Initial cal 4
VX7749-IC7749	X181285.D	05/02/19	19:25	02:57	Initial cal 8
VX7749-IC7749	X181286.D	05/02/19	19:54	03:26	Initial cal 20
VX7749-ICC7749	X181287.D	05/02/19	20:22	03:54	Initial cal 50
VX7749-IC7749	X181288.D	05/02/19	20:51	04:23	Initial cal 100
VX7749-IC7749	X181289.D	05/02/19	21:19	04:51	Initial cal 200
VX7749-ICV7749	X181292.D	05/02/19	22:45	06:17	Initial cal verification 50
VX7749-ICV7749	X181293.D	05/02/19	23:14	06:46	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VX7807-BFB
Lab File ID: X182393.D
Instrument ID: GCMSX
Injection Date: 06/26/19
Injection Time: 06:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11533	15.9		Pass
75	30.0 - 60.0% of mass 95	30520	42.1		Pass
95	Base peak, 100% relative abundance	72544	100.0		Pass
96	5.0 - 9.0% of mass 95	4626	6.38		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	67712	93.3		Pass
175	5.0 - 9.0% of mass 174	5506	7.59	(8.13) [a]	Pass
176	95.0 - 101.0% of mass 174	66677	91.9	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	4392	6.05	(6.59) [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
VX7807-CC7749	X182393.D	06/26/19	06:55	00:00	Continuing cal 20
VX7807-BS	X182395.D	06/26/19	07:57	01:02	Blank Spike
VX7807-MB	X182397.D	06/26/19	09:08	02:13	Method Blank
ZZZZZZ	X182398.D	06/26/19	09:57	03:02	(unrelated sample)
ZZZZZZ	X182399.D	06/26/19	10:26	03:31	(unrelated sample)
ZZZZZZ	X182400.D	06/26/19	10:55	04:00	(unrelated sample)
ZZZZZZ	X182401.D	06/26/19	11:23	04:28	(unrelated sample)
JC90273-6	X182402.D	06/26/19	11:52	04:57	(used for QC only; not part of job JC90121)
JC90121-2	X182403.D	06/26/19	12:21	05:26	TRIP-BLANK-1
ZZZZZZ	X182404.D	06/26/19	12:50	05:55	(unrelated sample)
ZZZZZZ	X182405.D	06/26/19	13:18	06:23	(unrelated sample)
ZZZZZZ	X182406.D	06/26/19	13:47	06:52	(unrelated sample)
JC90273-6MS	X182407.D	06/26/19	14:16	07:21	Matrix Spike
JC90273-6MSD	X182408.D	06/26/19	14:45	07:50	Matrix Spike Duplicate
ZZZZZZ	X182410.D	06/26/19	15:43	08:48	(unrelated sample)
ZZZZZZ	X182411.D	06/26/19	16:12	09:17	(unrelated sample)
ZZZZZZ	X182412.D	06/26/19	16:40	09:45	(unrelated sample)
ZZZZZZ	X182413.D	06/26/19	17:09	10:14	(unrelated sample)
ZZZZZZ	X182414.D	06/26/19	17:38	10:43	(unrelated sample)
VX7807-ECC7749	X182415.D	06/26/19	18:07	11:12	Ending cal 50

Internal Standard Area Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	V4B3896-CC3793	**Injection Date:**	06/24/19
Lab File ID:	4B91830.D	**Injection Time:**	07:01
Instrument ID:	GCMS4B	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	167234	6.73	382524	8.76	486793	9.63	436864	12.81	263515	15.38
Upper Limit [a]	334468	7.23	765048	9.26	973586	10.13	873728	13.31	527030	15.88
Lower Limit [b]	83617	6.23	191262	8.26	243397	9.13	218432	12.31	131758	14.88

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4B3896-BS	144178	6.75	335079	8.76	433432	9.63	402176	12.81	245994	15.38
V4B3896-MB	153261	6.74	334920	8.76	451852	9.63	413681	12.81	244157	15.38
JC90121-16	121901	6.73	352209	8.76	461468	9.63	421431	12.81	244506	15.38
JC90121-16MS	138636	6.74	335865	8.76	440292	9.63	411553	12.81	243868	15.38
JC90121-16MSD	146266	6.74	328369	8.76	432825	9.63	404062	12.81	240751	15.38
JC90121-1	147147	6.74	317626	8.76	436505	9.63	398093	12.81	235031	15.38
JC90121-3	150217	6.74	331508	8.76	440703	9.63	404402	12.81	242552	15.38
JC90121-4	154664	6.75	328420	8.76	439587	9.63	408861	12.81	243720	15.38
JC90121-5	156666	6.75	322471	8.76	430344	9.63	400171	12.81	233516	15.38
JC90121-6	159607	6.73	315656	8.76	430475	9.63	403319	12.81	240351	15.38
JC90121-7	149681	6.74	323337	8.76	429764	9.63	401502	12.81	227817	15.38
JC90121-8	143273	6.75	321934	8.76	428452	9.63	394001	12.81	234206	15.38
JC90121-9	139085	6.74	323081	8.76	430395	9.63	401012	12.81	238241	15.38
JC90121-10	131340	6.74	322568	8.76	429873	9.63	402117	12.81	234593	15.38
JC90121-11	136809	6.74	296839	8.75	414527	9.63	384272	12.81	224041	15.38
JC90121-12	133684	6.74	313626	8.76	421614	9.63	392649	12.81	234968	15.38
JC90121-13	133858	6.73	318216	8.76	431310	9.63	398920	12.81	236546	15.38
JC90121-14	135838	6.74	306522	8.75	414484	9.63	388750	12.81	233426	15.38
V4B3896-ECC3793	138218	6.74	297602	8.76	413985	9.63	392553	12.81	226233	15.38

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VA9710-CC9645	**Injection Date:**	06/25/19
Lab File ID:	A251078.D	**Injection Time:**	19:20
Instrument ID:	GCMSA	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	270975	8.16	194568	10.54	287121	11.50	243838	14.89	129599	17.51
Upper Limit [a]	541950	8.66	389136	11.04	574242	12.00	487676	15.39	259198	18.01
Lower Limit [b]	135488	7.66	97284	10.04	143561	11.00	121919	14.39	64800	17.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA9710-BS	292513	8.17	217831	10.54	320146	11.50	277721	14.89	145240	17.52
VA9710-MB	291244	8.16	201744	10.54	287859	11.50	228103	14.89	140548	17.51
JC90121-19	270393	8.16	197059	10.54	279477	11.50	226289	14.89	141046	17.51
JC90121-17	274337	8.15	202506	10.54	281442	11.50	224255	14.89	137244	17.51
JC90121-18	286580	8.16	201494	10.54	286308	11.50	231606	14.90	144984	17.52
JC90121-20	286083	8.16	206428	10.54	290876	11.50	231164	14.90	141768	17.52
JC90121-21	271937	8.17	203734	10.54	289810	11.50	230332	14.89	141488	17.51
JC90121-22	272108	8.16	198946	10.54	282236	11.51	228610	14.90	141793	17.52
JC90121-23	271547	8.15	193110	10.54	270650	11.50	220356	14.89	140209	17.51
JC90121-24	268798	8.16	198720	10.54	279067	11.50	222004	14.90	136626	17.52
JC90121-25	259916	8.17	194128	10.54	271916	11.50	217103	14.89	135538	17.52
JC90121-26	271912	8.15	195706	10.54	276566	11.50	220200	14.90	136237	17.52
JC90121-27	256888	8.17	186811	10.54	265790	11.50	219395	14.90	138034	17.52
JC90121-28	269908	8.15	190745	10.54	270442	11.50	221492	14.89	138038	17.51
JC90121-29	265020	8.16	194523	10.54	275961	11.51	218629	14.89	137370	17.51
JC90121-30	259409	8.17	190868	10.54	268806	11.50	219161	14.90	137871	17.51
ZZZZZZ	266106	8.16	182997	10.54	260042	11.50	213950	14.89	135740	17.51
JC90121-19MS	267194	8.16	195357	10.54	288537	11.50	244760	14.90	139307	17.52
JC90121-19MSD	282373	8.17	200421	10.54	299526	11.51	248392	14.89	135633	17.51
VA9710-ECC9645	278686	8.16	206408	10.54	304299	11.50	261968	14.90	143296	17.52

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VX7807-CC7749	**Injection Date:**	06/26/19
Lab File ID:	X182393.D	**Injection Time:**	06:55
Instrument ID:	GCMSX	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	131265	7.40	192685	10.20	260927	11.39	262071	15.60	147792	18.39
Upper Limit [a]	262530	7.90	385370	10.70	521854	11.89	524142	16.10	295584	18.89
Lower Limit [b]	65633	6.90	96343	9.70	130464	10.89	131036	15.10	73896	17.89

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VX7807-BS	138229	7.40	191602	10.20	260813	11.39	266607	15.60	143631	18.39
VX7807-MB	142797	7.39	204076	10.20	278274	11.39	273831	15.60	183451	18.40
ZZZZZZ	158447	7.40	212822	10.20	283810	11.39	278167	15.60	176516	18.40
ZZZZZZ	133507	7.40	202847	10.19	273870	11.39	273092	15.60	181382	18.39
ZZZZZZ	139805	7.40	200918	10.20	273692	11.39	273302	15.60	183942	18.39
ZZZZZZ	137222	7.40	203107	10.20	272505	11.39	262036	15.60	156505	18.39
JC90273-6	123224	7.40	202922	10.20	273422	11.39	266143	15.60	166930	18.39
JC90121-2	147377	7.40	205943	10.20	275237	11.39	272910	15.60	177859	18.40
ZZZZZZ	128930	7.40	200493	10.20	277167	11.39	274271	15.60	177854	18.40
ZZZZZZ	130913	7.41	202880	10.20	274746	11.39	272725	15.60	180640	18.40
ZZZZZZ	141782	7.40	202217	10.20	272360	11.39	269627	15.60	179396	18.40
JC90273-6MS	116734	7.41	186221	10.20	257095	11.39	260327	15.60	142889	18.39
JC90273-6MSD	115566	7.41	191547	10.20	263658	11.39	268048	15.60	141930	18.40
ZZZZZZ	135916	7.41	209683	10.20	278530	11.39	275142	15.60	171192	18.40
ZZZZZZ	139033	7.40	208158	10.20	277209	11.39	274450	15.60	184604	18.40
ZZZZZZ	149876	7.41	207978	10.20	275132	11.39	273601	15.60	181069	18.40
ZZZZZZ	136095	7.40	205342	10.20	279875	11.39	278739	15.60	179807	18.40
ZZZZZZ	143534	7.40	203283	10.20	277106	11.39	274336	15.60	183521	18.40
VX7807-ECC7749	121845	7.41	190706	10.20	259159	11.39	264567	15.60	142972	18.40

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

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
JC90121-1	4B91840.D	109	109	100	104
JC90121-2	X182403.D	110	104	103	92
JC90121-3	4B91841.D	105	103	97	102
JC90121-4	4B91842.D	105	103	97	101
JC90121-5	4B91843.D	106	104	96	103
JC90121-6	4B91844.D	110	109	97	101
JC90121-7	4B91845.D	105	104	96	106
JC90121-8	4B91846.D	105	104	97	99
JC90121-9	4B91847.D	106	103	96	100
JC90121-10	4B91848.D	104	103	96	102
JC90121-11	4B91849.D	113	112	98	102
JC90121-12	4B91850.D	107	104	97	100
JC90121-13	4B91851.D	108	103	97	100
JC90121-14	4B91852.D	110	105	95	98
JC90121-16	4B91836.D	101	101	98	105
JC90121-17	A251083.D	99	103	100	97
JC90121-18	A251084.D	102	106	99	98
JC90121-19	A251082.D	102	105	100	99
JC90121-20	A251085.D	102	107	100	99
JC90121-21	A251086.D	104	105	100	99
JC90121-22	A251087.D	103	107	99	98
JC90121-23	A251088.D	103	105	100	95
JC90121-24	A251089.D	105	107	100	99
JC90121-25	A251090.D	104	107	100	99
JC90121-26	A251091.D	104	108	101	98
JC90121-27	A251092.D	103	107	100	98
JC90121-28	A251093.D	103	107	98	97
JC90121-29	A251094.D	104	107	100	97
JC90121-30	A251095.D	103	104	100	97
JC90121-16MS	4B91837.D	99	97	96	101
JC90121-16MSD	4B91838.D	100	99	98	100
JC90121-19MS	A251097.D	103	102	101	103
JC90121-19MSD	A251098.D	103	100	102	104
JC90273-6MS	X182407.D	109	95	99	104
JC90273-6MSD	X182408.D	106	93	99	107
V4B3896-BS	4B91832.D	98	99	98	99
V4B3896-MB	4B91834.D	106	109	99	104
VA9710-BS	A251079.D	104	102	98	108
VA9710-MB	A251081.D	103	103	100	99
VX7807-BS	X182395.D	107	96	98	105

Surrogate Recovery Summary

Job Number: JC90121
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

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
VX7807-MB	X182397.D	111	102	102	91

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Initial Calibration Summary

Job Number: JC90121 **Sample:** V4B3793-ICC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B89759.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B3793.M (RTE Integrator)
Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
Last Update : Mon Apr 08 11:56:42 2019
Response via : Initial Calibration

Calibration Files
1 =4B89754.D 4 =4B89756.D 100 =4B89760.D 50 =4B89759.D
20 =4B89758.D 200 =4B89761.D 8 =4B89757.D 0.5 =4B89753.D
2 =4B89755.D 0.2 =4B89752.D = =

Compound	1	4	100	50	20	200	8	0.5	2	0.2	Avg	%RSD
1) I tert butyl alcohol-d9	ISTD											
2) ethanol											0.000	-1.00
3) tertiary butyl alcohol	0.121	0.145	0.147	0.140	0.139	0.143	0.146		0.152		0.141	6.51
4) 1,4-dioxane		0.010	0.012	0.011	0.010	0.012	0.010		0.009		0.011	9.88
5) I pentafluorobenzene	ISTD											
6) chlorodifluoromethane	0.988	1.042	1.033	0.987	0.985	0.996	1.027		1.158		1.027	5.63
7) dichlorodifluoromethane	0.894	0.813	1.124	1.061	1.063	1.072	1.002		0.994		1.003	10.30
8) chloromethane	1.209	0.949	1.184	1.114	1.126	1.115	1.160	1.322	1.191		1.152	8.64
9) vinyl chloride	0.983	0.808	1.100	1.036	1.038	1.013	1.034	0.948	1.022		0.998	8.27
10) 1,3-butadiene	0.757	0.776	0.762	0.733	0.738	0.709	0.766		0.813		0.757	4.15
11) bromomethane		0.580	0.698	0.680	0.689	0.604	0.703		0.744		0.671	8.64
12) chloroethane	0.587	0.425	0.514	0.501	0.519	0.451	0.530		0.551		0.510	10.18
13) trichlorofluoromethane	0.914	0.779	1.064	0.996	1.024	0.979	0.982		0.992		0.966	8.97
14) vinyl bromide	0.547	0.425	0.569	0.531	0.541	0.520	0.538	0.512	0.526		0.523	7.69
15) ethyl ether	0.279	0.303	0.307	0.296	0.300	0.288	0.309		0.333		0.302	5.34
16) 2-chloropropane	1.327	1.183	1.059	1.024	1.043	0.983	1.073		1.320		1.127	11.92
17) acrolein		0.113	0.118	0.113	0.118	0.110	0.116				0.115	2.71
18) freon 113	0.521	0.542	0.563	0.535	0.543	0.541	0.535		0.599		0.547	4.33
19) 1,1-dichloroethene	1.009	1.043	1.026	0.982	1.005	0.964	1.033	1.085	1.125		1.030	4.84
20) acetone	0.044	0.050	0.054	0.053	0.051	0.049	0.053		0.055		0.051	6.63
21) acetonitrile		0.090	0.082	0.081	0.081	0.076	0.090				0.083	6.62
22) iodomethane	1.029	1.098	1.111	1.061	1.065	1.072	1.093	1.141	1.206	0.959	1.084	6.05
23) carbon disulfide												

2.085 2.175 2.130 2.034 2.065 2.039 2.142 2.259 2.386 2.658 2.197 8.86

24) methylene chloride
0.710 0.723 0.705 0.679 0.689 0.673 0.705 0.786 0.796 0.718 6.14

25) methyl acetate
0.464 0.432 0.441 0.420 0.408 0.474 0.440 5.81

26) methyl tert butyl ether
1.651 1.683 1.581 1.556 1.567 1.473 1.673 1.858 1.829 1.652 7.68

27) trans-1,2-dichloroethene
0.862 0.926 0.886 0.844 0.868 0.836 0.885 0.914 0.982 0.843 0.885 5.13

28) hexane
0.460 0.490 0.466 0.441 0.460 0.446 0.456 0.517 0.509 0.472 5.82

29) di-isopropyl ether
2.165 2.218 2.070 2.050 2.084 1.935 2.179 2.493 2.427 2.376 2.200 8.20

30) 2-butanone
0.054 0.063 0.060 0.059 0.061 0.060 0.062 0.060 4.71

31) 1,1-dichloroethane
1.066 1.118 1.075 1.037 1.069 1.013 1.095 1.136 1.199 1.081 1.089 4.83

32) chloroprene
0.781 0.856 0.852 0.808 0.826 0.807 0.852 0.887 0.931 0.789 0.839 5.53

33) acrylonitrile
0.223 0.233 0.223 0.224 0.218 0.233 0.239 0.228 3.25

34) vinyl acetate
0.080 0.097 0.090 0.089 0.095 0.087 0.081 0.088 7.43

35) ethyl tert-butyl ether
1.841 1.961 1.852 1.826 1.839 1.730 1.971 2.199 2.166 1.955 1.934 7.78

36) ethyl acetate
0.076 0.082 0.078 0.081 0.078 0.083 0.087 0.081 4.82

37) 2,2-dichloropropane
0.890 0.861 0.797 0.774 0.787 0.757 0.843 0.956 0.980 0.886 0.853 8.91

38) cis-1,2-dichloroethene
0.679 0.677 0.658 0.632 0.631 0.627 0.653 0.691 0.725 0.626 0.660 5.00

39) propionitrile
0.081 0.091 0.087 0.084 0.087 0.081 0.091 0.081 0.100 0.087 7.05

40) methyl acrylate
0.070 0.082 0.077 0.079 0.080 0.074 0.065 0.075 8.01

41) methacrylonitrile
0.179 0.202 0.222 0.212 0.214 0.218 0.212 0.220 0.210 6.69

42) bromochloromethane
0.289 0.318 0.323 0.308 0.313 0.313 0.324 0.311 0.345 0.316 4.70

43) tetrahydrofuran
0.073 0.077 0.074 0.072 0.073 0.073 0.085 0.075 5.91

44) chloroform
1.056 1.044 1.009 0.965 0.985 0.967 1.006 1.157 1.152 1.038 7.02

45) tert-butyl formate
0.398 0.465 0.459 0.449 0.438 0.436 0.465 0.450 0.505 0.452 6.36

46) dibromofluoromethane (s)
0.453 0.450 0.452 0.454 0.450 0.453 0.455 0.450 0.454 0.451 0.452 0.44

47) 1,1,1-trichloroethane
0.866 0.930 0.936 0.883 0.887 0.915 0.921 0.951 1.008 0.893 0.919 4.46

48) cyclohexane
0.972 0.755 0.986 0.919 1.068 0.924 0.930 0.954 0.950 0.855 0.931 8.87

49) isobutyl alcohol
0.000 -1.00

50) 1,1-dichloropropene
0.730 0.757 0.747 0.698 0.724 0.720 0.729 0.790 0.801 0.662 0.736 5.56

51) carbon tetrachloride
0.725 0.781 0.804 0.751 0.751 0.783 0.768 0.756 0.858 0.706 0.768 5.52

52) tert-amyl alcohol
0.041 0.040 0.036 0.036 0.037 0.035 0.040 0.042 0.038 7.05

53) isopropyl acetate

```
            0.098 0.113 0.104 0.105 0.110 0.101       0.100        0.104    5.21

54) I   1,4-difluorobenzene   ----------------ISTD---------------------
55)  1,2-dichloroethane-d4 (s)
      0.331 0.332 0.316 0.322 0.332 0.316 0.335 0.336 0.340 0.337  0.330    2.61
56)  n-butyl alcohol
      0.009 0.011 0.009 0.010 0.010 0.009 0.011 0.011 0.012        0.010   10.45
57)  2,2,4-trimethylpentane
      1.762 1.830 1.750 1.688 1.779 1.623 1.734 1.883 1.930 1.737  1.772    5.08
58)  benzene
      1.654 1.718 1.653 1.583 1.639 1.587 1.660 1.854 1.867 1.763  1.698    5.96
59)  tert-amyl methyl ether
      1.400 1.429 1.276 1.290 1.316 1.154 1.422 1.561 1.611 1.457  1.392    9.85
60)  heptane
      0.293 0.328 0.319 0.301 0.315 0.302 0.301 0.336 0.344 0.240  0.308    9.46
61)  1,2-dichloroethane
      0.534 0.520 0.480 0.463 0.482 0.456 0.491       0.582        0.501    8.38
62)  ethyl acrylate
      0.414 0.440 0.456 0.436 0.445 0.437 0.453 0.429 0.488        0.444    4.63
63)  trichloroethene
      0.392 0.411 0.415 0.390 0.399 0.400 0.400 0.454 0.436 0.367  0.406    6.02
64)  2-chloroethyl vinyl ether
      0.211 0.225 0.236 0.228 0.227 0.222 0.231       0.245        0.228    4.34
65)  methyl methacrylate
            0.084 0.097 0.095 0.091 0.096 0.087       0.082        0.090    6.71
66)  methylcyclohexane
      0.830 0.887 0.845 0.818 0.850 0.797 0.853 0.954 0.941 0.815  0.859    6.15
67)  1,2-dichloropropane
      0.409 0.445 0.425 0.408 0.414 0.403 0.433 0.467 0.465 0.357  0.423    7.68
68)  dibromomethane
      0.243 0.246 0.249 0.238 0.241 0.238 0.248 0.229 0.275        0.245    5.21
69)  bromodichloromethane
      0.494 0.507 0.539 0.505 0.508 0.526 0.511 0.534 0.548 0.473  0.515    4.40
70)  2-nitropropane     *This compound fails Initial Calibration criteria*
                  0.082 0.071 0.066 0.115 0.066                    0.080   25.57
            ----- Linear regression -----  Coefficient =  0.9663
              Response Ratio = -0.01159 + 0.10440 *A

71)  epichlorohydrin
      0.033 0.041 0.040 0.039 0.040 0.038 0.040       0.043        0.039    7.93
72)  cis-1,3-dichloropropene
      0.572 0.604 0.633 0.597 0.606 0.610 0.604 0.638 0.661 0.534  0.606    5.81
73)  4-methyl-2-pentanone
      0.158 0.165 0.158 0.156 0.161 0.146 0.168 0.169 0.181        0.163    5.91
74)  isoamyl alcohol
      0.011 0.014 0.012 0.013 0.014 0.011 0.014       0.014        0.013   10.10

75) I   chlorobenzene-d5      ----------------ISTD---------------------
76)  toluene-d8 (s)
      1.275 1.254 1.259 1.242 1.267 1.270 1.255 1.248 1.262 1.251  1.258    0.82
77)  toluene
      0.971 1.050 1.075 0.995 1.035 1.040 1.030 1.082 1.136 1.008  1.042    4.54
78)  ethyl methacrylate
      0.468 0.508 0.528 0.504 0.511 0.503 0.515 0.475 0.552        0.507    4.98
79)  trans-1,3-dichloropropene
      0.555 0.574 0.589 0.554 0.567 0.565 0.566 0.539 0.625 0.509  0.564    5.35
80)  1,1,2-trichloroethane
      0.314 0.315 0.327 0.306 0.316 0.317 0.313 0.297 0.357 0.282  0.314    6.19
81)  tetrachloroethene
      0.384 0.397 0.402 0.371 0.382 0.387 0.383 0.439 0.408 0.352  0.391    6.00
```

82) 2-hexanone
0.161 0.174 0.160 0.157 0.165 0.146 0.169 0.152 0.196 0.164 8.72
83) 1,3-dichloropropane
0.571 0.587 0.586 0.558 0.570 0.561 0.583 0.622 0.658 0.544 0.584 5.74
84) butyl acetate
0.268 0.295 0.275 0.271 0.287 0.262 0.303 0.277 0.338 0.286 8.20
85) dibromochloromethane
0.392 0.408 0.453 0.416 0.412 0.446 0.403 0.399 0.438 0.344 0.411 7.61
86) 1,2-dibromoethane
0.477 0.469 0.517 0.484 0.491 0.499 0.492 0.512 0.520 0.460 0.492 4.09
87) n-butyl ether
1.906 1.964 1.853 1.783 1.843 1.758 1.905 2.049 2.128 1.868 1.906 6.03
88) chlorobenzene
1.160 1.161 1.184 1.108 1.141 1.141 1.150 1.237 1.255 1.143 1.168 3.90
89) 1,1,1,2-tetrachloroethane
0.435 0.465 0.492 0.461 0.462 0.477 0.461 0.528 0.515 0.383 0.468 8.71
90) ethylbenzene
1.945 2.089 2.037 1.928 1.997 1.937 2.010 2.239 2.231 2.044 2.046 5.48
91) m,p-xylene
0.759 0.784 0.779 0.740 0.762 0.740 0.769 0.821 0.837 0.777 4.31
92) o-xylene
1.677 1.756 1.725 1.646 1.697 1.649 1.719 1.865 1.899 1.705 1.734 4.92
93) styrene
1.199 1.284 1.309 1.243 1.272 1.244 1.273 1.301 1.350 1.175 1.265 4.11
94) butyl acrylate
0.902 0.957 0.899 0.877 0.914 0.855 0.946 0.990 1.013 0.814 0.917 6.66
95) isopropylbenzene
2.086 2.206 2.239 2.100 2.161 2.162 2.180 2.356 2.428 2.047 2.197 5.41
96) bromoform
0.269 0.286 0.333 0.301 0.288 0.331 0.289 0.254 0.315 0.296 8.99
97) cis-1,4-dichloro-2-butene
0.137 0.151 0.165 0.154 0.155 0.163 0.157 0.132 0.164 0.153 7.72

98) I 1,4-dichlorobenzene-d ----------ISTD----------
99) 4-bromofluorobenzene (s)
0.819 0.822 0.827 0.822 0.822 0.817 0.823 0.832 0.817 0.830 0.823 0.64
100) 1,1,2,2-tetrachloroethane
0.895 0.972 0.995 0.932 0.927 0.939 0.944 0.967 1.037 0.955 0.956 4.12
101) trans-1,4-dichloro-2-butene
0.179 0.199 0.208 0.195 0.192 0.200 0.192 0.153 0.205 0.192 8.80
102) 1,2,3-trichloropropane
0.205 0.239 0.240 0.226 0.230 0.224 0.228 0.206 0.245 0.227 6.20
103) bromobenzene
0.900 0.963 1.013 0.935 0.932 0.974 0.933 0.983 1.016 0.792 0.944 6.89
104) n-propylbenzene
3.870 4.102 4.294 4.016 4.057 4.061 4.041 4.351 4.344 3.945 4.108 4.06
105) 2-chlorotoluene
0.823 0.877 0.920 0.856 0.859 0.879 0.854 0.891 0.926 0.728 0.861 6.53
106) 4-chlorotoluene
2.338 2.445 2.477 2.317 2.358 2.367 2.369 2.535 2.572 2.329 2.411 3.76
107) 1,3,5-trimethylbenzene
2.869 3.115 3.301 3.040 3.072 3.125 3.046 3.156 3.294 2.863 3.088 4.79
108) tert-butylbenzene
2.433 2.580 2.933 2.638 2.642 2.846 2.527 2.626 2.710 2.462 2.640 5.98
109) 1,2,4-trimethylbenzene
2.886 3.136 3.267 3.040 3.054 3.115 3.058 3.155 3.343 2.894 3.095 4.66
110) sec-butylbenzene
3.695 3.970 4.381 4.012 4.019 4.168 3.951 4.059 4.214 3.674 4.014 5.41
111) p-isopropyltoluene
3.153 3.441 3.706 3.413 3.385 3.525 3.377 3.504 3.587 3.076 3.417 5.52

Initial Calibration Summary

Job Number: JC90121 **Sample:** V4B3793-ICC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B89759.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
112)  1,3-dichlorobenzene
       1.697 1.838 1.881 1.743 1.770 1.808 1.792 1.833 1.955 1.764  1.808    4.07
113)  1,4-dichlorobenzene
       1.747 1.832 1.905 1.774 1.781 1.847 1.773 1.929 1.945 1.626  1.816    5.33
114)  1,2-dichlorobenzene
       1.754 1.873 1.951 1.814 1.814 1.877 1.838 1.921 2.026 1.831  1.870    4.21
115)  benzyl chloride
       1.569 1.648 1.785 1.669 1.639 1.735 1.629 1.765 1.769 1.609  1.682    4.52
116)  n-butylbenzene
       1.531 1.689 1.798 1.643 1.656 1.732 1.628 1.641 1.693 1.489  1.650    5.45
117)  hexachloroethane
             0.505 0.744 0.626 0.583 0.764 0.529       0.536        0.612   17.08
118)  1,2-dibromo-3-chloropropane
       0.191 0.226 0.264 0.250 0.235 0.261 0.234       0.231        0.237    9.84
119)  1,3,5-trichlorobenzene
       1.550 1.672 1.909 1.745 1.708 1.893 1.685 1.623 1.770 1.722  1.728    6.40
120)  1,2,4-trichlorobenzene
       1.328 1.466 1.716 1.569 1.524 1.687 1.474 1.390 1.483 1.540  1.518    7.90
121)  2-ethylhexyl acrylate
                  0.893 0.689 0.530 0.965 0.456                    0.707   31.27
             ----- Linear regression -----  Coefficient =  0.9908
               Response Ratio = -0.02347 + 0.95312 *A

122)  hexachlorobutadiene
       0.742 0.823 0.938 0.838 0.840 0.900 0.818 0.812 0.931        0.849    7.45
123)  naphthalene
       2.706 3.042 3.496 3.262 3.137 3.362 3.054 2.811 3.110 3.137  3.112    7.55
124)  1,2,3-trichlorobenzene
       1.196 1.337 1.575 1.449 1.363 1.519 1.364 1.277 1.376 1.409  1.387    7.95
125)  2-methylnaphthalene
                  1.799 1.560 1.326 1.783 1.198                    1.533   17.54
126)  Bis(chloromethyl)ether
                                                                   0.000   -1.00
127)  Ethylenimine
                                                                   0.000   -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M4B3793.M         Mon Apr 08 14:37:51 2019   GCMS4B
```

Initial Calibration Verification

Job Number: JC90121 **Sample:** V4B3793-ICV3793
Account: EAENYES EA Engineering **Lab FileID:** 4B89764.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V4B3793\4B89764.D Vial: 14
Acq On : 6 Apr 2019 11:57 pm Operator: CHELSEAS
Sample : ICV3793-50 Inst : MS4B
Misc : MS33655,V4B3793,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3793.M (RTE Integrator)
Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
Last Update : Tue Apr 09 08:39:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	103	0.01	6.76
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.414	1.389	1.8	102	0.01	6.86
4		1,4-dioxane	0.106	0.114	-7.5	106	0.00	10.24
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	8.76
6		chlorodifluoromethane	1.027	1.031	-0.4	106	0.00	3.91
7		dichlorodifluoromethane	1.003	1.109	-10.6	106	0.00	3.88
8		chloromethane	1.152	1.134	1.6	103	0.00	4.24
9		vinyl chloride	0.998	1.020	-2.2	100	0.00	4.45
10		1,3-butadiene	0.757	0.848	-12.0	117	0.00	4.47
11		bromomethane	0.671	0.692	-3.1	103	0.00	4.99
12		chloroethane	0.510	0.508	0.4	103	0.01	5.13
13		trichlorofluoromethane	0.966	1.012	-4.8	103	0.00	5.53
14		vinyl bromide	0.523	0.552	-5.5	105	0.00	5.43
15		ethyl ether	0.302	0.298	1.3	102	0.00	5.82
16		2-chloropropane	1.127	1.098	2.6	108	0.00	6.02
17		acrolein	0.115	0.120	-4.3	107	0.00	6.03
18		freon 113	0.547	0.615	-12.4	116	0.00	6.21
19		1,1-dichloroethene	1.030	0.942	8.5	97	0.01	6.22
20		acetone	0.051	0.052	-2.0	100	-0.01	6.18
21		acetonitrile	0.083	0.062	25.3	77	0.00	6.55
22		iodomethane	1.084	1.224	-12.9	117	0.01	6.45
23		carbon disulfide	2.197	2.629	-19.7	131	0.00	6.59
24		methylene chloride	0.718	0.677	5.7	101	0.00	6.81
25		methyl acetate	0.440	0.419	4.8	96	0.00	6.58
26		methyl tert butyl ether	1.652	1.525	6.1	99	0.00	7.11
27		trans-1,2-dichloroethene	0.885	0.842	4.9	101	0.00	7.15
28		hexane	0.472	0.449	4.9	103	0.00	7.45
29		di-isopropyl ether	2.200	1.972	10.4	97	0.00	7.63
30		2-butanone	0.060	0.059	1.7	100	0.00	8.21
31		1,1-dichloroethane	1.089	1.054	3.2	103	0.00	7.65
32		chloroprene	0.839	0.839	0.0	105	0.00	7.74
33		acrylonitrile	0.228	0.245	-7.5	111	0.00	7.05
34		vinyl acetate	0.088	0.085	3.4	95	0.00	7.58
35		ethyl tert-butyl ether	1.934	1.750	9.5	97	0.00	8.05
36		ethyl acetate	0.081	0.076	6.2	99	0.00	8.22
37		2,2-dichloropropane	0.853	0.744	12.8	97	0.00	8.33
38		cis-1,2-dichloroethene	0.660	0.623	5.6	100	0.00	8.29
39		propionitrile	0.087	0.087	0.0	104	0.00	8.29
40		methyl acrylate	0.075	0.077	-2.7	101	0.00	8.30
41		methacrylonitrile	0.210	0.210	0.0	100	0.00	8.46

Initial Calibration Verification

Job Number: JC90121 **Sample:** V4B3793-ICV3793
Account: EAENYES EA Engineering **Lab FileID:** 4B89764.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		bromochloromethane	0.316	0.312	1.3	102	0.00	8.56
43		tetrahydrofuran	0.075	0.074	1.3	102	0.00	8.58
44		chloroform	1.038	0.976	6.0	102	0.00	8.63
45		tert-butyl formate	0.452	0.402	11.1	90	0.00	8.66
46	S	dibromofluoromethane (s)	0.452	0.451	0.2	101	0.00	8.80
47		1,1,1-trichloroethane	0.919	0.877	4.6	100	0.00	8.88
48		cyclohexane	0.931	1.092	-17.3	120	0.00	8.99
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.736	0.714	3.0	103	0.00	9.03
51		carbon tetrachloride	0.768	0.769	-0.1	104	0.00	9.07
52		tert-amyl alcohol	0.038	0.039	-2.6	108	0.00	9.13
53		isopropyl acetate	0.104	0.099	4.8	97	0.00	9.14
54	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.63
55	S	1,2-dichloroethane-d4 (s)	0.330	0.320	3.0	101	0.00	9.20
56		n-butyl alcohol	0.010	0.010	0.0	104	0.00	9.66
57		2,2,4-trimethylpentane	1.772	1.681	5.1	101	0.00	9.34
58		benzene	1.698	1.600	5.8	102	0.00	9.26
59		tert-amyl methyl ether	1.392	1.227	11.9	96	0.00	9.32
60		heptane	0.308	0.346	-12.3	116	0.00	9.48
61		1,2-dichloroethane	0.501	0.458	8.6	100	0.00	9.27
62		ethyl acrylate	0.444	0.439	1.1	102	0.00	9.89
63		trichloroethene	0.406	0.404	0.5	105	0.00	9.93
64		2-chloroethyl vinyl ether	0.228	0.236	-3.5	105	0.00	10.68
65		methyl methacrylate	0.090	0.094	-4.4	101	0.00	10.15
66		methylcyclohexane	0.859	0.828	3.6	102	0.00	10.22
67		1,2-dichloropropane	0.423	0.408	3.5	101	0.00	10.21
68		dibromomethane	0.245	0.235	4.1	100	0.00	10.31
69		bromodichloromethane	0.515	0.502	2.5	101	0.00	10.46
		----------	True	Calc.	% Drift	----------		
70		2-nitropropane	50.000	43.949	12.1	114	0.00	10.65
		----------	AvgRF	CCRF	% Dev	----------		
71		epichlorohydrin	0.039	0.039	0.0	102	0.00	10.77
72		cis-1,3-dichloropropene	0.606	0.594	2.0	101	0.00	10.91
73		4-methyl-2-pentanone	0.163	0.155	4.9	101	0.00	11.00
74		isoamyl alcohol	0.013	0.013	0.0	104	0.00	10.99
75	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	12.81
76	S	toluene-d8 (s)	1.258	1.251	0.6	101	0.00	11.22
77		toluene	1.042	1.012	2.9	102	0.00	11.29
78		ethyl methacrylate	0.507	0.509	-0.4	102	0.00	11.46
79		trans-1,3-dichloropropene	0.564	0.566	-0.4	103	0.00	11.48
80		1,1,2-trichloroethane	0.314	0.306	2.5	101	0.00	11.71
81		tetrachloroethene	0.391	0.387	1.0	105	0.00	11.87
82		2-hexanone	0.164	0.154	6.1	98	0.00	11.87
83		1,3-dichloropropane	0.584	0.563	3.6	101	0.00	11.90
84		butyl acetate	0.286	0.268	6.3	99	0.00	11.95
85		dibromochloromethane	0.411	0.432	-5.1	104	0.00	12.17
86		1,2-dibromoethane	0.492	0.489	0.6	102	0.00	12.33
87		n-butyl ether	1.906	1.873	1.7	106	0.00	12.79
88		chlorobenzene	1.168	1.137	2.7	103	0.00	12.85
89		1,1,1,2-tetrachloroethane	0.468	0.468	0.0	102	0.00	12.92
90		ethylbenzene	2.046	1.948	4.8	102	0.00	12.91
91		m,p-xylene	0.777	0.748	3.7	102	0.00	13.04
92		o-xylene	1.734	1.635	5.7	100	0.00	13.47
93		styrene	1.265	1.257	0.6	102	0.00	13.49
94		butyl acrylate	0.917	0.853	7.0	98	0.00	13.28
95		isopropylbenzene	2.197	2.116	3.7	101	0.00	13.86

Initial Calibration Verification

Job Number: JC90121 **Sample:** V4B3793-ICV3793
Account: EAENYES EA Engineering **Lab FileID:** 4B89764.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

96		bromoform	0.296	0.323	-9.1	108	0.00	13.74
97		cis-1,4-dichloro-2-butene	0.153	0.153	0.0	100	0.00	13.89
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	15.38
99	S	4-bromofluorobenzene (s)	0.823	0.824	-0.1	100	0.00	14.08
100		1,1,2,2-tetrachloroethane	0.956	0.923	3.5	99	0.00	14.17
101		trans-1,4-dichloro-2-bute	0.192	0.214	-11.5	109	0.00	14.20
102		1,2,3-trichloropropane	0.227	0.220	3.1	97	0.00	14.26
103		bromobenzene	0.944	0.951	-0.7	102	0.00	14.29
104		n-propylbenzene	4.108	4.091	0.4	102	0.00	14.32
105		2-chlorotoluene	0.861	0.851	1.2	99	0.00	14.46
106		4-chlorotoluene	2.411	2.383	1.2	103	0.00	14.59
107		1,3,5-trimethylbenzene	3.088	3.079	0.3	101	0.00	14.49
108		tert-butylbenzene	2.640	2.708	-2.6	103	0.00	14.87
109		1,2,4-trimethylbenzene	3.095	3.133	-1.2	103	0.00	14.92
110		sec-butylbenzene	4.014	4.066	-1.3	101	0.00	15.11
111		p-isopropyltoluene	3.417	3.463	-1.3	101	0.00	15.26
112		1,3-dichlorobenzene	1.808	1.793	0.8	103	0.00	15.30
113		1,4-dichlorobenzene	1.816	1.816	0.0	102	0.00	15.41
114		1,2-dichlorobenzene	1.870	1.845	1.3	102	0.00	15.82
115		benzyl chloride	1.682	2.008	-19.4	120	0.00	15.51
116		n-butylbenzene	1.650	1.656	-0.4	101	0.00	15.71
117		hexachloroethane	0.612	0.674	-10.1	108	0.00	16.15
118		1,2-dibromo-3-chloropropa	0.237	0.238	-0.4	95	0.00	16.66
119		1,3,5-trichlorobenzene	1.728	1.761	-1.9	101	0.00	16.87
120		1,2,4-trichlorobenzene	1.518	1.553	-2.3	99	0.00	17.55
			True	Calc.	% Drift			
121		2-ethylhexyl acrylate	10.000	9.619	3.8	116	0.00	17.55
			AvgRF	CCRF	% Dev			
122		hexachlorobutadiene	0.849	0.813	4.2	97	0.00	17.67
123		naphthalene	3.112	3.256	-4.6	100	0.00	17.86
124		1,2,3-trichlorobenzene	1.387	1.449	-4.5	100	0.00	18.09
125		2-methylnaphthalene	1.533	1.603	-4.6	103	0.00	19.14
126		Bis(chloromethyl)ether		NA				
127		Ethylenimine		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B89759.D M4B3793.M Tue Apr 09 08:40:52 2019 GCMS4B

Continuing Calibration Summary

Job Number: JC90121 **Sample:** V4B3896-CC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B91830.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...-25\v4b3896\4b91830.d Vial: 4
Acq On : 24 Jun 2019 7:01 am Operator: edwardd
Sample : cc3793-20 Inst : MS4B
Misc : MS35593,V4B3896,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3793.M (RTE Integrator)
Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
Last Update : Tue Apr 09 08:39:45 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	104	-0.02	6.73
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.414	1.245	12.0	93	0.00	6.85
4		1,4-dioxane	0.106	0.102	3.8	102	0.00	10.24
5	I	pentafluorobenzene	1.000	1.000	0.0	134	0.00	8.76
6		chlorodifluoromethane	1.027	0.848	17.4	115	0.00	3.90
7		dichlorodifluoromethane	1.003	0.853	15.0	107	0.00	3.89
8		chloromethane	1.152	0.987	14.3	117	0.01	4.25
9		vinyl chloride	0.998	0.885	11.3	114	0.00	4.45
10		1,3-butadiene	0.757	0.626	17.3	113	0.02	4.48
11		bromomethane	0.671	0.584	13.0	113	0.01	5.00
12		chloroethane	0.510	0.439	13.9	113	0.00	5.12
13		trichlorofluoromethane	0.966	0.848	12.2	111	0.00	5.52
14		vinyl bromide	0.523	0.535	-2.3	132	0.00	5.43
15		ethyl ether	0.302	0.279	7.6	124	0.00	5.82
16		2-chloropropane	1.127	0.992	12.0	127	0.00	6.03
17		acrolein	0.115	0.079	31.3#	90	0.00	6.03
18		freon 113	0.547	0.444	18.8	109	0.00	6.21
19		1,1-dichloroethene	1.030	0.933	9.4	124	0.00	6.21
20		acetone	0.051	0.057	-11.8	150	0.00	6.19
21		acetonitrile	0.083	0.063	24.1#	104	0.00	6.55
22		iodomethane	1.084	0.972	10.3	122	0.00	6.45
23		carbon disulfide	2.197	1.813	17.5	117	0.00	6.59
24		methylene chloride	0.718	0.629	12.4	122	0.00	6.81
25		methyl acetate	0.440	0.373	15.2	119	0.00	6.58
26		methyl tert butyl ether	1.652	1.336	19.1	114	0.00	7.11
27		trans-1,2-dichloroethene	0.885	0.805	9.0	124	0.00	7.15
28		hexane	0.472	0.369	21.8#	107	0.00	7.45
29		di-isopropyl ether	2.200	1.832	16.7	117	0.00	7.63
30		2-butanone	0.060	0.056	6.7	127	0.00	8.22
31		1,1-dichloroethane	1.089	0.977	10.3	122	0.00	7.66
32		chloroprene	0.839	0.708	15.6	114	0.00	7.74
33		acrylonitrile	0.228	0.195	14.5	116	0.00	7.05
34		vinyl acetate	0.088	0.084	4.5	126	0.00	7.58
35		ethyl tert-butyl ether	1.934	1.537	20.5#	112	0.00	8.04
36		ethyl acetate	0.081	0.067	17.3	111	0.00	8.22
37		2,2-dichloropropane	0.853	0.730	14.4	124	0.00	8.32
38		cis-1,2-dichloroethene	0.660	0.594	10.0	126	0.00	8.29
39		propionitrile	0.087	0.073	16.1	112	0.00	8.28
40		methyl acrylate	0.075	0.067	10.7	114	0.00	8.31
41		methacrylonitrile	0.210	0.184	12.4	115	0.00	8.46

Continuing Calibration Summary

Job Number: JC90121 **Sample:** V4B3896-CC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B91830.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		bromochloromethane	0.316	0.292	7.6	125	0.00	8.56
43		tetrahydrofuran	0.075	0.063	16.0	117	0.00	8.58
44		chloroform	1.038	0.927	10.7	126	0.00	8.63
45		tert-butyl formate	0.452	0.351	22.3#	107	0.00	8.66
46	S	dibromofluoromethane (s)	0.452	0.434	4.0	129	0.00	8.80
47		1,1,1-trichloroethane	0.919	0.820	10.8	123	0.00	8.88
48		cyclohexane	0.931	0.754	19.0	94	0.00	8.99
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.736	0.651	11.5	120	0.00	9.03
51		carbon tetrachloride	0.768	0.716	6.8	127	0.00	9.07
52		tert-amyl alcohol	0.038	0.024	36.8#	88	0.00	9.12
53		isopropyl acetate	0.104	0.094	9.6	120	0.00	9.14
54	I	1,4-difluorobenzene	1.000	1.000	0.0	129	0.00	9.63
55	S	1,2-dichloroethane-d4 (s)	0.330	0.331	-0.3	129	0.00	9.19
56		n-butyl alcohol	0.010	0.007	30.0#	90	0.00	9.65
57		2,2,4-trimethylpentane	1.772	1.424	19.6	103	0.00	9.34
58		benzene	1.698	1.531	9.8	120	0.00	9.26
59		tert-amyl methyl ether	1.392	1.135	18.5	111	0.00	9.32
60		heptane	0.308	0.259	15.9	106	0.00	9.48
61		1,2-dichloroethane	0.501	0.478	4.6	128	0.00	9.27
62		ethyl acrylate	0.444	0.390	12.2	113	0.00	9.89
63		trichloroethene	0.406	0.392	3.4	126	0.00	9.93
64		2-chloroethyl vinyl ether	0.228	0.210	7.9	119	0.00	10.68
65		methyl methacrylate	0.090	0.079	12.2	112	0.00	10.15
66		methylcyclohexane	0.859	0.688	19.9	104	0.00	10.22
67		1,2-dichloropropane	0.423	0.397	6.1	124	0.00	10.21
68		dibromomethane	0.245	0.238	2.9	127	0.00	10.31
69		bromodichloromethane	0.515	0.511	0.8	130	0.00	10.45
		----------	True	Calc.	% Drift	----------		
70		2-nitropropane	20.000	26.617	-33.1#	214	0.00	10.64
		----------	AvgRF	CCRF	% Dev	----------		
71		epichlorohydrin	0.039	0.034	12.8	110	0.00	10.77
72		cis-1,3-dichloropropene	0.606	0.586	3.3	125	0.00	10.90
73		4-methyl-2-pentanone	0.163	0.145	11.0	116	0.00	11.00
74		isoamyl alcohol	0.013	0.009	30.8#	90	0.00	10.99
75	I	chlorobenzene-d5	1.000	1.000	0.0	130	0.00	12.81
76	S	toluene-d8 (s)	1.258	1.251	0.6	129	0.00	11.22
77		toluene	1.042	0.976	6.3	123	0.00	11.29
78		ethyl methacrylate	0.507	0.455	10.3	116	0.00	11.46
79		trans-1,3-dichloropropene	0.564	0.574	-1.8	132	0.00	11.48
80		1,1,2-trichloroethane	0.314	0.310	1.3	128	0.00	11.71
81		tetrachloroethene	0.391	0.369	5.6	126	0.00	11.87
82		2-hexanone	0.164	0.151	7.9	120	0.00	11.87
83		1,3-dichloropropane	0.584	0.562	3.8	128	0.00	11.90
84		butyl acetate	0.286	0.267	6.6	121	0.00	11.95
85		dibromochloromethane	0.411	0.428	-4.1	135	0.00	12.16
86		1,2-dibromoethane	0.492	0.419	14.8	111	0.00	12.33
87		n-butyl ether	1.906	1.612	15.4	114	0.00	12.79
88		chlorobenzene	1.168	1.094	6.3	125	0.00	12.84
89		1,1,1,2-tetrachloroethane	0.468	0.460	1.7	130	0.00	12.91
90		ethylbenzene	2.046	1.852	9.5	121	0.00	12.90
91		m,p-xylene	0.777	0.709	8.8	121	0.00	13.04
92		o-xylene	1.734	1.572	9.3	121	0.00	13.47
93		styrene	1.265	1.160	8.3	119	0.00	13.49
94		butyl acrylate	0.917	0.706	23.0#	101	0.00	13.28
95		isopropylbenzene	2.197	1.950	11.2	117	0.00	13.86

Continuing Calibration Summary

Job Number: JC90121 **Sample:** V4B3896-CC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B91830.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

96		bromoform	0.296	0.313	-5.7	141	0.00	13.74
97		cis-1,4-dichloro-2-butene	0.153	0.145	5.2	122	0.00	13.89
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	131	0.00	15.38
99	S	4-bromofluorobenzene (s)	0.823	0.812	1.3	129	0.00	14.08
100		1,1,2,2-tetrachloroethane	0.956	0.867	9.3	122	0.00	14.16
101		trans-1,4-dichloro-2-bute	0.192	0.176	8.3	120	0.00	14.20
102		1,2,3-trichloropropane	0.227	0.214	5.7	121	0.00	14.26
103		bromobenzene	0.944	0.904	4.2	127	0.00	14.28
104		n-propylbenzene	4.108	3.687	10.2	119	0.00	14.32
105		2-chlorotoluene	0.861	0.815	5.3	124	0.00	14.46
106		4-chlorotoluene	2.411	2.205	8.5	122	0.00	14.59
107		1,3,5-trimethylbenzene	3.088	2.785	9.8	119	0.00	14.49
108		tert-butylbenzene	2.640	2.333	11.6	116	0.00	14.87
109		1,2,4-trimethylbenzene	3.095	2.817	9.0	121	0.00	14.92
110		sec-butylbenzene	4.014	3.565	11.2	116	0.00	15.11
111		p-isopropyltoluene	3.417	2.986	12.6	115	0.00	15.26
112		1,3-dichlorobenzene	1.808	1.644	9.1	122	0.00	15.30
113		1,4-dichlorobenzene	1.816	1.646	9.4	121	0.00	15.40
114		1,2-dichlorobenzene	1.870	1.683	10.0	121	0.00	15.82
115		benzyl chloride	1.682	1.566	6.9	125	0.00	15.50
116		n-butylbenzene	1.650	1.468	11.0	116	0.00	15.71
117		hexachloroethane	0.612	0.573	6.4	129	0.00	16.15
118		1,2-dibromo-3-chloropropa	0.237	0.204	13.9	113	0.00	16.66
119		1,3,5-trichlorobenzene	1.728	1.550	10.3	119	0.00	16.87
120		1,2,4-trichlorobenzene	1.518	1.293	14.8	111	0.00	17.54
		----------	True	Calc.	% Drift	----------		
121		2-ethylhexyl acrylate	4.000	2.068	48.3#	49	0.00	17.55
		----------	AvgRF	CCRF	% Dev	----------		
122		hexachlorobutadiene	0.849	0.748	11.9	116	0.00	17.66
123		naphthalene	3.112	2.419	22.3#	101	0.00	17.85
124		1,2,3-trichlorobenzene	1.387	1.177	15.1	113	0.00	18.09
125		2-methylnaphthalene	1.533	0.743	51.5#	73	0.00	19.14
126		Bis(chloromethyl)ether		----------NA----------				
127		Ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B89758.D M4B3793.M Tue Jun 25 04:09:48 2019

Continuing Calibration Summary

Job Number: JC90121 **Sample:** V4B3896-ECC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B91853.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...-25\v4b3896\4b91853.d Vial: 27
Acq On : 24 Jun 2019 5:50 pm Operator: edwardd
Sample : ecc3793-50 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3793.M (RTE Integrator)
Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
Last Update : Tue Apr 09 08:39:45 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	93	0.00	6.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.414	1.330	5.9	89	-0.02	6.84
4		1,4-dioxane	0.106	0.099	6.6	83	0.00	10.24
5	I	pentafluorobenzene	1.000	1.000	0.0	110	0.00	8.76
6		chlorodifluoromethane	1.027	0.982	4.4	109	0.00	3.91
7		dichlorodifluoromethane	1.003	0.921	8.2	95	0.00	3.89
8		chloromethane	1.152	1.114	3.3	110	0.00	4.24
9		vinyl chloride	0.998	1.030	-3.2	109	0.00	4.44
10		1,3-butadiene	0.757	0.849	-12.2	127	0.00	4.47
11		bromomethane	0.671	0.678	-1.0	109	0.00	4.99
12		chloroethane	0.510	0.530	-3.9	116	0.01	5.13
13		trichlorofluoromethane	0.966	1.040	-7.7	114	0.00	5.52
14		vinyl bromide	0.523	0.637	-21.8	131	0.00	5.42
15		ethyl ether	0.302	0.319	-5.6	118	0.00	5.82
16		2-chloropropane	1.127	1.141	-1.2	122	0.00	6.02
17		acrolein	0.115	0.091	20.9	88	0.00	6.02
18		freon 113	0.547	0.540	1.3	111	0.00	6.21
19		1,1-dichloroethene	1.030	1.096	-6.4	122	0.00	6.20
20		acetone	0.051	0.057	-11.8	118	-0.01	6.18
21		acetonitrile	0.083	0.078	6.0	105	0.00	6.54
22		iodomethane	1.084	1.100	-1.5	114	0.00	6.44
23		carbon disulfide	2.197	2.187	0.5	118	0.00	6.59
24		methylene chloride	0.718	0.765	-6.5	124	0.00	6.81
25		methyl acetate	0.440	0.454	-3.2	113	0.00	6.58
26		methyl tert butyl ether	1.652	1.606	2.8	113	0.00	7.11
27		trans-1,2-dichloroethene	0.885	0.963	-8.8	125	0.00	7.15
28		hexane	0.472	0.433	8.3	108	0.00	7.45
29		di-isopropyl ether	2.200	2.244	-2.0	120	0.00	7.63
30		2-butanone	0.060	0.064	-6.7	117	0.00	8.21
31		1,1-dichloroethane	1.089	1.183	-8.6	125	0.00	7.65
32		chloroprene	0.839	0.869	-3.6	118	0.00	7.74
33		acrylonitrile	0.228	0.239	-4.8	117	0.00	7.05
34		vinyl acetate	0.088	0.091	-3.4	110	0.00	7.58
35		ethyl tert-butyl ether	1.934	1.865	3.6	112	0.00	8.04
36		ethyl acetate	0.081	0.090	-11.1	127	0.00	8.22
37		2,2-dichloropropane	0.853	0.784	8.1	111	0.00	8.32
38		cis-1,2-dichloroethene	0.660	0.715	-8.3	124	0.00	8.29
39		propionitrile	0.087	0.088	-1.1	114	0.00	8.28
40		methyl acrylate	0.075	0.084	-12.0	119	0.00	8.30
41		methacrylonitrile	0.210	0.233	-11.0	120	0.00	8.46

Continuing Calibration Summary

Job Number: JC90121 **Sample:** V4B3896-ECC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B91853.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		bromochloromethane	0.316	0.347	-9.8	123	0.00	8.56
43		tetrahydrofuran	0.075	0.076	-1.3	113	0.00	8.57
44		chloroform	1.038	1.122	-8.1	127	0.00	8.63
45		tert-butyl formate	0.452	0.388	14.2	95	0.00	8.66
46	S	dibromofluoromethane (s)	0.452	0.493	-9.1	119	0.00	8.80
47		1,1,1-trichloroethane	0.919	1.022	-11.2	127	0.00	8.88
48		cyclohexane	0.931	0.981	-5.4	117	0.00	8.99
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.736	0.799	-8.6	125	0.00	9.03
51		carbon tetrachloride	0.768	0.885	-15.2	129	0.00	9.07
52		tert-amyl alcohol	0.038	0.029	23.7	88	-0.01	9.12
53		isopropyl acetate	0.104	0.115	-10.6	122	0.00	9.14
54	I	1,4-difluorobenzene	1.000	1.000	0.0	114	0.00	9.63
55	S	1,2-dichloroethane-d4 (s)	0.330	0.343	-3.9	121	0.00	9.19
56		n-butyl alcohol	0.010	0.007	30.0	88	0.00	9.65
57		2,2,4-trimethylpentane	1.772	1.660	6.3	112	0.00	9.34
58		benzene	1.698	1.726	-1.6	124	0.00	9.26
59		tert-amyl methyl ether	1.392	1.276	8.3	113	0.00	9.32
60		heptane	0.308	0.279	9.4	105	0.00	9.48
61		1,2-dichloroethane	0.501	0.527	-5.2	130	0.00	9.27
62		ethyl acrylate	0.444	0.441	0.7	115	0.00	9.89
63		trichloroethene	0.406	0.439	-8.1	128	0.00	9.93
64		2-chloroethyl vinyl ether	0.228	0.239	-4.8	120	0.00	10.68
65		methyl methacrylate	0.090	0.089	1.1	107	0.00	10.15
66		methylcyclohexane	0.859	0.820	4.5	114	0.00	10.22
67		1,2-dichloropropane	0.423	0.454	-7.3	127	0.00	10.20
68		dibromomethane	0.245	0.267	-9.0	128	0.00	10.31
69		bromodichloromethane	0.515	0.579	-12.4	131	0.00	10.45
		----------	True	Calc.	% Drift	----------		
70		2-nitropropane	50.000	65.750	-31.5	202	0.00	10.64
		----------	AvgRF	CCRF	% Dev	----------		
71		epichlorohydrin	0.039	0.036	7.7	107	0.00	10.77
72		cis-1,3-dichloropropene	0.606	0.634	-4.6	121	0.00	10.90
73		4-methyl-2-pentanone	0.163	0.167	-2.5	122	0.00	11.00
74		isoamyl alcohol	0.013	0.010	23.1	90	0.00	10.99
75	I	chlorobenzene-d5	1.000	1.000	0.0	119	0.00	12.81
76	S	toluene-d8 (s)	1.258	1.228	2.4	118	0.00	11.22
77		toluene	1.042	1.037	0.5	125	0.00	11.29
78		ethyl methacrylate	0.507	0.496	2.2	118	0.00	11.46
79		trans-1,3-dichloropropene	0.564	0.583	-3.4	126	0.00	11.48
80		1,1,2-trichloroethane	0.314	0.329	-4.8	129	0.00	11.71
81		tetrachloroethene	0.391	0.404	-3.3	130	0.00	11.87
82		2-hexanone	0.164	0.155	5.5	118	0.00	11.87
83		1,3-dichloropropane	0.584	0.600	-2.7	128	0.00	11.90
84		butyl acetate	0.286	0.278	2.8	122	0.00	11.95
85		dibromochloromethane	0.411	0.445	-8.3	128	0.00	12.16
86		1,2-dibromoethane	0.492	0.444	9.8	110	0.00	12.33
87		n-butyl ether	1.906	1.766	7.3	118	0.00	12.79
88		chlorobenzene	1.168	1.175	-0.6	127	0.00	12.84
89		1,1,1,2-tetrachloroethane	0.468	0.497	-6.2	129	0.00	12.91
90		ethylbenzene	2.046	2.025	1.0	126	0.00	12.90
91		m,p-xylene	0.777	0.762	1.9	123	0.00	13.04
92		o-xylene	1.734	1.712	1.3	124	0.00	13.47
93		styrene	1.265	1.296	-2.5	125	0.00	13.49
94		butyl acrylate	0.917	0.824	10.1	112	0.00	13.28
95		isopropylbenzene	2.197	2.125	3.3	121	0.00	13.86

Continuing Calibration Summary

Job Number: JC90121 **Sample:** V4B3896-ECC3793
Account: EAENYES EA Engineering **Lab FileID:** 4B91853.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

			True	Calc.	% Drift			
96		bromoform	0.296	0.331	-11.8	132	0.00	13.74
97		cis-1,4-dichloro-2-butene	0.153	0.101	34.0	78	0.00	13.89
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	117	0.00	15.38
99	S	4-bromofluorobenzene (s)	0.823	0.832	-1.1	119	0.00	14.08
100		1,1,2,2-tetrachloroethane	0.956	1.000	-4.6	126	0.00	14.16
101		trans-1,4-dichloro-2-bute	0.192	0.130	32.3	78	0.00	14.20
102		1,2,3-trichloropropane	0.227	0.242	-6.6	125	0.00	14.26
103		bromobenzene	0.944	0.999	-5.8	125	0.00	14.29
104		n-propylbenzene	4.108	4.284	-4.3	125	0.00	14.32
105		2-chlorotoluene	0.861	0.920	-6.9	126	0.00	14.46
106		4-chlorotoluene	2.411	2.469	-2.4	125	0.00	14.59
107		1,3,5-trimethylbenzene	3.088	3.198	-3.6	123	0.00	14.49
108		tert-butylbenzene	2.640	2.693	-2.0	119	0.00	14.87
109		1,2,4-trimethylbenzene	3.095	3.186	-2.9	123	0.00	14.92
110		sec-butylbenzene	4.014	4.199	-4.6	122	0.00	15.11
111		p-isopropyltoluene	3.417	3.477	-1.8	119	0.00	15.26
112		1,3-dichlorobenzene	1.808	1.867	-3.3	125	0.00	15.30
113		1,4-dichlorobenzene	1.816	1.871	-3.0	123	0.00	15.40
114		1,2-dichlorobenzene	1.870	1.914	-2.4	123	0.00	15.82
115		benzyl chloride	1.682	1.352	19.6	95	0.00	15.50
116		n-butylbenzene	1.650	1.721	-4.3	123	0.00	15.71
117		hexachloroethane	0.612	0.602	1.6	113	0.00	16.15
118		1,2-dibromo-3-chloropropa	0.237	0.234	1.3	109	0.00	16.66
119		1,3,5-trichlorobenzene	1.728	1.721	0.4	115	0.00	16.87
120		1,2,4-trichlorobenzene	1.518	1.498	1.3	112	0.00	17.54
			True	Calc.	% Drift			
121		2-ethylhexyl acrylate	10.000	4.854	51.5#	59	0.00	17.55
			AvgRF	CCRF	% Dev			
122		hexachlorobutadiene	0.849	0.831	2.1	116	0.00	17.66
123		naphthalene	3.112	2.942	5.5	106	0.00	17.85
124		1,2,3-trichlorobenzene	1.387	1.378	0.6	111	0.00	18.09
125		2-methylnaphthalene	1.533	1.001	34.7	75	0.00	19.13
126		Bis(chloromethyl)ether		NA				
127		Ethylenimine		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B89759.D M4B3793.M Tue Jun 25 04:53:46 2019

Initial Calibration Summary

Job Number: JC90121 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Response Factor Report MSA

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Calibration Files
4 =A249735.D 2 =A249734.D 20 =A249737.D 50 =A249738.D
100 =A249739.D 1 =A249733.D 200 =A249740.D 0.5 =A249732.D
8 =A249736.D 0.2 =A249731.D = =

Compound	4	2	20	50	100	1	200	0.5	8	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) ethanol											0.000#	-1.00
3) tertiary butyl alcohol	1.103	1.004	1.044	1.018	1.061		1.007		0.991		1.033	3.79
4) 1,4-dioxane	0.067	0.055	0.070	0.071	0.075		0.065		0.065		0.067	9.81
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	1.040	1.020	0.962	0.964	0.981	0.916	0.925		0.960		0.971	4.36
7) dichlorodifluoromethane	1.175	1.254	1.210	1.229	1.318	1.076	1.187	0.966	1.216		1.181	8.75
8) chloromethane	1.118	1.249	1.139	1.504	1.569	1.138	1.436	1.213	1.179		1.283	13.49
9) vinyl chloride	1.015	1.106	1.089	1.124	1.201	1.079	1.097	0.981	1.090		1.087	5.75
10) 1,3-butadiene	1.193	1.165	1.013	0.966	0.952	1.074	0.880		1.044		1.036	10.30
11) bromomethane	0.742	0.782	0.738	0.756	0.805	0.780	0.731	0.782	0.754		0.763	3.28
12) chloroethane	0.563	0.552	0.545	0.570	0.613	0.474	0.559	0.513	0.585		0.552	7.31
13) vinyl bromide	0.709	0.770	0.740	0.751	0.821	0.694	0.754	0.550	0.766		0.728	10.48
14) trichlorofluoromethane	1.092	1.144	1.109	1.133	1.213	1.054	1.110		1.143		1.125	4.13
15) ethyl ether	0.273	0.237	0.265	0.265	0.263	0.203	0.255		0.251		0.252	8.95
16) acrolein			0.109	0.118	0.125		0.122		0.099		0.114	9.25
17) freon 113	0.573	0.546	0.546	0.550	0.572	0.502	0.544		0.538		0.547	4.06
18) 1,1-dichloroethene	0.591	0.554	0.529	0.529	0.566	0.467	0.564		0.525		0.541	6.92
19) acetone	*This compound fails for EPA 624.1*											
	0.072	0.069	0.073	0.076	0.077		0.072		0.069		0.073	4.40
20) acetonitrile	0.121	0.120	0.117	0.117	0.119	0.107	0.107		0.113		0.115	4.72
21) iodomethane	1.015	0.949	0.949	0.962	1.023	0.949	1.010	0.815	0.971		0.960	6.47
22) carbon disulfide	1.951	1.859	1.681	1.686	1.767	1.825	1.737	1.994	1.687		1.799	6.51
23) methylene chloride												

Initial Calibration Summary

Job Number: JC90121 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

0.630 0.578 0.555 0.563 0.590 0.538 0.587 0.453 0.573 0.563 8.62

24) methyl acetate
0.583 0.466 0.500 0.529 0.516 0.492 0.479 0.509 7.60

25) methyl tert butyl ether
1.715 1.647 1.601 1.605 1.684 1.511 1.635 1.388 1.555 1.593 6.20

26) trans-1,2-dichloroethene
0.518 0.467 0.485 0.483 0.490 0.430 0.479 0.414 0.460 0.470 6.73

27) hexane
0.713 0.736 0.668 0.679 0.696 0.694 0.665 0.596 0.664 0.679 5.79

28) di-isopropyl ether
1.778 1.714 1.645 1.644 1.694 1.625 1.623 1.577 1.610 1.410 1.632 5.96

29) ethyl tert-butyl ether
1.684 1.610 1.595 1.594 1.669 1.568 1.602 1.390 1.541 1.359 1.561 6.88

30) 2-butanone
0.088 0.078 0.087 0.090 0.095 0.061 0.095 0.077 0.084 13.63

31) 1,1-dichloroethane
0.935 0.870 0.853 0.835 0.847 0.890 0.813 0.734 0.819 0.844 6.63

32) chloroprene
0.735 0.704 0.695 0.699 0.710 0.606 0.675 0.649 0.684 0.684 5.49

33) acrylonitrile
0.290 0.256 0.260 0.266 0.258 0.227 0.259 7.84

34) vinyl acetate
0.110 0.106 0.107 0.113 0.113 0.099 0.108 4.76

35) ethyl acetate
0.087 0.089 0.102 0.107 0.099 0.080 0.094 11.15

36) 2,2-dichloropropane
0.911 0.877 0.820 0.817 0.833 0.862 0.796 0.671 0.818 0.823 8.16

37) cis-1,2-dichloroethene
0.602 0.548 0.557 0.549 0.561 0.508 0.545 0.460 0.541 0.541 7.20

38) methyl acrylate
0.079 0.090 0.099 0.104 0.105 0.085 0.094 11.30

39) propionitrile
0.124 0.109 0.116 0.119 0.122 0.098 0.118 0.083 0.110 0.111 11.91

40) bromochloromethane
0.311 0.279 0.289 0.285 0.297 0.257 0.285 0.203 0.279 0.276 11.21

41) tetrahydrofuran
0.259 0.258 0.236 0.238 0.242 0.240 0.233 0.218 0.241 5.57

42) chloroform
0.946 0.917 0.838 0.823 0.842 0.824 0.806 0.943 0.846 0.988 0.877 7.35

43) tert-butyl formate
0.481 0.466 0.457 0.463 0.481 0.338 0.460 0.420 0.446 10.66

44) dibromofluoromethane (s)
0.496 0.496 0.497 0.493 0.495 0.495 0.488 0.497 0.494 0.477 0.493 1.29

45) methacrylonitrile
0.245 0.201 0.241 0.248 0.261 0.258 0.225 0.240 8.68

46) cyclohexane
0.912 0.949 0.886 0.928 1.018 0.823 0.955 0.821 0.916 0.912 6.90

47) 1,1,1-trichloroethane
0.937 0.901 0.873 0.880 0.912 0.847 0.883 0.815 0.842 0.707 0.860 7.48

48) iso-butyl alcohol
0.089 0.080 0.084 0.086 0.091 0.070 0.085 0.079 0.083 8.09

49) 1,1-dichloropropene
0.733 0.651 0.632 0.643 0.676 0.595 0.650 0.571 0.630 0.642 7.18

50) carbon tetrachloride
0.842 0.836 0.772 0.773 0.806 0.708 0.779 0.653 0.748 0.768 7.84

51) tert-amyl alcohol
0.080 0.079 0.079 0.080 0.073 0.071 0.077 5.05

52) I 1,4-difluorobenzene ----------ISTD----------

53) 1,2-dichloroethane-d4 (s)

0.368 0.367 0.358 0.350 0.345 0.369 0.335 0.364 0.369 0.366 0.359 3.29

54) benzene
1.388 1.355 1.283 1.244 1.286 1.323 1.213 1.283 1.248 1.140 1.276 5.56

55) iso-octane
1.278 1.146 1.234 1.261 1.345 1.060 1.254 1.043 1.161 1.198 8.54

56) tert-amyl methyl ether
1.206 1.113 1.126 1.082 1.106 1.095 1.040 1.039 1.094 0.969 1.087 5.76

57) heptane
0.274 0.236 0.246 0.239 0.251 0.234 0.231 0.184 0.241 0.237 10.05

58) isopropyl acetate
0.096 0.088 0.098 0.095 0.100 0.093 0.085 0.094 5.76

59) 1,2-dichloroethane
0.480 0.457 0.439 0.422 0.429 0.494 0.403 0.566 0.433 0.458 10.82

60) n-butyl alcohol
0.023 0.021 0.023 0.024 0.024 0.018 0.021 0.021 0.022 8.52

61) ethyl acrylate
0.414 0.351 0.427 0.435 0.457 0.438 0.391 0.416 8.48

62) trichloroethene
0.351 0.350 0.315 0.309 0.331 0.331 0.316 0.309 0.314 0.325 5.03

63) 2-nitropropane
0.148 0.142 0.137 0.147 0.148 0.108 0.142 0.130 0.138 9.79

64) methylcyclohexane
0.717 0.734 0.687 0.670 0.694 0.644 0.657 0.639 0.655 0.611 0.671 5.59

65) 2-chloroethyl vinyl ether
0.169 0.156 0.174 0.185 0.200 0.142 0.196 0.159 0.173 11.72

66) methyl methacrylate
0.088 0.078 0.093 0.100 0.104 0.101 0.080 0.092 11.23

67) 1,2-dichloropropane
0.335 0.309 0.316 0.308 0.325 0.289 0.315 0.269 0.305 0.308 6.26

68) dibromomethane
0.227 0.218 0.207 0.206 0.218 0.167 0.210 0.206 0.207 8.56

69) bromodichloromethane
0.460 0.435 0.428 0.422 0.442 0.390 0.433 0.407 0.413 0.426 4.84

70) epichlorohydrin
0.048 0.046 0.048 0.050 0.051 0.034 0.049 0.044 0.046 11.90

71) cis-1,3-dichloropropene
0.480 0.473 0.471 0.481 0.513 0.428 0.499 0.374 0.449 0.379 0.455 10.40

72) 4-methyl-2-pentanone
0.220 0.195 0.200 0.197 0.202 0.170 0.191 0.155 0.183 0.190 10.00

73) 3-methyl-1-butanol
0.038 0.036 0.038 0.038 0.038 0.029 0.035 0.034 0.036 9.21

74) I chlorobenzene-d5 ----------ISTD----------

75) toluene-d8 (s)
1.363 1.362 1.351 1.308 1.251 1.367 1.220 1.371 1.369 1.334 1.330 4.03

76) toluene
0.978 0.958 0.880 0.865 0.863 0.860 0.817 0.963 0.850 0.802 0.884 7.00

77) trans-1,3-dichloropropene
0.498 0.424 0.475 0.478 0.491 0.426 0.463 0.423 0.463 0.404 0.455 7.17

78) ethyl methacrylate
0.504 0.475 0.477 0.471 0.476 0.444 0.450 0.385 0.455 0.460 7.22

79) 1,1,2-trichloroethane
0.279 0.271 0.262 0.258 0.262 0.226 0.246 0.219 0.250 0.252 7.87

80) 2-hexanone
0.212 0.195 0.192 0.186 0.186 0.172 0.177 0.174 0.185 0.187 6.45

81) tetrachloroethene
0.487 0.457 0.431 0.417 0.418 0.431 0.392 0.445 0.415 0.433 6.39

82) 1,3-dichloropropane
0.529 0.481 0.500 0.498 0.506 0.505 0.484 0.455 0.486 0.414 0.486 6.58

83) butyl acetate

```
      0.309 0.283 0.281 0.272 0.271       0.258       0.270        0.278    5.84
 84)  dibromochloromethane
      0.406 0.370 0.380 0.378 0.390 0.351 0.374 0.396 0.358        0.378    4.62
 85)  1,2-dibromoethane
      0.377 0.362 0.355 0.354 0.371 0.324 0.358 0.257 0.354        0.346   10.50
 86)  n-butyl ether
      1.623 1.521 1.462 1.407 1.417 1.458 1.321 1.460 1.390        1.451    5.90
 87)  chlorobenzene
      1.031 0.924 0.918 0.924 0.958 0.898 0.929 0.901 0.894 0.812  0.919    5.95
 88)  1,1,1,2-tetrachloroethane
      0.521 0.498 0.461 0.441 0.444 0.470 0.422 0.434 0.458 0.454  0.460    6.49
 89)  ethylbenzene
      1.777 1.710 1.616 1.598 1.619 1.613 1.533 1.713 1.558 1.677  1.642    4.63
 90)  m,p-xylene
      0.688 0.640 0.647 0.628 0.650 0.622 0.622 0.621 0.625        0.638    3.39
 91)  o-xylene
      0.778 0.738 0.723 0.694 0.713 0.680 0.685 0.692 0.671 0.686  0.706    4.62
 92)  styrene
      1.141 0.993 0.992 0.977 1.007 0.980 1.004 1.030 0.962 1.066  1.015    5.23
 93)  butyl acrylate
      0.826 0.806 0.767 0.695 0.681 0.718 0.637 0.629 0.755        0.724    9.67
 94)  n-amyl acetate
      0.381 0.362 0.340 0.304 0.291 0.319 0.276       0.331        0.325   10.87
 95)  bromoform
      0.306 0.281 0.272 0.264 0.266 0.238 0.259 0.221 0.261        0.263    9.20
 96)  isopropylbenzene
      2.136 2.026 1.993 1.896 1.899 1.864 1.760 1.885 1.885 1.755  1.910    6.09
 97)  cis-1,4-dichloro-2-butene   *This compounds fails Initial Calibration criteria*
      0.028       0.045 0.064 0.076       0.098       0.029        0.057   48.84

 98) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 99)  4-bromofluorobenzene (s)
      0.738 0.741 0.767 0.800 0.856 0.753 0.870 0.745 0.756 0.763  0.779    6.14
100)  bromobenzene
      0.773 0.671 0.720 0.750 0.834 0.677 0.826 0.669 0.697        0.735    8.78
101)  1,1,2,2-tetrachloroethane
      0.986 0.935 0.960 0.985 1.068 0.905 1.021 0.852 0.885 0.953  0.955    6.74
102)  trans-1,4-dichloro-2-butene  *This compounds fails Initial Calibration criteria*
      0.026       0.062 0.091 0.111       0.114       0.040        0.074   50.09
103)  1,2,3-trichloropropane
      0.278 0.250 0.281 0.279 0.303 0.249 0.290 0.263 0.268        0.273    6.59
104)  n-propylbenzene
      3.684 3.424 3.570 3.629 3.973 3.371 3.755 3.136 3.323 4.010  3.588    7.85
105)  2-chlorotoluene
      0.809 0.733 0.794 0.817 0.920 0.695 0.904       0.721        0.799   10.28
106)  4-chlorotoluene
      1.926 1.831 1.834 1.856 2.042 1.772 1.990 1.767 1.752 1.904  1.867    5.20
107)  1,3,5-trimethylbenzene
      2.807 2.589 2.837 2.982 3.303 2.508 3.120 2.453 2.564 2.501  2.766   10.60
108)  tert-butylbenzene
      0.600 0.516 0.641 0.668 0.755       0.736       0.570        0.641   13.55
109)  1,2,4-trimethylbenzene
      2.852 2.627 2.754 2.816 3.136 2.330 2.981 2.503 2.537 2.837  2.737    8.79
110)  sec-butylbenzene
      3.643 3.469 3.828 4.010 4.434 3.256 4.106       3.467        3.777   10.38
111)  1,3-dichlorobenzene
      1.596 1.424 1.417 1.415 1.503 1.435 1.439 1.370 1.340 1.636  1.458    6.47
112)  p-isopropyltoluene
      3.261 2.976 3.241 3.322 3.742 2.732 3.500 2.809 2.927 2.961  3.147   10.22
113)  1,4-dichlorobenzene
```

Initial Calibration Summary

Job Number: JC90121 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
       1.584 1.472 1.420 1.410 1.492 1.547 1.423 1.556 1.374        1.475    5.02
114)  1,2-dichlorobenzene
       1.684 1.565 1.523 1.528 1.642 1.521 1.581 1.415 1.457 1.880  1.579    8.36
115)  n-butylbenzene
       1.647 1.584 1.556 1.530 1.658 1.428 1.596 1.449 1.442 1.499  1.539    5.43
116)  1,2-dibromo-3-chloropropane
       0.324 0.324 0.338 0.346 0.361 0.298 0.338       0.339        0.334    5.63
117)  1,3,5-trichlorobenzene
       1.596 1.447 1.425 1.424 1.530 1.482 1.461 1.435 1.386 1.705  1.489    6.51
118)  2-ethylhexyl acrylate
                 0.574 0.739 0.907       0.894       0.541        0.731   23.54
              ----- Linear regression -----  Coefficient =  0.9952
                Response Ratio = -0.01690 + 0.90861 *A

119)  1,2,4-trichlorobenzene
       1.409 1.300 1.342 1.342 1.428 1.302 1.343 1.258 1.286 1.387  1.340    4.12
120)  hexachlorobutadiene
       0.547 0.478 0.510 0.525 0.603 0.516 0.581       0.502        0.533    7.86
121)  naphthalene
       4.003 3.646 3.935 3.962 4.189 3.586 3.852 3.449 3.779 4.766  3.917    9.44
122)  1,2,3-trichlorobenzene
       1.426 1.225 1.368 1.365 1.487 1.308 1.388 1.218 1.317        1.345    6.57
123)  hexachloroethane
       0.441 0.385 0.479 0.523 0.617       0.610       0.411        0.495   18.64
124)  2-methylnaphthalene
                 1.912 2.142 2.466       2.320       1.602        2.089   16.35
125)  ethylenimine
                                                                    0.000#  -1.00
126)  bis(chloromethyl)ether
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MA9645.M          Tue May 14 14:12:27 2019   RPT1
```

Initial Calibration Verification

Job Number: JC90121 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9645\A249743.D Vial: 14
Acq On : 11 May 2019 9:17 pm Operator: PrashanS
Sample : ICV9645-50 Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.042	-0.9	107	0.00	8.29
4		1,4-dioxane	0.067	0.073	-9.0	108	0.00	12.18
5	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	10.55
6	M	chlorodifluoromethane	0.971	1.099	-13.2	120	0.00	4.58
7	M	dichlorodifluoromethane	1.181	1.204	-1.9	104	0.01	4.55
8	M	chloromethane	1.283	1.462	-14.0	103	0.00	4.99
9	M	vinyl chloride	1.087	1.057	2.8	99	0.00	5.25
10		1,3-butadiene	1.036	1.160	-12.0	127	0.00	5.27
11	M	bromomethane	0.763	0.717	6.0	100	0.00	5.92
12	M	chloroethane	0.552	0.543	1.6	101	0.00	6.11
13		vinyl bromide	0.728	0.740	-1.6	104	0.01	6.49
14	M	trichlorofluoromethane	1.125	1.082	3.8	101	0.00	6.63
15	M	ethyl ether	0.252	0.262	-4.0	105	0.00	7.01
16	M	acrolein	0.114	0.120	-5.3	108	0.00	7.27
17		freon 113	0.547	0.627	-14.6	120	0.00	7.51
18	M	1,1-dichloroethene	0.541	0.522	3.5	104	0.00	7.48
19	M	acetone	0.073	0.075	-2.7	104	0.00	7.48
20	M	acetonitrile	0.115	0.082	28.7	75	0.00	7.93
21	M	iodomethane	0.960	1.138	-18.5	125	0.00	7.75
22	M	carbon disulfide	1.799	1.901	-5.7	119	0.00	7.90
23	M	methylene chloride	0.563	0.573	-1.8	108	0.00	8.23
24	M	methyl acetate	0.509	0.515	-1.2	103	0.00	7.97
25	M	methyl tert butyl ether	1.593	1.648	-3.5	109	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.478	-1.7	105	0.00	8.64
27		hexane	0.679	0.709	-4.4	110	0.00	9.01
28	M	di-isopropyl ether	1.632	1.581	3.1	102	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.571	-0.6	104	0.00	9.71
30	M	2-butanone	0.084	0.091	-8.3	107	0.00	9.92
31	M	1,1-dichloroethane	0.844	0.849	-0.6	107	0.00	9.25
32	M	chloroprene	0.684	0.730	-6.7	110	0.00	9.35
33	M	acrylonitrile	0.259	0.286	-10.4	116	0.00	8.53
34	M	vinyl acetate	0.108	0.101	6.5	100	0.00	9.18
35	M	ethyl acetate	0.094	0.093	1.1	96	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.797	3.2	103	0.00	10.03
37	M	cis-1,2-dichloroethene	0.541	0.533	1.5	103	0.00	9.99
38		methyl acrylate	0.094	0.100	-6.4	107	0.00	10.02
39	M	propionitrile	0.111	0.122	-9.9	108	0.00	10.00
40	M	bromochloromethane	0.276	0.296	-7.2	110	0.00	10.30
41	M	tetrahydrofuran	0.241	0.244	-1.2	108	0.00	10.32

Initial Calibration Verification

Job Number: JC90121 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.840	4.2	108	0.00	10.39
43		tert-butyl formate	0.446	0.424	4.9	97	0.00	10.43
44	S	dibromofluoromethane (s)	0.493	0.487	1.2	104	0.00	10.59
45	M	methacrylonitrile	0.240	0.253	-5.4	108	0.00	10.20
46		cyclohexane	0.912	0.960	-5.3	109	0.00	10.78
47	M	1,1,1-trichloroethane	0.860	0.881	-2.4	106	0.00	10.66
48		iso-butyl alcohol	0.083	0.087	-4.8	107	0.00	10.78
49		1,1-dichloropropene	0.642	0.648	-0.9	107	0.00	10.83
50		carbon tetrachloride	0.768	0.793	-3.3	108	0.00	10.86
51		tert-amyl alcohol	0.077	0.083	-7.8	110	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	11.51
53	S	1,2-dichloroethane-d4 (s)	0.359	0.351	2.2	103	0.00	11.02
54	M	benzene	1.276	1.289	-1.0	107	0.00	11.09
55	M	iso-octane	1.198	1.309	-9.3	107	0.00	11.19
56		tert-amyl methyl ether	1.087	1.091	-0.4	104	0.00	11.17
57	M	heptane	0.237	0.284	-19.8	123	0.00	11.35
58	M	isopropyl acetate	0.094	0.092	2.1	100	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.426	7.0	104	0.00	11.11
60		n-butyl alcohol	0.022	0.024	-9.1	106	0.00	11.55
61		ethyl acrylate	0.416	0.454	-9.1	107	0.00	11.81
62	M	trichloroethene	0.325	0.329	-1.2	110	0.00	11.84
63	M	2-nitropropane	0.138	0.158	-14.5	111	0.00	12.63
64	m	methylcyclohexane	0.671	0.693	-3.3	107	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.199	-15.0	111	0.00	12.65
66	M	methyl methacrylate	0.092	0.104	-13.0	107	0.00	12.09
67	M	1,2-dichloropropane	0.308	0.323	-4.9	108	0.00	12.14
68	M	dibromomethane	0.207	0.214	-3.4	107	0.00	12.26
69	M	bromodichloromethane	0.426	0.424	0.5	103	0.00	12.41
70		epichlorohydrin	0.046	0.052	-13.0	108	0.00	12.75
71	M	cis-1,3-dichloropropene	0.455	0.495	-8.8	106	0.00	12.90
72	M	4-methyl-2-pentanone	0.190	0.202	-6.3	106	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.040	-11.1	110	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.90
75	S	toluene-d8 (s)	1.330	1.316	1.1	103	0.00	13.23
76		toluene	0.884	0.885	-0.1	105	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.507	-11.4	109	0.00	13.51
78		ethyl methacrylate	0.460	0.494	-7.4	108	0.00	13.49
79		1,1,2-trichloroethane	0.252	0.267	-6.0	106	0.00	13.75
80		2-hexanone	0.187	0.189	-1.1	105	0.00	13.92
81	M	tetrachloroethene	0.433	0.460	-6.2	113	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.522	-7.4	108	0.00	13.95
83	M	butyl acetate	0.278	0.277	0.4	105	0.00	14.00
84	M	dibromochloromethane	0.378	0.404	-6.9	110	0.00	14.23
85	M	1,2-dibromoethane	0.346	0.366	-5.8	106	0.00	14.40
86	M	n-butyl ether	1.451	1.497	-3.2	109	0.00	14.87
87	M	chlorobenzene	0.919	0.960	-4.5	107	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.460	0.0	107	0.00	15.01
89	M	ethylbenzene	1.642	1.623	1.2	104	0.00	15.00
90	M	m,p-xylene	0.638	0.642	-0.6	105	0.00	15.13
91	M	o-xylene	0.706	0.718	-1.7	106	0.00	15.59
92	M	styrene	1.015	0.992	2.3	104	0.00	15.60
93		butyl acrylate	0.724	0.690	4.7	102	0.00	15.38
94		n-amyl acetate	0.325	0.285	12.3	96	0.00	15.61
95	M	bromoform	0.263	0.288	-9.5	112	0.00	15.86
96		isopropylbenzene	1.910	1.963	-2.8	106	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.060	-5.3	97	0.00	16.02
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	17.52

Initial Calibration Verification

Job Number: JC90121 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.791	-1.5	100	0.00	16.20
100	M	bromobenzene	0.735	0.780	-6.1	105	0.00	16.42
101	M	1,1,2,2-tetrachloroethane	0.955	1.013	-6.1	104	0.00	16.29
102	M	trans-1,4-dichloro-2-bute	0.074	0.099	-33.8#	110	0.00	16.32
103	M	1,2,3-trichloropropane	0.273	0.284	-4.0	103	0.00	16.39
104	M	n-propylbenzene	3.588	3.759	-4.8	105	0.00	16.44
105	M	2-chlorotoluene	0.799	0.834	-4.4	103	0.00	16.60
106	M	4-chlorotoluene	1.867	1.942	-4.0	106	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	3.090	-11.7	105	0.00	16.62
108	M	tert-butylbenzene	0.641	0.709	-10.6	107	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.986	-9.1	107	0.00	17.06
110	M	sec-butylbenzene	3.777	4.196	-11.1	106	0.00	17.25
111	M	1,3-dichlorobenzene	1.458	1.480	-1.5	106	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.546	-12.7	108	0.00	17.39
113	M	1,4-dichlorobenzene	1.475	1.469	0.4	106	0.00	17.55
114	M	1,2-dichlorobenzene	1.579	1.590	-0.7	105	0.00	17.97
115	M	n-butylbenzene	1.539	1.560	-1.4	103	0.00	17.85
116	M	1,2-dibromo-3-chloropropa	0.334	0.345	-3.3	101	0.00	18.82
117	M	1,3,5-trichlorobenzene	1.489	1.460	1.9	104	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	10.247	-2.5	116	0.00	19.76

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.363	-1.7	103	0.00	19.78
120	M	hexachlorobutadiene	0.533	0.534	-0.2	103	0.00	19.90
121	M	naphthalene	3.917	4.198	-7.2	107	0.00	20.11
122	M	1,2,3-trichlorobenzene	1.345	1.423	-5.8	106	0.00	20.36
123	M	hexachloroethane	0.495	0.580	-17.2	112	0.00	18.30
124		2-methylnaphthalene	2.089	2.276	-9.0	108	0.00	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue May 14 14:11:55 2019 RPT1

Initial Calibration Verification

Job Number: JC90121 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9645\A249744.D Vial: 15
Acq On : 11 May 2019 9:46 pm Operator: PrashanS
Sample : ICV9645-50 Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	103	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.54
6	M	chlorodifluoromethane		----------NA----------				
7	M	dichlorodifluoromethane		----------NA----------				
8	M	chloromethane		----------NA----------				
9	M	vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11	M	bromomethane		----------NA----------				
12	M	chloroethane		----------NA----------				
13		vinyl bromide		----------NA----------				
14	M	trichlorofluoromethane		----------NA----------				
15	M	ethyl ether		----------NA----------				
16	M	acrolein		----------NA----------				
17		freon 113		----------NA----------				
18	M	1,1-dichloroethene		----------NA----------				
19	M	acetone		----------NA----------				
20	M	acetonitrile	0.115	0.114	0.9	105	0.00	7.93
21	M	iodomethane		----------NA----------				
22	M	carbon disulfide		----------NA----------				
23	M	methylene chloride		----------NA----------				
24	M	methyl acetate		----------NA----------				
25	M	methyl tert butyl ether		----------NA----------				
26	M	trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28	M	di-isopropyl ether		----------NA----------				
29	M	ethyl tert-butyl ether		----------NA----------				
30	M	2-butanone		----------NA----------				
31	M	1,1-dichloroethane		----------NA----------				
32	M	chloroprene		----------NA----------				
33	M	acrylonitrile	0.259	0.235	9.3	97	0.00	8.53
34	M	vinyl acetate		----------NA----------				
35	M	ethyl acetate		----------NA----------				
36	M	2,2-dichloropropane		----------NA----------				
37	M	cis-1,2-dichloroethene		----------NA----------				
38		methyl acrylate		----------NA----------				
39	M	propionitrile		----------NA----------				
40	M	bromochloromethane		----------NA----------				
41	M	tetrahydrofuran		----------NA----------				

Initial Calibration Verification

Job Number: JC90121 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform		----------NA----------					
43		tert-butyl formate		----------NA----------					
44	S	dibromofluoromethane (s)	0.493	0.481	2.4	104	0.00	10.58	
45	M	methacrylonitrile		----------NA----------					
46		cyclohexane		----------NA----------					
47	M	1,1,1-trichloroethane		----------NA----------					
48		iso-butyl alcohol		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		carbon tetrachloride		----------NA----------					
51		tert-amyl alcohol		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	11.51	
53	S	1,2-dichloroethane-d4 (s)	0.359	0.362	-0.8	103	0.00	11.02	
54	M	benzene		----------NA----------					
55	M	iso-octane		----------NA----------					
56		tert-amyl methyl ether		----------NA----------					
57	M	heptane		----------NA----------					
58	M	isopropyl acetate		----------NA----------					
59	M	1,2-dichloroethane		----------NA----------					
60		n-butyl alcohol		----------NA----------					
61		ethyl acrylate		----------NA----------					
62	M	trichloroethene		----------NA----------					
63	M	2-nitropropane		----------NA----------					
64	m	methylcyclohexane		----------NA----------					
65	M	2-chloroethyl vinyl ether		----------NA----------					
66	M	methyl methacrylate		----------NA----------					
67	M	1,2-dichloropropane		----------NA----------					
68	M	dibromomethane		----------NA----------					
69	M	bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71	M	cis-1,3-dichloropropene		----------NA----------					
72	M	4-methyl-2-pentanone		----------NA----------					
73	M	3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	92	0.00	14.90	
75	S	toluene-d8 (s)	1.330	1.364	-2.6	95	0.00	13.23	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		2-hexanone		----------NA----------					
81	M	tetrachloroethene	0.433	0.422	2.5	93	0.00	13.92	
82	M	1,3-dichloropropane		----------NA----------					
83	M	butyl acetate		----------NA----------					
84	M	dibromochloromethane		----------NA----------					
85	M	1,2-dibromoethane		----------NA----------					
86	M	n-butyl ether		----------NA----------					
87	M	chlorobenzene		----------NA----------					
88	M	1,1,1,2-tetrachloroethane		----------NA----------					
89	M	ethylbenzene		----------NA----------					
90	M	m,p-xylene		----------NA----------					
91	M	o-xylene		----------NA----------					
92	M	styrene		----------NA----------					
93		butyl acrylate		----------NA----------					
94		n-amyl acetate		----------NA----------					
95	M	bromoform		----------NA----------					
96		isopropylbenzene		----------NA----------					
97		cis-1,4-dichloro-2-butene		----------NA----------					
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	17.52	

Initial Calibration Verification

Job Number: JC90121 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.759	2.6	104	0.00	16.20	
100	M	bromobenzene		----------NA----------					
101	M	1,1,2,2-tetrachloroethane		----------NA----------					
102	M	trans-1,4-dichloro-2-bute		----------NA----------					
103	M	1,2,3-trichloropropane		----------NA----------					
104	M	n-propylbenzene		----------NA----------					
105	M	2-chlorotoluene		----------NA----------					
106	M	4-chlorotoluene		----------NA----------					
107	M	1,3,5-trimethylbenzene		----------NA----------					
108	M	tert-butylbenzene		----------NA----------					
109	M	1,2,4-trimethylbenzene		----------NA----------					
110	M	sec-butylbenzene		----------NA----------					
111	M	1,3-dichlorobenzene		----------NA----------					
112	M	p-isopropyltoluene		----------NA----------					
113	M	1,4-dichlorobenzene		----------NA----------					
114	M	1,2-dichlorobenzene		----------NA----------					
115	M	n-butylbenzene		----------NA----------					
116	M	1,2-dibromo-3-chloropropa		----------NA----------					
117	M	1,3,5-trichlorobenzene		----------NA----------					
		----------	True	Calc.	% Drift	----------			
118		2-ethylhexyl acrylate		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
119	M	1,2,4-trichlorobenzene		----------NA----------					
120	M	hexachlorobutadiene		----------NA----------					
121	M	naphthalene		----------NA----------					
122	M	1,2,3-trichlorobenzene		----------NA----------					
123	M	hexachloroethane		----------NA----------					
124		2-methylnaphthalene		----------NA----------					
125		ethylenimine		----------NA----------					
126		bis(chloromethyl)ether		----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue May 14 14:11:57 2019 RPT1

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VA9710-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251078.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jonkm\va9710\a251078.d Vial: 52
Acq On : 25 Jun 2019 7:20 pm Operator: edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9710,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	102	-0.01	8.16
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.071	-3.7	107	0.00	8.29
4		1,4-dioxane	0.067	0.076	-13.4	109	0.00	12.17
5	I	pentafluorobenzene	1.000	1.000	0.0	108	0.00	10.54
6	M	chlorodifluoromethane	0.971	0.847	12.8	95	0.00	4.58
7	M	dichlorodifluoromethane	1.181	0.949	19.6	83	0.02	4.55
8	M	chloromethane	1.283	1.038	19.1	74	0.00	4.99
9	M	vinyl chloride	1.087	0.955	12.1	92	0.00	5.25
10		1,3-butadiene	1.036	0.577	44.3#	65	0.00	5.27
11	M	bromomethane	0.763	0.654	14.3	93	0.01	5.93
12	M	chloroethane	0.552	0.495	10.3	94	0.00	6.10
13		vinyl bromide	0.728	0.655	10.0	94	0.00	6.48
14	M	trichlorofluoromethane	1.125	1.026	8.8	98	0.00	6.63
15	M	ethyl ether	0.252	0.256	-1.6	104	0.00	7.01
16	M	acrolein	0.114	0.120	-5.3	110	0.00	7.26
17		freon 113	0.547	0.482	11.9	95	0.00	7.50
18	M	1,1-dichloroethene	0.541	0.542	-0.2	111	0.01	7.48
19	M	acetone	0.073	0.072	1.4	102	0.00	7.47
20	M	acetonitrile	0.115	0.122	-6.1	113	-0.01	7.92
21	M	iodomethane	0.960	0.997	-3.9	112	0.00	7.75
22	M	carbon disulfide	1.799	1.591	11.6	102	0.01	7.92
23	M	methylene chloride	0.563	0.604	-7.3	116	0.00	8.23
24	M	methyl acetate	0.509	0.501	1.6	102	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.660	-4.2	112	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.453	3.6	101	0.00	8.63
27		hexane	0.679	0.556	18.1	88	0.00	9.01
28	M	di-isopropyl ether	1.632	1.648	-1.0	108	0.00	9.22
29	M	ethyl tert-butyl ether	1.561	1.628	-4.3	110	-0.01	9.71
30	M	2-butanone	0.084	0.089	-6.0	106	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.804	4.7	104	0.00	9.24
32	M	chloroprene	0.684	0.625	8.6	97	0.00	9.34
33	M	acrylonitrile	0.259	0.269	-3.9	112	0.00	8.52
34	M	vinyl acetate	0.108	0.118	-9.3	119	0.00	9.17
35	M	ethyl acetate	0.094	0.100	-6.4	106	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.823	0.0	109	-0.01	10.02
37	M	cis-1,2-dichloroethene	0.541	0.517	4.4	102	-0.01	9.98
38		methyl acrylate	0.094	0.096	-2.1	105	-0.02	10.01
39	M	propionitrile	0.111	0.118	-6.3	108	0.00	9.99
40	M	bromochloromethane	0.276	0.277	-0.4	105	0.00	10.29
41	M	tetrahydrofuran	0.241	0.228	5.4	103	0.00	10.31

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VA9710-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251078.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.835	4.8	109	0.00	10.38
43		tert-butyl formate	0.446	0.505	-13.2	118	0.00	10.42
44	S	dibromofluoromethane (s)	0.493	0.501	-1.6	110	0.00	10.58
45	M	methacrylonitrile	0.240	0.250	-4.2	109	0.00	10.20
46		cyclohexane	0.912	0.813	10.9	95	0.00	10.78
47	M	1,1,1-trichloroethane	0.860	0.861	-0.1	106	0.00	10.66
48		iso-butyl alcohol	0.083	0.083	0.0	104	0.00	10.78
49		1,1-dichloropropene	0.642	0.581	9.5	98	0.00	10.83
50		carbon tetrachloride	0.768	0.744	3.1	104	0.00	10.86
51		tert-amyl alcohol	0.077	0.079	-2.6	108	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	107	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.359	0.0	110	0.00	11.01
54	M	benzene	1.276	1.202	5.8	103	0.00	11.09
55	M	iso-octane	1.198	1.152	3.8	98	0.00	11.19
56		tert-amyl methyl ether	1.087	1.132	-4.1	112	0.00	11.16
57	M	heptane	0.237	0.208	12.2	93	0.00	11.34
58	M	isopropyl acetate	0.094	0.095	-1.1	107	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.426	7.0	108	-0.01	11.10
60		n-butyl alcohol	0.022	0.024	-9.1	108	-0.01	11.55
61		ethyl acrylate	0.416	0.446	-7.2	110	0.00	11.80
62	M	trichloroethene	0.325	0.308	5.2	107	0.00	11.83
63	M	2-nitropropane	0.138	0.142	-2.9	103	-0.01	12.61
64	m	methylcyclohexane	0.671	0.585	12.8	93	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.202	-16.8	117	0.00	12.65
66	M	methyl methacrylate	0.092	0.105	-14.1	113	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.320	-3.9	111	0.00	12.13
68	M	dibromomethane	0.207	0.222	-7.2	115	0.00	12.25
69	M	bromodichloromethane	0.426	0.454	-6.6	115	0.00	12.41
70		epichlorohydrin	0.046	0.052	-13.0	111	0.00	12.74
71	M	cis-1,3-dichloropropene	0.455	0.502	-10.3	112	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.194	-2.1	105	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.037	-2.8	104	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	14.89
75	S	toluene-d8 (s)	1.330	1.331	-0.1	106	0.00	13.23
76		toluene	0.884	0.852	3.6	102	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.511	-12.3	111	0.00	13.50
78		ethyl methacrylate	0.460	0.483	-5.0	106	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.278	-10.3	112	0.00	13.75
80		2-hexanone	0.187	0.191	-2.1	107	0.00	13.92
81	M	tetrachloroethene	0.433	0.393	9.2	98	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.525	-8.0	109	0.00	13.95
83	M	butyl acetate	0.278	0.289	-4.0	110	0.00	14.00
84	M	dibromochloromethane	0.378	0.410	-8.5	113	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.387	-11.8	113	0.00	14.39
86	M	n-butyl ether	1.451	1.388	4.3	102	0.00	14.87
87	M	chlorobenzene	0.919	0.910	1.0	102	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.465	-1.1	110	0.00	15.00
89	M	ethylbenzene	1.642	1.566	4.6	102	0.00	14.99
90	M	m,p-xylene	0.638	0.613	3.9	101	0.00	15.13
91	M	o-xylene	0.706	0.680	3.7	102	0.00	15.58
92	M	styrene	1.015	0.979	3.5	104	0.00	15.59
93		butyl acrylate	0.724	0.746	-3.0	112	0.00	15.37
94		n-amyl acetate	0.325	0.317	2.5	108	0.00	15.61
95	M	bromoform	0.263	0.296	-12.5	116	0.00	15.86
96		isopropylbenzene	1.910	1.856	2.8	102	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.189	-231.6#	307#	0.00	16.01
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	17.51

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VA9710-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251078.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.829	-6.4	108	0.00	16.20
100	M	bromobenzene	0.735	0.792	-7.8	110	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.080	-13.1	114	0.00	16.29
102	M	trans-1,4-dichloro-2-bute	0.074	0.208	-181.1#	237#	0.00	16.32
103	M	1,2,3-trichloropropane	0.273	0.293	-7.3	109	-0.01	16.38
104	M	n-propylbenzene	3.588	3.527	1.7	101	0.00	16.44
105	M	2-chlorotoluene	0.799	0.819	-2.5	104	0.00	16.59
106	M	4-chlorotoluene	1.867	1.903	-1.9	107	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	2.917	-5.5	102	0.00	16.61
108	M	tert-butylbenzene	0.641	0.677	-5.6	105	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.772	-1.3	102	0.00	17.05
110	M	sec-butylbenzene	3.777	3.941	-4.3	102	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.442	1.1	106	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.283	-4.3	103	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.426	3.3	105	0.00	17.55
114	M	1,2-dichlorobenzene	1.579	1.571	0.5	107	0.00	17.96
115	M	n-butylbenzene	1.539	1.489	3.2	101	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.361	-8.1	109	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.424	4.4	104	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	10.604	-6.0	124	0.00	19.75

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.354	-1.0	105	0.00	19.77
120	M	hexachlorobutadiene	0.533	0.557	-4.5	111	0.00	19.90
121	M	naphthalene	3.917	3.939	-0.6	104	-0.01	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.447	-7.6	110	-0.01	20.35
123	M	hexachloroethane	0.495	0.626	-26.5#	125	0.00	18.29
124		2-methylnaphthalene	2.089	2.027	3.0	99	0.00	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Wed Jun 26 11:58:52 2019

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VA9710-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251099.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jonkm\va9710\a251099.d Vial: 73
Acq On : 26 Jun 2019 5:33 am Operator: brittank
Sample : ECC9645-50 Inst : MSA
Misc : MS35699,VA9710,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	8.16
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.059	-2.5	109	0.00	8.29
4		1,4-dioxane	0.067	0.073	-9.0	107	0.00	12.18
5	I	pentafluorobenzene	1.000	1.000	0.0	114	0.00	10.54
6	M	chlorodifluoromethane	0.971	0.784	19.3	93	0.00	4.58
7	M	dichlorodifluoromethane	1.181	0.891	24.6	83	0.01	4.55
8	M	chloromethane	1.283	0.984	23.3	75	0.00	4.99
9	M	vinyl chloride	1.087	0.918	15.5	93	0.00	5.25
10		1,3-butadiene	1.036	0.789	23.8	94	0.01	5.28
11	M	bromomethane	0.763	0.640	16.1	97	0.00	5.93
12	M	chloroethane	0.552	0.481	12.9	97	0.00	6.10
13		vinyl bromide	0.728	0.635	12.8	97	0.00	6.49
14	M	trichlorofluoromethane	1.125	0.957	14.9	97	0.00	6.62
15	M	ethyl ether	0.252	0.246	2.4	106	0.00	7.01
16	M	acrolein	0.114	0.112	1.8	109	0.00	7.26
17		freon 113	0.547	0.463	15.4	96	0.00	7.50
18	M	1,1-dichloroethene	0.541	0.467	13.7	101	0.00	7.47
19	M	acetone	0.073	0.074	-1.4	112	0.00	7.47
20	M	acetonitrile	0.115	0.115	0.0	113	-0.01	7.91
21	M	iodomethane	0.960	0.896	6.7	107	-0.01	7.74
22	M	carbon disulfide	1.799	1.436	20.2	98	0.00	7.90
23	M	methylene chloride	0.563	0.530	5.9	108	0.00	8.22
24	M	methyl acetate	0.509	0.497	2.4	108	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.603	-0.6	114	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.446	5.1	106	0.00	8.63
27		hexane	0.679	0.510	24.9	86	0.00	9.01
28	M	di-isopropyl ether	1.632	1.602	1.8	112	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.569	-0.5	113	0.00	9.71
30	M	2-butanone	0.084	0.088	-4.8	112	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.789	6.5	108	0.00	9.24
32	M	chloroprene	0.684	0.614	10.2	101	0.00	9.35
33	M	acrylonitrile	0.259	0.266	-2.7	117	0.00	8.52
34	M	vinyl acetate	0.108	0.110	-1.9	118	0.00	9.17
35	M	ethyl acetate	0.094	0.099	-5.3	112	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.719	12.6	101	0.00	10.03
37	M	cis-1,2-dichloroethene	0.541	0.523	3.3	109	0.00	9.98
38		methyl acrylate	0.094	0.094	0.0	109	0.00	10.02
39	M	propionitrile	0.111	0.114	-2.7	110	0.00	9.99
40	M	bromochloromethane	0.276	0.278	-0.7	112	0.00	10.29
41	M	tetrahydrofuran	0.241	0.221	8.3	106	0.00	10.31

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VA9710-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251099.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.819	6.6	114	0.00	10.38
43		tert-butyl formate	0.446	0.490	-9.9	121	0.00	10.42
44	S	dibromofluoromethane (s)	0.493	0.501	-1.6	116	0.00	10.57
45	M	methacrylonitrile	0.240	0.250	-4.2	115	0.00	10.20
46		cyclohexane	0.912	0.799	12.4	99	0.00	10.77
47	M	1,1,1-trichloroethane	0.860	0.844	1.9	110	0.00	10.66
48		iso-butyl alcohol	0.083	0.080	3.6	107	0.00	10.77
49		1,1-dichloropropene	0.642	0.579	9.8	103	0.00	10.83
50		carbon tetrachloride	0.768	0.750	2.3	111	0.00	10.86
51		tert-amyl alcohol	0.077	0.075	2.6	108	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	113	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.365	-1.7	118	0.00	11.01
54	M	benzene	1.276	1.206	5.5	110	0.00	11.08
55	M	iso-octane	1.198	1.015	15.3	91	0.00	11.18
56		tert-amyl methyl ether	1.087	1.097	-0.9	115	0.00	11.16
57	M	heptane	0.237	0.184	22.4	87	0.00	11.34
58	M	isopropyl acetate	0.094	0.100	-6.4	119	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.421	8.1	113	0.00	11.10
60		n-butyl alcohol	0.022	0.022	0.0	107	0.00	11.55
61		ethyl acrylate	0.416	0.429	-3.1	112	0.00	11.80
62	M	trichloroethene	0.325	0.300	7.7	110	0.00	11.83
63	M	2-nitropropane	0.138	0.140	-1.4	108	0.00	12.62
64	m	methylcyclohexane	0.671	0.562	16.2	95	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.190	-9.8	116	0.00	12.65
66	M	methyl methacrylate	0.092	0.098	-6.5	111	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.317	-2.9	117	0.00	12.13
68	M	dibromomethane	0.207	0.216	-4.3	119	0.00	12.25
69	M	bromodichloromethane	0.426	0.446	-4.7	120	0.00	12.41
70		epichlorohydrin	0.046	0.047	-2.2	107	0.00	12.75
71	M	cis-1,3-dichloropropene	0.455	0.475	-4.4	112	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.200	-5.3	115	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.036	0.0	107	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	112	0.00	14.90
75	S	toluene-d8 (s)	1.330	1.325	0.4	113	0.00	13.23
76		toluene	0.884	0.853	3.5	110	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.466	-2.4	109	0.00	13.50
78		ethyl methacrylate	0.460	0.487	-5.9	115	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.272	-7.9	117	0.00	13.74
80		2-hexanone	0.187	0.188	-0.5	113	0.00	13.92
81	M	tetrachloroethene	0.433	0.383	11.5	102	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.499	-2.7	112	0.00	13.95
83	M	butyl acetate	0.278	0.289	-4.0	119	0.00	14.00
84	M	dibromochloromethane	0.378	0.396	-4.8	117	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.377	-9.0	119	0.00	14.39
86	M	n-butyl ether	1.451	1.433	1.2	114	0.00	14.87
87	M	chlorobenzene	0.919	0.895	2.6	108	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.464	-0.9	117	0.00	15.00
89	M	ethylbenzene	1.642	1.563	4.8	109	0.00	14.99
90	M	m,p-xylene	0.638	0.621	2.7	110	0.00	15.13
91	M	o-xylene	0.706	0.710	-0.6	114	0.00	15.58
92	M	styrene	1.015	0.983	3.2	112	0.00	15.59
93		butyl acrylate	0.724	0.752	-3.9	121	0.00	15.37
94		n-amyl acetate	0.325	0.329	-1.2	121	0.00	15.61
95	M	bromoform	0.263	0.294	-11.8	124	0.00	15.86
96		isopropylbenzene	1.910	1.892	0.9	111	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.066	-15.8	115	0.00	16.01
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	115	0.00	17.52

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VA9710-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251099.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.807	-3.6	116	0.00	16.20
100	M	bromobenzene	0.735	0.770	-4.8	118	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.080	-13.1	126	0.00	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.093	-25.7	118	0.00	16.31
103	M	1,2,3-trichloropropane	0.273	0.294	-7.7	121	0.00	16.38
104	M	n-propylbenzene	3.588	3.573	0.4	113	0.00	16.44
105	M	2-chlorotoluene	0.799	0.820	-2.6	116	0.00	16.59
106	M	4-chlorotoluene	1.867	1.868	-0.1	116	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	2.898	-4.8	112	0.00	16.61
108	M	tert-butylbenzene	0.641	0.631	1.6	109	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.838	-3.7	116	0.00	17.06
110	M	sec-butylbenzene	3.777	3.794	-0.5	109	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.434	1.6	117	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.232	-2.7	112	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.416	4.0	116	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.592	-0.8	120	0.00	17.97
115	M	n-butylbenzene	1.539	1.504	2.3	113	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.357	-6.9	119	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.460	1.9	118	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	9.986	0.1	128	0.00	19.75

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.373	-2.5	118	0.00	19.77
120	M	hexachlorobutadiene	0.533	0.508	4.7	111	0.00	19.90
121	M	naphthalene	3.917	3.910	0.2	114	0.00	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.387	-3.1	117	0.00	20.35
123	M	hexachloroethane	0.495	0.560	-13.1	123	0.00	18.29
124		2-methylnaphthalene	2.089	1.871	10.4	101	0.00	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Wed Jun 26 12:03:12 2019

Initial Calibration Summary

Job Number: JC90121 **Sample:** VX7749-ICC7749
Account: EAENYES EA Engineering **Lab FileID:** X181287.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Response Factor Report ACC-VOA-M

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Calibration Files
1 =X181282.D 2 =X181283.D 100 =X181288.D 50 =X181287.D
20 =X181286.D 200 =X181289.D 4 =X181284.D 8 =X181285.D
0.5 =X181281.D 0.2 =X181280.D = =

Compound	1	2	100	50	20	200	4	8	0.5	0.2	Avg	%RSD
1) I tert butyl alcohol-d9	----------ISTD----------											
2) ethanol											0.000	-1.00
3) tertiary butyl alcohol	1.126	1.146	1.163	1.122	1.176	1.050	1.152				1.134	3.65
4) 1,4-dioxane	0.099	0.101	0.096	0.101	0.075	0.090					0.093	10.89
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	1.656	1.625	1.511	1.546	1.520	1.326	1.466	1.533	1.566		1.528	6.23
7) dichlorodifluoromethane	1.461	1.603	1.591	1.638	1.566	1.479	1.535	1.607	1.179		1.518	9.23
8) chloromethane	2.149	2.094	1.838	1.922	1.905	1.573	1.940	1.988			1.926	9.10
9) vinyl chloride	1.663	1.660	1.487	1.558	1.550	1.301	1.547	1.612	1.628	1.876	1.588	9.21
10) bromomethane	0.899	0.847	0.764	0.817	0.764	0.639	0.782	0.812			0.790	9.61
11) chloroethane	0.605	0.538	0.524	0.551	0.503	0.466	0.515	0.552	0.566	0.502	0.532	7.34
12) vinyl bromide	0.584	0.636	0.628	0.645	0.570	0.578	0.552	0.598	0.565		0.595	5.67
13) trichlorofluoromethane	0.975	1.040	0.987	1.010	0.953	0.924	0.956	1.012	0.854		0.968	5.73
14) 1,3-butadiene	0.769	0.791	0.626	0.669	0.643	0.577	0.667	0.718	0.711	0.612	0.678	10.11
15) ethyl ether	0.203	0.216	0.222	0.220	0.217	0.204	0.219	0.221			0.215	3.55
16) acrolein	0.090	0.093	0.103	0.081		0.133					0.100	19.97
17) 1,1-dichloroethene	0.373	0.392	0.351	0.352	0.354	0.316	0.362	0.380	0.364	0.362	0.361	5.63
18) freon 113	0.541	0.657	0.558	0.592	0.570	0.555	0.545	0.622			0.580	7.10
19) acetone	0.149	0.124	0.125	0.137	0.114	0.124	0.147				0.131	9.97
20) acetonitrile	0.080	0.084	0.089	0.075	0.096	0.099					0.087	10.42
21) iodomethane	0.733	0.708	0.701	0.695	0.683	0.649	0.644	0.700	0.674	0.751	0.694	4.80
22) carbon disulfide	1.356	1.318	1.243	1.266	1.230	1.140	1.217	1.292	1.288	1.471	1.282	6.94
23) methylene chloride												

	0.471	0.475	0.437	0.431	0.433	0.405	0.442	0.463	0.547		0.456	8.91
24)	methyl acetate												
		0.392	0.310	0.324	0.339	0.293	0.418	0.356			0.347	12.87
25)	methyl tert butyl ether												
	1.657	1.615	1.501	1.535	1.502	1.402	1.500	1.545	1.593	1.847	1.570	7.69
26)	trans-1,2-dichloroethene												
	0.437	0.413	0.372	0.375	0.384	0.329	0.378	0.406	0.403	0.399	0.390	7.52
27)	hexane												
	0.573	0.646	0.538	0.568	0.558	0.560	0.545	0.578			0.571	5.83
28)	di-isopropyl ether												
	1.915	1.904	1.617	1.703	1.699	1.519	1.746	1.770	1.977	2.160	1.801	10.48
29)	2-butanone												
		0.035	0.048	0.049	0.048	0.047	0.043	0.045			0.045	10.64
30)	1,1-dichloroethane												
	0.819	0.762	0.712	0.727	0.742	0.641	0.721	0.784	0.817	0.744	0.747	7.09
31)	chloroprene												
	0.634	0.567	0.554	0.562	0.572	0.511	0.576	0.576	0.497	0.516	0.556	7.20
32)	acrylonitrile												
			0.173	0.172	0.170	0.165	0.129	0.168			0.163	10.37
33)	vinyl acetate												
			0.079	0.078	0.078	0.077		0.070			0.076	4.95
34)	ethyl tert-butyl ether												
	1.669	1.677	1.681	1.705	1.634	1.597	1.584	1.675	1.730	1.722	1.667	2.94
35)	ethyl acetate												
			0.070	0.074	0.079	0.068	0.060	0.067			0.070	9.54
36)	2,2-dichloropropane												
	0.928	0.844	0.697	0.731	0.722	0.670	0.762	0.775			0.766	10.99
37)	cis-1,2-dichloroethene												
	0.526	0.506	0.421	0.430	0.443	0.381	0.443	0.468	0.420		0.449	10.06
38)	methyl acrylate												
			0.058	0.061	0.060	0.056	0.034	0.049			0.053	19.01
39)	propionitrile												
	0.065	0.066	0.061	0.066	0.067	0.059	0.063	0.066			0.064	4.70
40)	tert-butyl formate												
	0.445	0.439	0.403	0.427	0.418	0.378	0.441	0.442	0.377		0.419	6.48
41)	bromochloromethane												
	0.221	0.232	0.231	0.233	0.232	0.216	0.233	0.232	0.226		0.229	2.66
42)	tetrahydrofuran												
			0.054	0.058	0.061	0.053	0.048	0.053			0.055	8.48
43)	chloroform												
	0.805	0.758	0.688	0.695	0.699	0.634	0.718	0.729	0.839		0.729	8.64
44)	dibromofluoromethane (s)												
	0.402	0.401	0.420	0.402	0.400	0.412	0.401	0.413	0.404	0.413	0.407	1.73
45)	methacrylonitrile												
		0.159	0.170	0.172	0.169	0.167	0.149	0.168			0.165	4.91
46)	1,1,1-trichloroethane												
	0.817	0.746	0.773	0.774	0.724	0.770	0.709	0.727	0.785	0.664	0.749	5.90
47)	cyclohexane												
	0.872	0.802	0.853	0.890	0.847	0.855	0.760	0.779	0.768	0.850	0.828	5.60
48)	tert amyl alcohol												
		0.030	0.024	0.025	0.026	0.025	0.025	0.027			0.026	7.46
49)	1,1-dichloropropene												
	0.514	0.523	0.468	0.482	0.497	0.430	0.464	0.497	0.450		0.481	6.28
50)	isobutyl alcohol												
											0.000	-1.00
51)	carbon tetrachloride												
	0.714	0.686	0.611	0.637	0.614	0.599	0.624	0.624	0.562	0.616	0.629	6.85
52)	isopropyl acetate												
		0.074	0.091	0.094	0.092	0.091	0.079	0.084			0.086	8.53

Initial Calibration Summary

Job Number: JC90121 **Sample:** VX7749-ICC7749
Account: EAENYES EA Engineering **Lab FileID:** X181287.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

53) I 1,4-difluorobenzene ----------ISTD----------
54) 1,2-dichloroethane-d4 (s)
0.341 0.339 0.309 0.320 0.337 0.291 0.334 0.342 0.343 0.343 0.330 5.36
55) iso-octane
0.869 0.953 0.929 0.894 0.833 1.024 0.808 0.860 0.732 0.980 0.888 9.75
56) epichlorohydrin
0.034 0.036 0.034 0.035 0.035 0.033 0.037 0.038 0.035 4.32
57) n-butyl alcohol
0.010 0.011 0.012 0.012 0.011 0.012 0.011 0.011 0.011 5.99
58) benzene
1.295 1.219 1.063 1.116 1.136 0.995 1.147 1.152 1.319 1.160 8.96
59) tert-amyl methyl ether
1.179 1.199 1.062 1.092 1.090 1.007 1.080 1.116 1.161 1.282 1.127 7.04
60) heptane
0.179 0.199 0.171 0.182 0.180 0.182 0.167 0.173 0.161 0.177 6.10
61) 1,2-dichloroethane
0.471 0.441 0.351 0.367 0.379 0.322 0.402 0.398 0.391 12.27
62) trichloroethene
0.303 0.324 0.306 0.309 0.311 0.285 0.303 0.316 0.288 0.301 0.304 3.85
63) ethyl acrylate
0.323 0.389 0.389 0.404 0.413 0.377 0.365 0.397 0.382 7.35
64) 2-nitropropane
0.083 0.086 0.087 0.083 0.105 0.091 0.089 9.36
65) 2-chloroethyl vinyl ether
0.208 0.230 0.211 0.224 0.229 0.198 0.220 0.225 0.199 0.220 0.216 5.39
66) methyl methacrylate
0.085 0.085 0.083 0.084 0.073 0.075 0.081 6.82
67) 1,2-dichloropropane
0.125 0.135 0.122 0.130 0.134 0.112 0.132 0.134 0.128 6.10
68) dibromomethane
0.189 0.201 0.185 0.195 0.196 0.174 0.203 0.201 0.195 0.193 4.76
69) methylcyclohexane
0.552 0.599 0.503 0.530 0.511 0.526 0.522 0.519 0.533 5.71
70) bromodichloromethane
0.433 0.430 0.416 0.425 0.426 0.401 0.422 0.425 0.446 0.495 0.432 5.82
71) cis-1,3-dichloropropene
0.519 0.522 0.513 0.522 0.518 0.490 0.522 0.516 0.473 0.609 0.520 6.75
72) 4-methyl-2-pentanone
0.125 0.146 0.129 0.141 0.140 0.131 0.138 0.138 0.104 0.119 0.131 9.50
73) 3-methyl-1-butanol
0.008 0.011 0.011 0.012 0.012 0.011 0.011 0.012 0.011 10.71

74) I chlorobenzene-d5 ----------ISTD----------
75) toluene-d8 (s)
1.235 1.231 1.141 1.185 1.189 1.145 1.223 1.197 1.223 1.218 1.199 2.84
76) toluene
0.810 0.767 0.679 0.727 0.733 0.647 0.734 0.734 0.740 0.861 0.743 8.12
77) trans-1,3-dichloropropene
0.511 0.520 0.461 0.479 0.491 0.425 0.480 0.495 0.431 0.531 0.482 7.31
78) ethyl methacrylate
0.352 0.402 0.391 0.422 0.423 0.374 0.402 0.415 0.397 6.17
79) 1,1,2-trichloroethane
0.256 0.274 0.234 0.252 0.254 0.221 0.259 0.256 0.266 0.254 0.252 5.99
80) tetrachloroethene
0.296 0.300 0.253 0.271 0.275 0.239 0.287 0.279 0.241 0.271 8.37
81) 1,3-dichloropropane
0.529 0.531 0.408 0.450 0.482 0.366 0.499 0.495 0.456 0.519 0.473 11.40
82) 2-hexanone
0.112 0.128 0.110 0.121 0.128 0.106 0.124 0.134 0.120 8.34
83) butyl acetate

```
      0.240 0.254 0.227 0.243 0.244 0.222 0.255 0.258              0.243    5.38
 84)  dibromochloromethane
      0.375 0.386 0.340 0.352 0.345 0.324 0.356 0.342 0.355 0.342  0.352    5.07
 85)  1,2-dibromoethane
      0.339 0.368 0.329 0.351 0.352 0.306 0.356 0.346 0.296 0.331  0.337    6.65
 86)  n-butyl ether
      1.548 1.440 1.212 1.333 1.338 1.136 1.370 1.350              1.341    9.45
 87)  chlorobenzene
      0.916 0.905 0.786 0.823 0.834 0.738 0.823 0.850 0.833 0.980  0.849    8.12
 88)  1,1,1,2-tetrachloroethane
      0.418 0.397 0.333 0.375 0.374 0.325 0.384 0.382 0.387        0.375    7.84
 89)  ethylbenzene
      1.626 1.534 1.200 1.316 1.376 1.110 1.432 1.404 1.514        1.390   11.77
 90)  m,p-xylene
      0.611 0.608 0.492 0.528 0.547 0.465 0.570 0.568 0.601        0.555    9.31
 91)  o-xylene
      1.398 1.362 1.121 1.240 1.250 1.071 1.299 1.294 1.434        1.274    9.46
 92)  styrene
      1.006 1.004 0.810 0.884 0.917 0.742 0.952 0.961 0.903 1.016  0.920    9.71
 93)  butyl acrylate
      0.863 0.812 0.710 0.739 0.754 0.683 0.766 0.755 0.754 0.914  0.775    8.99
 94)  bromoform
      0.284 0.278 0.241 0.250 0.244 0.232 0.260 0.243 0.233 0.218  0.248    8.31
 95)  isopropylbenzene
      1.844 1.723 1.460 1.634 1.592 1.426 1.639 1.605 1.779        1.633    8.35
 96)  cis-1,4-dichloro-2-butene
      0.150 0.157 0.123 0.130 0.136 0.114 0.129 0.140              0.135   10.43

 97) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
 98)  4-bromofluorobenzene (s)
      0.776 0.771 0.900 0.876 0.841 0.901 0.784 0.808 0.763 0.771  0.819    6.81
 99)  bromobenzene
      0.706 0.736 0.718 0.751 0.731 0.669 0.696 0.725 0.705 0.810  0.725    5.20
100)  1,1,2,2-tetrachloroethane
      0.755 0.760 0.817 0.839 0.782 0.803 0.737 0.742 0.712 0.892  0.784    6.96
101)  trans-1,4-dichloro-2-butene
      0.190 0.167 0.187 0.187 0.185 0.172 0.176 0.181 0.159        0.178    5.88
102)  1,2,3-trichloropropane
      0.177 0.194 0.199 0.207 0.208 0.190 0.202 0.196              0.197    5.08
103)  n-propylbenzene
      3.011 3.034 2.931 3.124 2.973 2.832 2.884 2.899 2.914 3.619  3.022    7.48
104)  2-chlorotoluene
      0.656 0.680 0.698 0.735 0.686 0.695 0.664 0.635 0.624 0.775  0.685    6.59
105)  4-chlorotoluene
      1.925 1.811 1.752 1.816 1.789 1.664 1.755 1.775 1.868 2.244  1.840    8.59
106)  1,3,5-trimethylbenzene
      2.252 2.339 2.309 2.469 2.327 2.353 2.246 2.225 2.149        2.297    4.00
107)  tert-butylbenzene
      1.933 1.980 2.285 2.336 2.106 2.286 1.884 1.940 1.937 2.179  2.087    8.31
108)  1,2,4-trimethylbenzene
      2.427 2.432 2.334 2.505 2.386 2.314 2.318 2.355 2.491        2.396    3.01
109)  sec-butylbenzene
      3.024 3.061 3.280 3.421 3.096 3.352 2.930 2.949 2.808 3.685  3.161    8.49
110)  1,3-dichlorobenzene
      1.575 1.539 1.267 1.346 1.374 1.176 1.407 1.384 1.501        1.397    9.19
111)  p-isopropyltoluene
      2.653 2.690 2.744 2.890 2.668 2.781 2.547 2.604 2.650 3.294  2.752    7.75
112)  1,4-dichlorobenzene
      1.465 1.392 1.321 1.350 1.330 1.267 1.333 1.334 1.401        1.355    4.22
113)  1,2-dichlorobenzene
```

Initial Calibration Summary

Job Number: JC90121 **Sample:** VX7749-ICC7749
Account: EAENYES EA Engineering **Lab FileID:** X181287.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
       1.599 1.635 1.457 1.556 1.544 1.394 1.541 1.554 1.601        1.542    4.86
114)  benzyl chloride
       1.661 1.636 1.503 1.569 1.540 1.422 1.526 1.534 1.634        1.558    4.88
115)  n-butylbenzene
       1.327 1.304 1.323 1.410 1.307 1.310 1.216 1.245 1.233 1.444  1.312    5.53
116)  1,2-dibromo-3-chloropropane
       0.222 0.243 0.276 0.283 0.267 0.285 0.231 0.248              0.257    9.40
117)  1,3,5-trichlorobenzene
       1.554 1.518 1.542 1.642 1.592 1.531 1.508 1.556 1.452 1.578  1.547    3.33
118)  hexachlorobutadiene
       0.506 0.525 0.531 0.552 0.513 0.536 0.497 0.510 0.456 0.640  0.527    8.99
119)  naphthalene
                   3.886 4.014 3.826 3.797 2.957 3.467              3.658   10.62
120)  2-ethylhexyl acrylate
      *This compound does not meet initial calibration criteria*
                   0.908 0.734 0.399 1.063       0.225              0.665   52.42
121)  1,2,4-trichlorobenzene
       1.194 1.280 1.622 1.700 1.628 1.593 1.339 1.510              1.483   12.61
122)  1,2,3-trichlorobenzene
       1.170 1.251 1.712 1.742 1.648 1.656 1.327 1.519              1.503   14.90
123)  hexachloroethane
             0.401 0.564 0.557 0.475 0.584 0.402 0.426              0.487   16.50
124)  2-methylnaphthalene
                   2.755 2.269 1.572 2.862       0.987              2.089   38.26
             ----- Linear regression -----  Coefficient =  0.9961
               Response Ratio = -0.19403 + 2.90387 *A

125)  bis(chloromethyl)ether
                                                                    0.000   -1.00
126)  ethylenimine
                                                                    0.000   -1.00

127)     pentafluorobenzene(a) ----------------ISTD---------------------
128)  chlorotrifluoroethene
             0.376 0.460 0.436 0.440 0.455 0.414 0.433              0.430    6.61
129)  freon 123a
       0.637 0.673 0.613 0.623 0.647 0.589 0.674 0.650              0.638    4.59

130)     chlorobenzene-d5(a)   ----------------ISTD---------------------
131)  cyclohexanone
       0.014 0.016 0.017 0.017 0.016 0.019 0.015 0.015              0.016    9.78
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MX7749.M          Thu Jun 27 12:02:43 2019   GCMSX
```

Initial Calibration Verification

Job Number: JC90121 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181292.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7749\X181292.D Vial: 14
Acq On : 2 May 2019 10:45 pm Operator: juntaep
Sample : icv7749-50 Inst : ACC-VOA-M
Misc : MS34046,VX7749,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu May 09 14:26:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	95	0.00	7.40
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.252	-10.4	102	0.00	7.54
4		1,4-dioxane	0.093	0.104	-11.8	98	0.00	12.24
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	10.20
6		chlorodifluoromethane	1.528	1.758	-15.1	115	0.00	3.89
7		dichlorodifluoromethane	1.518	1.677	-10.5	103	0.00	3.88
8		chloromethane	1.926	1.970	-2.3	103	0.00	4.27
9		vinyl chloride	1.588	1.552	2.3	100	-0.01	4.50
10		bromomethane	0.790	0.810	-2.5	100	0.00	5.12
11		chloroethane	0.532	0.548	-3.0	100	-0.01	5.30
12		vinyl bromide	0.595	0.607	-2.0	95	0.00	5.66
13		trichlorofluoromethane	0.968	0.992	-2.5	99	-0.02	5.80
14		1,3-butadiene	0.678	0.789	-16.4	119	-0.01	4.52
15		ethyl ether	0.215	0.233	-8.4	107	0.00	6.21
16		acrolein	0.100	0.097	3.0	105	0.00	6.44
17		1,1-dichloroethene	0.361	0.346	4.2	99	0.00	6.66
18		freon 113	0.580	0.673	-16.0	115	0.00	6.70
19		acetone	0.131	0.139	-6.1	112	0.00	6.66
20		acetonitrile	0.087	0.077	11.5	92	0.00	7.10
21		iodomethane	0.694	0.792	-14.1	115	0.00	6.93
22		carbon disulfide	1.282	1.397	-9.0	111	0.00	7.10
23		methylene chloride	0.456	0.434	4.8	102	0.00	7.46
24		methyl acetate	0.347	0.332	4.3	103	0.00	7.18
25		methyl tert butyl ether	1.570	1.498	4.6	99	0.00	7.88
26		trans-1,2-dichloroethene	0.390	0.364	6.7	98	0.00	7.92
27		hexane	0.571	0.612	-7.2	109	0.00	8.36
28		di-isopropyl ether	1.801	1.640	8.9	97	0.00	8.61
29		2-butanone	0.045	0.050	-11.1	102	0.00	9.39
30		1,1-dichloroethane	0.747	0.758	-1.5	105	0.00	8.60
31		chloroprene	0.556	0.604	-8.6	108	0.00	8.73
32		acrylonitrile	0.163	0.200	-22.7	117	0.00	7.78
33		vinyl acetate	0.076	0.079	-3.9	103	0.00	8.53
34		ethyl tert-butyl ether	1.667	1.668	-0.1	99	0.00	9.18
35		ethyl acetate	0.070	0.076	-8.6	103	0.00	9.43
36		2,2-dichloropropane	0.766	0.682	11.0	94	0.00	9.52
37		cis-1,2-dichloroethene	0.449	0.427	4.9	100	0.00	9.48
38		methyl acrylate	0.053	0.062	-17.0	103	0.00	9.54
39		propionitrile	0.064	0.070	-9.4	106	0.00	9.47
40		tert-butyl formate	0.419	0.390	6.9	92	0.00	10.02
41		bromochloromethane	0.229	0.246	-7.4	106	0.00	9.85

Initial Calibration Verification

Job Number: JC90121 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181292.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.061	-10.9	106	-0.01	9.88
43		chloroform	0.729	0.718	1.5	104	0.00	9.97
44	S	dibromofluoromethane (s)	0.407	0.409	-0.5	103	0.00	10.21
45		methacrylonitrile	0.165	0.182	-10.3	107	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.776	-3.6	101	0.00	10.30
47		cyclohexane	0.828	0.888	-7.2	101	0.00	10.45
48	m	tert amyl alcohol	0.026	0.027	-3.8	107	0.00	10.69
49		1,1-dichloropropene	0.481	0.494	-2.7	104	0.00	10.52
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.650	-3.3	103	0.00	10.56
52		isopropyl acetate	0.086	0.095	-10.5	102	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.318	3.6	101	0.00	10.75
55		iso-octane	0.888	0.919	-3.5	104	0.00	10.98
56		epichlorohydrin	0.035	0.037	-5.7	107	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	102	0.00	11.47
58		benzene	1.160	1.157	0.3	105	0.00	10.83
59		tert-amyl methyl ether	1.127	1.065	5.5	99	0.00	10.97
60		heptane	0.177	0.227	-28.2	126	0.00	11.21
61		1,2-dichloroethane	0.391	0.373	4.6	103	0.00	10.86
62		trichloroethene	0.304	0.325	-6.9	106	0.00	11.79
63	m	ethyl acrylate	0.382	0.435	-13.9	109	0.00	11.80
64		2-nitropropane	0.089	0.094	-5.6	110	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.243	-12.5	110	0.00	12.87
66		methyl methacrylate	0.081	0.084	-3.7	100	0.00	12.15
67		1,2-dichloropropane	0.128	0.124	3.1	97	0.00	12.17
68		dibromomethane	0.193	0.190	1.6	98	0.00	12.31
69		methylcyclohexane	0.533	0.538	-0.9	103	0.00	12.19
70		bromodichloromethane	0.432	0.425	1.6	101	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.537	-3.3	104	0.00	13.16
72		4-methyl-2-pentanone	0.131	0.146	-11.5	105	0.00	13.30
73		3-methyl-1-butanol	0.011	0.012	-9.1	104	0.00	13.32
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.169	2.5	100	0.00	13.57
76		toluene	0.743	0.748	-0.7	104	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.502	-4.1	106	0.00	13.93
78		ethyl methacrylate	0.397	0.444	-11.8	107	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.261	-3.6	105	0.00	14.22
80		tetrachloroethene	0.271	0.288	-6.3	107	0.00	14.42
81		1,3-dichloropropane	0.473	0.465	1.7	105	0.00	14.46
82		2-hexanone	0.120	0.123	-2.5	103	0.00	14.46
83		butyl acetate	0.243	0.245	-0.8	102	0.00	14.60
84		dibromochloromethane	0.352	0.377	-7.1	108	0.00	14.79
85		1,2-dibromoethane	0.337	0.358	-6.2	103	0.00	14.99
86	m	n-butyl ether	1.341	1.432	-6.8	109	0.00	15.66
87		chlorobenzene	0.849	0.864	-1.8	106	0.00	15.64
88		1,1,1,2-tetrachloroethane	0.375	0.379	-1.1	103	0.00	15.74
89		ethylbenzene	1.390	1.355	2.5	104	0.00	15.74
90		m,p-xylene	0.555	0.548	1.3	105	0.00	15.91
91		o-xylene	1.274	1.266	0.6	103	0.00	16.43
92		styrene	0.920	0.907	1.4	104	0.00	16.45
93		butyl acrylate	0.775	0.755	2.6	103	0.00	16.25
94		bromoform	0.248	0.272	-9.7	110	0.00	16.72
95		isopropylbenzene	1.633	1.666	-2.0	103	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.134	0.7	104	0.00	16.92
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	18.39
98	S	4-bromofluorobenzene (s)	0.819	0.886	-8.2	101	0.00	17.11

Initial Calibration Verification

Job Number: JC90121 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181292.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	0.725	0.762	-5.1	101	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.874	-11.5	104	0.00	17.21
101		trans-1,4-dichloro-2-bute	0.178	0.217	-21.9	116	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.214	-8.6	103	0.00	17.30
103		n-propylbenzene	3.022	3.256	-7.7	104	0.00	17.37
104		2-chlorotoluene	0.685	0.743	-8.5	101	0.00	17.51
105		4-chlorotoluene	1.840	1.931	-4.9	106	0.00	17.63
106		1,3,5-trimethylbenzene	2.297	2.566	-11.7	103	0.00	17.56
107		tert-butylbenzene	2.087	2.455	-17.6	105	0.00	17.92
108		1,2,4-trimethylbenzene	2.396	2.555	-6.6	102	0.00	17.98
109		sec-butylbenzene	3.161	3.551	-12.3	103	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.398	-0.1	103	0.00	18.32
111		p-isopropyltoluene	2.752	3.033	-10.2	104	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.411	-4.1	104	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.621	-5.1	104	0.00	18.78
114		benzyl chloride	1.558	1.918	-23.1	122	0.00	18.51
115		n-butylbenzene	1.312	1.445	-10.1	102	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.285	-10.9	100	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.690	-9.2	102	0.00	19.69
118		hexachlorobutadiene	0.527	0.554	-5.1	100	0.00	20.38
119		naphthalene	3.658	4.190	-14.5	104	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.799	-20.2	108	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.748	-17.9	102	0.00	20.28
122	m	1,2,3-trichlorobenzene	1.503	1.797	-19.6	103	0.00	20.74
123		hexachloroethane	0.487	0.590	-21.1	106	0.00	19.07
			True	Calc.	% Drift			
124		2-methylnaphthalene	25.000	23.436	6.3	102	0.00	21.61
			AvgRF	CCRF	% Dev			
125		bis(chloromethyl)ether		NA				
126		ethylenimine		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Thu May 09 14:52:52 2019 GCMSX

Initial Calibration Verification

Job Number: JC90121 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181293.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7749\X181293.D Vial: 15
Acq On : 2 May 2019 11:14 pm Operator: juntaep
Sample : icv7749-50 Inst : ACC-VOA-M
Misc : MS34046,VX7749,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu May 09 14:26:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	107	-0.01	7.39
2		ethanol		----------NA----------				
3		tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.20
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		bromomethane		----------NA----------				
11		chloroethane		----------NA----------				
12		vinyl bromide		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		1,3-butadiene		----------NA----------				
15		ethyl ether		----------NA----------				
16		acrolein		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		freon 113		----------NA----------				
19		acetone		----------NA----------				
20		acetonitrile	0.087	0.092	-5.7	117	0.00	7.10
21		iodomethane		----------NA----------				
22		carbon disulfide		----------NA----------				
23		methylene chloride		----------NA----------				
24		methyl acetate		----------NA----------				
25		methyl tert butyl ether		----------NA----------				
26		trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28		di-isopropyl ether		----------NA----------				
29		2-butanone		----------NA----------				
30		1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile	0.163	0.165	-1.2	103	0.00	7.78
33		vinyl acetate		----------NA----------				
34		ethyl tert-butyl ether		----------NA----------				
35		ethyl acetate		----------NA----------				
36		2,2-dichloropropane		----------NA----------				
37		cis-1,2-dichloroethene		----------NA----------				
38		methyl acrylate		----------NA----------				
39		propionitrile		----------NA----------				
40		tert-butyl formate		----------NA----------				
41		bromochloromethate		----------NA----------				

Initial Calibration Verification

Job Number: JC90121 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181293.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran		----------NA----------					
43		chloroform		----------NA----------					
44	S	dibromofluoromethane (s)	0.407	0.415	-2.0	110	0.00	10.21	
45		methacrylonitrile		----------NA----------					
46		1,1,1-trichloroethane		----------NA----------					
47		cyclohexane		----------NA----------					
48	m	tert amyl alcohol		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		isobutyl alcohol		----------NA----------					
51		carbon tetrachloride		----------NA----------					
52		isopropyl acetate		----------NA----------					
53	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	11.39	
54	S	1,2-dichloroethane-d4 (s)	0.330	0.343	-3.9	113	0.00	10.75	
55		iso-octane		----------NA----------					
56		epichlorohydrin		----------NA----------					
57		n-butyl alcohol		----------NA----------					
58		benzene		----------NA----------					
59		tert-amyl methyl ether		----------NA----------					
60		heptane		----------NA----------					
61		1,2-dichloroethane		----------NA----------					
62		trichloroethene		----------NA----------					
63	m	ethyl acrylate		----------NA----------					
64		2-nitropropane		----------NA----------					
65		2-chloroethyl vinyl ether		----------NA----------					
66		methyl methacrylate		----------NA----------					
67		1,2-dichloropropane		----------NA----------					
68		dibromomethane		----------NA----------					
69		methylcyclohexane		----------NA----------					
70		bromodichloromethane		----------NA----------					
71		cis-1,3-dichloropropene		----------NA----------					
72		4-methyl-2-pentanone		----------NA----------					
73		3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.60	
75	S	toluene-d8 (s)	1.199	1.234	-2.9	105	0.00	13.57	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		tetrachloroethene	0.271	0.284	-4.8	106	0.00	14.42	
81		1,3-dichloropropane		----------NA----------					
82		2-hexanone		----------NA----------					
83		butyl acetate		----------NA----------					
84		dibromochloromethane		----------NA----------					
85		1,2-dibromoethane		----------NA----------					
86	m	n-butyl ether		----------NA----------					
87		chlorobenzene		----------NA----------					
88		1,1,1,2-tetrachloroethane		----------NA----------					
89		ethylbenzene		----------NA----------					
90		m,p-xylene		----------NA----------					
91		o-xylene		----------NA----------					
92		styrene		----------NA----------					
93		butyl acrylate		----------NA----------					
94		bromoform		----------NA----------					
95		isopropylbenzene		----------NA----------					
96		cis-1,4-dichloro-2-butene		----------NA----------					
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	129	0.00	18.39	
98	S	4-bromofluorobenzene (s)	0.819	0.769	6.1	113	0.00	17.11	

Initial Calibration Verification

Job Number: JC90121 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181293.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	----------NA----------
100		1,1,2,2-tetrachloroethane	----------NA----------
101		trans-1,4-dichloro-2-bute	----------NA----------
102		1,2,3-trichloropropane	----------NA----------
103		n-propylbenzene	----------NA----------
104		2-chlorotoluene	----------NA----------
105		4-chlorotoluene	----------NA----------
106		1,3,5-trimethylbenzene	----------NA----------
107		tert-butylbenzene	----------NA----------
108		1,2,4-trimethylbenzene	----------NA----------
109		sec-butylbenzene	----------NA----------
110		1,3-dichlorobenzene	----------NA----------
111		p-isopropyltoluene	----------NA----------
112		1,4-dichlorobenzene	----------NA----------
113		1,2-dichlorobenzene	----------NA----------
114		benzyl chloride	----------NA----------
115		n-butylbenzene	----------NA----------
116		1,2-dibromo-3-chloropropa	----------NA----------
117		1,3,5-trichlorobenzene	----------NA----------
118		hexachlorobutadiene	----------NA----------
119		naphthalene	----------NA----------
120		2-ethylhexyl acrylate	----------NA----------
121		1,2,4-trichlorobenzene	----------NA----------
122	m	1,2,3-trichlorobenzene	----------NA----------
123		hexachloroethane	----------NA----------

		----------	True	Calc.	% Drift	----------
124		2-methylnaphthalene		----------NA----------		

		----------	AvgRF	CCRF	% Dev	----------
125		bis(chloromethyl)ether		----------NA----------		
126		ethylenimine		----------NA----------		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Thu May 09 14:52:53 2019 GCMSX

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VX7807-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182393.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7807\X182393.D Vial: 2
Acq On : 26 Jun 2019 6:55 am Operator: deving
Sample : cc7749-20 Inst : ACC-VOA-M
Misc : MS35756,VX7807,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Tue Jun 25 12:21:02 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	86	0.00	7.40
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.068	5.8	82	-0.01	7.53
4		1,4-dioxane	0.093	0.105	-12.9	94	0.00	12.24
5	I	pentafluorobenzene	1.000	1.000	0.0	89	0.00	10.20
6		chlorodifluoromethane	1.528	1.518	0.7	89	0.00	3.90
7		dichlorodifluoromethane	1.518	1.706	-12.4	97	0.00	3.88
8		chloromethane	1.926	1.939	-0.7	90	0.01	4.28
9		vinyl chloride	1.588	1.694	-6.7	97	0.01	4.52
10		bromomethane	0.790	0.904	-14.4	105	0.00	5.13
11		chloroethane	0.532	0.581	-9.2	103	0.00	5.31
12		vinyl bromide	0.595	0.597	-0.3	93	0.00	5.66
13		trichlorofluoromethane	0.968	1.102	-13.8	103	0.00	5.81
14		1,3-butadiene	0.678	0.679	-0.1	94	0.00	4.54
15		ethyl ether	0.215	0.222	-3.3	91	0.00	6.22
16		acrolein	0.100	0.075	25.0#	64	0.00	6.44
17		1,1-dichloroethene	0.361	0.422	-16.9	106	0.00	6.67
18		freon 113	0.580	0.688	-18.6	107	0.01	6.71
19		acetone	0.131	0.132	-0.8	85	0.00	6.66
20		acetonitrile	0.087	0.083	4.6	82	0.00	7.10
21		iodomethane	0.694	0.749	-7.9	97	0.00	6.94
22		carbon disulfide	1.282	1.444	-12.6	104	0.00	7.10
23		methylene chloride	0.456	0.498	-9.2	102	0.00	7.46
24		methyl acetate	0.347	0.306	11.8	80	0.00	7.19
25		methyl tert butyl ether	1.570	1.482	5.6	88	0.00	7.89
26		trans-1,2-dichloroethene	0.390	0.435	-11.5	101	0.00	7.92
27		hexane	0.571	0.556	2.6	89	0.00	8.36
28		di-isopropyl ether	1.801	1.642	8.8	86	0.00	8.62
29		2-butanone	0.045	0.051	-13.3	95	0.00	9.40
30		1,1-dichloroethane	0.747	0.817	-9.4	98	0.00	8.60
31		chloroprene	0.556	0.544	2.2	84	0.00	8.73
32		acrylonitrile	0.163	0.169	-3.7	88	0.00	7.79
33		vinyl acetate	0.076	0.072	5.3	83	0.00	8.53
34		ethyl tert-butyl ether	1.667	1.582	5.1	86	0.00	9.19
35		ethyl acetate	0.070	0.058	17.1	65	0.01	9.44
36		2,2-dichloropropane	0.766	0.865	-12.9	106	0.00	9.52
37		cis-1,2-dichloroethene	0.449	0.489	-8.9	98	0.00	9.49
38		methyl acrylate	0.053	0.054	-1.9	81	0.00	9.54
39		propionitrile	0.064	0.068	-6.3	90	0.00	9.47
40		tert-butyl formate	0.419	0.376	10.3	80	0.00	10.02
41		bromochloromethane	0.229	0.253	-10.5	97	0.00	9.85

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VX7807-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182393.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.050	9.1	73	0.00	9.89
43		chloroform	0.729	0.765	-4.9	97	0.00	9.97
44	S	dibromofluoromethane (s)	0.407	0.442	-8.6	98	0.00	10.21
45		methacrylonitrile	0.165	0.162	1.8	85	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.811	-8.3	100	0.00	10.30
47		cyclohexane	0.828	0.782	5.6	82	0.00	10.45
48	m	tert amyl alcohol	0.026	0.026	0.0	89	0.00	10.70
49		1,1-dichloropropene	0.481	0.525	-9.1	94	0.00	10.52
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.694	-10.3	100	0.00	10.56
52		isopropyl acetate	0.086	0.086	0.0	83	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	90	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.326	1.2	87	0.00	10.75
55		iso-octane	0.888	0.895	-0.8	97	0.00	10.99
56		epichlorohydrin	0.035	0.034	2.9	86	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	91	0.00	11.47
58		benzene	1.160	1.233	-6.3	98	0.00	10.83
59		tert-amyl methyl ether	1.127	1.061	5.9	88	0.00	10.97
60		heptane	0.177	0.178	-0.6	89	0.00	11.21
61		1,2-dichloroethane	0.391	0.378	3.3	90	0.00	10.87
62		trichloroethene	0.304	0.326	-7.2	94	0.00	11.80
63	m	ethyl acrylate	0.382	0.366	4.2	80	0.00	11.80
64		2-nitropropane	0.089	0.064	28.1#	66	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.228	-5.6	90	0.00	12.87
66		methyl methacrylate	0.081	0.071	12.3	77	0.00	12.16
67		1,2-dichloropropane	0.128	0.130	-1.6	88	0.00	12.17
68		dibromomethane	0.193	0.207	-7.3	95	0.00	12.31
69		methylcyclohexane	0.533	0.572	-7.3	101	0.00	12.20
70		bromodichloromethane	0.432	0.433	-0.2	91	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.526	-1.2	91	0.00	13.16
72		4-methyl-2-pentanone	0.131	0.138	-5.3	88	0.00	13.30
73		3-methyl-1-butanol	0.011	0.011	0.0	88	0.00	13.33
74	I	chlorobenzene-d5	1.000	1.000	0.0	93	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.203	-0.3	94	0.00	13.57
76		toluene	0.743	0.738	0.7	94	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.468	2.9	89	0.00	13.94
78		ethyl methacrylate	0.397	0.391	1.5	86	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.265	-5.2	97	0.00	14.22
80		tetrachloroethene	0.271	0.282	-4.1	96	0.00	14.43
81		1,3-dichloropropane	0.473	0.487	-3.0	94	0.00	14.46
82		2-hexanone	0.120	0.125	-4.2	91	0.00	14.46
83		butyl acetate	0.243	0.230	5.3	88	0.00	14.61
84		dibromochloromethane	0.352	0.354	-0.6	96	0.00	14.79
85		1,2-dibromoethane	0.337	0.352	-4.5	93	0.00	14.99
86	m	n-butyl ether	1.341	1.300	3.1	91	0.00	15.66
87		chlorobenzene	0.849	0.875	-3.1	98	0.00	15.65
88		1,1,1,2-tetrachloroethane	0.375	0.379	-1.1	94	0.00	15.74
89		ethylbenzene	1.390	1.395	-0.4	95	0.00	15.75
90		m,p-xylene	0.555	0.555	0.0	94	0.00	15.91
91		o-xylene	1.274	1.256	1.4	94	0.00	16.43
92		styrene	0.920	0.936	-1.7	95	0.00	16.45
93		butyl acrylate	0.775	0.670	13.5	83	0.00	16.25
94		bromoform	0.248	0.255	-2.8	97	0.00	16.71
95		isopropylbenzene	1.633	1.558	4.6	91	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.130	3.7	89	0.00	16.92
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	18.39
98	S	4-bromofluorobenzene (s)	0.819	0.848	-3.5	96	0.00	17.11

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VX7807-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182393.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

			True	Calc.	% Drift			
99		bromobenzene	0.725	0.746	-2.9	97	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.803	-2.4	97	0.00	17.21
101		trans-1,4-dichloro-2-bute	0.178	0.169	5.1	87	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.200	-1.5	91	0.00	17.30
103		n-propylbenzene	3.022	3.056	-1.1	98	0.00	17.37
104		2-chlorotoluene	0.685	0.697	-1.8	96	0.00	17.51
105		4-chlorotoluene	1.840	1.843	-0.2	98	0.00	17.63
106		1,3,5-trimethylbenzene	2.297	2.334	-1.6	95	0.00	17.56
107		tert-butylbenzene	2.087	2.037	2.4	92	0.00	17.92
108		1,2,4-trimethylbenzene	2.396	2.429	-1.4	97	0.00	17.98
109		sec-butylbenzene	3.161	3.158	0.1	97	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.432	-2.5	99	0.00	18.32
111		p-isopropyltoluene	2.752	2.708	1.6	96	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.400	-3.3	100	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.593	-3.3	98	0.00	18.78
114		benzyl chloride	1.558	1.630	-4.6	100	0.00	18.51
115		n-butylbenzene	1.312	1.389	-5.9	101	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.259	-0.8	92	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.662	-7.4	99	0.00	19.69
118		hexachlorobutadiene	0.527	0.561	-6.5	104	0.00	20.39
119		naphthalene	3.658	3.845	-5.1	95	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.465	30.1#	111	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.724	-16.3	100	0.00	20.28
122	m	1,2,3-trichlorobenzene	1.503	1.710	-13.8	98	0.00	20.74
123		hexachloroethane	0.487	0.484	0.6	97	0.00	19.07
			True	Calc.	% Drift			
124		2-methylnaphthalene	10.000	8.058	19.4	83	0.00	21.62
			AvgRF	CCRF	% Dev			
125		bis(chloromethyl)ether		NA				
126		ethylenimine		NA				
127		pentafluorobenzene(a)	1.000	1.000	0.0	83	0.00	10.20
128		chlorotrifluoroethene		NA				
129		freon 123a		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181286.D MX7749.M Wed Jun 26 14:46:08 2019 GCMSX

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VX7807-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182415.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...6-27\vx7807\x182415.d Vial: 24
Acq On : 26 Jun 2019 6:07 pm Operator: jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Tue Jun 25 12:21:02 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	84	0.01	7.41
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.097	3.3	79	0.00	7.54
4		1,4-dioxane	0.093	0.107	-15.1	89	0.00	12.25
5	I	pentafluorobenzene	1.000	1.000	0.0	91	0.00	10.20
6		chlorodifluoromethane	1.528	1.383	9.5	82	0.02	3.91
7		dichlorodifluoromethane	1.518	1.565	-3.1	87	0.02	3.90
8		chloromethane	1.926	1.748	9.2	83	0.02	4.29
9		vinyl chloride	1.588	1.492	6.0	87	0.02	4.53
10		bromomethane	0.790	0.844	-6.8	94	0.02	5.15
11		chloroethane	0.532	0.544	-2.3	90	0.01	5.32
12		vinyl bromide	0.595	0.598	-0.5	85	0.01	5.67
13		trichlorofluoromethane	0.968	1.043	-7.7	94	0.02	5.83
14		1,3-butadiene	0.678	0.773	-14.0	105	0.02	4.55
15		ethyl ether	0.215	0.217	-0.9	90	0.01	6.23
16		acrolein	0.100	0.067	33.0	66	0.00	6.45
17		1,1-dichloroethene	0.361	0.381	-5.5	99	0.00	6.67
18		freon 113	0.580	0.633	-9.1	98	0.01	6.71
19		acetone	0.131	0.111	15.3	81	0.01	6.66
20		acetonitrile	0.087	0.077	11.5	84	0.00	7.11
21		iodomethane	0.694	0.726	-4.6	95	0.01	6.94
22		carbon disulfide	1.282	1.357	-5.9	98	0.01	7.11
23		methylene chloride	0.456	0.475	-4.2	101	0.00	7.46
24		methyl acetate	0.347	0.285	17.9	80	0.00	7.19
25		methyl tert butyl ether	1.570	1.506	4.1	90	0.00	7.90
26		trans-1,2-dichloroethene	0.390	0.404	-3.6	98	0.00	7.93
27		hexane	0.571	0.520	8.9	84	0.01	8.37
28		di-isopropyl ether	1.801	1.617	10.2	87	0.01	8.62
29		2-butanone	0.045	0.047	-4.4	88	0.00	9.40
30		1,1-dichloroethane	0.747	0.758	-1.5	95	0.00	8.60
31		chloroprene	0.556	0.526	5.4	85	0.00	8.73
32		acrylonitrile	0.163	0.162	0.6	86	0.00	7.77
33		vinyl acetate	0.076	0.079	-3.9	92	0.00	8.54
34		ethyl tert-butyl ether	1.667	1.637	1.8	88	0.00	9.19
35		ethyl acetate	0.070	0.061	12.9	75	0.02	9.45
36		2,2-dichloropropane	0.766	0.785	-2.5	98	0.00	9.53
37		cis-1,2-dichloroethene	0.449	0.458	-2.0	97	0.00	9.49
38		methyl acrylate	0.053	0.058	-9.4	88	0.00	9.54
39		propionitrile	0.064	0.064	0.0	88	0.00	9.47
40		tert-butyl formate	0.419	0.395	5.7	85	0.00	10.02
41		bromochloromethane	0.229	0.244	-6.6	95	0.00	9.86

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VX7807-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182415.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.055	0.0	86	0.00	9.89
43		chloroform	0.729	0.723	0.8	95	0.00	9.98
44	S	dibromofluoromethane (s)	0.407	0.436	-7.1	99	0.00	10.21
45		methacrylonitrile	0.165	0.163	1.2	87	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.780	-4.1	92	0.00	10.31
47		cyclohexane	0.828	0.828	0.0	85	0.00	10.46
48	m	tert amyl alcohol	0.026	0.025	3.8	89	0.00	10.70
49		1,1-dichloropropene	0.481	0.484	-0.6	92	0.00	10.53
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.633	-0.6	91	0.00	10.56
52		isopropyl acetate	0.086	0.090	-4.7	87	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	91	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.310	6.1	88	0.00	10.75
55		iso-octane	0.888	0.854	3.8	87	0.00	10.99
56		epichlorohydrin	0.035	0.032	8.6	82	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	88	0.00	11.47
58		benzene	1.160	1.147	1.1	94	0.00	10.83
59		tert-amyl methyl ether	1.127	1.077	4.4	90	0.00	10.97
60		heptane	0.177	0.168	5.1	84	0.00	11.21
61		1,2-dichloroethane	0.391	0.350	10.5	87	0.00	10.87
62		trichloroethene	0.304	0.314	-3.3	93	0.00	11.80
63	m	ethyl acrylate	0.382	0.365	4.5	83	0.00	11.80
64		2-nitropropane	0.089	0.064	28.1	68	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.201	6.9	82	0.00	12.87
66		methyl methacrylate	0.081	0.080	1.2	86	0.00	12.16
67		1,2-dichloropropane	0.128	0.126	1.6	89	0.00	12.17
68		dibromomethane	0.193	0.193	0.0	90	0.00	12.31
69		methylcyclohexane	0.533	0.558	-4.7	96	0.00	12.20
70		bromodichloromethane	0.432	0.421	2.5	91	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.508	2.3	89	0.00	13.16
72		4-methyl-2-pentanone	0.131	0.135	-3.1	88	0.00	13.30
73		3-methyl-1-butanol	0.011	0.011	0.0	87	0.00	13.32
74	I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.174	2.1	93	0.00	13.58
76		toluene	0.743	0.704	5.2	91	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.440	8.7	86	0.00	13.94
78		ethyl methacrylate	0.397	0.389	2.0	87	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.250	0.8	93	0.00	14.22
80		tetrachloroethene	0.271	0.263	3.0	91	0.00	14.43
81		1,3-dichloropropane	0.473	0.445	5.9	93	0.00	14.46
82		2-hexanone	0.120	0.115	4.2	89	0.00	14.46
83		butyl acetate	0.243	0.227	6.6	88	0.00	14.60
84		dibromochloromethane	0.352	0.339	3.7	90	0.00	14.79
85		1,2-dibromoethane	0.337	0.344	-2.1	92	0.00	14.99
86	m	n-butyl ether	1.341	1.257	6.3	89	0.00	15.66
87		chlorobenzene	0.849	0.831	2.1	95	0.00	15.65
88		1,1,1,2-tetrachloroethane	0.375	0.360	4.0	90	0.00	15.74
89		ethylbenzene	1.390	1.293	7.0	92	0.00	15.75
90		m,p-xylene	0.555	0.517	6.8	92	0.00	15.91
91		o-xylene	1.274	1.183	7.1	90	0.00	16.43
92		styrene	0.920	0.880	4.3	94	0.00	16.45
93		butyl acrylate	0.775	0.675	12.9	86	0.00	16.25
94		bromoform	0.248	0.237	4.4	89	0.00	16.72
95		isopropylbenzene	1.633	1.528	6.4	88	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.061	54.8#	44#	0.00	16.92
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	18.40
98	S	4-bromofluorobenzene (s)	0.819	0.862	-5.3	96	0.00	17.11

Continuing Calibration Summary

Job Number: JC90121 **Sample:** VX7807-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182415.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	0.725	0.729	-0.6	95	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.812	-3.6	95	0.00	17.21
101		trans-1,4-dichloro-2-bute	0.178	0.093	47.8	49#	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.197	0.0	93	0.00	17.30
103		n-propylbenzene	3.022	2.963	2.0	93	0.00	17.37
104		2-chlorotoluene	0.685	0.687	-0.3	91	0.00	17.51
105		4-chlorotoluene	1.840	1.756	4.6	95	0.00	17.64
106		1,3,5-trimethylbenzene	2.297	2.305	-0.3	91	0.00	17.56
107		tert-butylbenzene	2.087	2.174	-4.2	91	0.00	17.93
108		1,2,4-trimethylbenzene	2.396	2.360	1.5	92	0.00	17.98
109		sec-butylbenzene	3.161	3.200	-1.2	92	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.328	4.9	97	0.00	18.32
111		p-isopropyltoluene	2.752	2.679	2.7	91	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.348	0.5	98	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.516	1.7	95	0.00	18.78
114		benzyl chloride	1.558	1.415	9.2	88	0.00	18.51
115		n-butylbenzene	1.312	1.339	-2.1	93	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.263	-2.3	91	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.593	-3.0	95	0.00	19.69
118		hexachlorobutadiene	0.527	0.518	1.7	92	0.00	20.38
119		naphthalene	3.658	3.843	-5.1	94	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.758	-14.0	101	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.679	-13.2	97	0.00	20.28
122	m	1,2,3-trichlorobenzene	1.503	1.708	-13.6	96	0.00	20.74
123		hexachloroethane	0.487	0.511	-4.9	90	0.00	19.07
		----------	True	Calc.	% Drift	----------		
124		2-methylnaphthalene	25.000	19.669	21.3	82	0.00	21.61
		----------	AvgRF	CCRF	% Dev	----------		
125		bis(chloromethyl)ether		----------NA----------				
126		ethylenimine		----------NA----------				
127		pentafluorobenzene(a)	1.000	1.000	0.0	83	0.00	10.20
128		chlorotrifluoroethene		----------NA----------				
129		freon 123a		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Wed Jun 26 22:24:19 2019

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : R:\voa-gcms\complete\2019\dayton201906\6-25-2019\lotusa\v4b3896\
Data File : 4b91840.d
Acq On : 24 Jun 2019 11:45 am
Operator : edwardd
Sample : JC90121-1
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 25 11:44:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

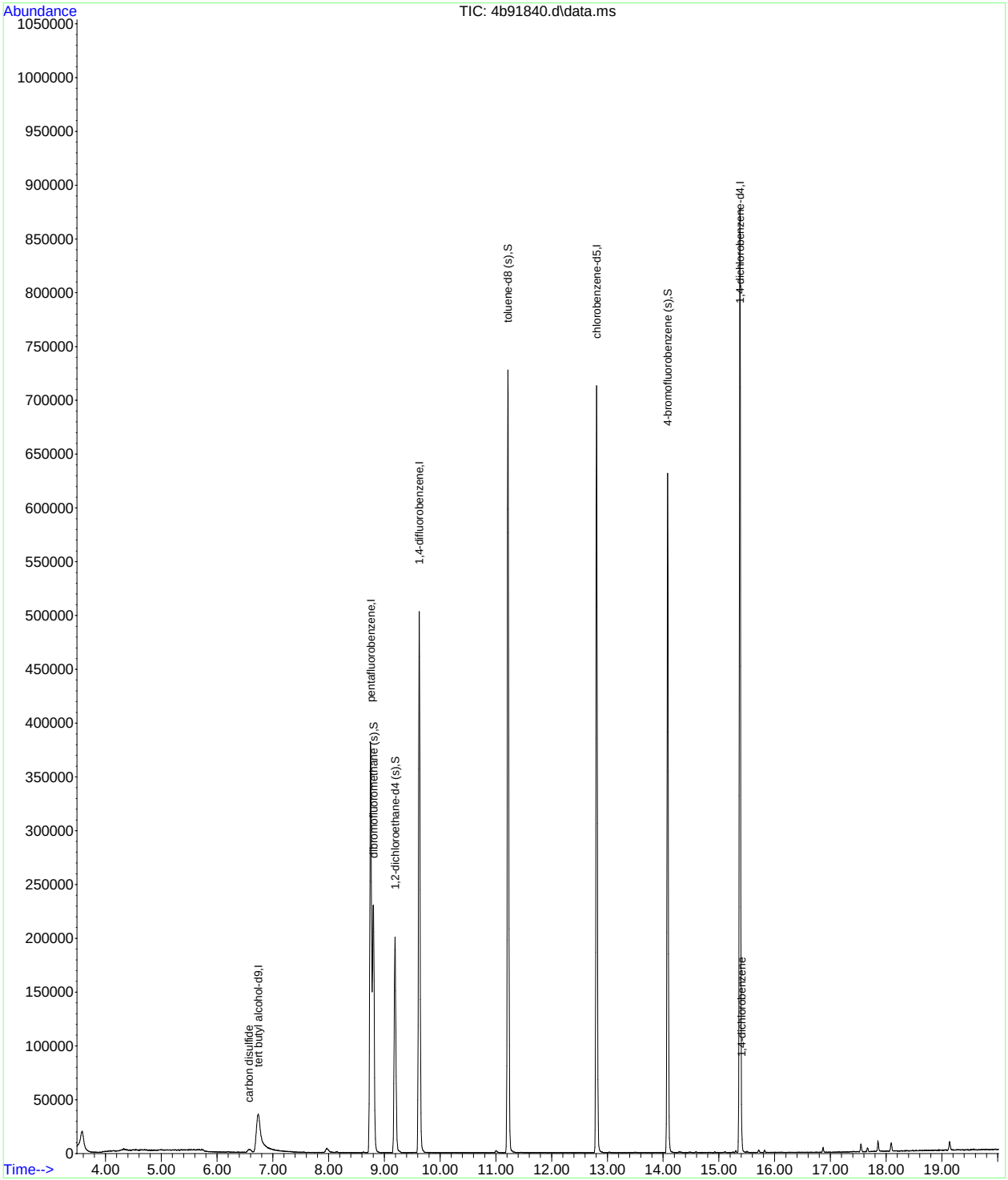
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.738	65	147147	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	317626	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	436505	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	398093	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.378	152	235031	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	156847	54.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.22%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	157075	54.57	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.14%			
76) toluene-d8 (s)	11.215	98	499421	49.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.70%			
99) 4-bromofluorobenzene (s)	14.081	95	202070	52.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.46%			
Target Compounds						Qvalue
23) carbon disulfide	6.571	76	9598	0.69	ug/L	91
113) 1,4-dichlorobenzene	15.405	146	2544	0.30	ug/L	75

(#) = qualifier out of range (m) = manual integration (+) = signals summed

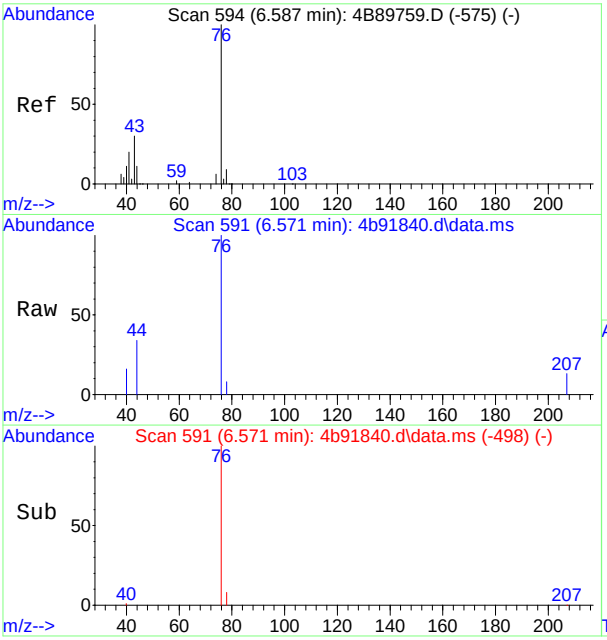
Quantitation Report (QT Reviewed)

Data Path : R:\voa-gcms\complete\2019\dayton201906\6-25-2019\lotusa\v4b3896\
Data File : 4b91840.d
Acq On : 24 Jun 2019 11:45 am
Operator : edwardd
Sample : JC90121-1
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 25 11:44:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



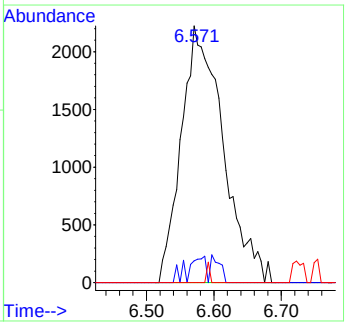
M4B3793.M Tue Jun 25 11:45:06 2019 Page: 2

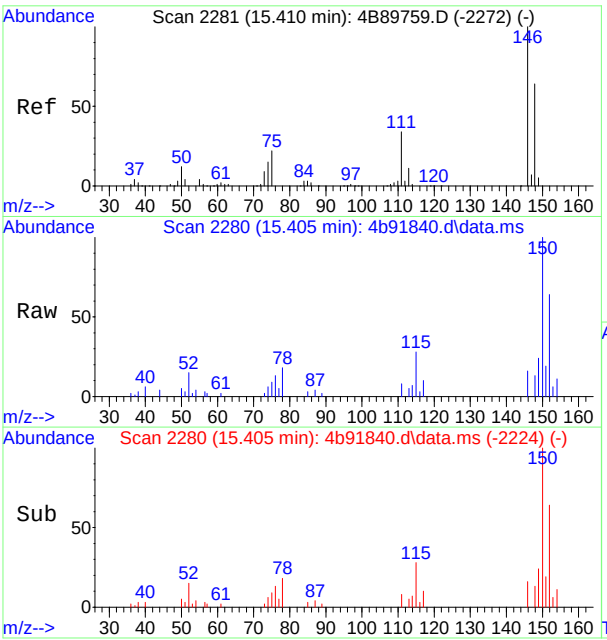


#23
carbon disulfide
Concen: 0.69 ug/L
RT: 6.571 min Scan# 591
Delta R.T. -0.016 min
Lab File: 4b91840.d
Acq: 24 Jun 2019 11:45 am

Tgt Ion: 76 Resp: 9598

Ion	Ratio	Lower	Upper
76	100		
78	8.5	0.0	39.4
38	0.0	0.0	36.5

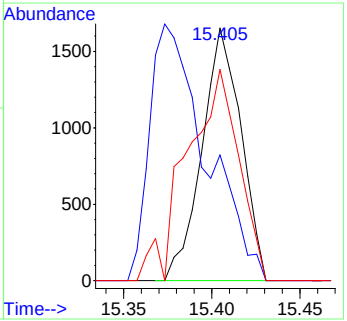




#113
1,4-dichlorobenzene
Concen: 0.30 ug/L
RT: 15.405 min Scan# 2280
Delta R.T. -0.005 min
Lab File: 4b91840.d
Acq: 24 Jun 2019 11:45 am

Tgt Ion:146 Resp: 2544

Ion	Ratio	Lower	Upper
146	100		
111	49.8	4.7	64.7
148	83.6	34.5	94.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182403.D
Acq On : 26 Jun 2019 12:21 pm
Operator : jessicap
Sample : JC90121-2
Misc : MS35698,VX7807,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 26 14:55:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	147377	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	205943	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	275237	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	272910	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.40	152	177859	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.20	168	205943	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.22	113	92418	55.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.30%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	94355	51.97	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.94%			
75) toluene-d8 (s)	13.58	98	335424	51.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.54%			
98) 4-bromofluorobenzene (s)	17.11	95	134425	46.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.26%			

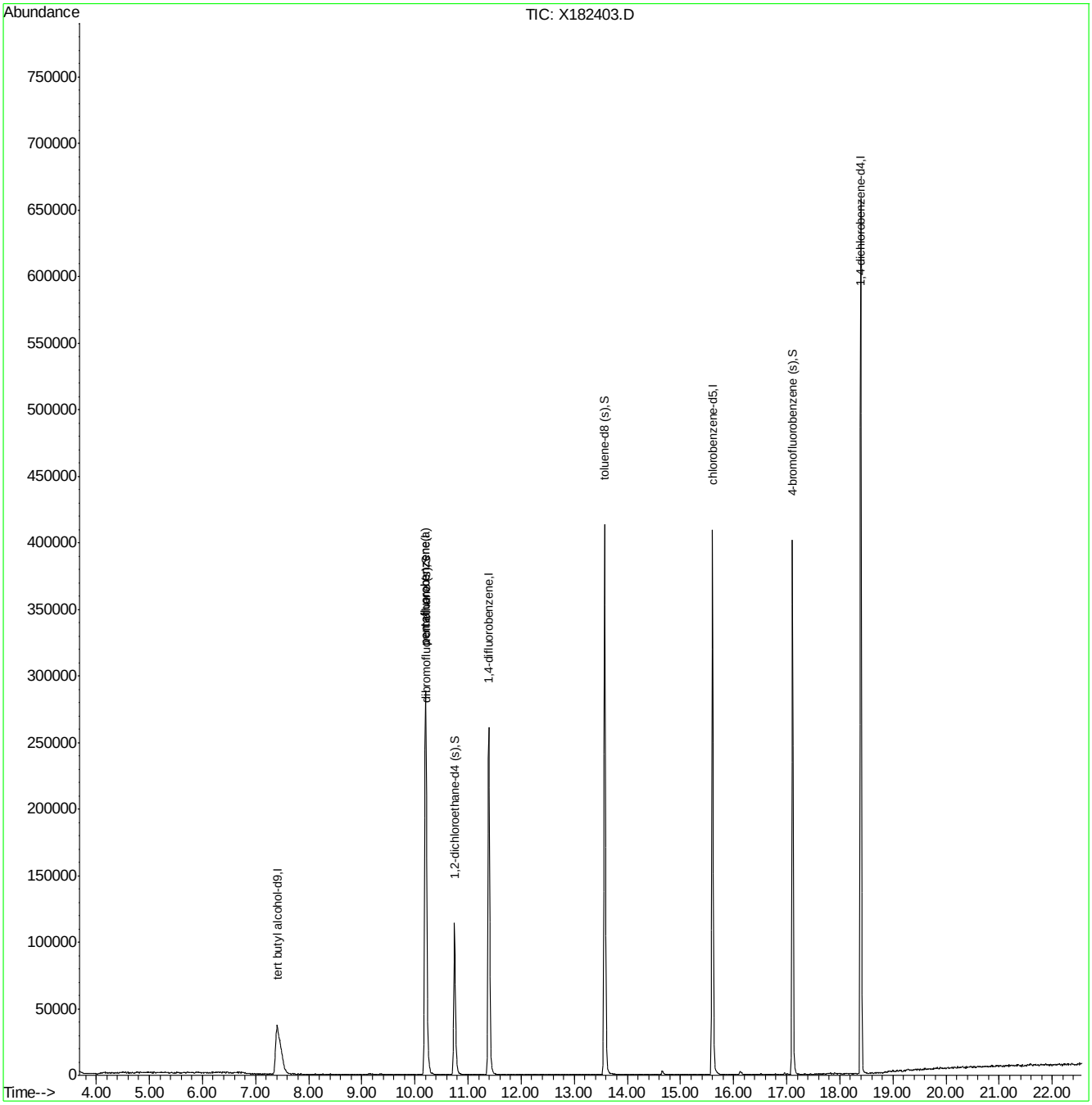
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182403.D
Acq On : 26 Jun 2019 12:21 pm
Operator : jessicap
Sample : JC90121-2
Misc : MS35698,VX7807,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 26 14:55:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91841.d
Acq On : 24 Jun 2019 12:13 pm
Operator : edwardd
Sample : JC90121-3 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:34:47 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

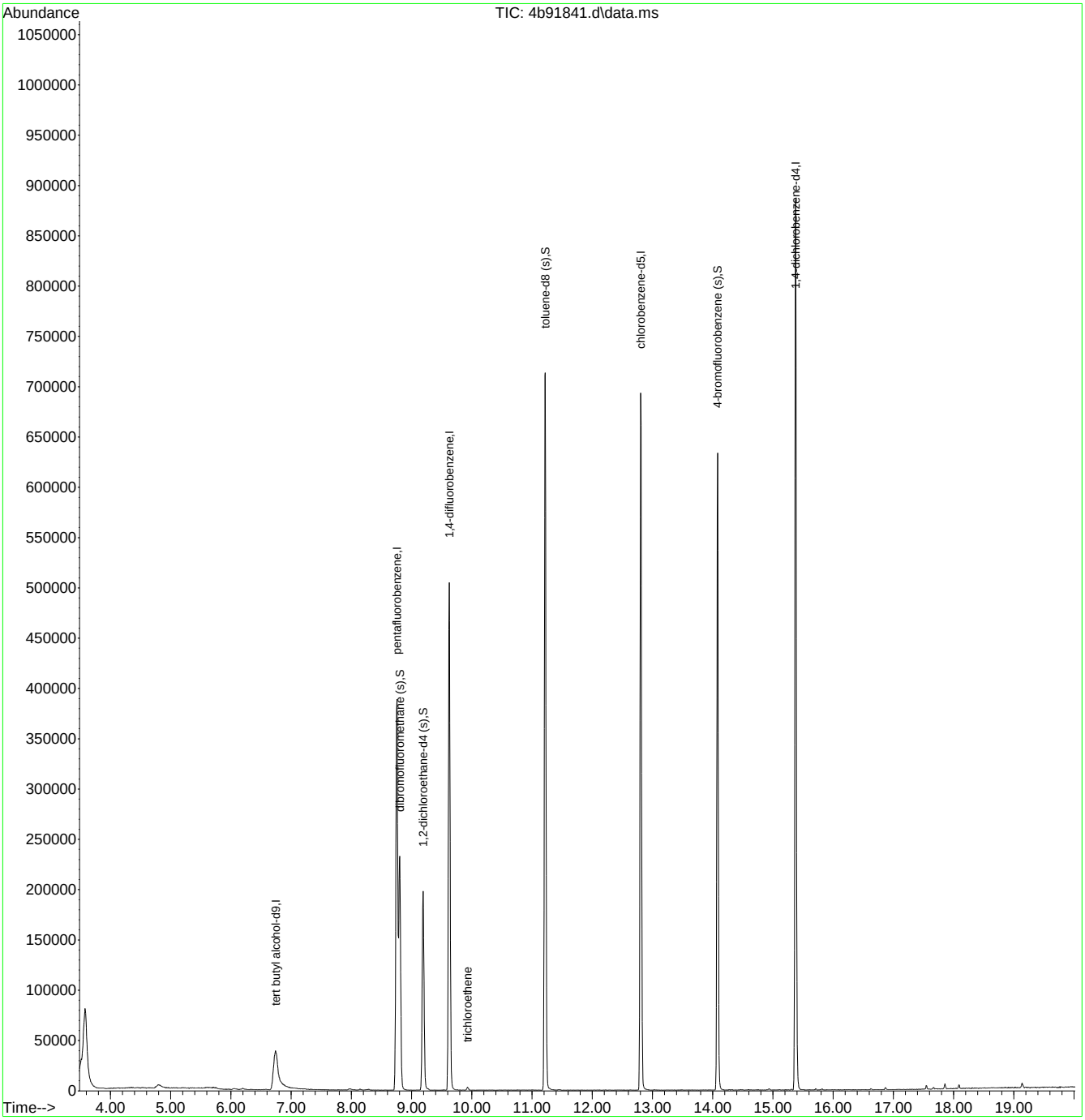
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.743	65	150217	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	331508	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	440703	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	404402	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	242552	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	156673	52.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.52%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	150018	51.62	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.24%			
76) toluene-d8 (s)	11.220	98	493417	48.48	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.96%			
99) 4-bromofluorobenzene (s)	14.081	95	203714	51.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.04%			
Target Compounds						Qvalue
63) trichloroethene	9.929	95	1282	0.36	ug/L	88

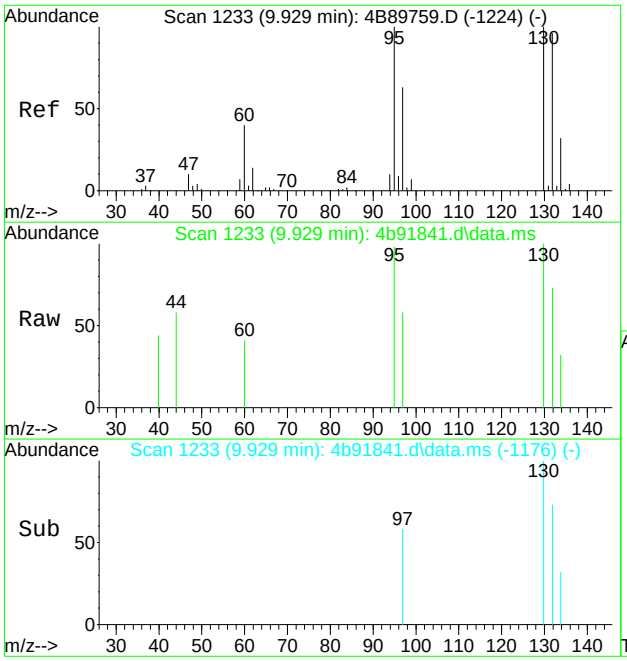
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91841.d
Acq On : 24 Jun 2019 12:13 pm
Operator : edwardd
Sample : JC90121-3 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:34:47 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

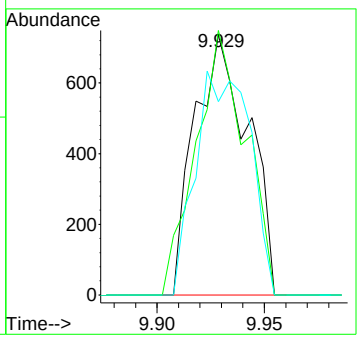




#63
trichloroethene
Concen: 0.36 ug/L
RT: 9.929 min Scan# 1233
Delta R.T. -0.000 min
Lab File: 4b91841.d
Acq: 24 Jun 2019 12:13 pm

Tgt Ion: 95 Resp: 1282

Ion	Ratio	Lower	Upper
95	100		
130	101.8	70.0	130.0
132	74.3	66.4	126.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91842.d
Acq On : 24 Jun 2019 12:41 pm
Operator : edwardd
Sample : JC90121-4 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:35:51 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

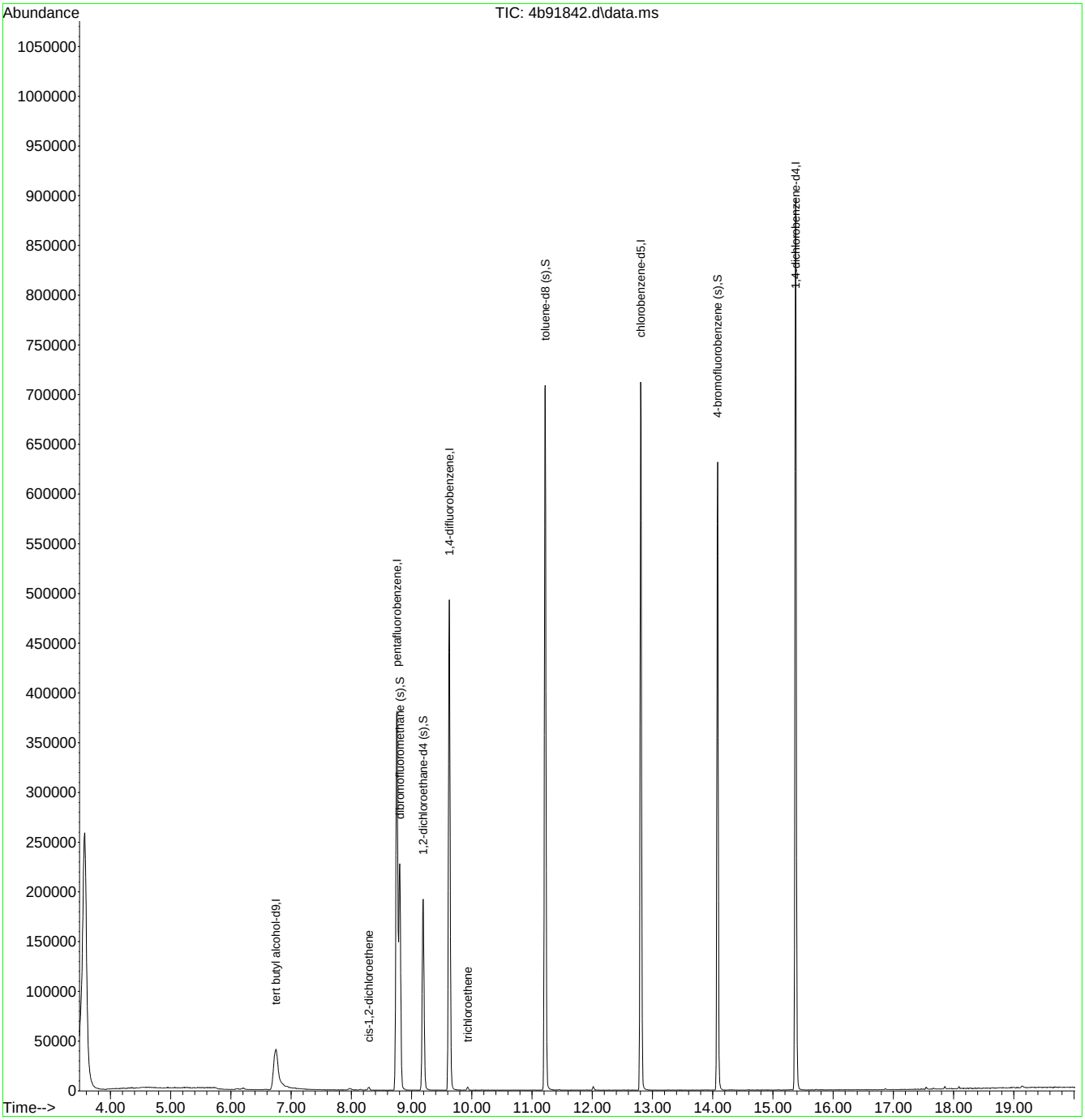
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.749	65	154664	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	328420	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	439587	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	408861	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	243720	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	155477	52.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.70%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	149882	51.71	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.42%			
76) toluene-d8 (s)	11.221	98	499647	48.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.12%			
99) 4-bromofluorobenzene (s)	14.081	95	203459	50.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.42%			
Target Compounds						Qvalue
38) cis-1,2-dichloroethene	8.292	96	1731	0.40	ug/L	89
63) trichloroethene	9.934	95	1183	0.33	ug/L	98

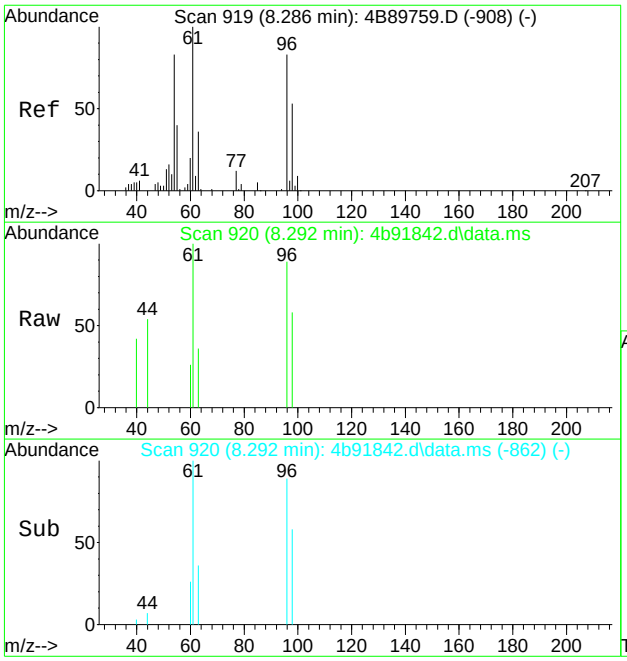
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91842.d
Acq On : 24 Jun 2019 12:41 pm
Operator : edwardd
Sample : JC90121-4 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:35:51 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

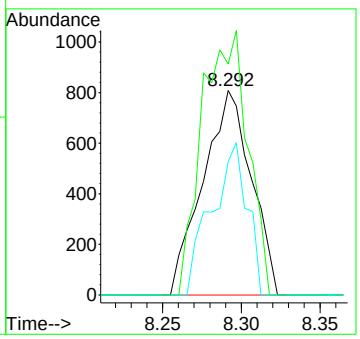


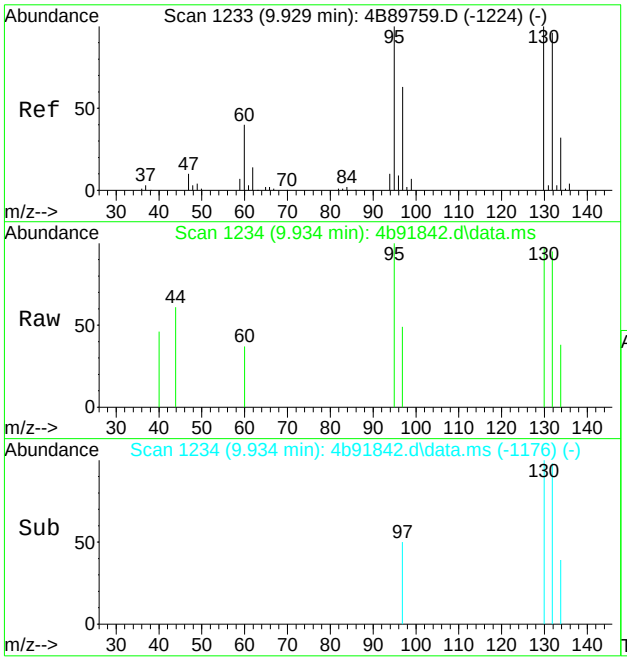


#38
cis-1,2-dichloroethene
Concen: 0.40 ug/L
RT: 8.292 min Scan# 920
Delta R.T. 0.005 min
Lab File: 4b91842.d
Acq: 24 Jun 2019 12:41 pm

Tgt Ion: 96 Resp: 1731

Ion	Ratio	Lower	Upper
96	100		
61	112.9	99.9	159.9
98	65.2	33.5	93.5

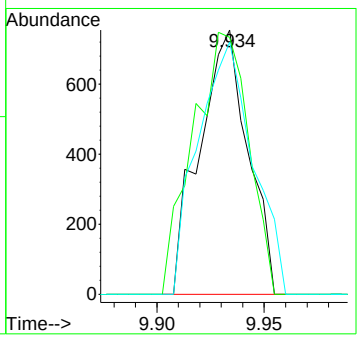




#63
trichloroethene
Concen: 0.33 ug/L
RT: 9.934 min Scan# 1234
Delta R.T. 0.005 min
Lab File: 4b91842.d
Acq: 24 Jun 2019 12:41 pm

Tgt Ion: 95 Resp: 1183

Ion	Ratio	Lower	Upper
95	100		
130	97.2	70.0	130.0
132	95.4	66.4	126.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91843.d
Acq On : 24 Jun 2019 1:09 pm
Operator : edwardd
Sample : JC90121-5 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:36:51 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

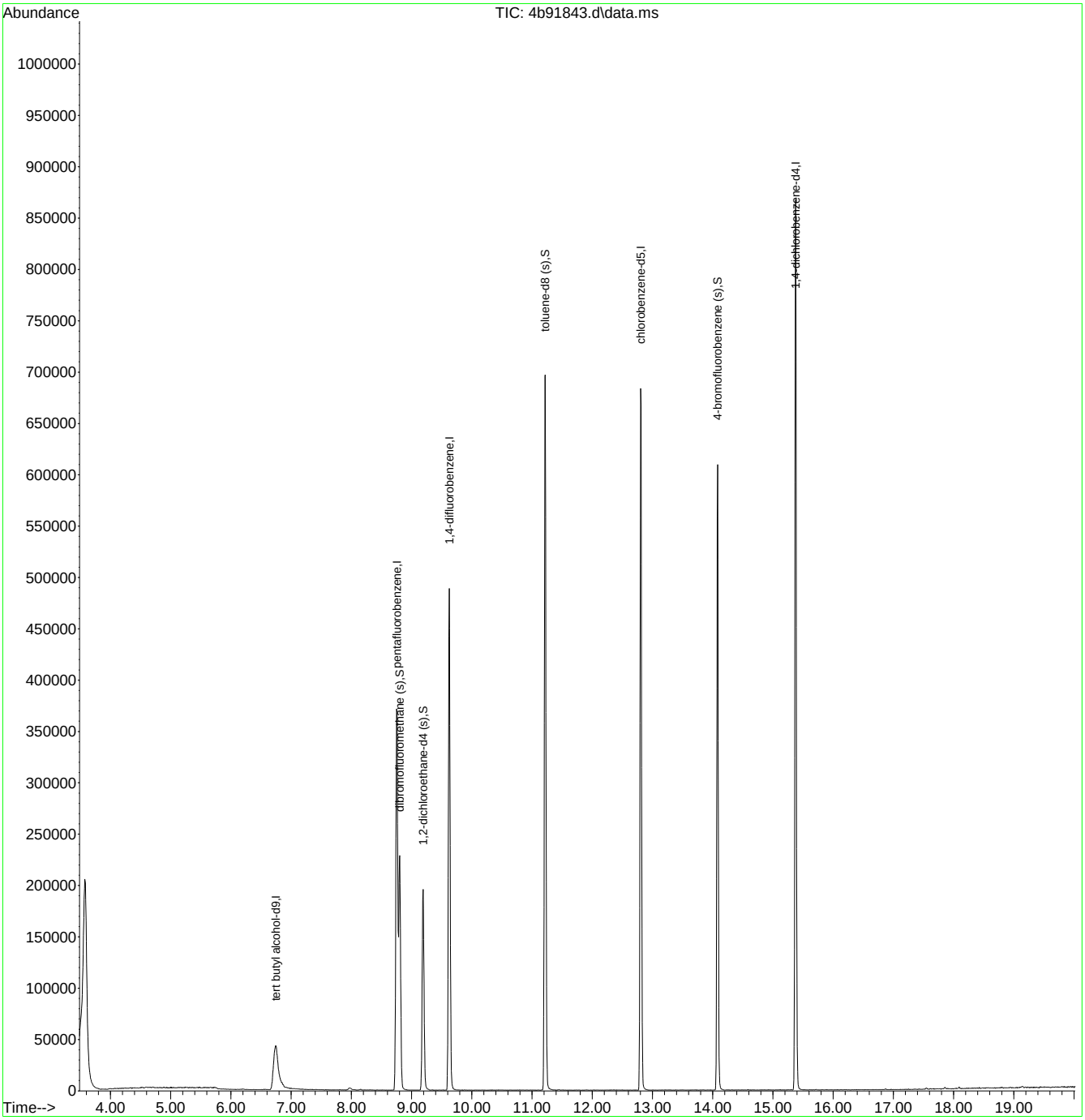
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.749	65	156666	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	322471	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	430344	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	400171	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	233516	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.799	113	154220	52.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.78%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	147368	51.93	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.86%			
76) toluene-d8 (s)	11.215	98	483050	47.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.92%			
99) 4-bromofluorobenzene (s)	14.081	95	198568	51.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.30%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91843.d
Acq On : 24 Jun 2019 1:09 pm
Operator : edwardd
Sample : JC90121-5 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:36:51 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91844.d
Acq On : 24 Jun 2019 1:37 pm
Operator : edwardd
Sample : JC90121-6 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:38:24 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

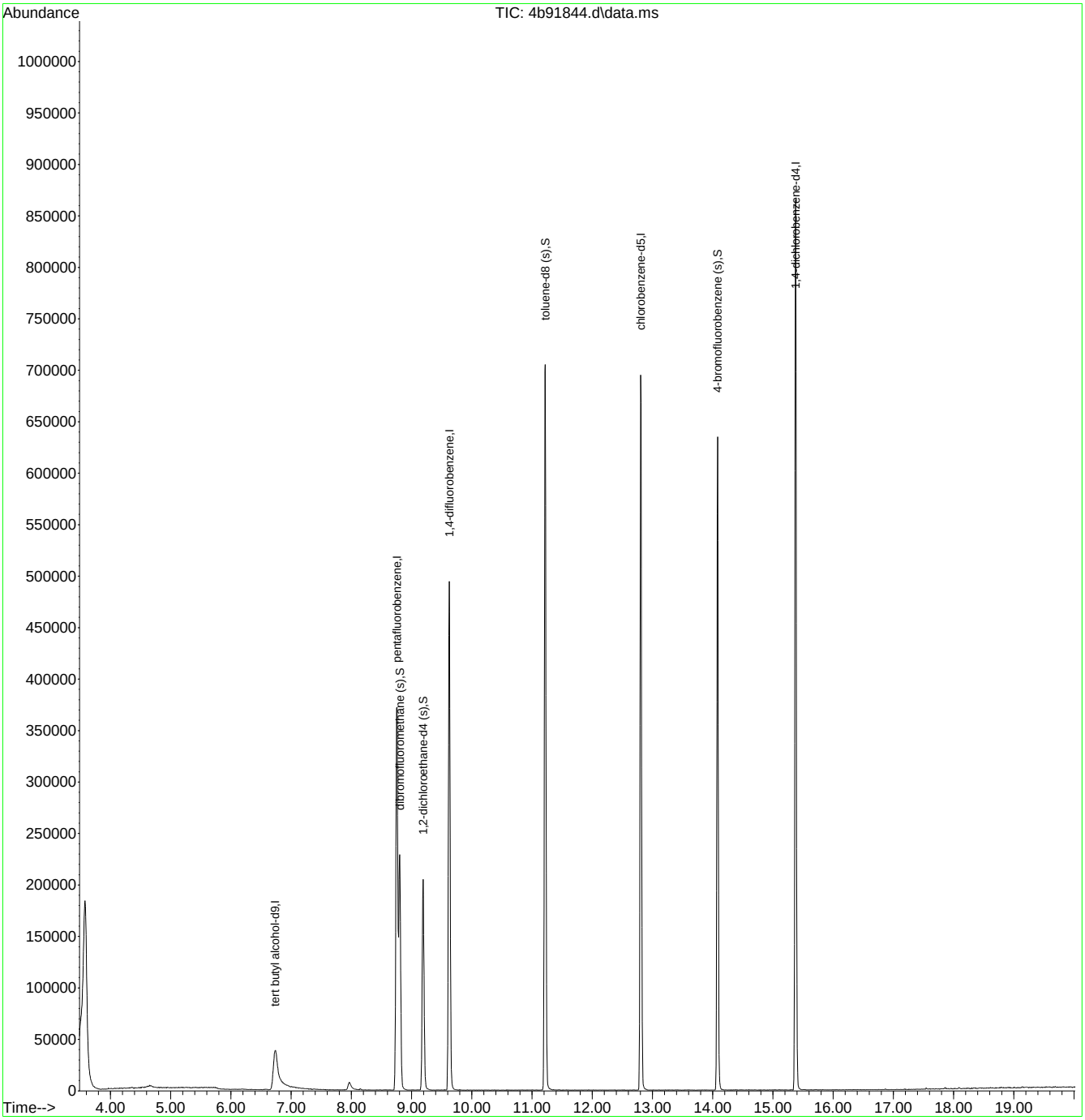
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.733	65	159607	500.00	ug/L	-0.02
5) pentafluorobenzene	8.757	168	315656	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	430475	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	403319	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.378	152	240351	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	156655	54.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.76%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	154994	54.60	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.20%			
76) toluene-d8 (s)	11.220	98	490279	48.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.60%			
99) 4-bromofluorobenzene (s)	14.081	95	200788	50.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.50%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91844.d
Acq On : 24 Jun 2019 1:37 pm
Operator : edwardd
Sample : JC90121-6 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:38:24 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91845.d
Acq On : 24 Jun 2019 2:05 pm
Operator : edwardd
Sample : JC90121-7 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:39:02 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

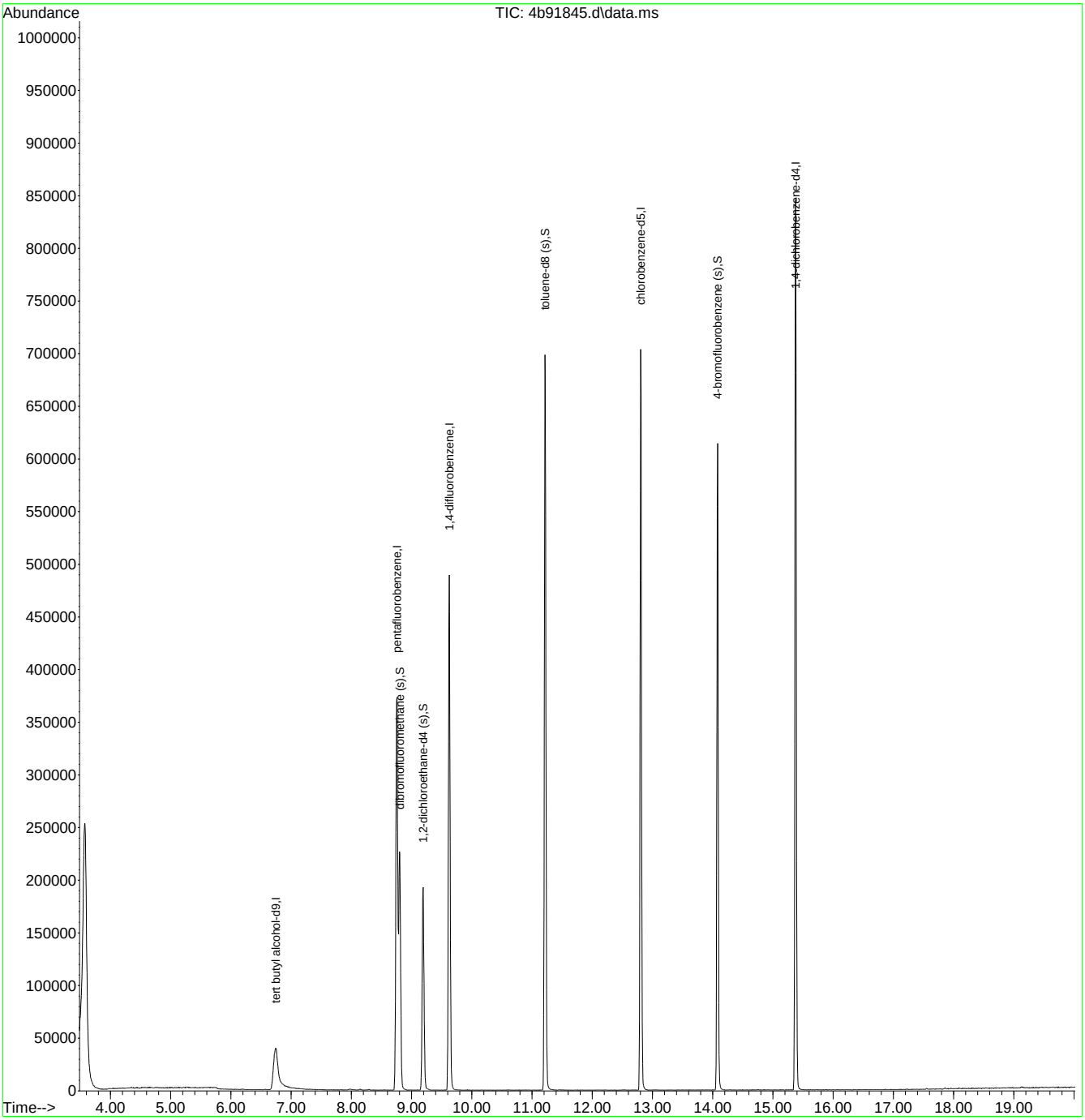
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.743	65	149681	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	323337	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	429764	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	401502	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	227817	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	153054	52.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.70%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	146948	51.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.70%			
76) toluene-d8 (s)	11.215	98	485163	48.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.02%			
99) 4-bromofluorobenzene (s)	14.081	95	198705	52.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.96%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91845.d
Acq On : 24 Jun 2019 2:05 pm
Operator : edwardd
Sample : JC90121-7 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:39:02 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91846.d
Acq On : 24 Jun 2019 2:34 pm
Operator : edwardd
Sample : JC90121-8 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:40:03 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

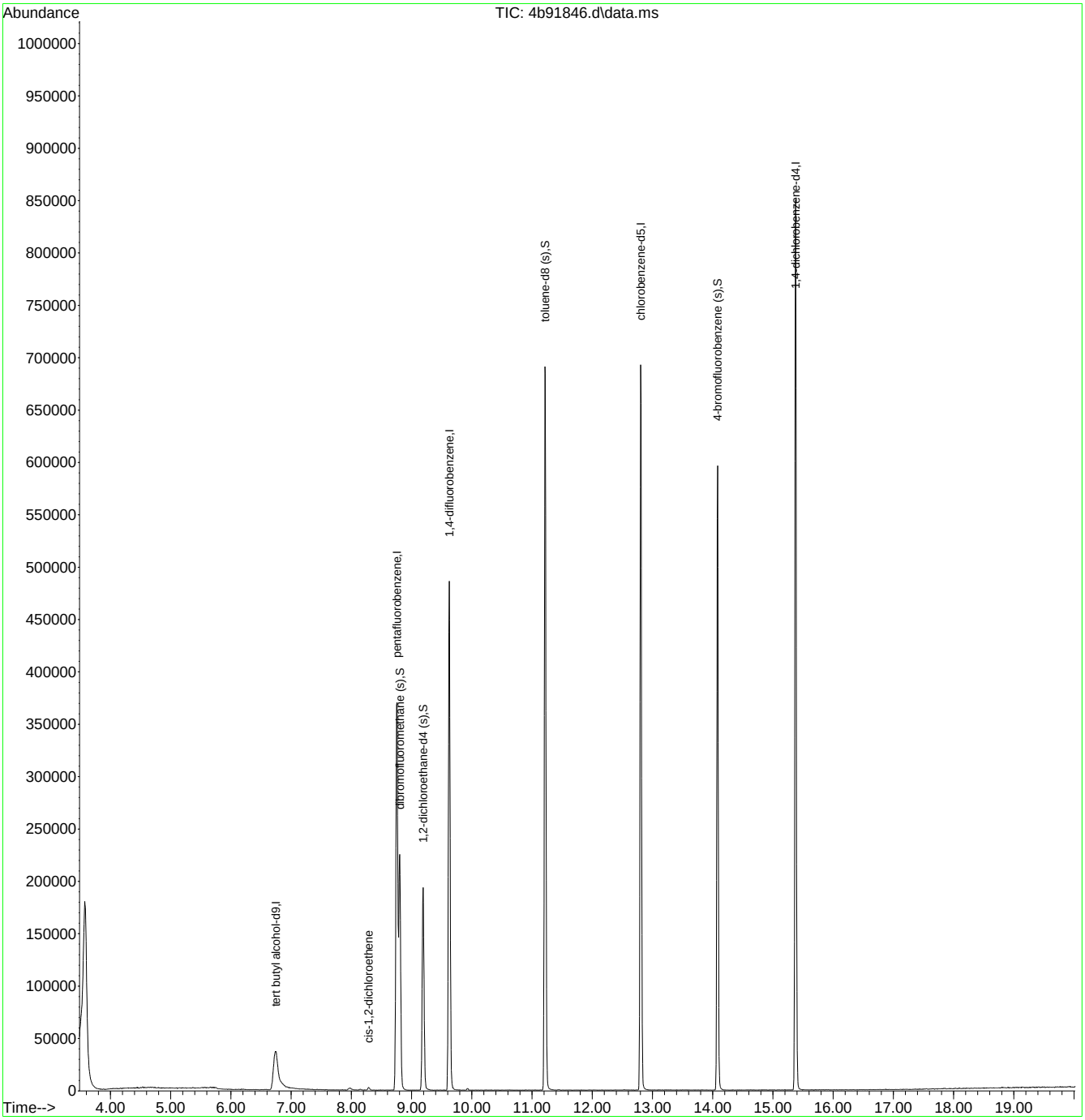
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.749	65	143273	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	321934	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	428452	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	394001	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	234206	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	153416	52.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.40%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	146346	51.80	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.60%			
76) toluene-d8 (s)	11.215	98	482604	48.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.34%			
99) 4-bromofluorobenzene (s)	14.082	95	191337	49.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.26%			
Target Compounds						Qvalue
38) cis-1,2-dichloroethene	8.286	96	1435	0.34	ug/L	93

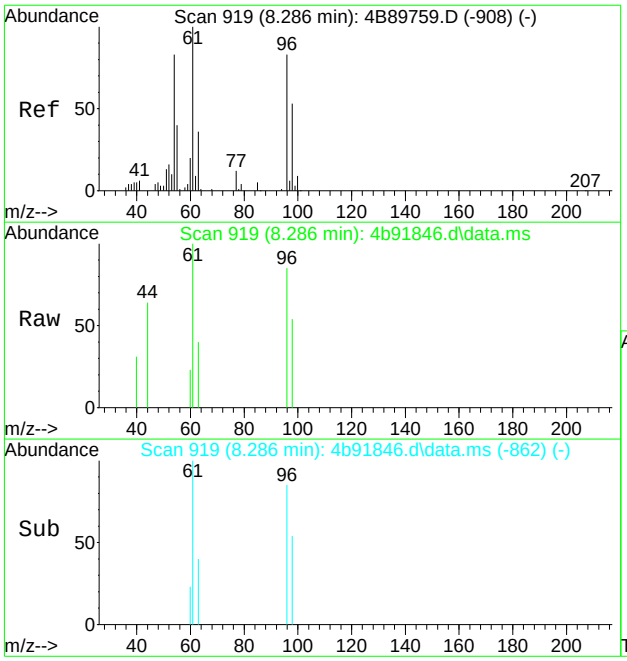
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91846.d
Acq On : 24 Jun 2019 2:34 pm
Operator : edwardd
Sample : JC90121-8 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:40:03 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

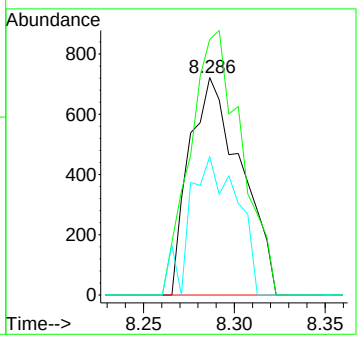




#38
cis-1,2-dichloroethene
Concen: 0.34 ug/L
RT: 8.286 min Scan# 919
Delta R.T. -0.000 min
Lab File: 4b91846.d
Acq: 24 Jun 2019 2:34 pm

Tgt Ion: 96 Resp: 1435

Ion	Ratio	Lower	Upper
96	100		
61	117.6	99.9	159.9
98	63.7	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91847.d
Acq On : 24 Jun 2019 3:02 pm
Operator : edwardd
Sample : JC90121-9 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:42:08 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

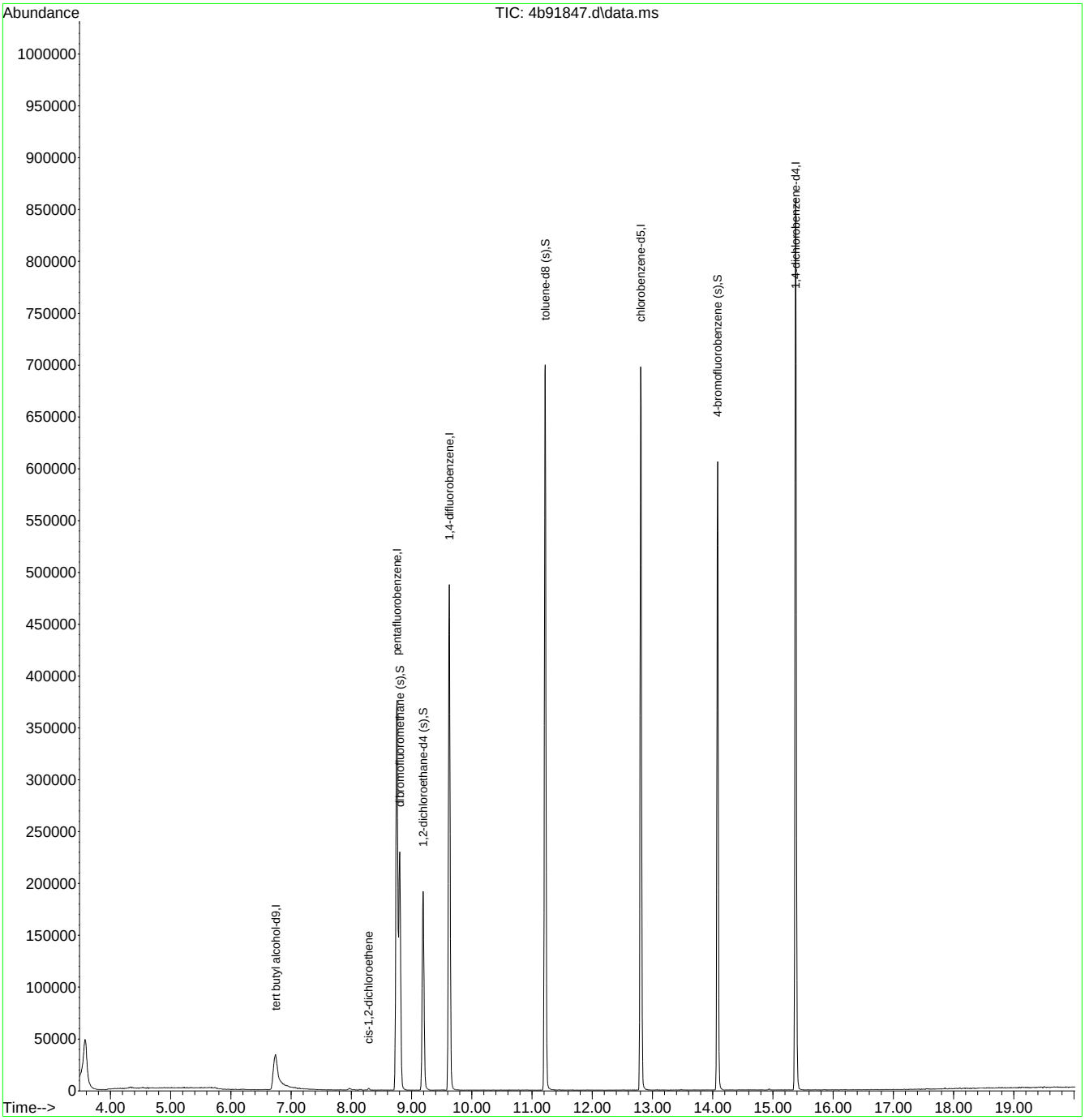
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.743	65	139085	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	323081	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	430395	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	401012	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.378	152	238241	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	154408	52.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.70%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	146483	51.61	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.22%			
76) toluene-d8 (s)	11.220	98	486895	48.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.48%			
99) 4-bromofluorobenzene (s)	14.081	95	195653	49.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.78%			
Target Compounds						Qvalue
38) cis-1,2-dichloroethene	8.286	96	954	0.22	ug/L	# 66

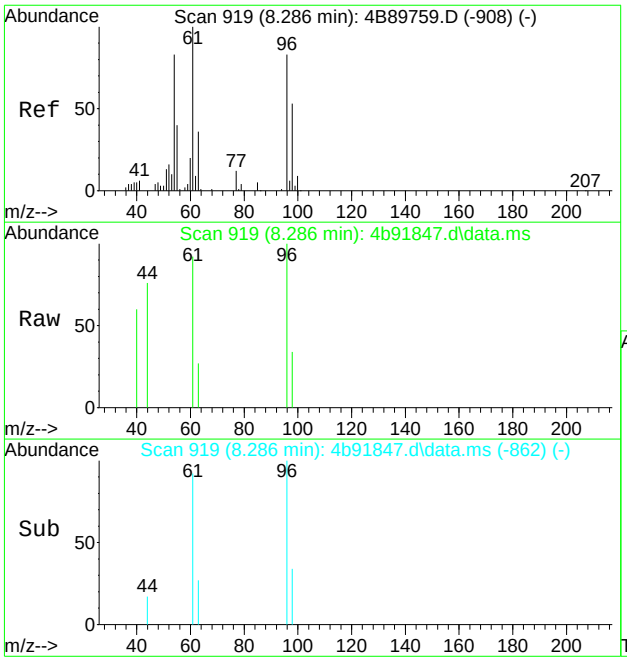
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91847.d
Acq On : 24 Jun 2019 3:02 pm
Operator : edwardd
Sample : JC90121-9 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:42:08 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

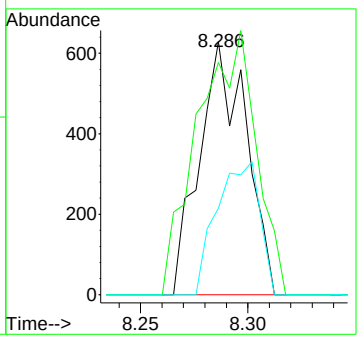




#38
cis-1,2-dichloroethene
Concen: 0.22 ug/L
RT: 8.286 min Scan# 919
Delta R.T. -0.000 min
Lab File: 4b91847.d
Acq: 24 Jun 2019 3:02 pm

Tgt Ion: 96 Resp: 954

Ion	Ratio	Lower	Upper
96	100		
61	91.7	99.9	159.9#
98	34.2	33.5	93.5



7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91848.d
Acq On : 24 Jun 2019 3:30 pm
Operator : edwardd
Sample : JC90121-10 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:43:13 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

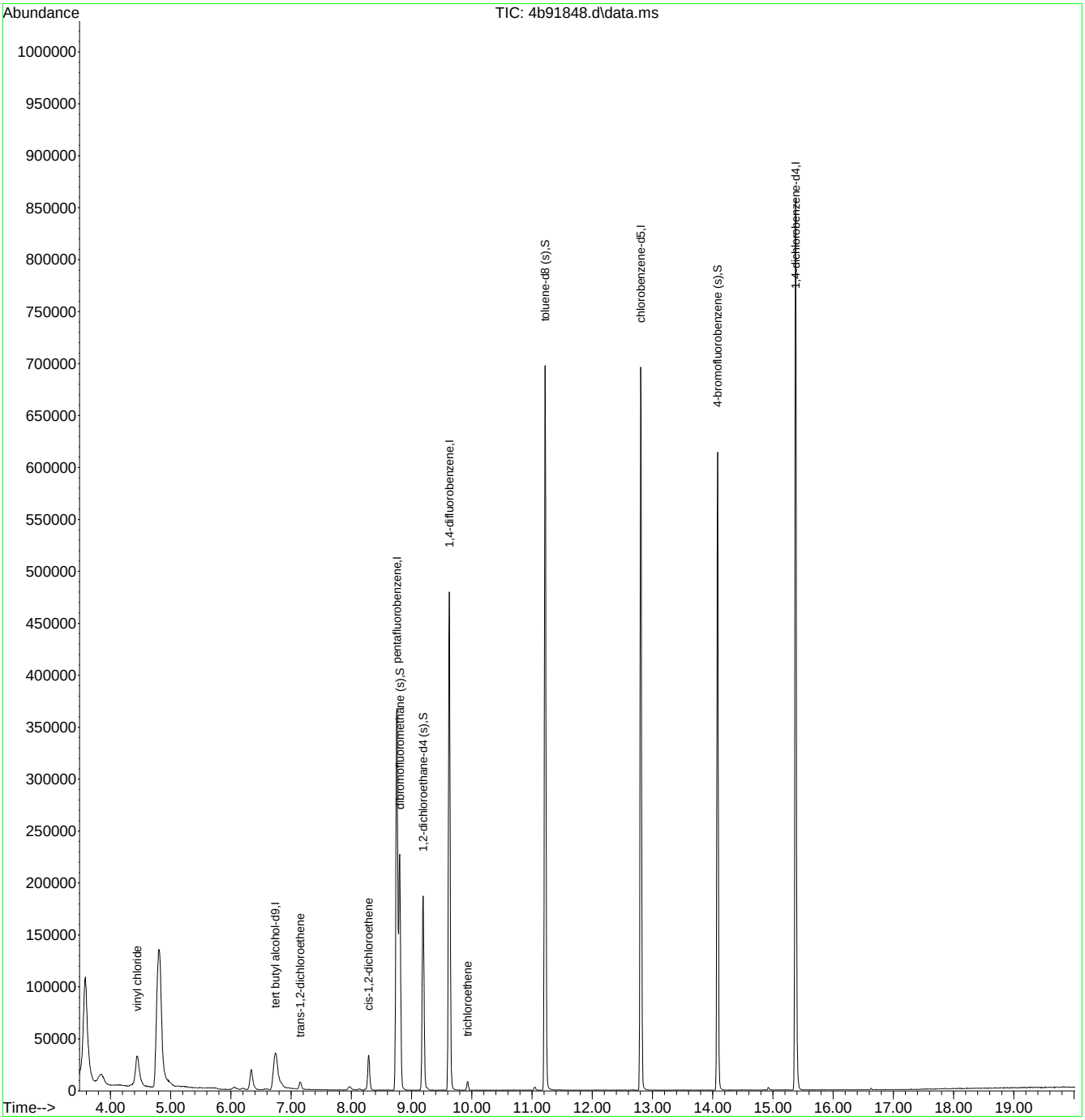
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.738	65	131340	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	322568	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	429873	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	402117	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	234593	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	151985	52.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.20%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	145298	51.26	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.52%			
76) toluene-d8 (s)	11.215	98	486464	48.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.14%			
99) 4-bromofluorobenzene (s)	14.082	95	196817	50.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.92%			
Target Compounds						Qvalue
9) vinyl chloride	4.447	62	89021	13.83	ug/L	99
27) trans-1,2-dichloroethene	7.151	61	6525	1.14	ug/L	92
38) cis-1,2-dichloroethene	8.286	96	19096	4.49	ug/L	97
63) trichloroethene	9.929	95	3284	0.94	ug/L	99

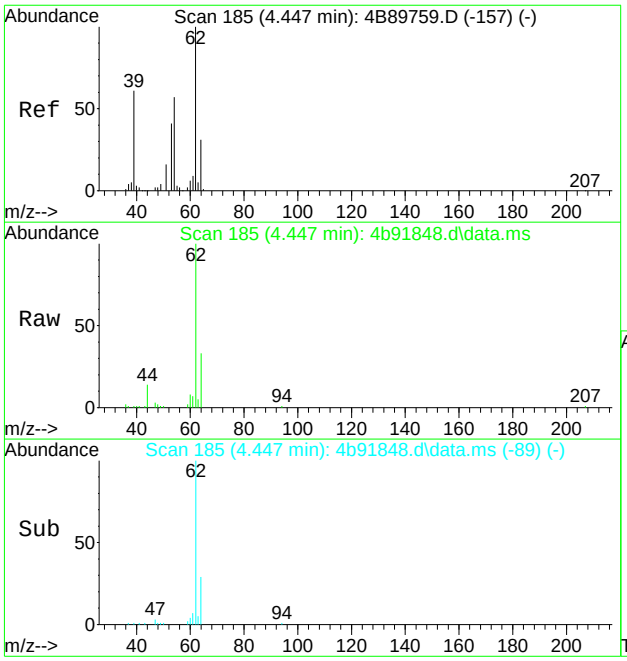
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91848.d
Acq On : 24 Jun 2019 3:30 pm
Operator : edwardd
Sample : JC90121-10 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:43:13 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

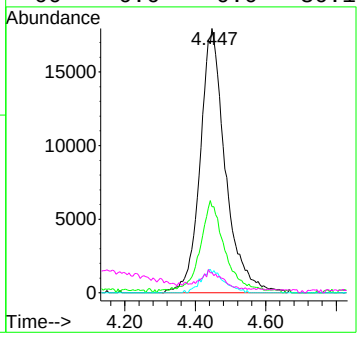


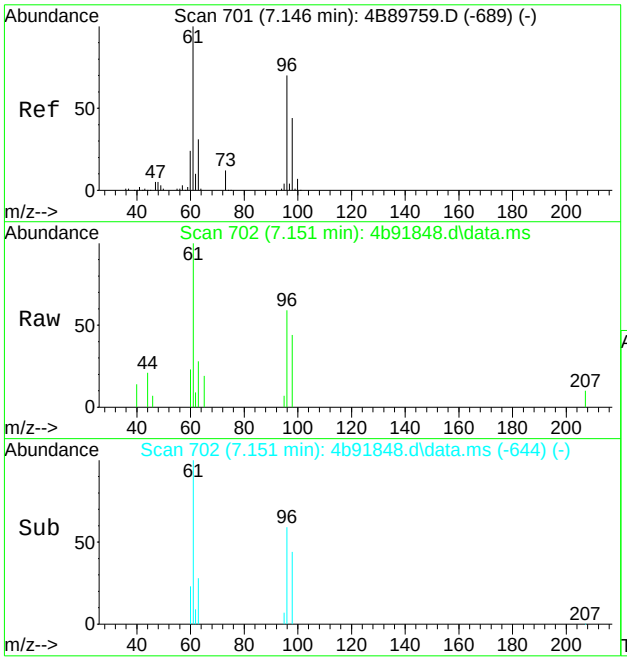


#9
vinyl chloride
Concen: 13.83 ug/L
RT: 4.447 min Scan# 185
Delta R.T. -0.000 min
Lab File: 4b91848.d
Acq: 24 Jun 2019 3:30 pm

Tgt Ion: 62 Resp: 89021

Ion	Ratio	Lower	Upper
62	100		
64	31.7	1.8	61.8
61	7.4	0.0	38.5
60	6.6	0.0	36.1

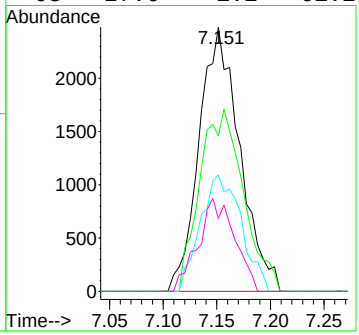


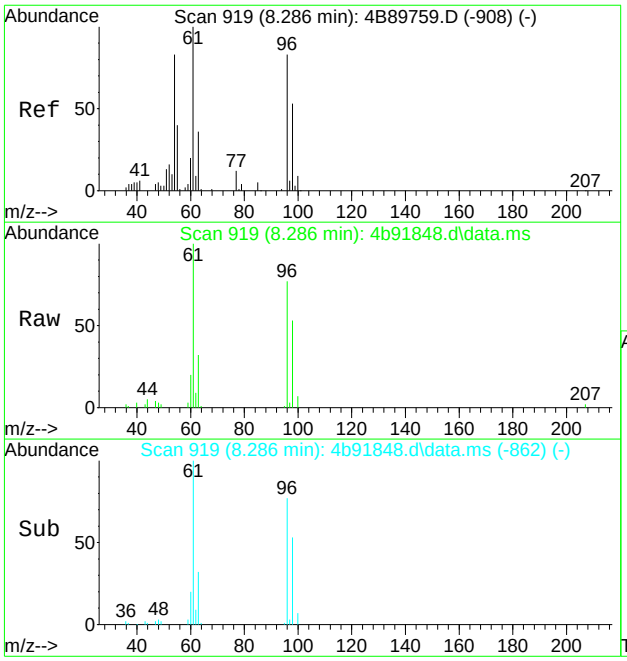


#27
trans-1,2-dichloroethene
Concen: 1.14 ug/L
RT: 7.151 min Scan# 702
Delta R.T. 0.005 min
Lab File: 4b91848.d
Acq: 24 Jun 2019 3:30 pm

Tgt Ion: 61 Resp: 6525

Ion	Ratio	Lower	Upper
61	100		
96	58.8	39.6	99.6
98	44.1	13.9	73.9
63	27.6	1.2	61.2

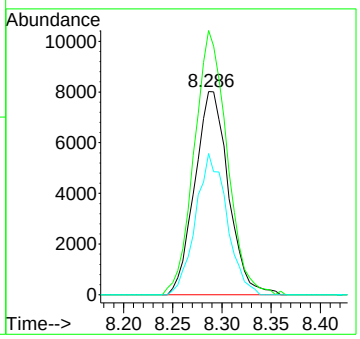


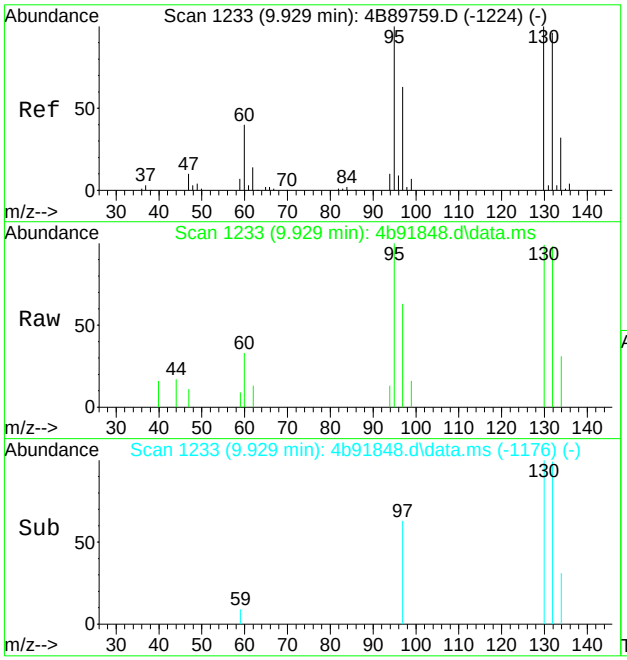


#38
cis-1,2-dichloroethene
Concen: 4.49 ug/L
RT: 8.286 min Scan# 919
Delta R.T. -0.000 min
Lab File: 4b91848.d
Acq: 24 Jun 2019 3:30 pm

Tgt Ion: 96 Resp: 19096

Ion	Ratio	Lower	Upper
96	100		
61	130.2	99.9	159.9
98	69.6	33.5	93.5

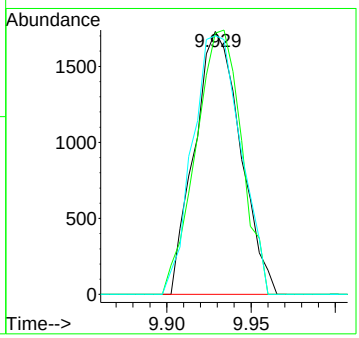




#63
trichloroethene
Concen: 0.94 ug/L
RT: 9.929 min Scan# 1233
Delta R.T. -0.000 min
Lab File: 4b91848.d
Acq: 24 Jun 2019 3:30 pm

Tgt Ion: 95 Resp: 3284

Ion	Ratio	Lower	Upper
95	100		
130	99.3	70.0	130.0
132	98.4	66.4	126.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91849.d
Acq On : 24 Jun 2019 3:58 pm
Operator : edwardd
Sample : JC90121-11 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:44:54 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

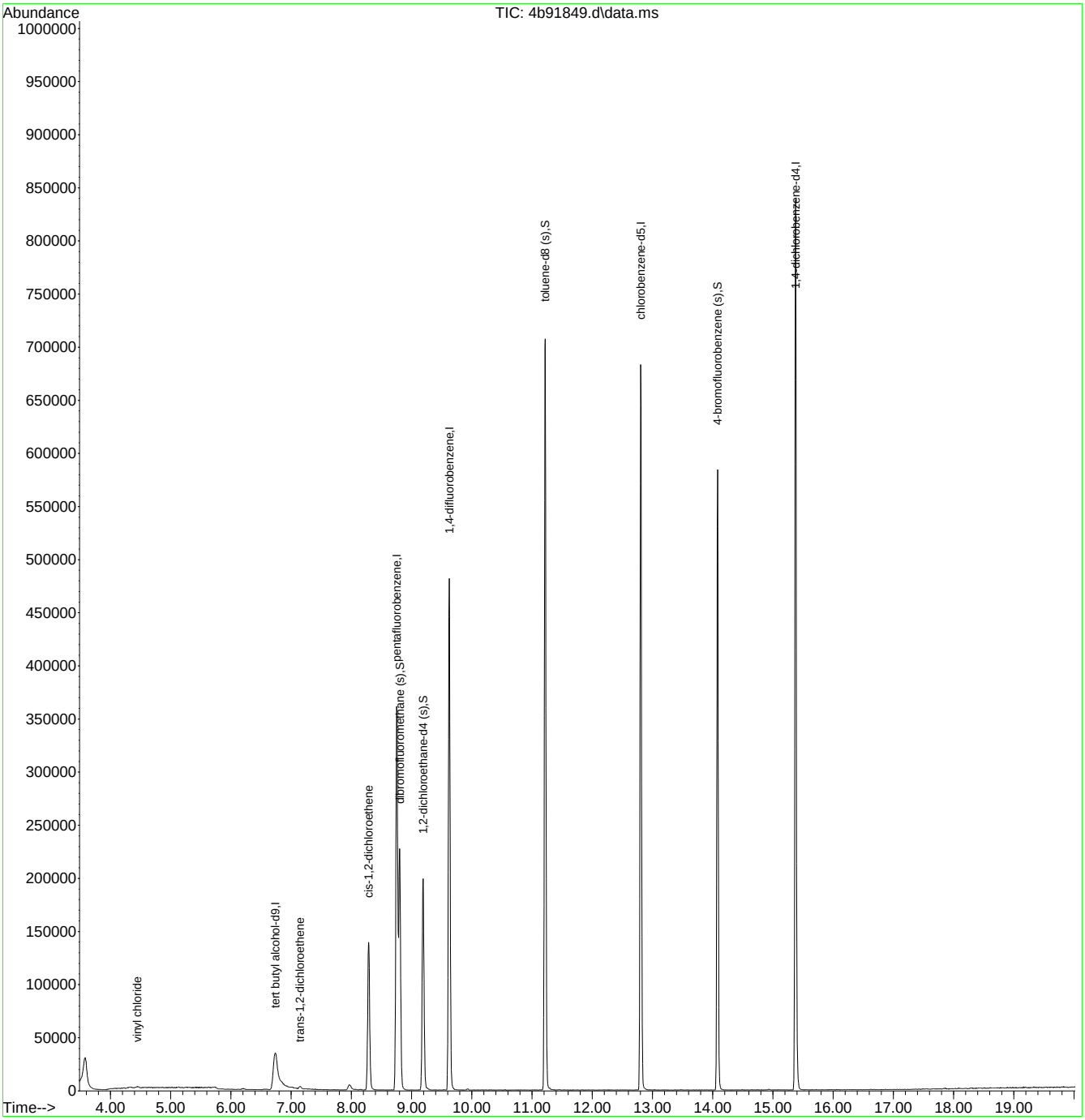
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.738	65	136809	500.00	ug/L	0.00
5) pentafluorobenzene	8.752	168	296839	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	414527	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	384272	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	224041	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	152226	56.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 113.42%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	152994	55.97	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 111.94%			
76) toluene-d8 (s)	11.215	98	475344	49.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.30%			
99) 4-bromofluorobenzene (s)	14.082	95	188997	51.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
Target Compounds						Qvalue
9) vinyl chloride	4.442	62	2252	0.38	ug/L	71
27) trans-1,2-dichloroethene	7.146	61	1827	0.35	ug/L	89
38) cis-1,2-dichloroethene	8.286	96	74201	18.94	ug/L	97

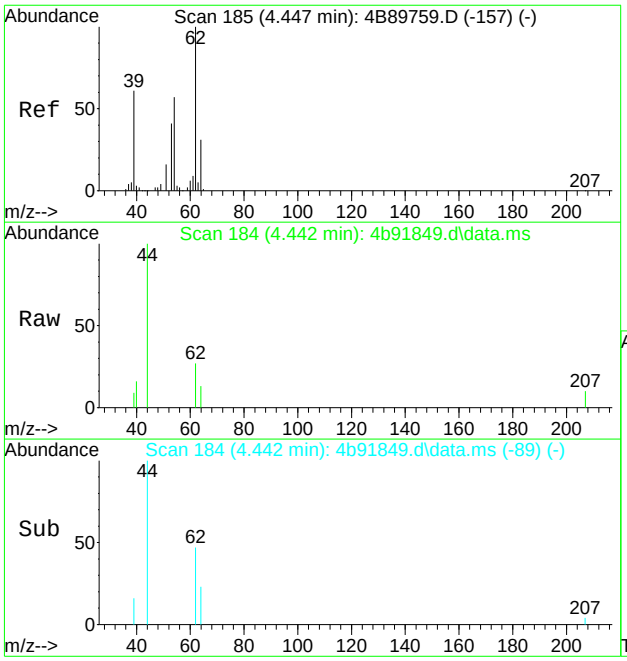
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91849.d
Acq On : 24 Jun 2019 3:58 pm
Operator : edwardd
Sample : JC90121-11 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:44:54 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

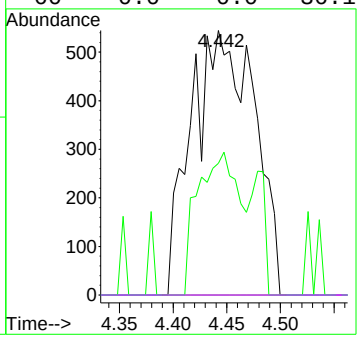


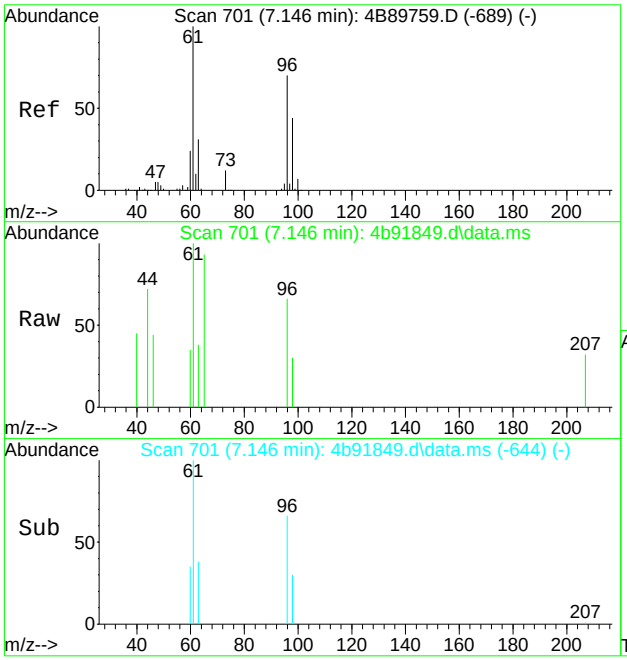


#9
vinyl chloride
Concen: 0.38 ug/L
RT: 4.442 min Scan# 184
Delta R.T. -0.005 min
Lab File: 4b91849.d
Acq: 24 Jun 2019 3:58 pm

Tgt Ion: 62 Resp: 2252

Ion	Ratio	Lower	Upper
62	100		
64	49.7	1.8	61.8
61	0.0	0.0	38.5
60	0.0	0.0	36.1

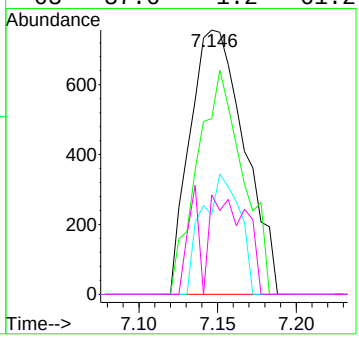


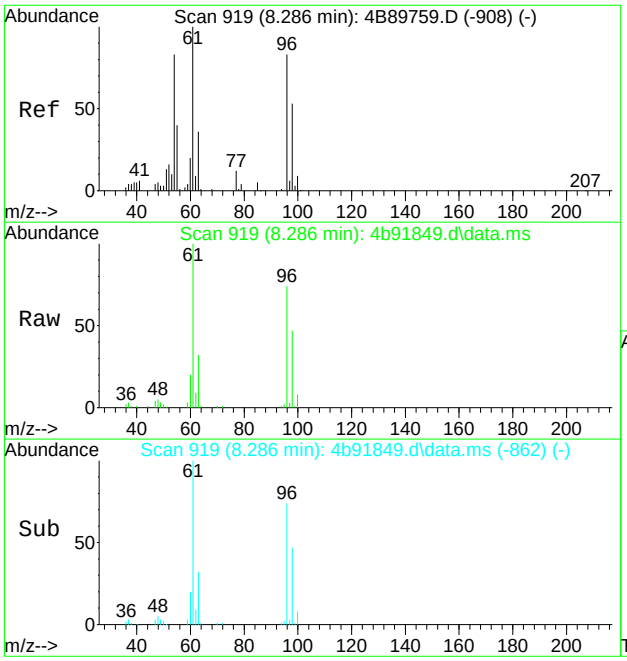


#27
trans-1,2-dichloroethene
Concen: 0.35 ug/L
RT: 7.146 min Scan# 701
Delta R.T. -0.000 min
Lab File: 4b91849.d
Acq: 24 Jun 2019 3:58 pm

Tgt Ion: 61 Resp: 1827

Ion	Ratio	Lower	Upper
61	100		
96	66.4	39.6	99.6
98	30.1	13.9	73.9
63	37.6	1.2	61.2

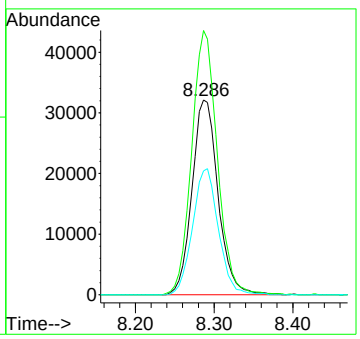




#38
cis-1,2-dichloroethene
Concen: 18.94 ug/L
RT: 8.286 min Scan# 919
Delta R.T. -0.000 min
Lab File: 4b91849.d
Acq: 24 Jun 2019 3:58 pm

Tgt Ion: 96 Resp: 74201

Ion	Ratio	Lower	Upper
96	100		
61	135.8	99.9	159.9
98	63.6	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91850.d
Acq On : 24 Jun 2019 4:26 pm
Operator : edwardd
Sample : JC90121-12 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:46:26 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

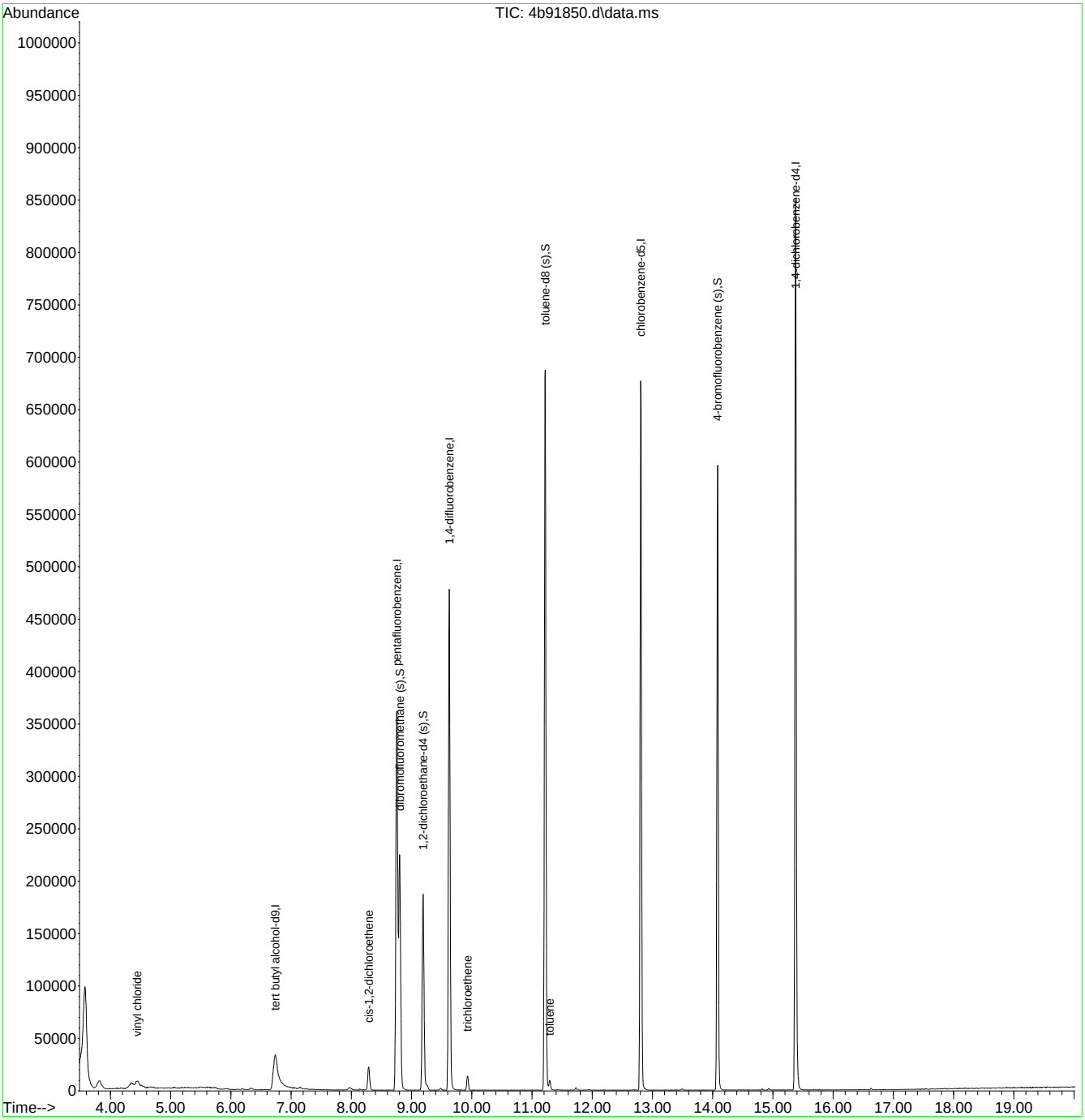
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.738	65	133684	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	313626	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	421614	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	392649	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	234968	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	151455	53.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.80%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	144152	51.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.70%			
76) toluene-d8 (s)	11.221	98	478000	48.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.74%			
99) 4-bromofluorobenzene (s)	14.082	95	192955	49.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.76%			
Target Compounds						Qvalue
9) vinyl chloride	4.442	62	17855	2.85	ug/L	99
38) cis-1,2-dichloroethene	8.292	96	12612	3.05	ug/L	95
63) trichloroethene	9.929	95	5424	1.58	ug/L	95
77) toluene	11.294	92	4189	0.51	ug/L	94

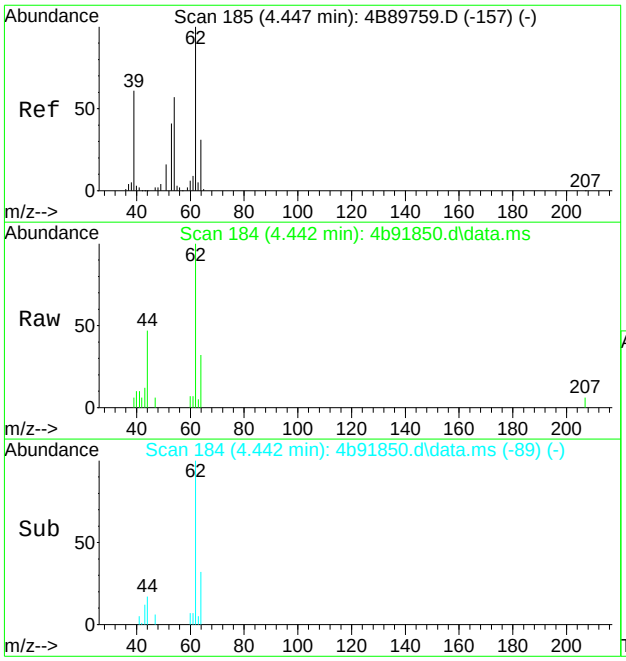
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91850.d
Acq On : 24 Jun 2019 4:26 pm
Operator : edwardd
Sample : JC90121-12 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:46:26 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

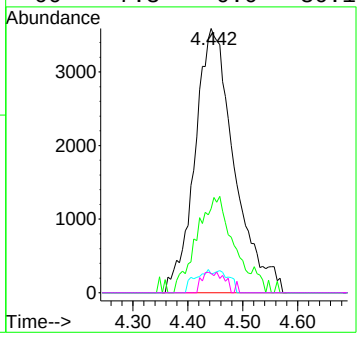


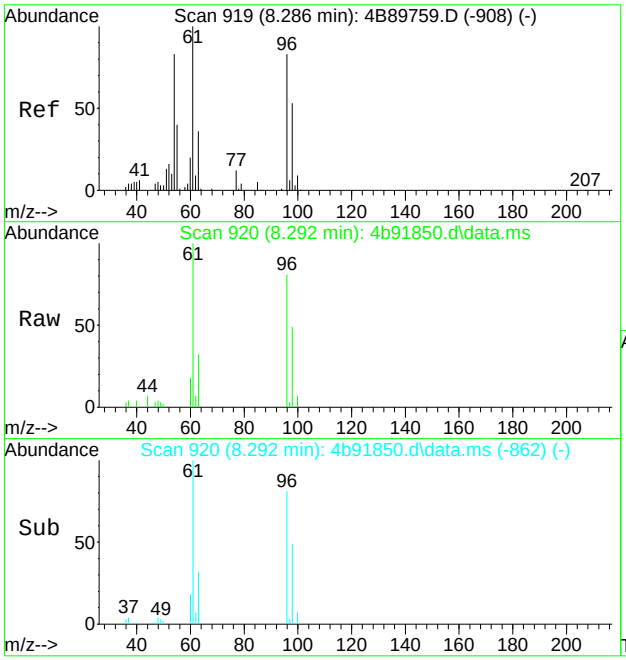


#9
vinyl chloride
Concen: 2.85 ug/L
RT: 4.442 min Scan# 184
Delta R.T. -0.005 min
Lab File: 4b91850.d
Acq: 24 Jun 2019 4:26 pm

Tgt Ion: 62 Resp: 17855

Ion	Ratio	Lower	Upper
62	100		
64	31.8	1.8	61.8
61	7.1	0.0	38.5
60	7.3	0.0	36.1

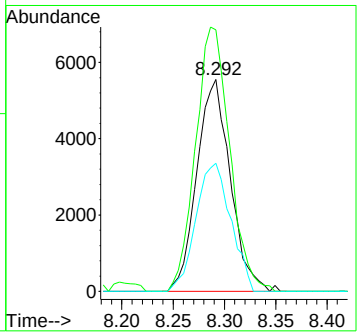


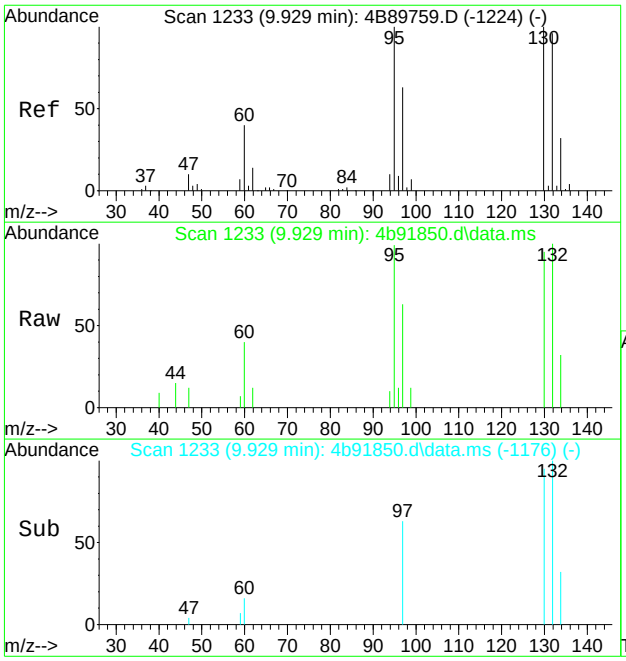


#38
cis-1,2-dichloroethene
Concen: 3.05 ug/L
RT: 8.292 min Scan# 920
Delta R.T. 0.005 min
Lab File: 4b91850.d
Acq: 24 Jun 2019 4:26 pm

Tgt Ion: 96 Resp: 12612

Ion	Ratio	Lower	Upper
96	100		
61	123.4	99.9	159.9
98	60.4	33.5	93.5

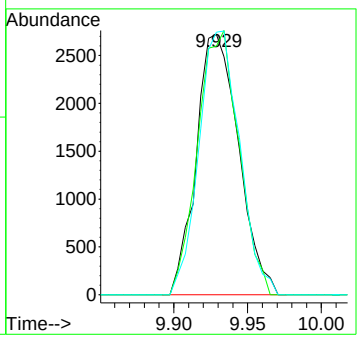


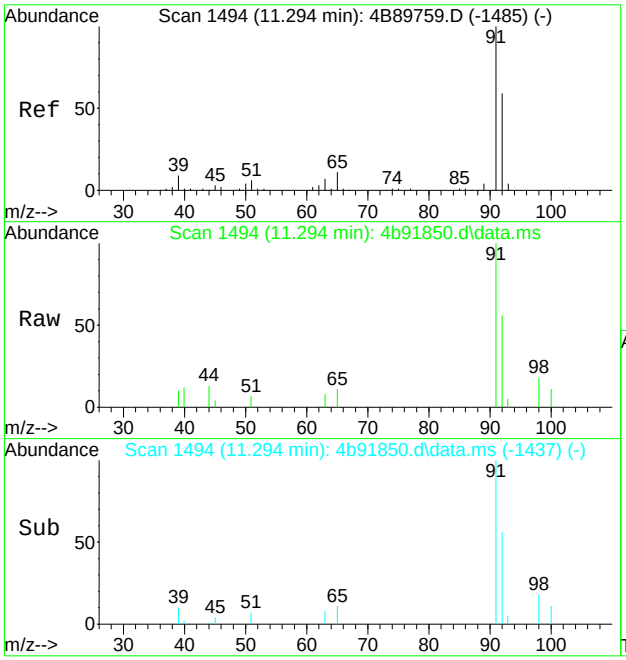


#63
trichloroethene
Concen: 1.58 ug/L
RT: 9.929 min Scan# 1233
Delta R.T. 0.000 min
Lab File: 4b91850.d
Acq: 24 Jun 2019 4:26 pm

Tgt Ion: 95 Resp: 5424

Ion	Ratio	Lower	Upper
95	100		
130	95.4	70.0	130.0
132	100.8	66.4	126.4

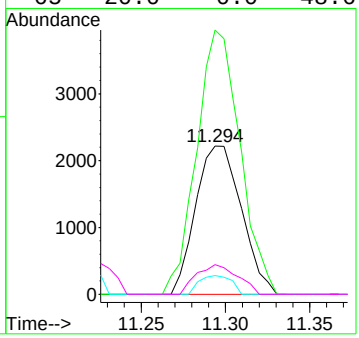




#77
toluene
Concen: 0.51 ug/L
RT: 11.294 min Scan# 1494
Delta R.T. -0.000 min
Lab File: 4b91850.d
Acq: 24 Jun 2019 4:26 pm

Tgt Ion: 92 Resp: 4189

Ion	Ratio	Lower	Upper
92	100		
91	178.3	150.2	190.2
51	12.8	0.0	40.3
65	20.0	0.0	48.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91851.d
Acq On : 24 Jun 2019 4:54 pm
Operator : edwardd
Sample : JC90121-13 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:48:05 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

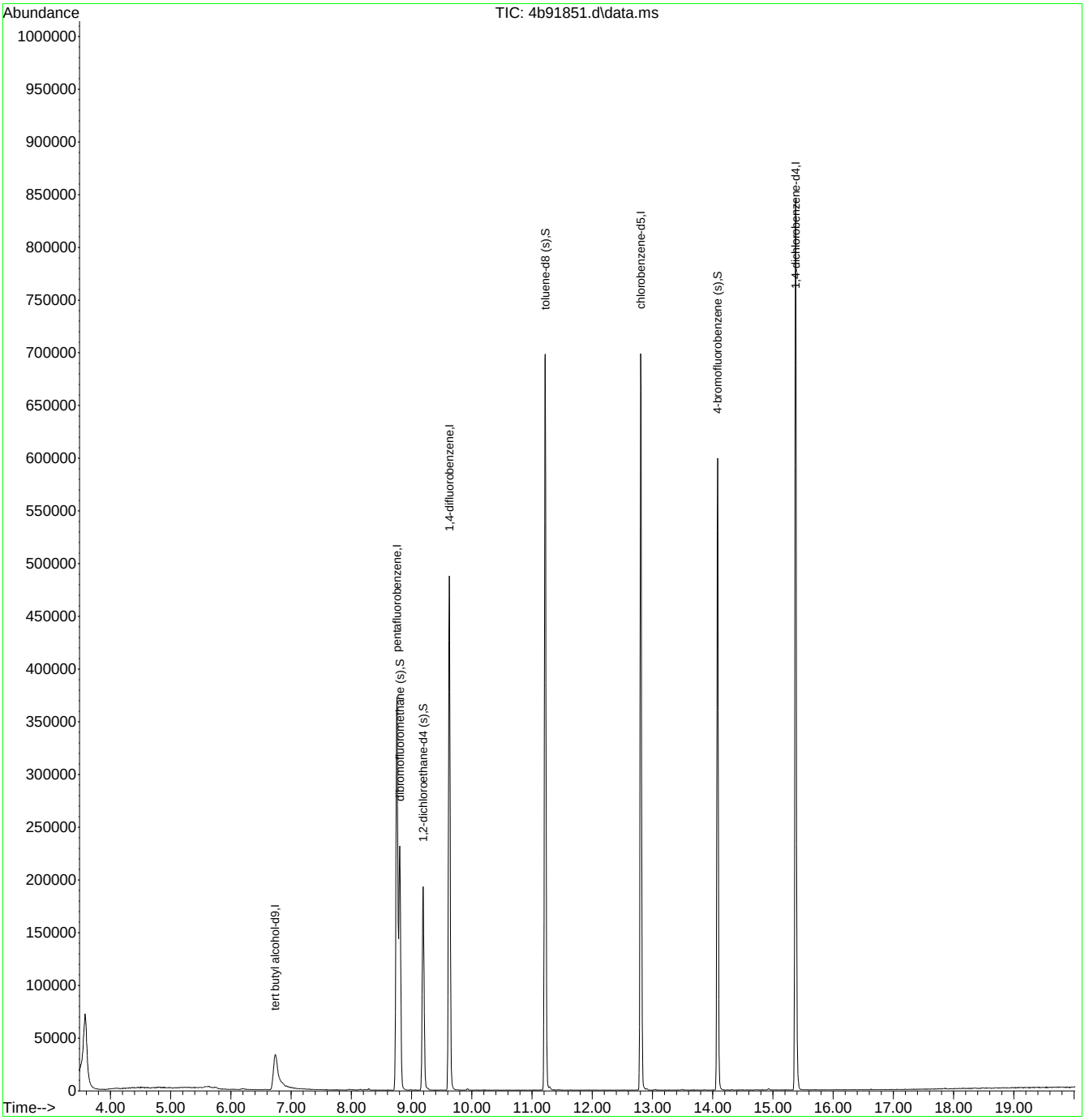
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.733	65	133858	500.00	ug/L	-0.02
5) pentafluorobenzene	8.757	168	318216	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	431310	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	398920	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	236546	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	155091	53.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.80%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	145963	51.32	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.64%			
76) toluene-d8 (s)	11.221	98	486768	48.48	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.96%			
99) 4-bromofluorobenzene (s)	14.081	95	194738	50.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.02%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91851.d
Acq On : 24 Jun 2019 4:54 pm
Operator : edwardd
Sample : JC90121-13 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:48:05 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91852.d
Acq On : 24 Jun 2019 5:22 pm
Operator : edwardd
Sample : JC90121-14 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:48:47 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

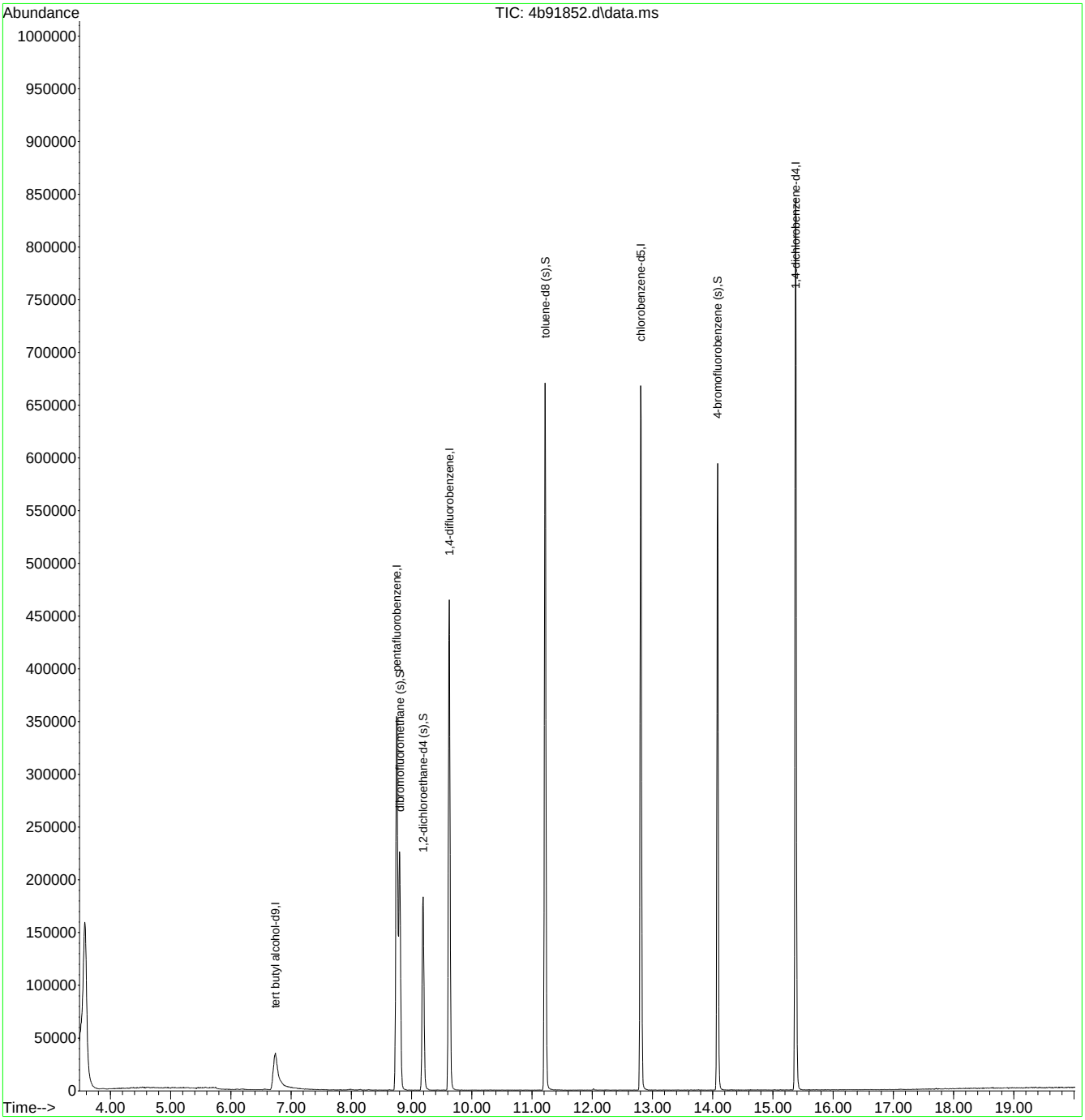
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.738	65	135838	500.00	ug/L	0.00
5) pentafluorobenzene	8.752	168	306522	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	414484	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	388750	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	233426	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	152413	54.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.98%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	143122	52.37	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.74%			
76) toluene-d8 (s)	11.221	98	466076	47.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.28%			
99) 4-bromofluorobenzene (s)	14.082	95	187651	48.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.66%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91852.d
Acq On : 24 Jun 2019 5:22 pm
Operator : edwardd
Sample : JC90121-14 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:48:47 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91836.d
Acq On : 24 Jun 2019 9:53 am
Operator : edwardd
Sample : JC90121-16 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:26:30 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 09 08:39:45 2019
Response via : Initial Calibration

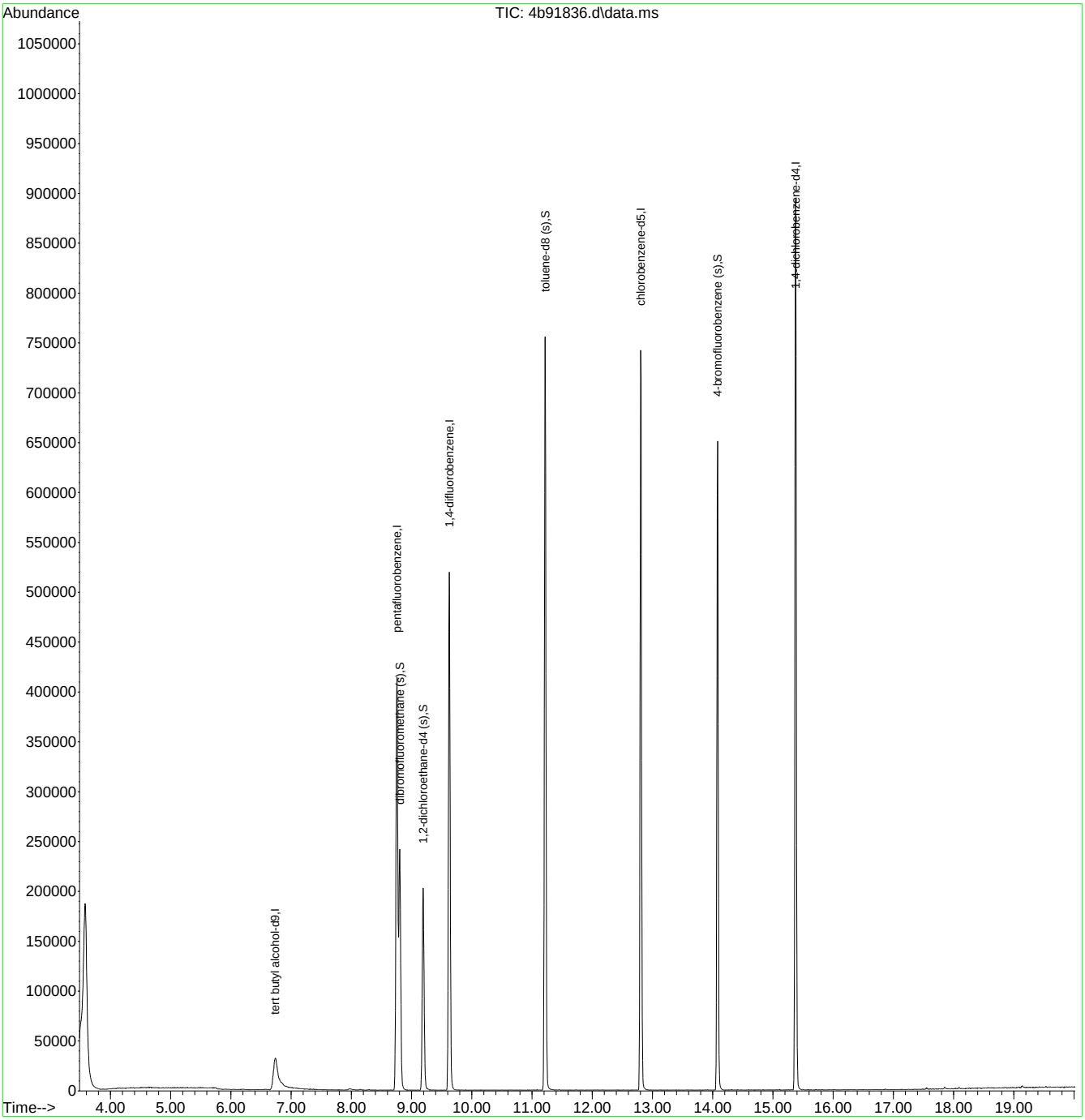
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.733	65	121901	500.00	ug/L	-0.02
5) pentafluorobenzene	8.757	168	352209	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	461468	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	421431	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.378	152	244506	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	160932	50.53	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.06%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	153911	50.58	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.16%			
76) toluene-d8 (s)	11.220	98	522315	49.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.50%			
99) 4-bromofluorobenzene (s)	14.081	95	211717	52.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.20%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91836.d
Acq On : 24 Jun 2019 9:53 am
Operator : edwardd
Sample : JC90121-16 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:26:30 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 09 08:39:45 2019
Response via : Initial Calibration



M4B3793.M Tue Jun 25 04:26:48 2019 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251083.d
Acq On : 25 Jun 2019 9:56 pm
Operator : brittank
Sample : JC90121-17 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 57 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:08:22 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

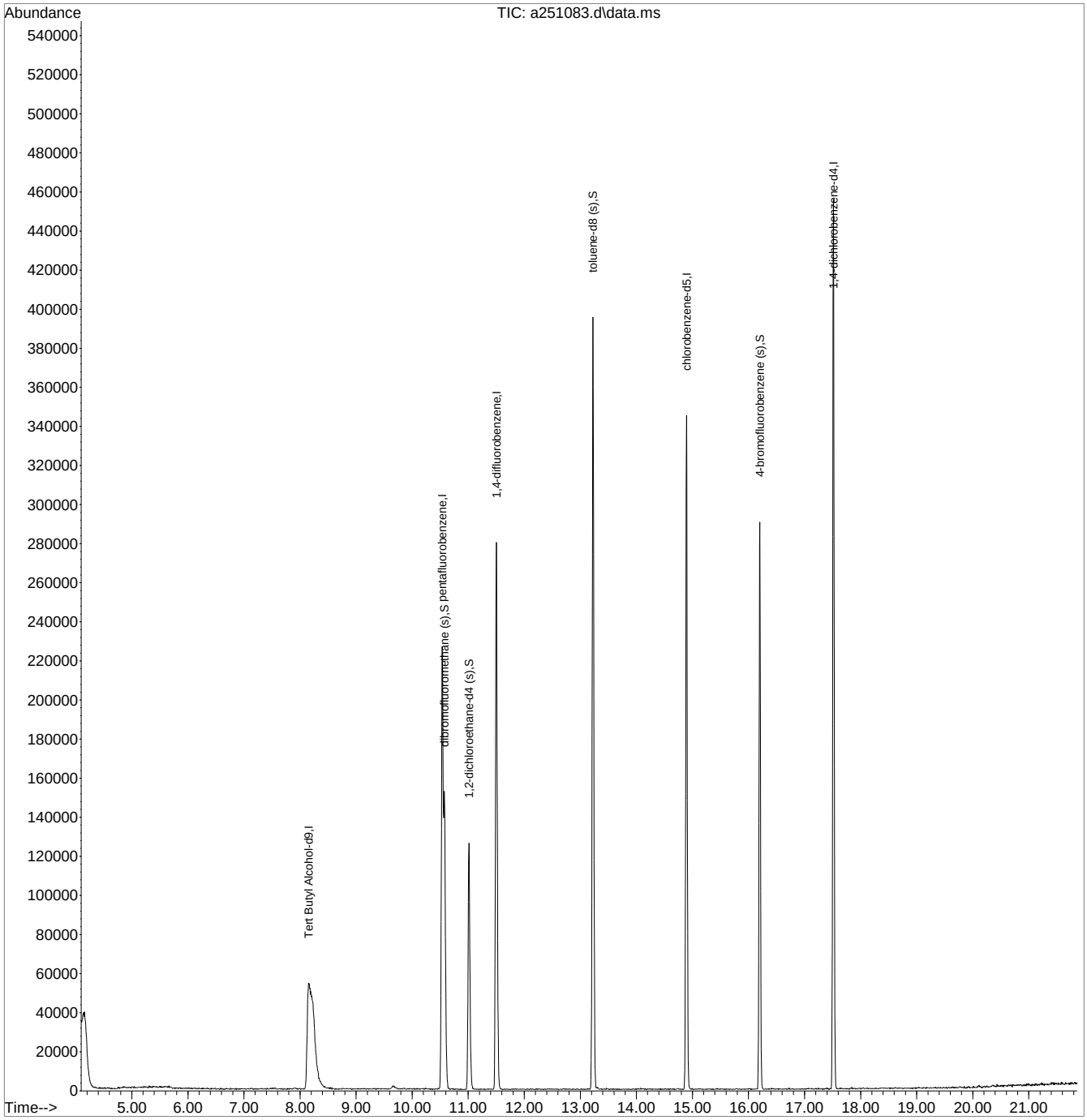
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.152	65	274337	500.00	ug/L	-0.02
5) pentafluorobenzene	10.537	168	202506	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	281442	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	224255	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	137244	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.574	113	98869	49.53	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.06%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	104189	51.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.06%			
75) toluene-d8 (s)	13.226	98	297939	49.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.92%			
99) 4-bromofluorobenzene (s)	16.201	95	103673	48.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.98%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251083.d
Acq On : 25 Jun 2019 9:56 pm
Operator : brittank
Sample : JC90121-17 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 57 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:08:22 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251084.d
Acq On : 25 Jun 2019 10:24 pm
Operator : brittank
Sample : JC90121-18 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 58 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:08:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

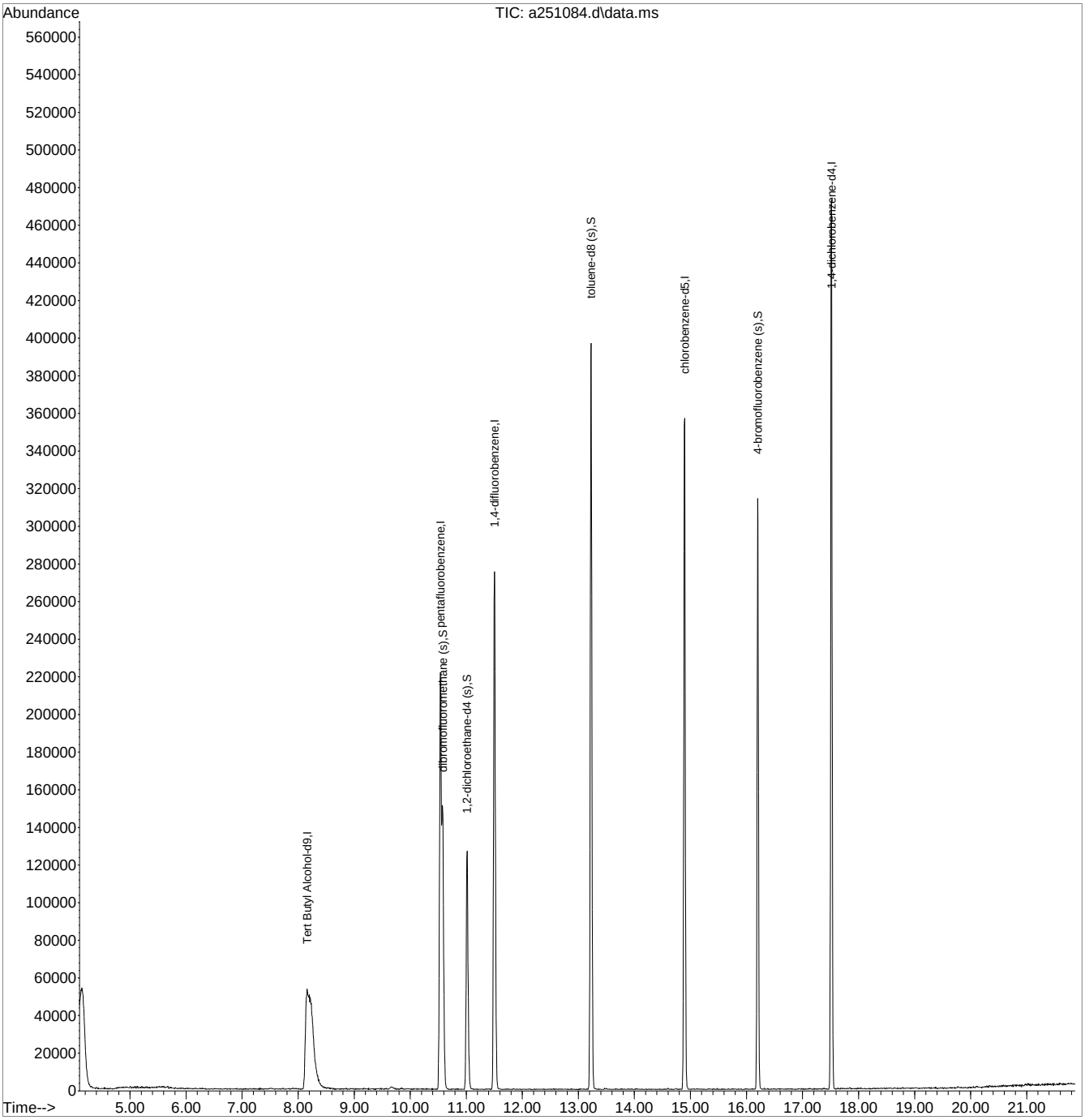
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.160	65	286580	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	201494	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	286308	50.00	ug/L	0.00
74) chlorobenzene-d5	14.896	117	231606	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.517	152	144984	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.582	113	101781	51.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.50%			
53) 1,2-dichloroethane-d4 (s)	11.010	65	108833	52.91	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.82%			
75) toluene-d8 (s)	13.228	98	305369	49.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.16%			
99) 4-bromofluorobenzene (s)	16.199	95	111066	49.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.36%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251084.d
Acq On : 25 Jun 2019 10:24 pm
Operator : brittank
Sample : JC90121-18 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 58 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:08:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251082.d
Acq On : 25 Jun 2019 9:27 pm
Operator : brittank
Sample : JC90121-19 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 56 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:07:46 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

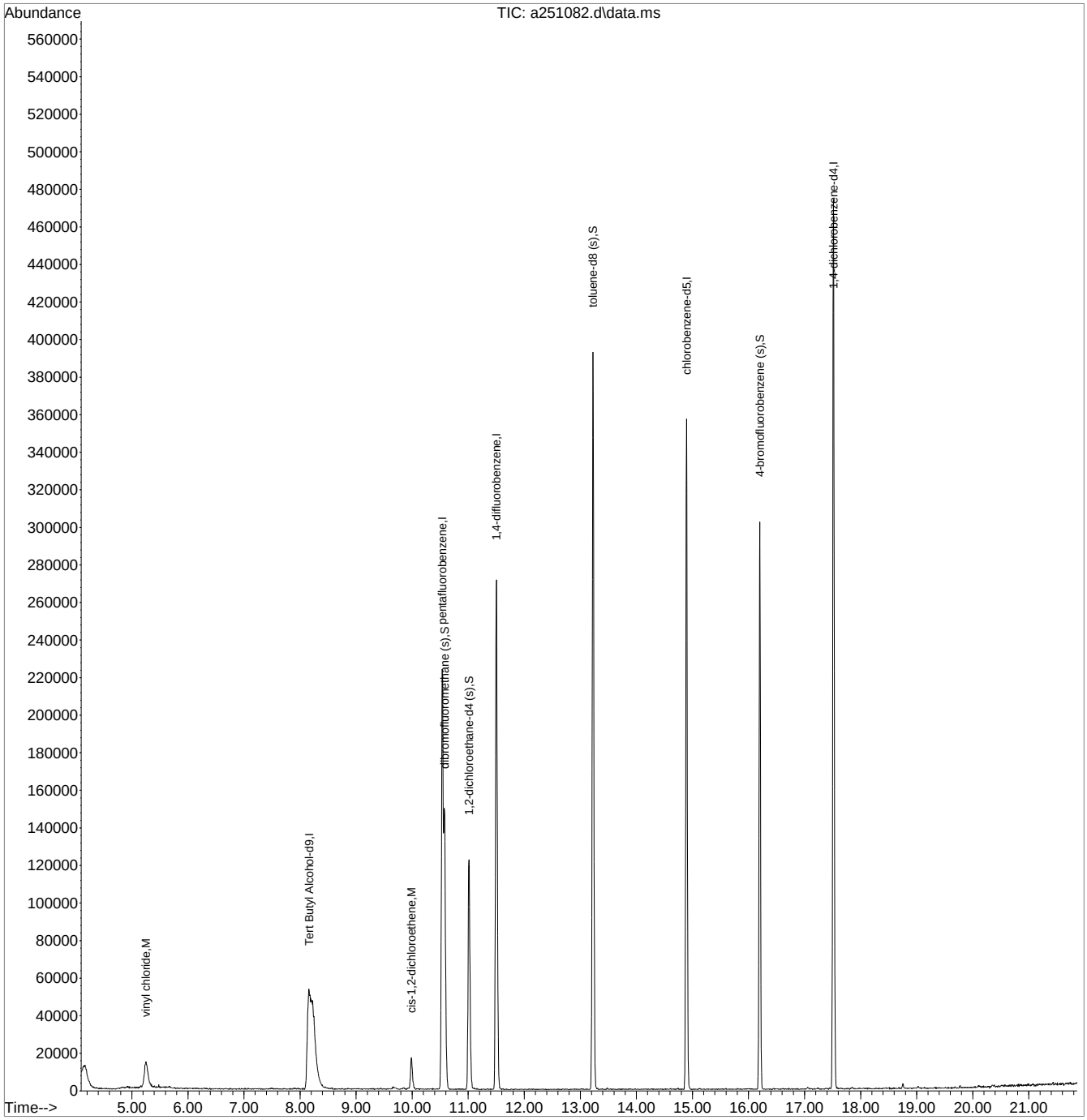
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.163	65	270393	500.00	ug/L	0.00
5) pentafluorobenzene	10.537	168	197059	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.499	114	279477	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	226289	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	141046	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	98901	50.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.84%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	105093	52.34	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.68%			
75) toluene-d8 (s)	13.225	98	300926	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
99) 4-bromofluorobenzene (s)	16.201	95	108390	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.66%			
Target Compounds						Qvalue
9) vinyl chloride	5.249	62	39891	9.31	ug/L	94
37) cis-1,2-dichloroethene	9.983	96	10449	4.90	ug/L	92

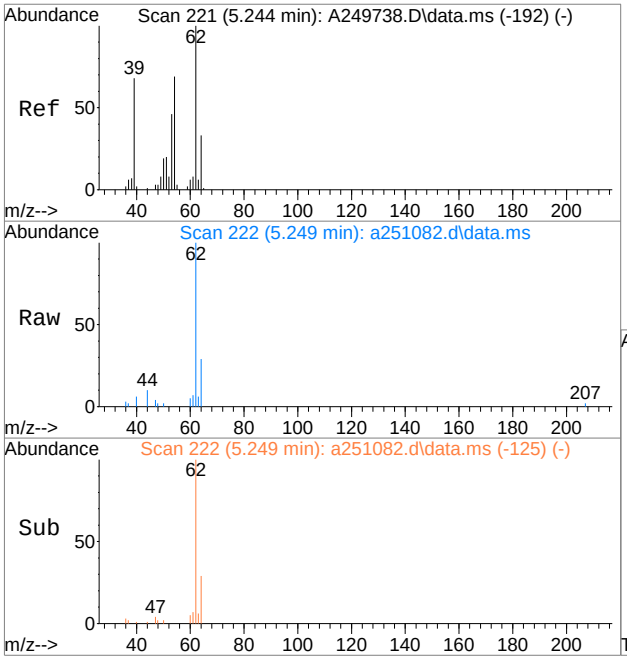
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251082.d
Acq On : 25 Jun 2019 9:27 pm
Operator : brittank
Sample : JC90121-19 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 56 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:07:46 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

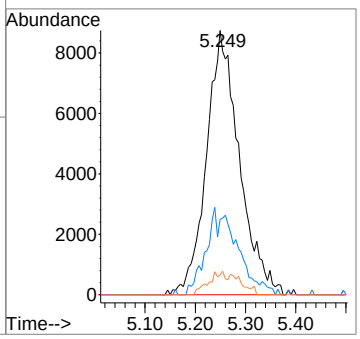


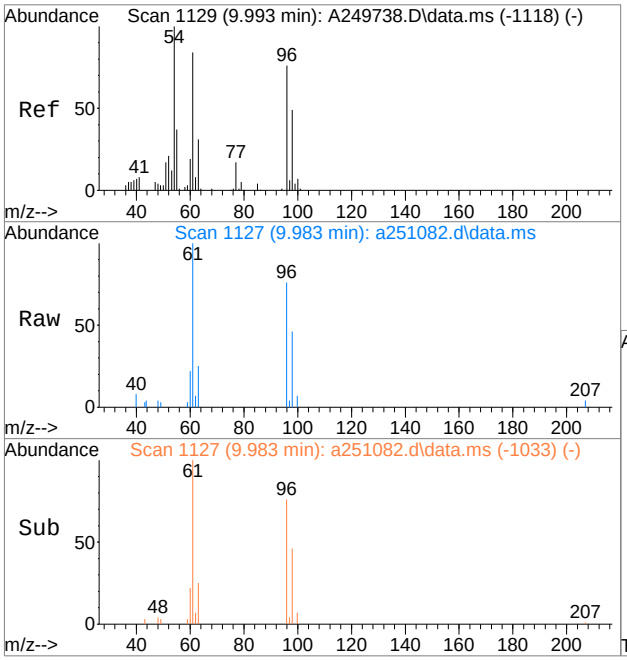


#9
vinyl chloride
Concen: 9.31 ug/L
RT: 5.249 min Scan# 222
Delta R.T. 0.005 min
Lab File: a251082.d
Acq: 25 Jun 2019 9:27 pm

Tgt Ion: 62 Resp: 39891

Ion	Ratio	Lower	Upper
62	100		
64	28.5	2.5	62.5
61	7.4	0.0	37.6

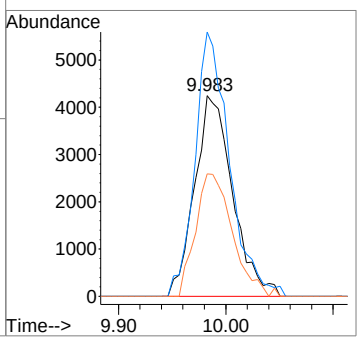




#37
cis-1,2-dichloroethene
Concen: 4.90 ug/L
RT: 9.983 min Scan# 1127
Delta R.T. -0.011 min
Lab File: a251082.d
Acq: 25 Jun 2019 9:27 pm

Tgt Ion: 96 Resp: 10449

Ion	Ratio	Lower	Upper
96	100		
61	131.8	91.3	151.3
98	61.0	34.7	94.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251085.d
Acq On : 25 Jun 2019 10:53 pm
Operator : brittank
Sample : JC90121-20 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 59 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:09:08 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

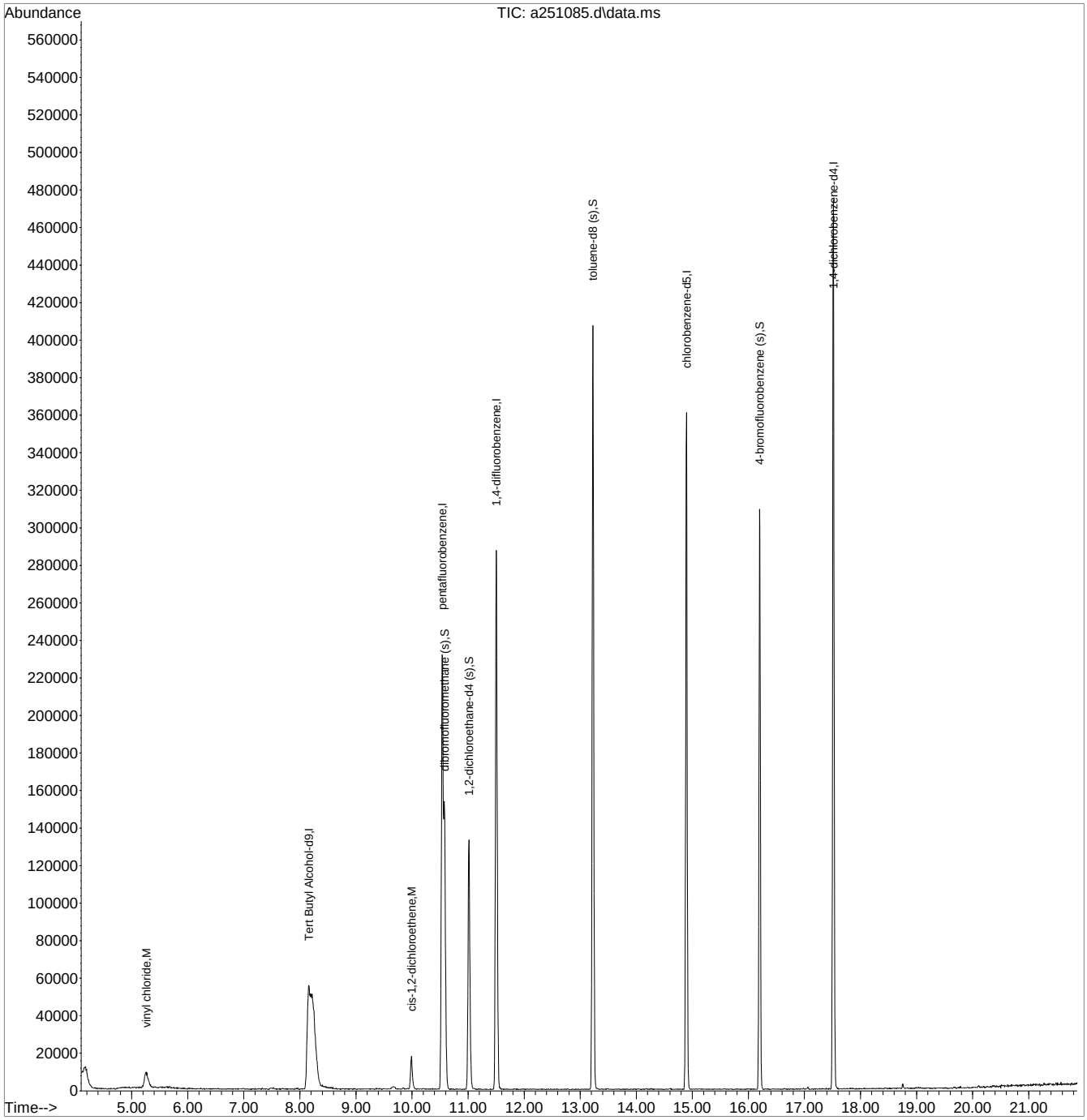
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.160	65	286083	500.00	ug/L	0.00
5) pentafluorobenzene	10.539	168	206428	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	290876	50.00	ug/L	0.00
74) chlorobenzene-d5	14.896	117	231164	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.516	152	141768	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.581	113	103458	50.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.70%			
53) 1,2-dichloroethane-d4 (s)	11.015	65	111851	53.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.06%			
75) toluene-d8 (s)	13.228	98	308100	50.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.24%			
99) 4-bromofluorobenzene (s)	16.198	95	109111	49.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.82%			
Target Compounds						Qvalue
9) vinyl chloride	5.262	62	24831	5.53	ug/L	96
37) cis-1,2-dichloroethene	9.990	96	10515	4.71	ug/L	96

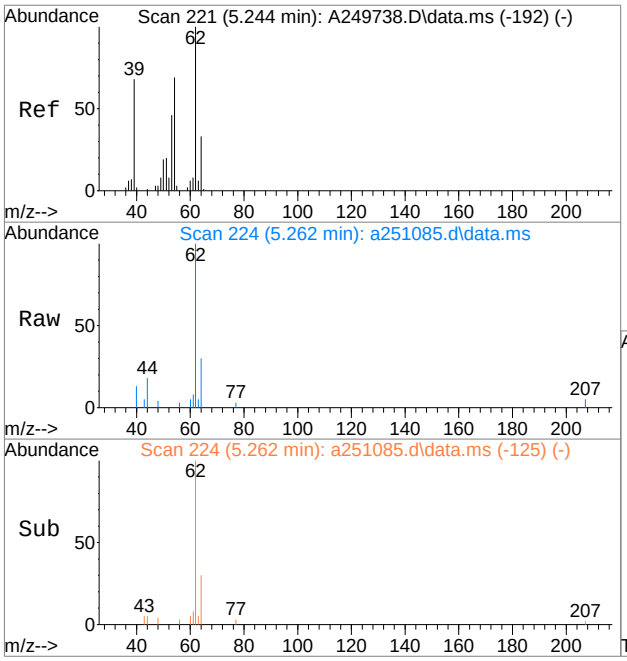
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251085.d
Acq On : 25 Jun 2019 10:53 pm
Operator : brittank
Sample : JC90121-20 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 59 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:09:08 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

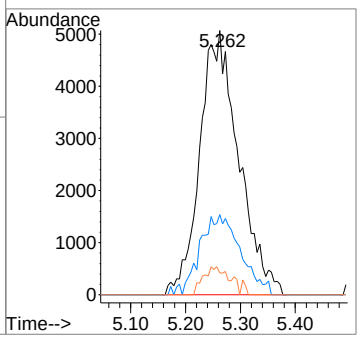


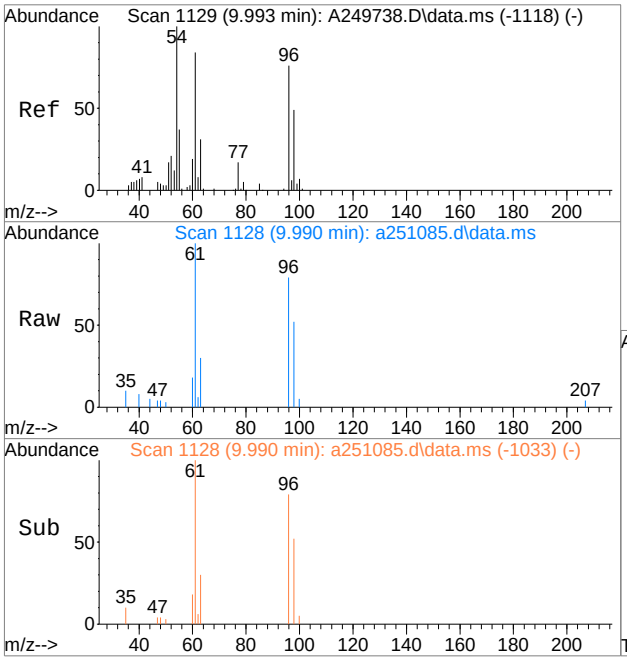


#9
vinyl chloride
Concen: 5.53 ug/L
RT: 5.262 min Scan# 224
Delta R.T. 0.018 min
Lab File: a251085.d
Acq: 25 Jun 2019 10:53 pm

Tgt Ion: 62 Resp: 24831

Ion	Ratio	Lower	Upper
62	100		
64	30.3	2.5	62.5
61	8.3	0.0	37.6

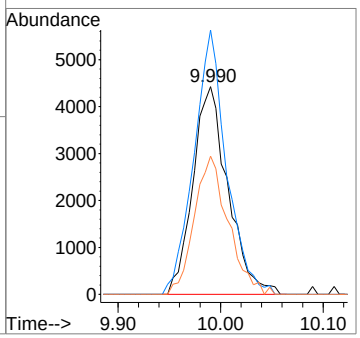




#37
cis-1,2-dichloroethene
Concen: 4.71 ug/L
RT: 9.990 min Scan# 1128
Delta R.T. -0.003 min
Lab File: a251085.d
Acq: 25 Jun 2019 10:53 pm

Tgt Ion: 96 Resp: 10515

Ion	Ratio	Lower	Upper
96	100		
61	127.2	91.3	151.3
98	66.5	34.7	94.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251086.d
Acq On : 25 Jun 2019 11:22 pm
Operator : brittank
Sample : JC90121-21 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 60 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:09:28 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

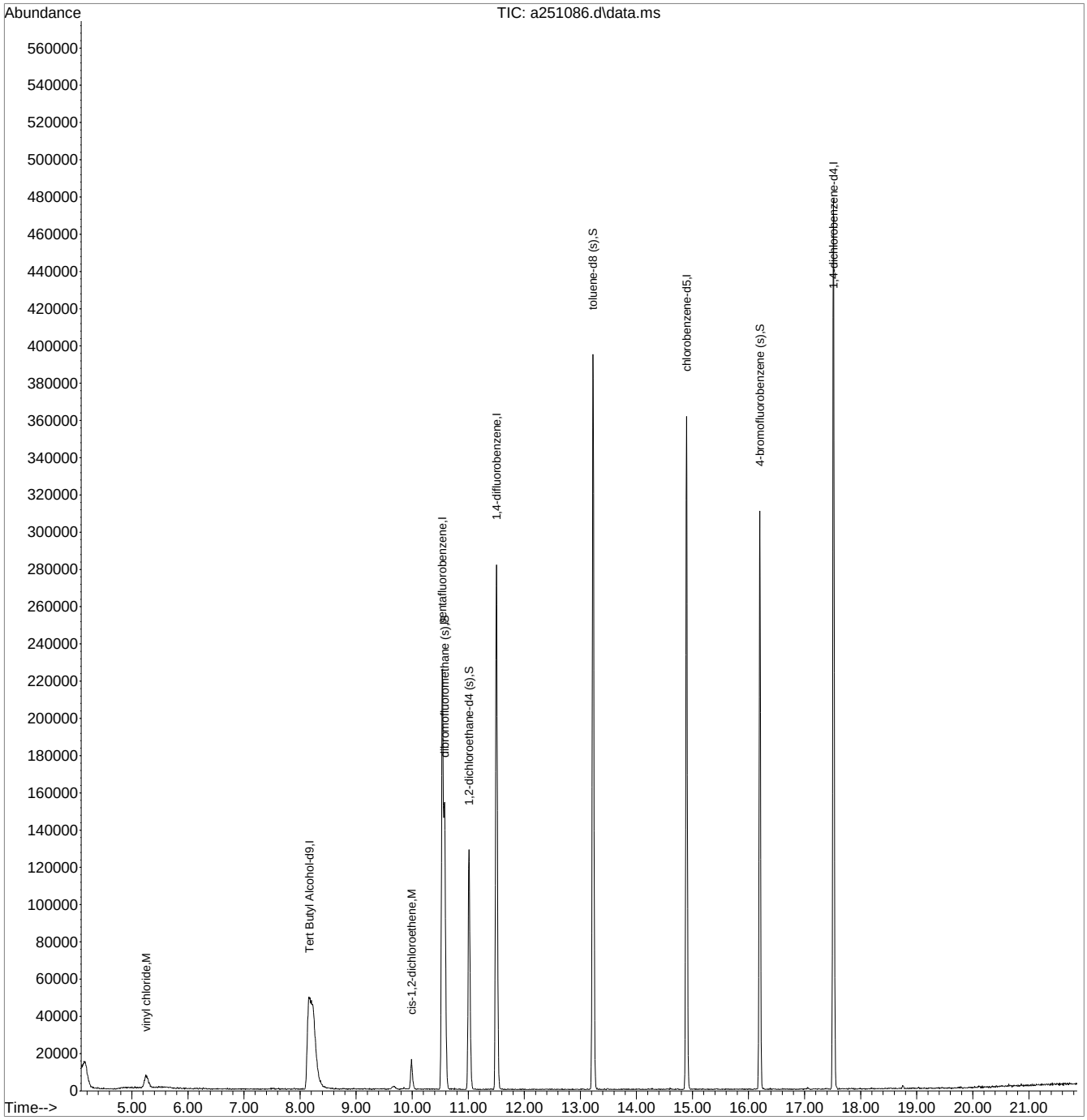
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.167	65	271937	500.00	ug/L	# 0.00
5) pentafluorobenzene	10.537	168	203734	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.504	114	289810	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	230332	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	141488	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	104393	51.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.98%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	109761	52.72	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.44%			
75) toluene-d8 (s)	13.225	98	307274	50.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.32%			
99) 4-bromofluorobenzene (s)	16.201	95	109418	49.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.30%			
Target Compounds						Qvalue
9) vinyl chloride	5.254	62	20216	4.56	ug/L	95
37) cis-1,2-dichloroethene	9.987	96	9217	4.18	ug/L	80

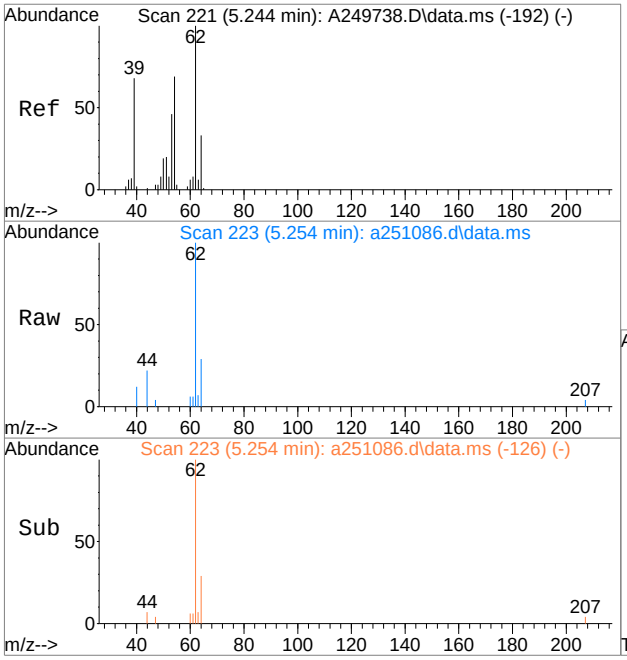
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251086.d
Acq On : 25 Jun 2019 11:22 pm
Operator : brittank
Sample : JC90121-21 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 60 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:09:28 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

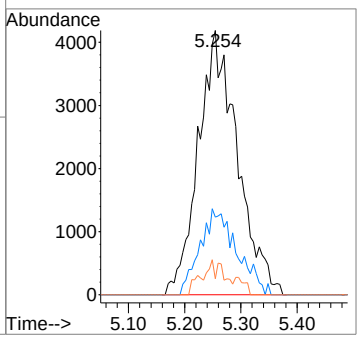


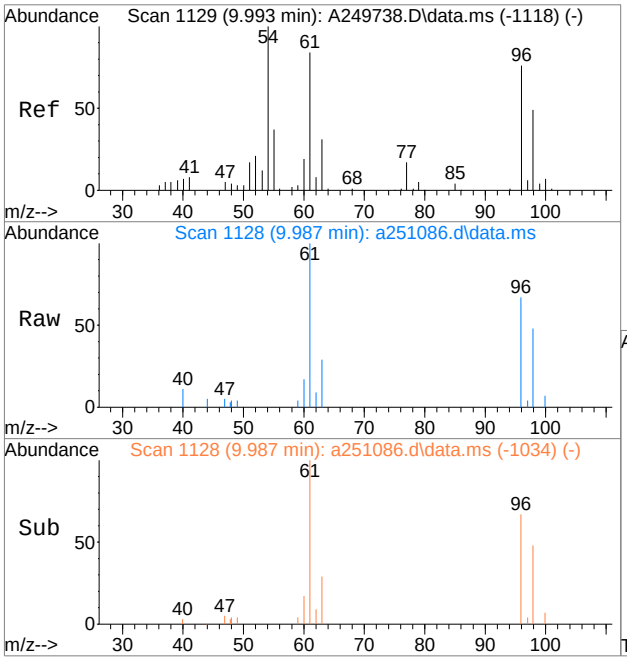


#9
vinyl chloride
Concen: 4.56 ug/L
RT: 5.254 min Scan# 223
Delta R.T. 0.010 min
Lab File: a251086.d
Acq: 25 Jun 2019 11:22 pm

Tgt Ion: 62 Resp: 20216

Ion	Ratio	Lower	Upper
62	100		
64	29.4	2.5	62.5
61	6.1	0.0	37.6

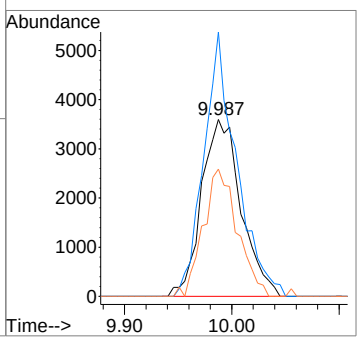




#37
cis-1,2-dichloroethene
Concen: 4.18 ug/L
RT: 9.987 min Scan# 1128
Delta R.T. -0.006 min
Lab File: a251086.d
Acq: 25 Jun 2019 11:22 pm

Tgt Ion: 96 Resp: 9217

Ion	Ratio	Lower	Upper
96	100		
61	149.4	91.3	151.3
98	72.0	34.7	94.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251087.d
Acq On : 25 Jun 2019 11:51 pm
Operator : brittank
Sample : JC90121-22 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 61 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:10:53 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

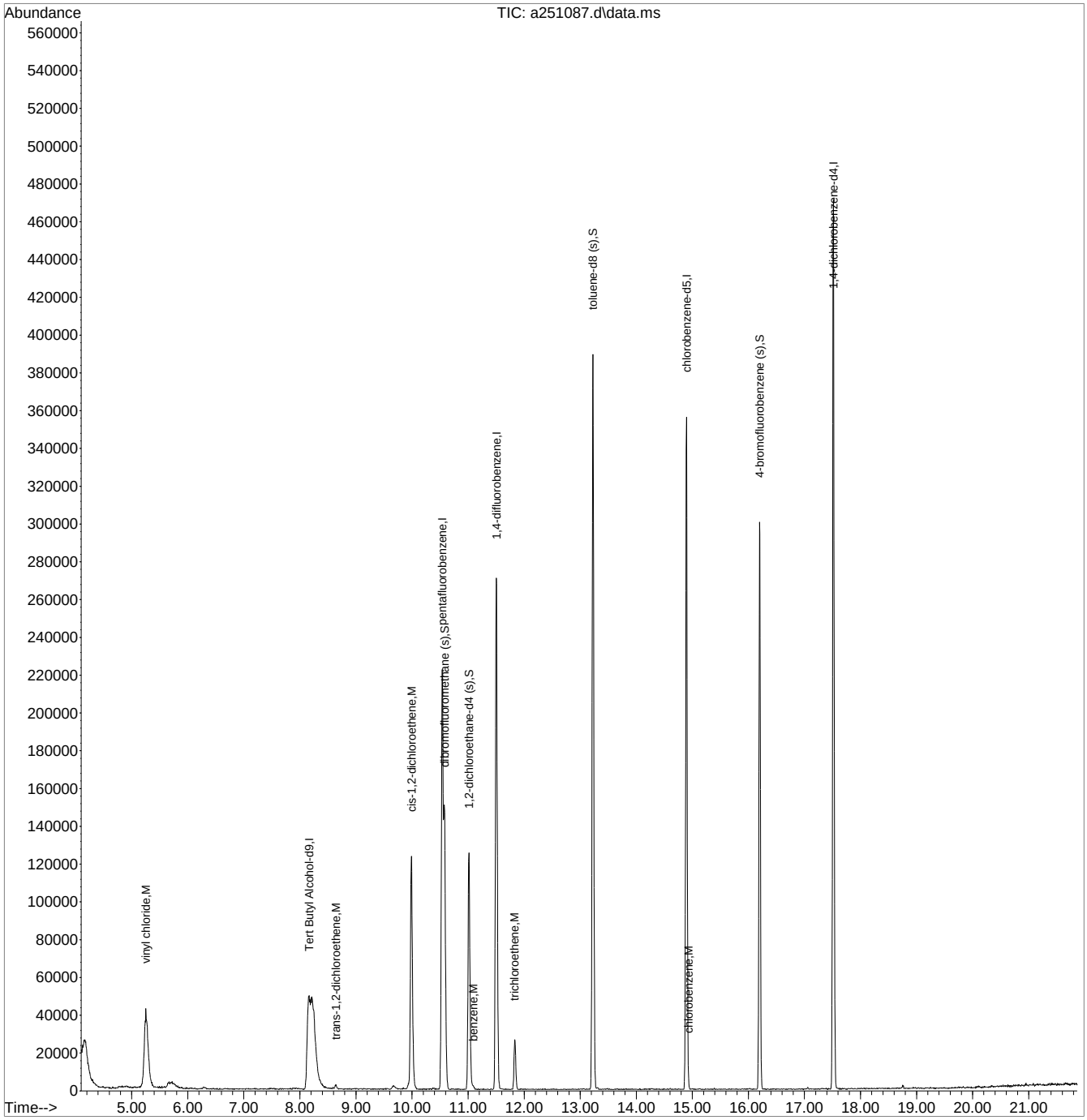
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.165	65	272108	500.00	ug/L	# 0.00
5) pentafluorobenzene	10.539	168	198946	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.507	114	282236	50.00	ug/L	0.00
74) chlorobenzene-d5	14.896	117	228610	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.516	152	141793	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.581	113	101058	51.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.08%			
53) 1,2-dichloroethane-d4 (s)	11.015	65	108902	53.71	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.42%			
75) toluene-d8 (s)	13.227	98	302014	49.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.34%			
99) 4-bromofluorobenzene (s)	16.198	95	108736	49.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.46%			
Target Compounds						Qvalue
9) vinyl chloride	5.252	62	117498	27.17	ug/L	94
26) trans-1,2-dichloroethene	8.641	96	1334	0.71	ug/L	78
37) cis-1,2-dichloroethene	9.990	96	73698	34.22	ug/L	93
54) benzene	11.094	78	2198	0.31	ug/L	76
62) trichloroethene	11.826	95	11336	6.18	ug/L	84
87) chlorobenzene	14.932	112	1016	0.24	ug/L	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

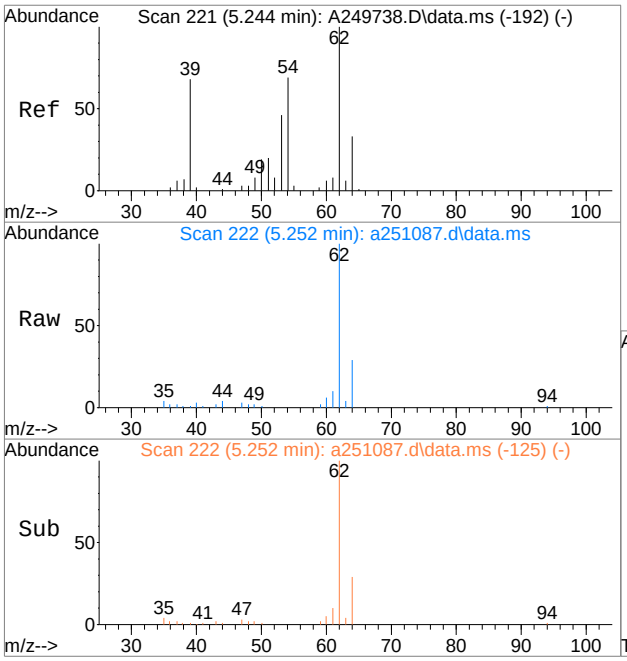
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251087.d
Acq On : 25 Jun 2019 11:51 pm
Operator : brittank
Sample : JC90121-22 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 61 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:10:53 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



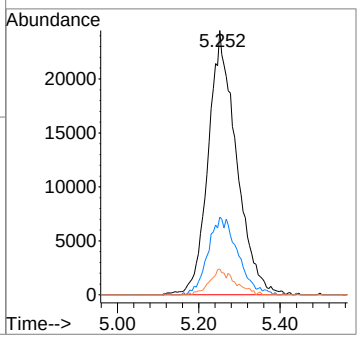
MA9645.M Wed Jun 26 12:21:24 2019 Page: 2

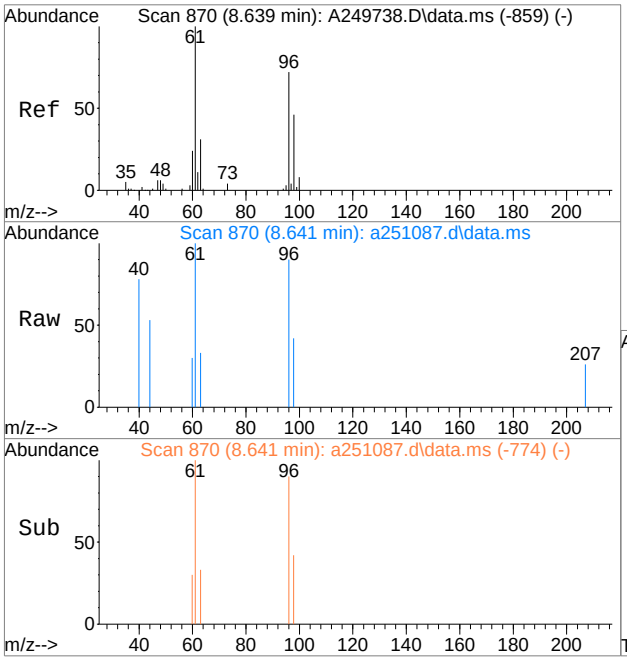


#9
vinyl chloride
Concen: 27.17 ug/L
RT: 5.252 min Scan# 222
Delta R.T. 0.007 min
Lab File: a251087.d
Acq: 25 Jun 2019 11:51 pm

Tgt Ion: 62 Resp: 117498

Ion	Ratio	Lower	Upper
62	100		
64	29.4	2.5	62.5
61	9.7	0.0	37.6

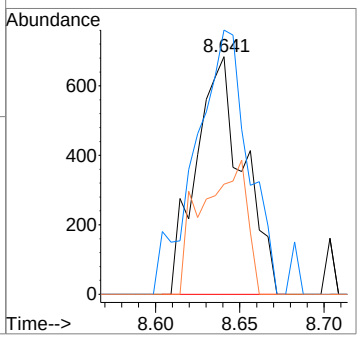


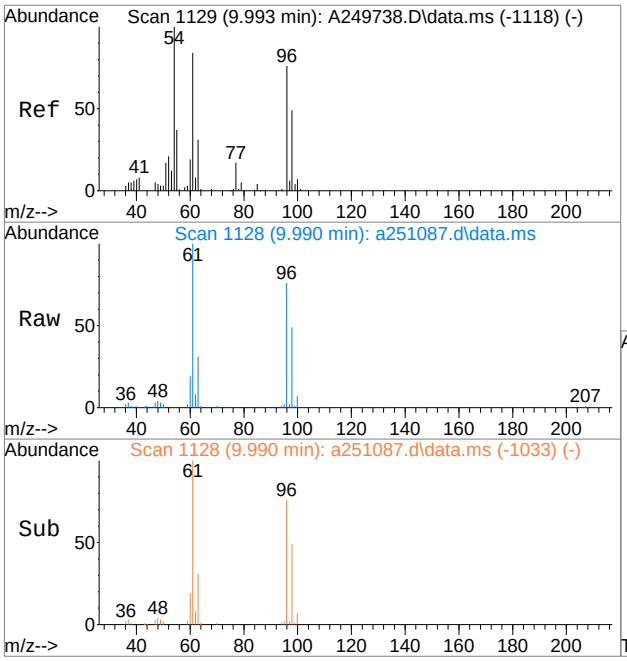


#26
trans-1,2-dichloroethene
Concen: 0.71 ug/L
RT: 8.641 min Scan# 870
Delta R.T. 0.002 min
Lab File: a251087.d
Acq: 25 Jun 2019 11:51 pm

Tgt Ion: 96 Resp: 1334

Ion	Ratio	Lower	Upper
96	100		
61	111.3	108.5	168.5
98	46.3	33.4	93.4

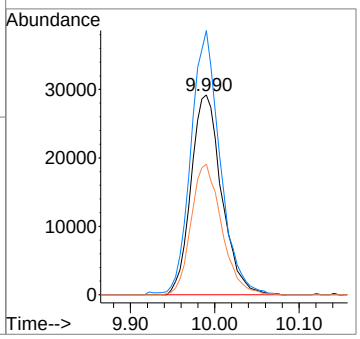


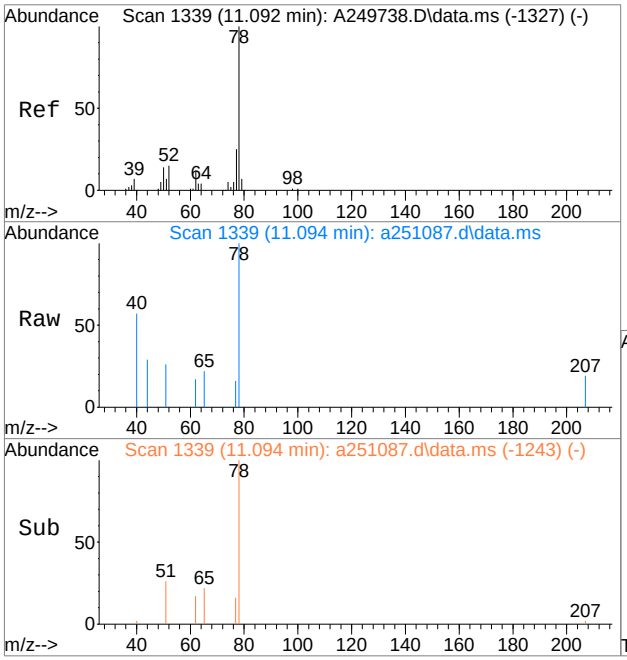


#37
cis-1,2-dichloroethene
Concen: 34.22 ug/L
RT: 9.990 min Scan# 1128
Delta R.T. -0.003 min
Lab File: a251087.d
Acq: 25 Jun 2019 11:51 pm

Tgt Ion: 96 Resp: 73698

Ion	Ratio	Lower	Upper
96	100		
61	132.4	91.3	151.3
98	65.4	34.7	94.7

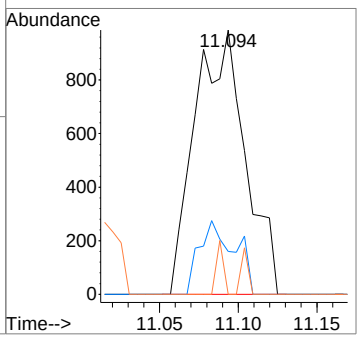


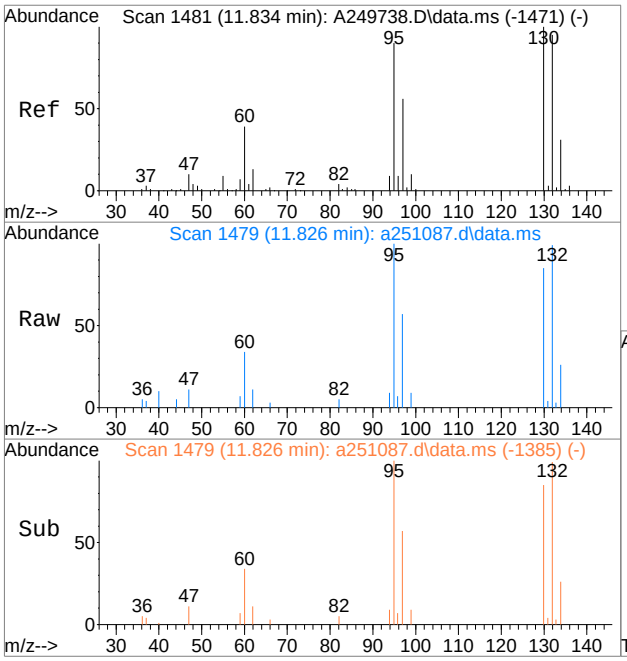


#54
benzene
Concen: 0.31 ug/L
RT: 11.094 min Scan# 1339
Delta R.T. 0.002 min
Lab File: a251087.d
Acq: 25 Jun 2019 11:51 pm

Tgt Ion: 78 Resp: 2198

Ion	Ratio	Lower	Upper
78	100		
77	16.2	0.0	54.7
52	0.0	0.0	45.2

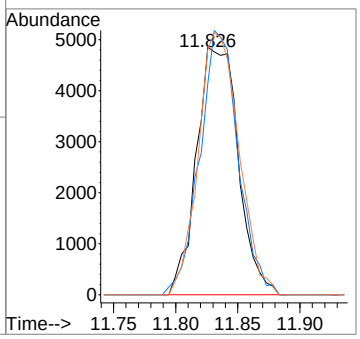


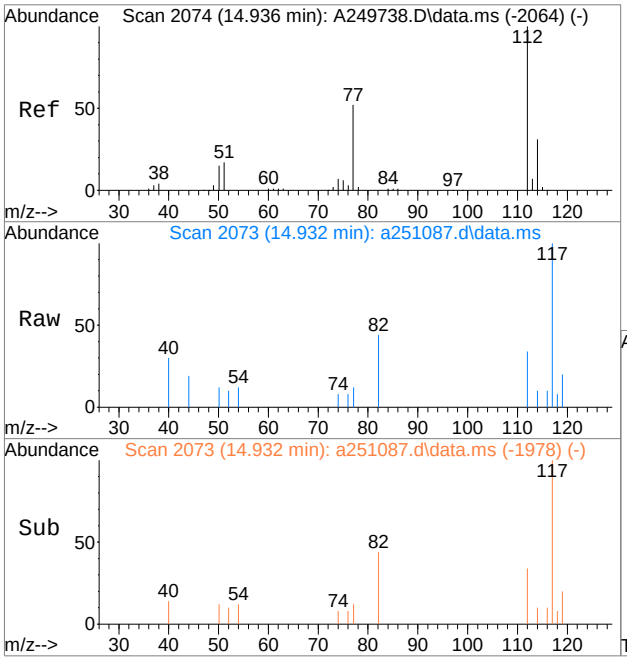


#62
trichloroethene
Concen: 6.18 ug/L
RT: 11.826 min Scan# 1479
Delta R.T. -0.008 min
Lab File: a251087.d
Acq: 25 Jun 2019 11:51 pm

Tgt Ion: 95 Resp: 11336

Ion	Ratio	Lower	Upper
95	100		
130	85.2	81.5	141.5
132	98.9	75.4	135.4

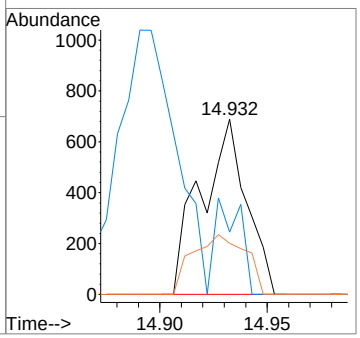




#87
chlorobenzene
Concen: 0.24 ug/L
RT: 14.932 min Scan# 2073
Delta R.T. -0.003 min
Lab File: a251087.d
Acq: 25 Jun 2019 11:51 pm

Tgt Ion:112 Resp: 1016

Ion	Ratio	Lower	Upper
112	100		
77	35.6	21.6	81.6
114	29.2	1.4	61.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251088.d
Acq On : 26 Jun 2019 12:19 am
Operator : brittank
Sample : JC90121-23 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 62 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:12:05 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

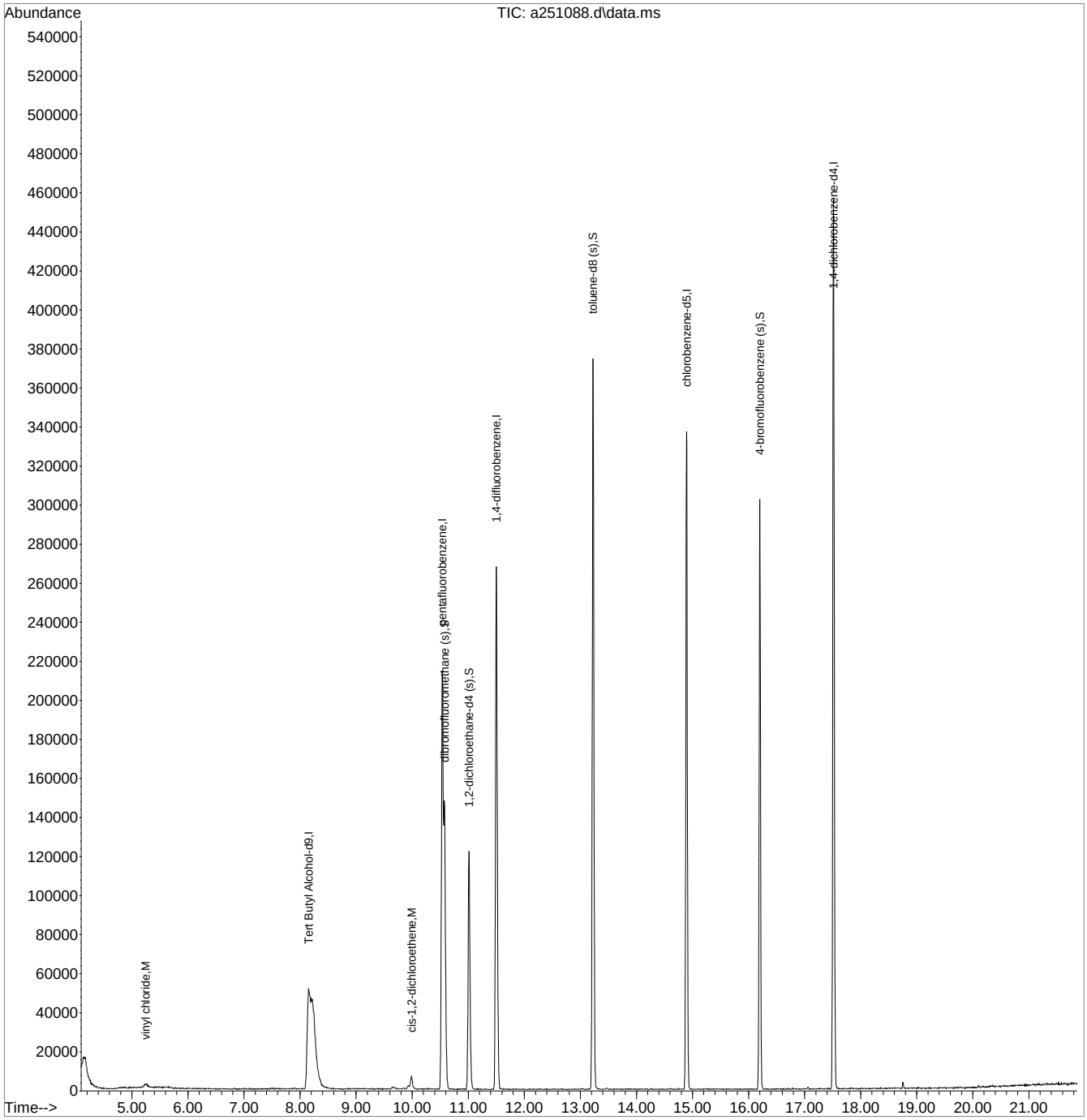
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.151	65	271547	500.00	ug/L	-0.02
5) pentafluorobenzene	10.536	168	193110	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.498	114	270650	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	220356	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	140209	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	98057	51.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.04%			
53) 1,2-dichloroethane-d4 (s)	11.012	65	102453	52.69	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.38%			
75) toluene-d8 (s)	13.224	98	291565	49.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.50%			
99) 4-bromofluorobenzene (s)	16.200	95	103943	47.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.18%			
Target Compounds						Qvalue
9) vinyl chloride	5.243	62	5767	1.37	ug/L	70
37) cis-1,2-dichloroethene	9.992	96	4281	2.05	ug/L	85

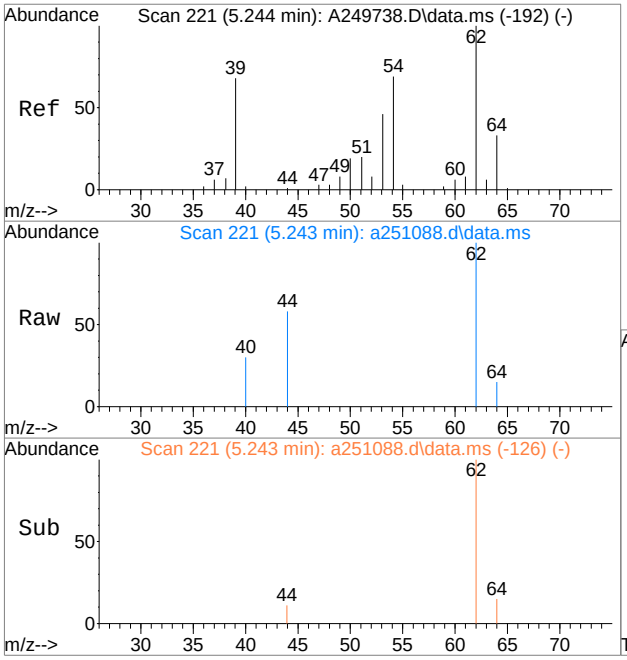
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251088.d
Acq On : 26 Jun 2019 12:19 am
Operator : brittank
Sample : JC90121-23 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 62 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:12:05 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

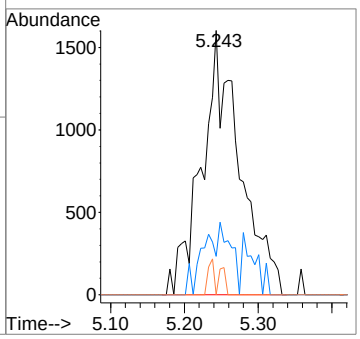


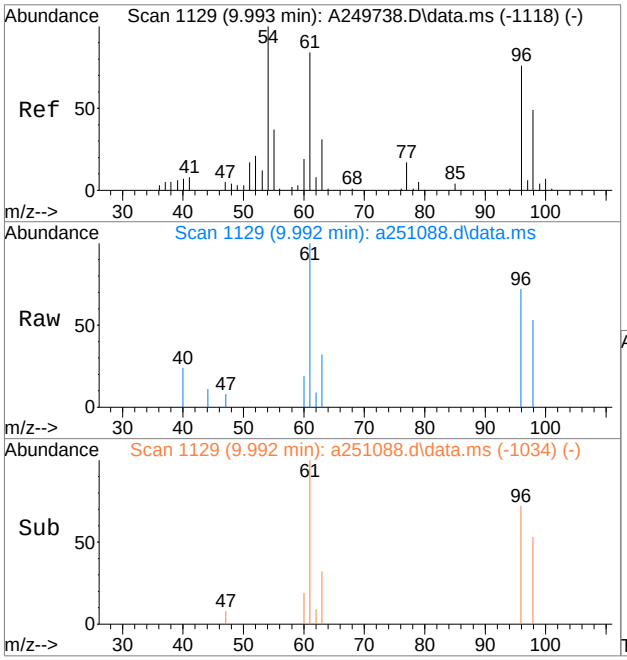


#9
vinyl chloride
Concen: 1.37 ug/L
RT: 5.243 min Scan# 221
Delta R.T. -0.001 min
Lab File: a251088.d
Acq: 26 Jun 2019 12:19 am

Tgt Ion: 62 Resp: 5767

Ion	Ratio	Lower	Upper
62	100		
64	14.5	2.5	62.5
61	0.0	0.0	37.6

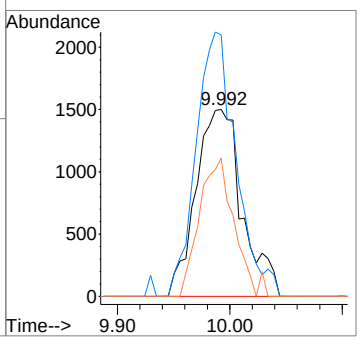




#37
cis-1,2-dichloroethene
Concen: 2.05 ug/L
RT: 9.992 min Scan# 1129
Delta R.T. -0.001 min
Lab File: a251088.d
Acq: 26 Jun 2019 12:19 am

Tgt Ion: 96 Resp: 4281

Ion	Ratio	Lower	Upper
96	100		
61	139.8	91.3	151.3
98	73.9	34.7	94.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251089.d
Acq On : 26 Jun 2019 12:48 am
Operator : brittank
Sample : JC90121-24 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 63 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:12:31 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

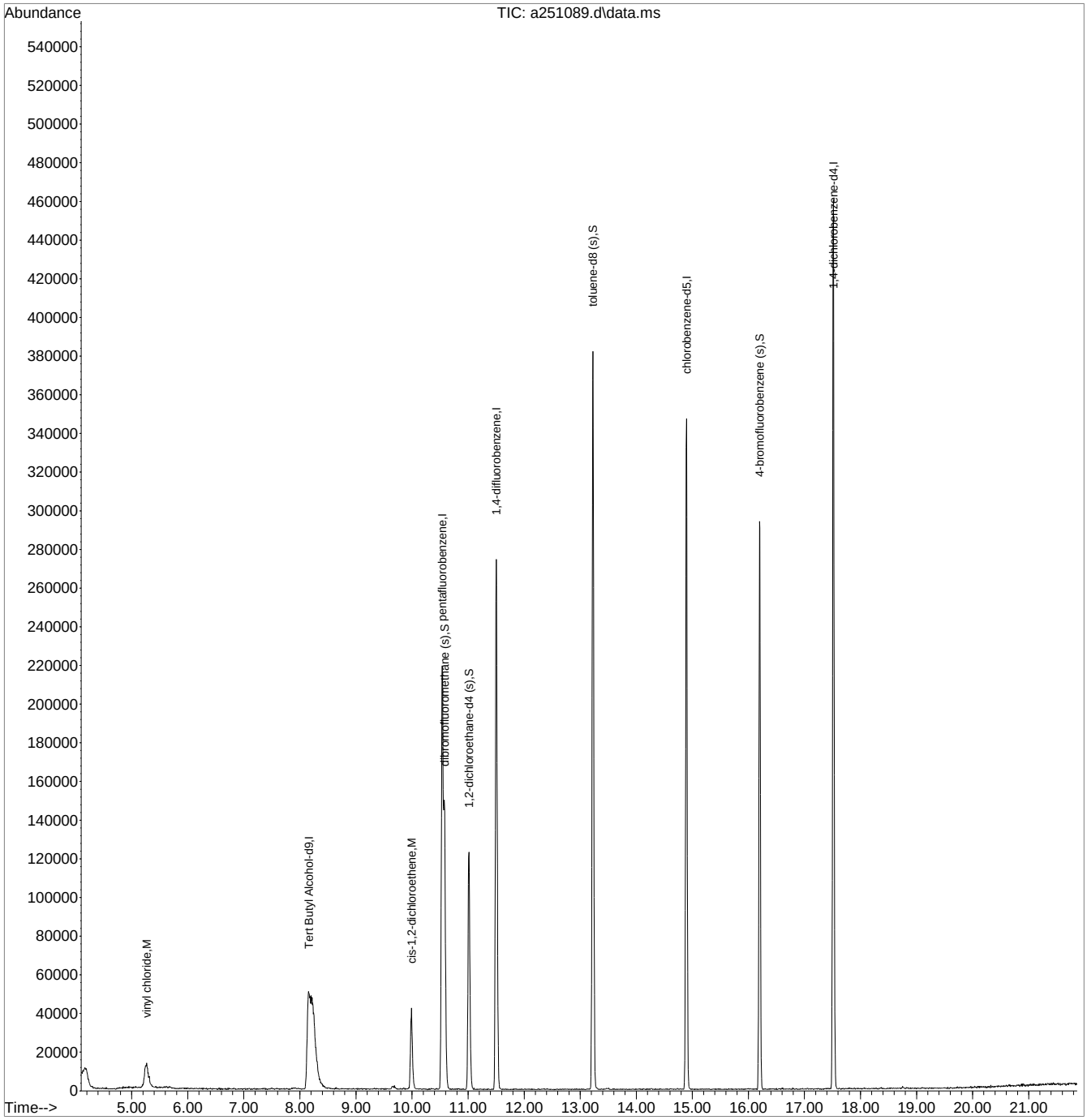
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.159	65	268798	500.00	ug/L	# 0.00
5) pentafluorobenzene	10.539	168	198720	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	279067	50.00	ug/L	0.00
74) chlorobenzene-d5	14.896	117	222004	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.516	152	136626	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.581	113	102622	52.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.78%			
53) 1,2-dichloroethane-d4 (s)	11.015	65	107511	53.63	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.26%			
75) toluene-d8 (s)	13.227	98	295762	50.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.18%			
99) 4-bromofluorobenzene (s)	16.198	95	105091	49.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.76%			
Target Compounds						Qvalue
9) vinyl chloride	5.267	62	39712	9.19	ug/L	96
37) cis-1,2-dichloroethene	9.990	96	23923	11.12	ug/L	95

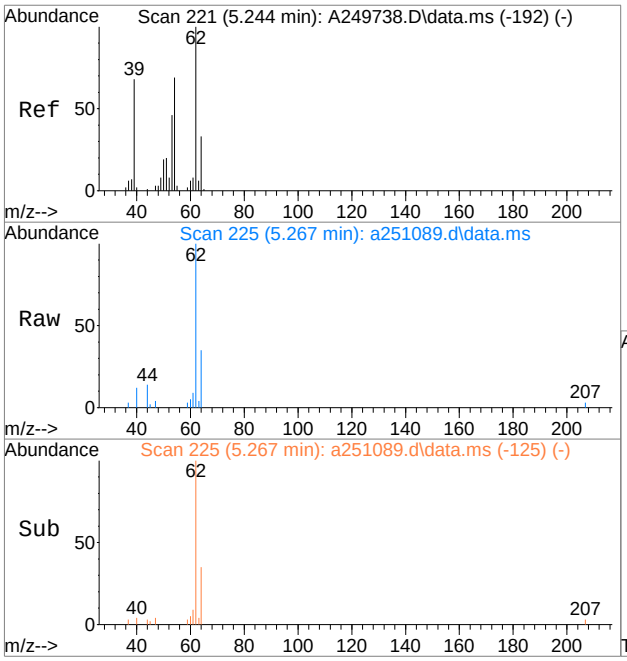
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251089.d
Acq On : 26 Jun 2019 12:48 am
Operator : brittank
Sample : JC90121-24 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 63 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:12:31 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

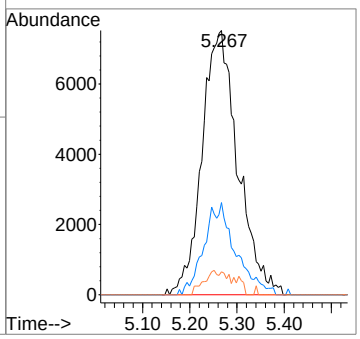


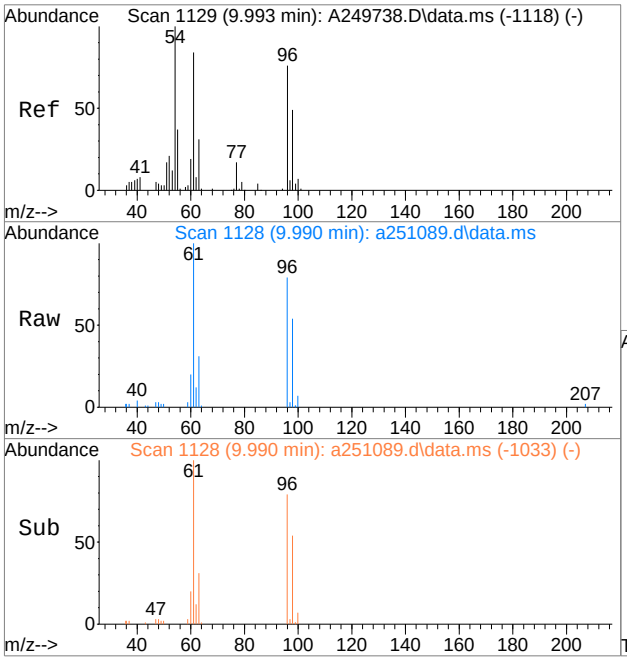


#9
vinyl chloride
Concen: 9.19 ug/L
RT: 5.267 min Scan# 225
Delta R.T. 0.023 min
Lab File: a251089.d
Acq: 26 Jun 2019 12:48 am

Tgt Ion: 62 Resp: 39712

Ion	Ratio	Lower	Upper
62	100		
64	34.9	2.5	62.5
61	8.7	0.0	37.6

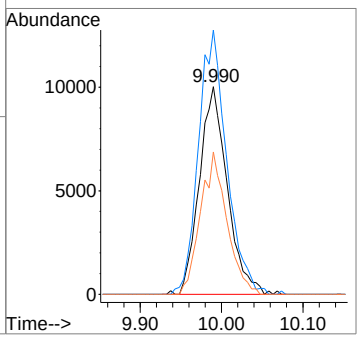




#37
cis-1,2-dichloroethene
Concen: 11.12 ug/L
RT: 9.990 min Scan# 1128
Delta R.T. -0.003 min
Lab File: a251089.d
Acq: 26 Jun 2019 12:48 am

Tgt Ion: 96 Resp: 23923

Ion	Ratio	Lower	Upper
96	100		
61	127.4	91.3	151.3
98	68.6	34.7	94.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251090.d
Acq On : 26 Jun 2019 1:17 am
Operator : brittank
Sample : JC90121-25 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 64 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:12:52 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

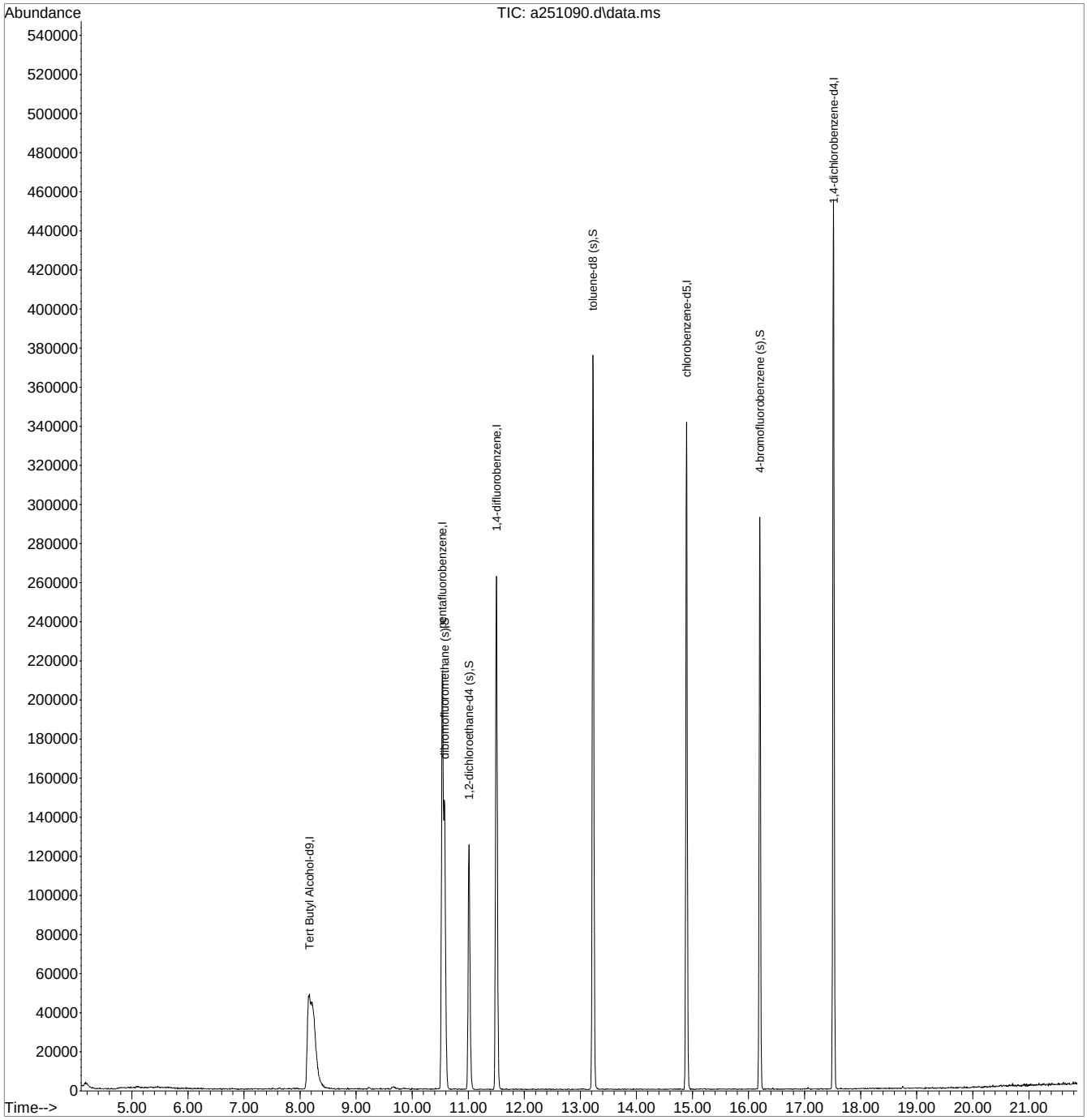
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.167	65	259916	500.00	ug/L	0.00
5) pentafluorobenzene	10.536	168	194128	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.504	114	271916	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	217103	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.519	152	135538	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	99595	52.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.10%			
53) 1,2-dichloroethane-d4 (s)	11.012	65	104445	53.47	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.94%			
75) toluene-d8 (s)	13.225	98	289286	50.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.20%			
99) 4-bromofluorobenzene (s)	16.201	95	104317	49.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.82%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251090.d
Acq On : 26 Jun 2019 1:17 am
Operator : brittank
Sample : JC90121-25 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 64 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:12:52 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251091.d
Acq On : 26 Jun 2019 1:45 am
Operator : brittank
Sample : JC90121-26 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 65 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:13:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

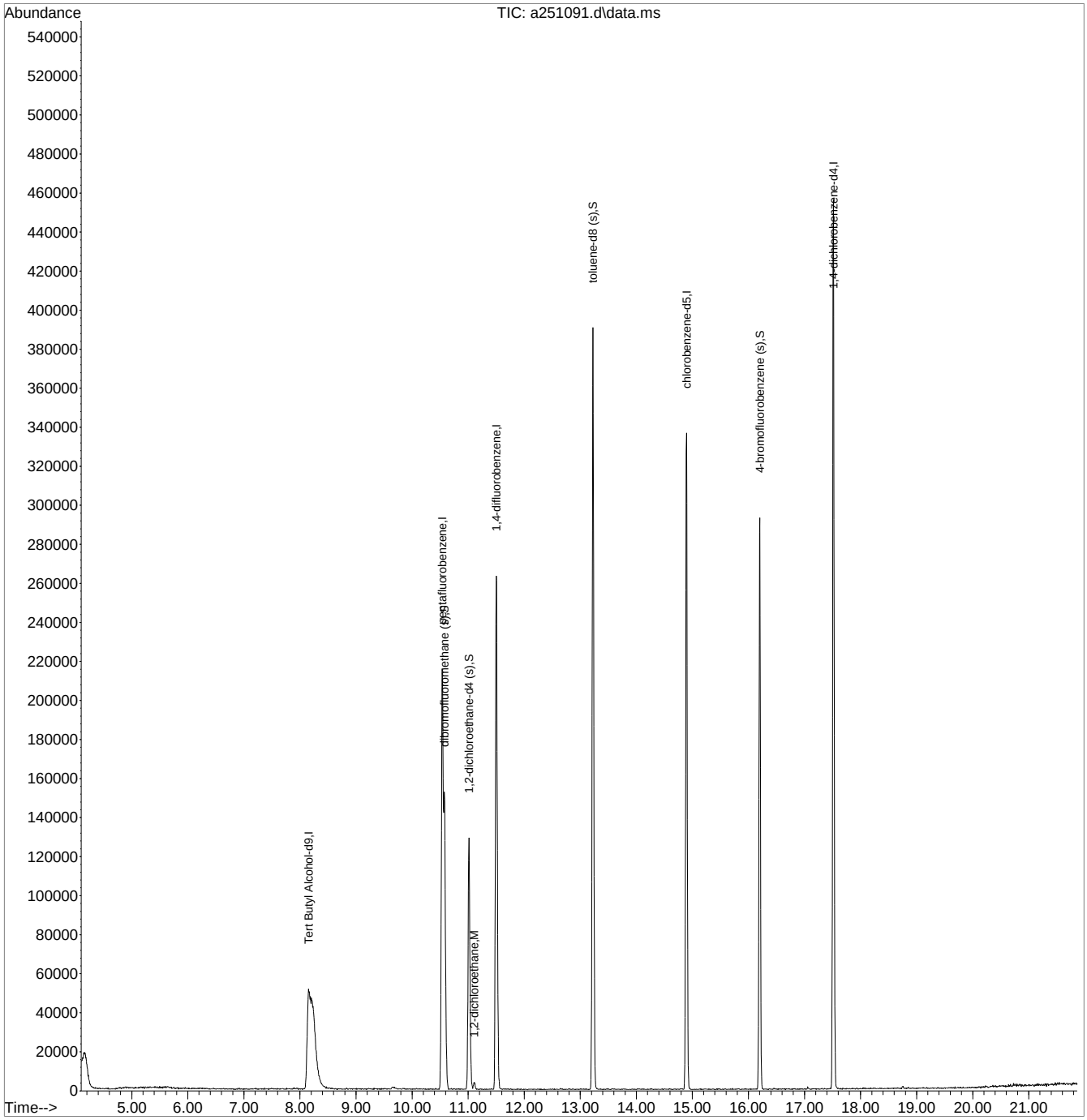
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.153	65	271912	500.00	ug/L	-0.01
5) pentafluorobenzene	10.538	168	195706	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	276566	50.00	ug/L	0.00
74) chlorobenzene-d5	14.895	117	220200	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.515	152	136237	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.575	113	100254	51.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.94%			
53) 1,2-dichloroethane-d4 (s)	11.014	65	107169	53.94	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.88%			
75) toluene-d8 (s)	13.227	98	296244	50.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.18%			
99) 4-bromofluorobenzene (s)	16.203	95	103942	48.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.96%			
Target Compounds						Qvalue
59) 1,2-dichloroethane	11.103	62	3629	1.43	ug/L	78

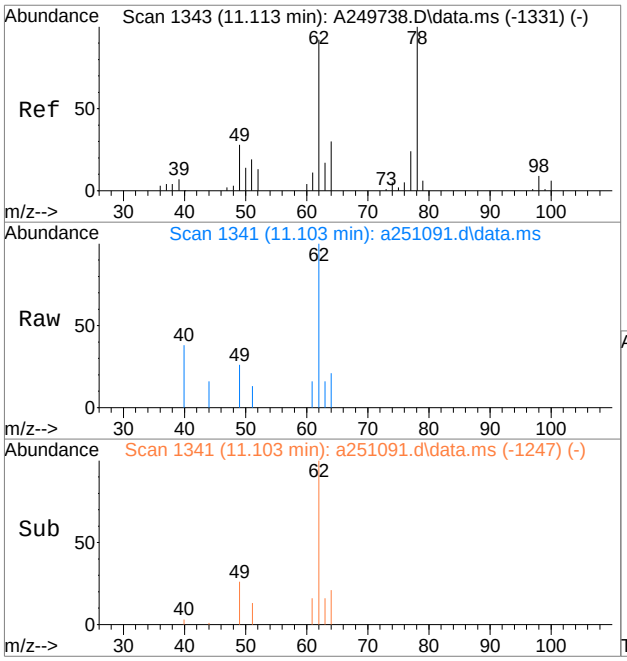
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251091.d
Acq On : 26 Jun 2019 1:45 am
Operator : brittank
Sample : JC90121-26 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 65 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:13:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

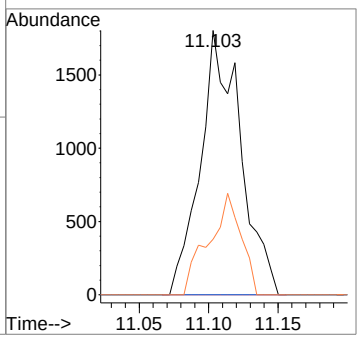




#59
1,2-dichloroethane
Concen: 1.43 ug/L
RT: 11.103 min Scan# 1341
Delta R.T. -0.009 min
Lab File: a251091.d
Acq: 26 Jun 2019 1:45 am

Tgt Ion: 62 Resp: 3629

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	40.2
64	21.0	2.8	62.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251092.d
Acq On : 26 Jun 2019 2:14 am
Operator : brittank
Sample : JC90121-27 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 66 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 15:14:48 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

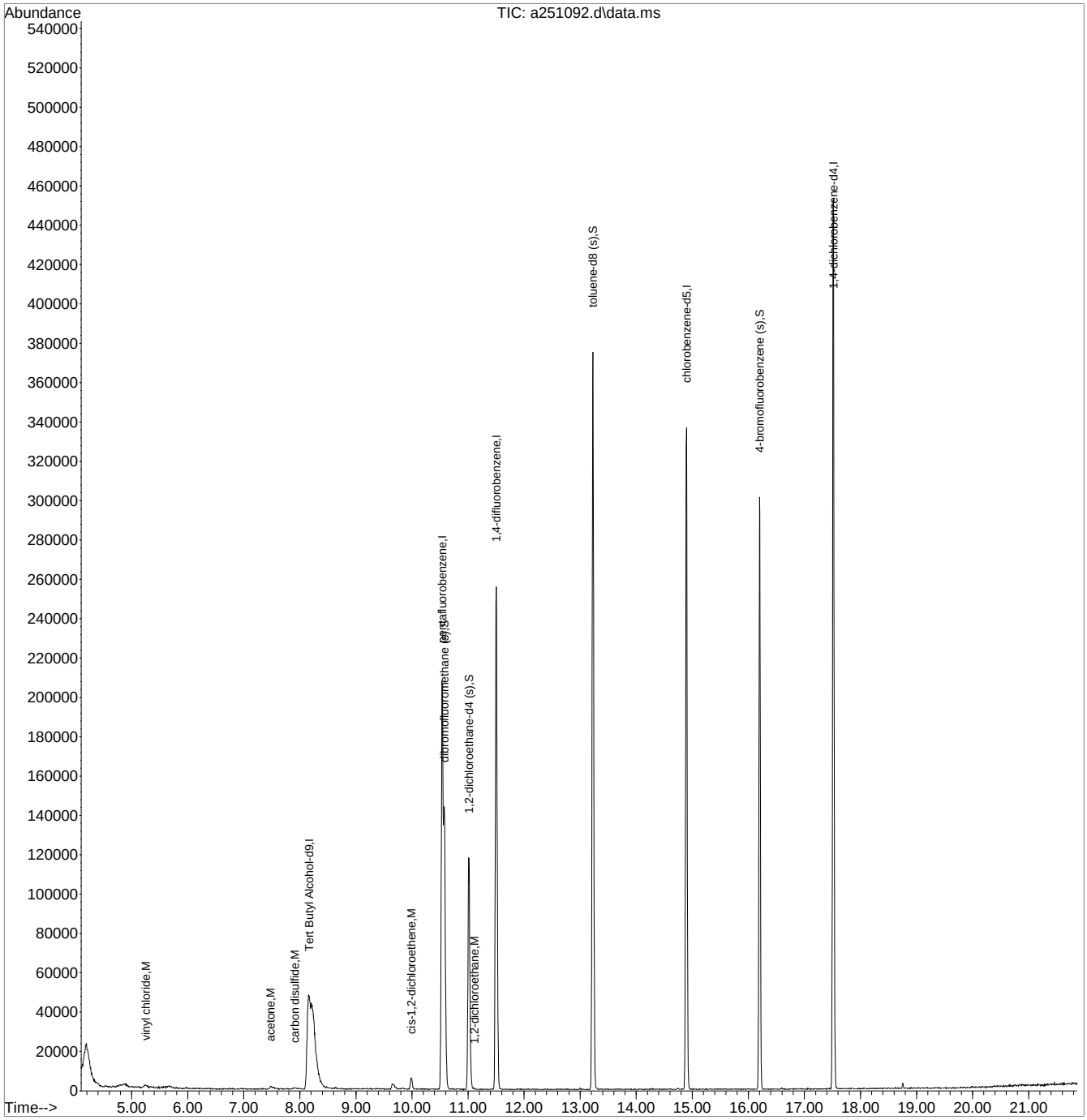
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.165	65	256888	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	186811	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	265790	50.00	ug/L	0.00
74) chlorobenzene-d5	14.896	117	219395	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.517	152	138034	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.576	113	95278	51.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.48%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	102239	53.54	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.08%			
75) toluene-d8 (s)	13.228	98	290294	49.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.50%			
99) 4-bromofluorobenzene (s)	16.199	95	105398	49.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.04%			
Target Compounds						Qvalue
9) vinyl chloride	5.252	62	3477	0.86	ug/L	90
19) acetone	7.475	58	684	2.52	ug/L #	78
22) carbon disulfide	7.909	76	1974	0.29	ug/L	72
37) cis-1,2-dichloroethene	9.985	96	3941	1.95	ug/L	82
59) 1,2-dichloroethane	11.110	62	595	0.24	ug/L #	49

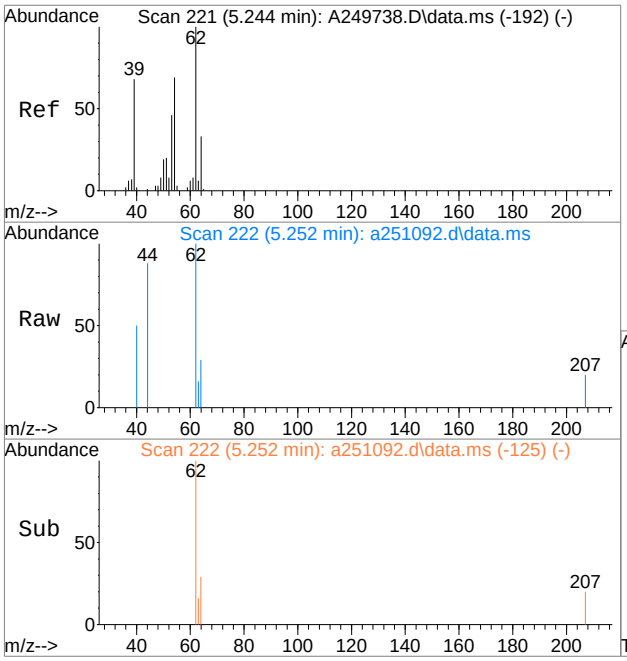
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251092.d
Acq On : 26 Jun 2019 2:14 am
Operator : brittank
Sample : JC90121-27 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 66 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 15:14:48 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

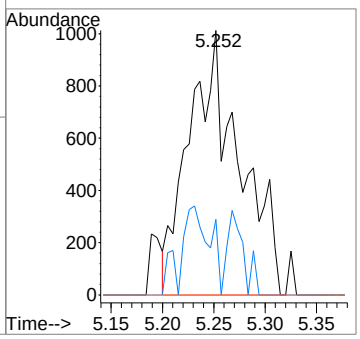


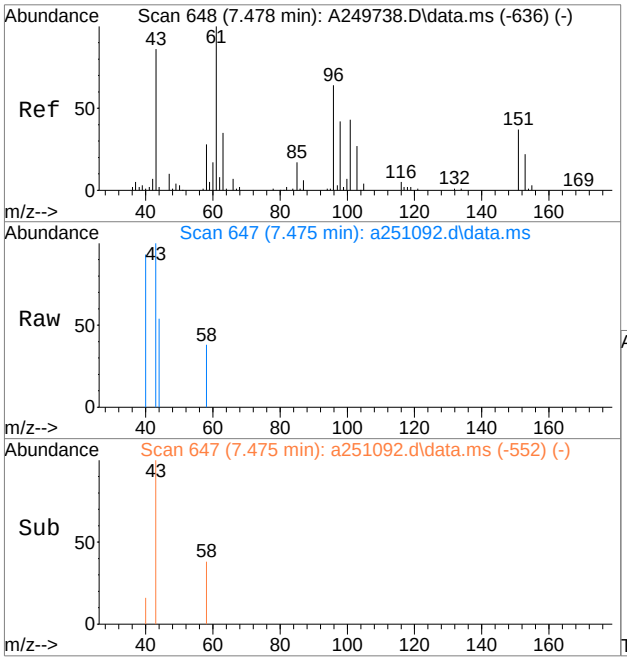


#9
vinyl chloride
Concen: 0.86 ug/L
RT: 5.252 min Scan# 222
Delta R.T. 0.008 min
Lab File: a251092.d
Acq: 26 Jun 2019 2:14 am

Tgt Ion: 62 Resp: 3477

Ion	Ratio	Lower	Upper
62	100		
64	28.5	2.5	62.5
61	0.0	0.0	37.6

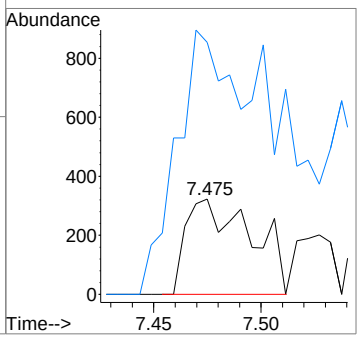


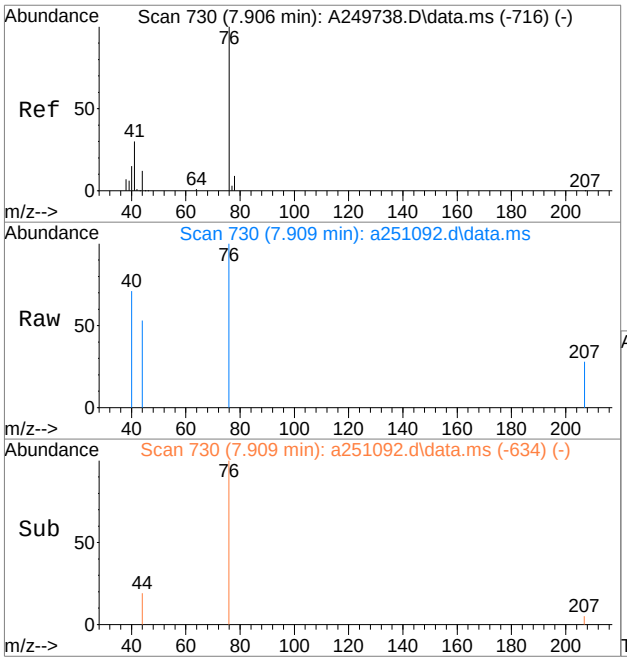


#19
acetone
Concen: 2.52 ug/L
RT: 7.475 min Scan# 647
Delta R.T. -0.002 min
Lab File: a251092.d
Acq: 26 Jun 2019 2:14 am

Tgt Ion: 58 Resp: 684

Ion	Ratio	Lower	Upper
58	100		
43	264.4	278.3	338.3#

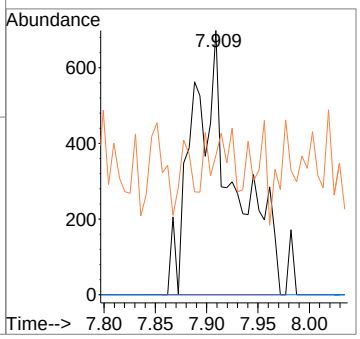


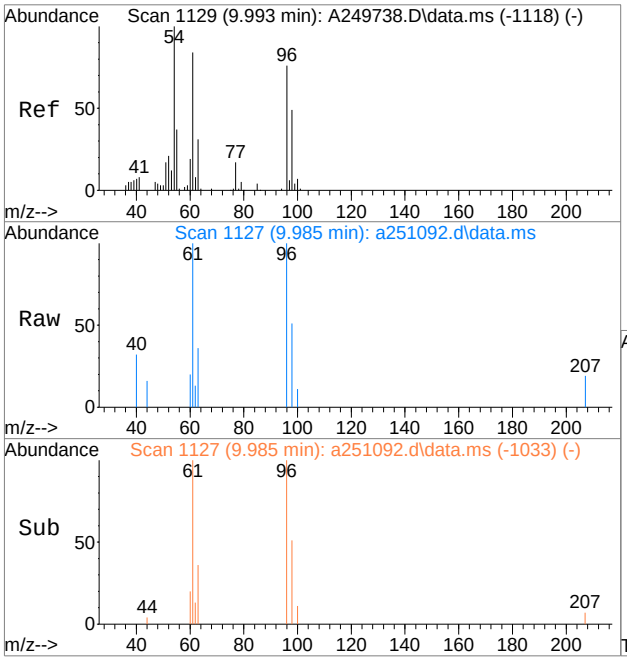


#22
carbon disulfide
Concen: 0.29 ug/L
RT: 7.909 min Scan# 730
Delta R.T. 0.003 min
Lab File: a251092.d
Acq: 26 Jun 2019 2:14 am

Tgt Ion: 76 Resp: 1974

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.1
44	0.0	0.0	41.6

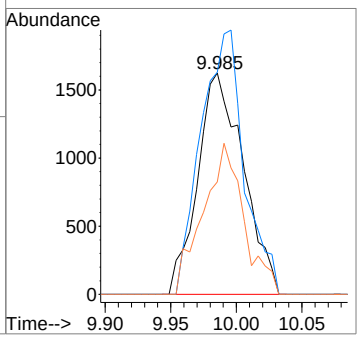


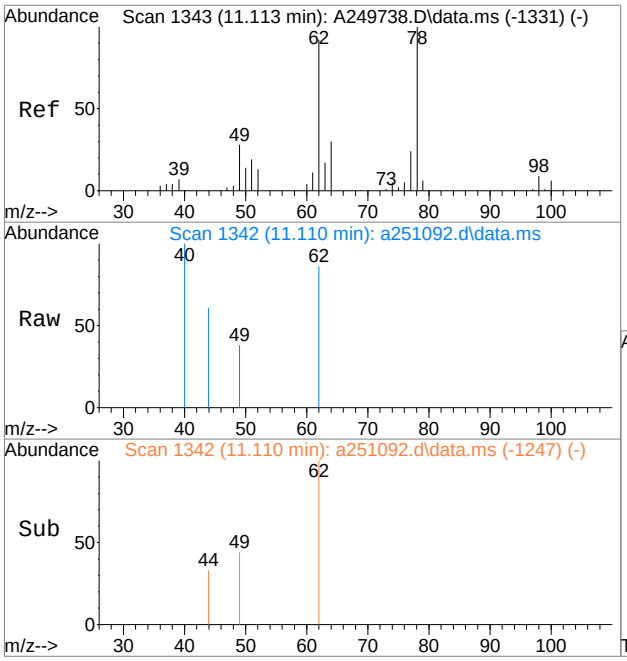


#37
cis-1,2-dichloroethene
Concen: 1.95 ug/L
RT: 9.985 min Scan# 1127
Delta R.T. -0.008 min
Lab File: a251092.d
Acq: 26 Jun 2019 2:14 am

Tgt Ion: 96 Resp: 3941

Ion	Ratio	Lower	Upper
96	100		
61	100.2	91.3	151.3
98	50.8	34.7	94.7

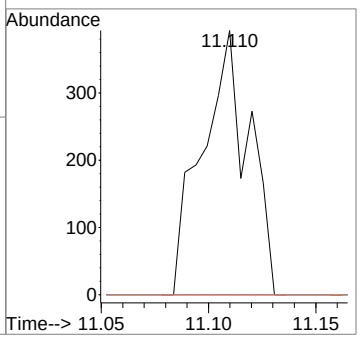




#59
1,2-dichloroethane
Concen: 0.24 ug/L
RT: 11.110 min Scan# 1342
Delta R.T. -0.003 min
Lab File: a251092.d
Acq: 26 Jun 2019 2:14 am

Tgt Ion: 62 Resp: 595

Ion	Ratio	Lower	Upper
62	100		
98	0.0	0.0	40.2
64	0.0	2.8	62.8#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251093.d
Acq On : 26 Jun 2019 2:42 am
Operator : brittank
Sample : JC90121-28 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 67 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 15:15:30 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

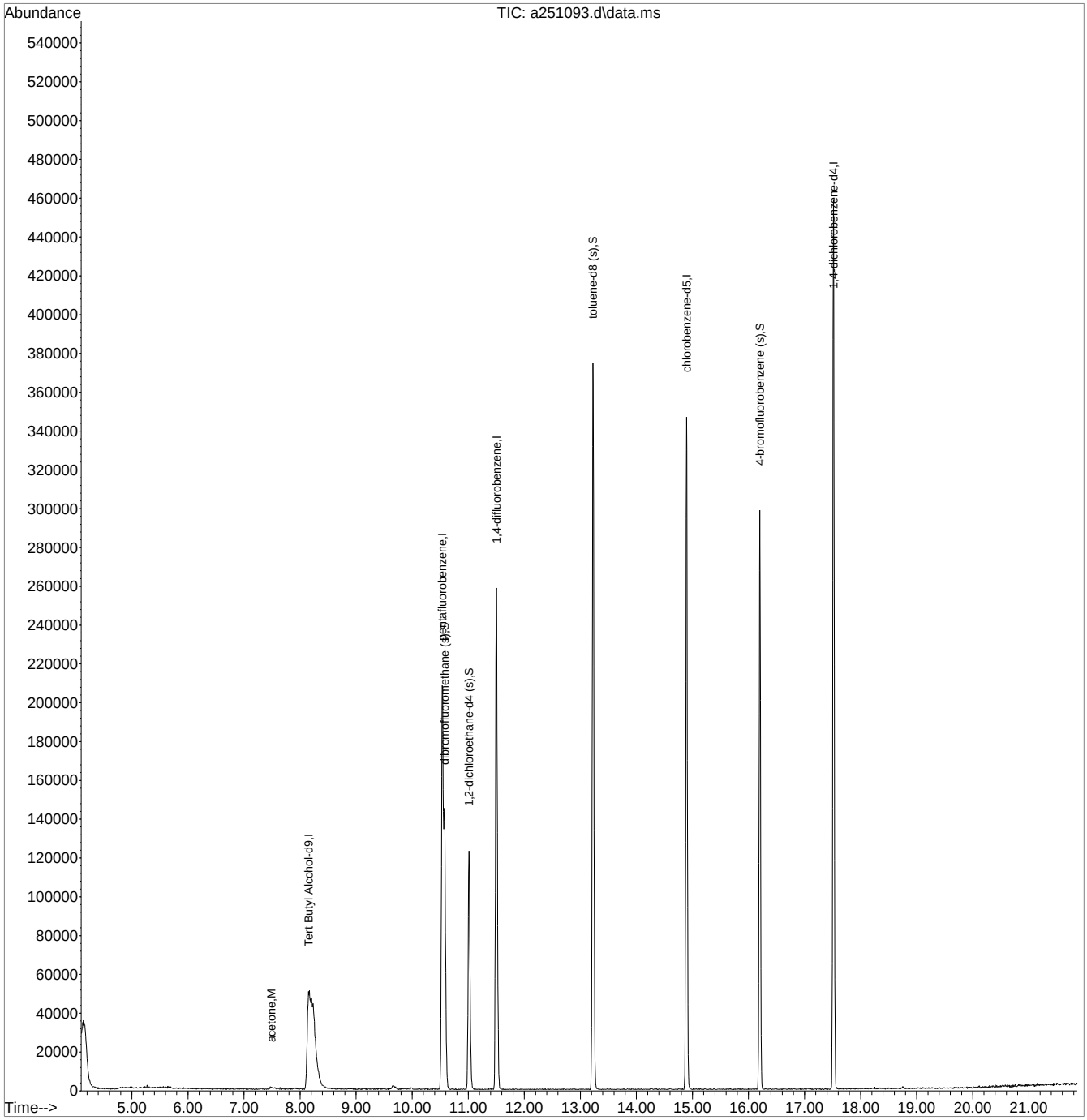
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.152	65	269908	500.00	ug/L	-0.02
5) pentafluorobenzene	10.536	168	190745	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.504	114	270442	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	221492	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	138038	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	96453	51.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.60%			
53) 1,2-dichloroethane-d4 (s)	11.012	65	103885	53.47	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.94%			
75) toluene-d8 (s)	13.225	98	289592	49.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.32%			
99) 4-bromofluorobenzene (s)	16.201	95	103932	48.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.68%			
Target Compounds						Qvalue
19) acetone	7.487	58	551	1.99	ug/L	# 64

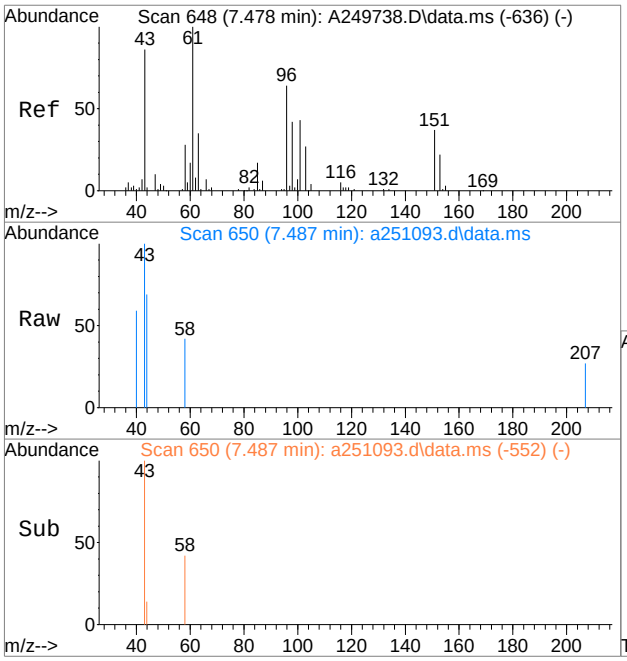
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251093.d
Acq On : 26 Jun 2019 2:42 am
Operator : brittank
Sample : JC90121-28 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 67 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 15:15:30 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

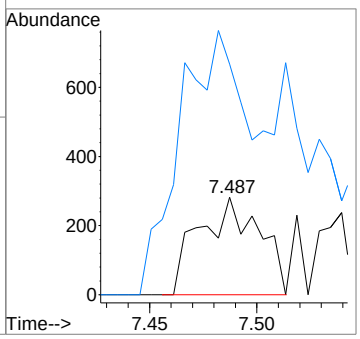




#19
acetone
Concen: 1.99 ug/L
RT: 7.487 min Scan# 650
Delta R.T. 0.010 min
Lab File: a251093.d
Acq: 26 Jun 2019 2:42 am

Tgt Ion: 58 Resp: 551

Ion	Ratio	Lower	Upper
58	100		
43	236.5	278.3	338.3#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251094.d
Acq On : 26 Jun 2019 3:11 am
Operator : brittank
Sample : JC90121-29 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 68 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:17:31 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

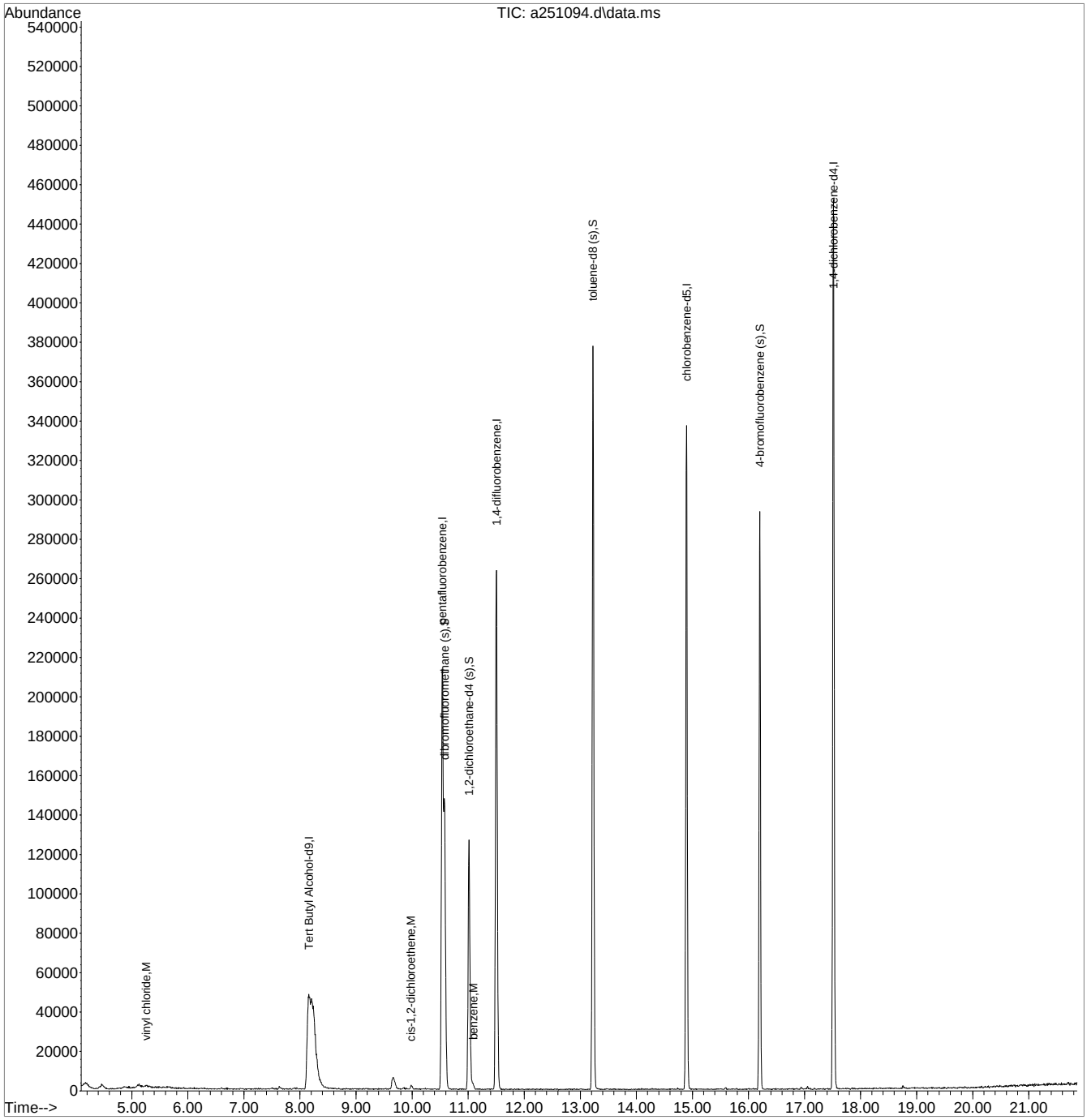
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.158	65	265020	500.00	ug/L	-0.01
5) pentafluorobenzene	10.537	168	194523	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	275961	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	218629	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	137370	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	99559	51.93	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.86%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	105945	53.44	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.88%			
75) toluene-d8 (s)	13.226	98	291735	50.17	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.34%			
99) 4-bromofluorobenzene (s)	16.202	95	103452	48.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.70%			
Target Compounds						Qvalue
9) vinyl chloride	5.255	62	1893	0.45	ug/L #	49
37) cis-1,2-dichloroethene	9.978	96	1264	0.60	ug/L	89
54) benzene	11.092	78	3521	0.50	ug/L	80

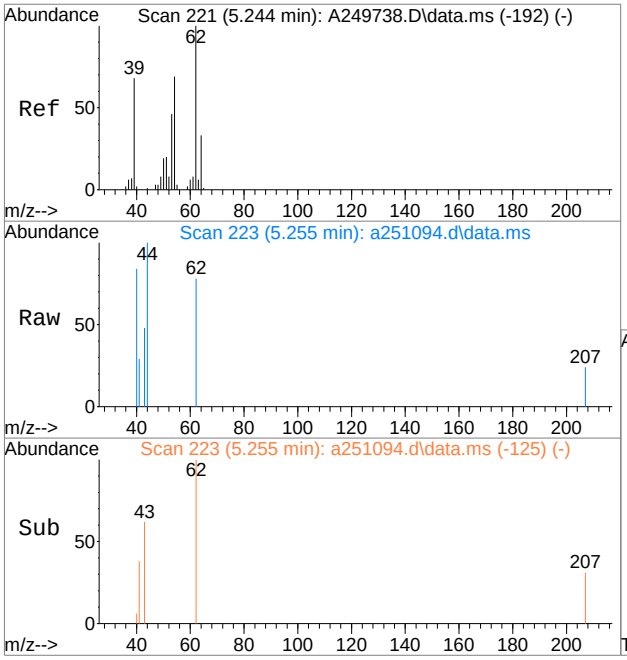
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251094.d
Acq On : 26 Jun 2019 3:11 am
Operator : brittank
Sample : JC90121-29 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 68 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:17:31 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

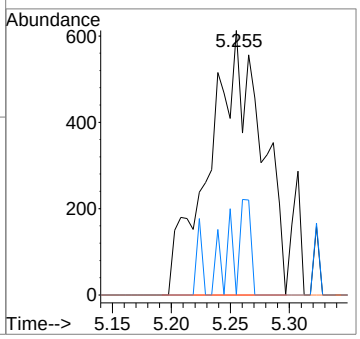


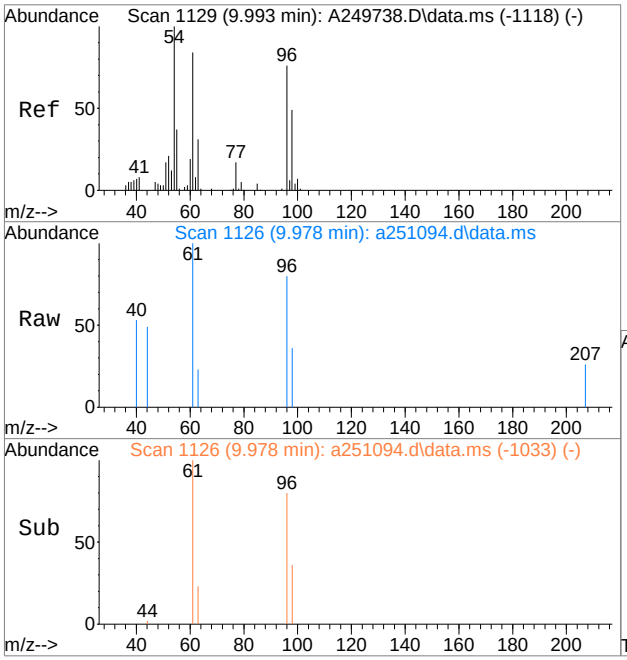


#9
vinyl chloride
Concen: 0.45 ug/L
RT: 5.255 min Scan# 223
Delta R.T. 0.011 min
Lab File: a251094.d
Acq: 26 Jun 2019 3:11 am

Tgt Ion: 62 Resp: 1893

Ion	Ratio	Lower	Upper
62	100		
64	0.0	2.5	62.5#
61	0.0	0.0	37.6

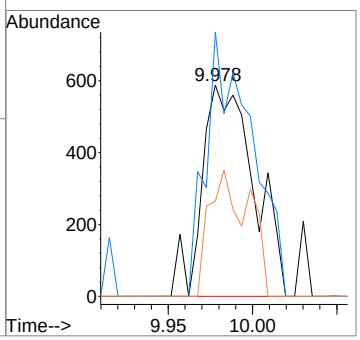


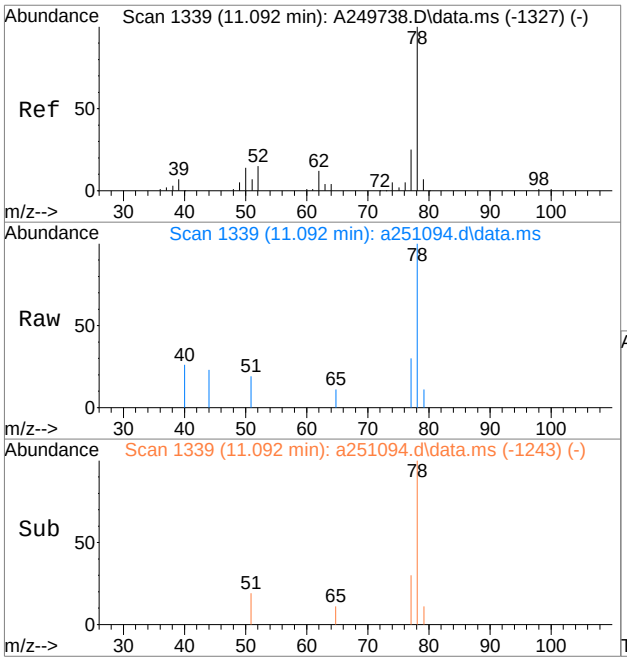


#37
cis-1,2-dichloroethene
Concen: 0.60 ug/L
RT: 9.978 min Scan# 1126
Delta R.T. -0.015 min
Lab File: a251094.d
Acq: 26 Jun 2019 3:11 am

Tgt Ion: 96 Resp: 1264

Ion	Ratio	Lower	Upper
96	100		
61	125.2	91.3	151.3
98	45.1	34.7	94.7

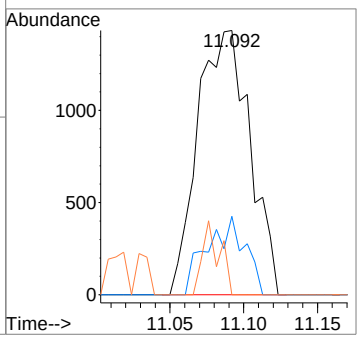




#54
benzene
Concen: 0.50 ug/L
RT: 11.092 min Scan# 1339
Delta R.T. 0.000 min
Lab File: a251094.d
Acq: 26 Jun 2019 3:11 am

Tgt Ion: 78 Resp: 3521

Ion	Ratio	Lower	Upper
78	100		
77	29.7	0.0	54.7
52	0.0	0.0	45.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251095.d
Acq On : 26 Jun 2019 3:39 am
Operator : brittank
Sample : JC90121-30 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 69 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:18:34 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

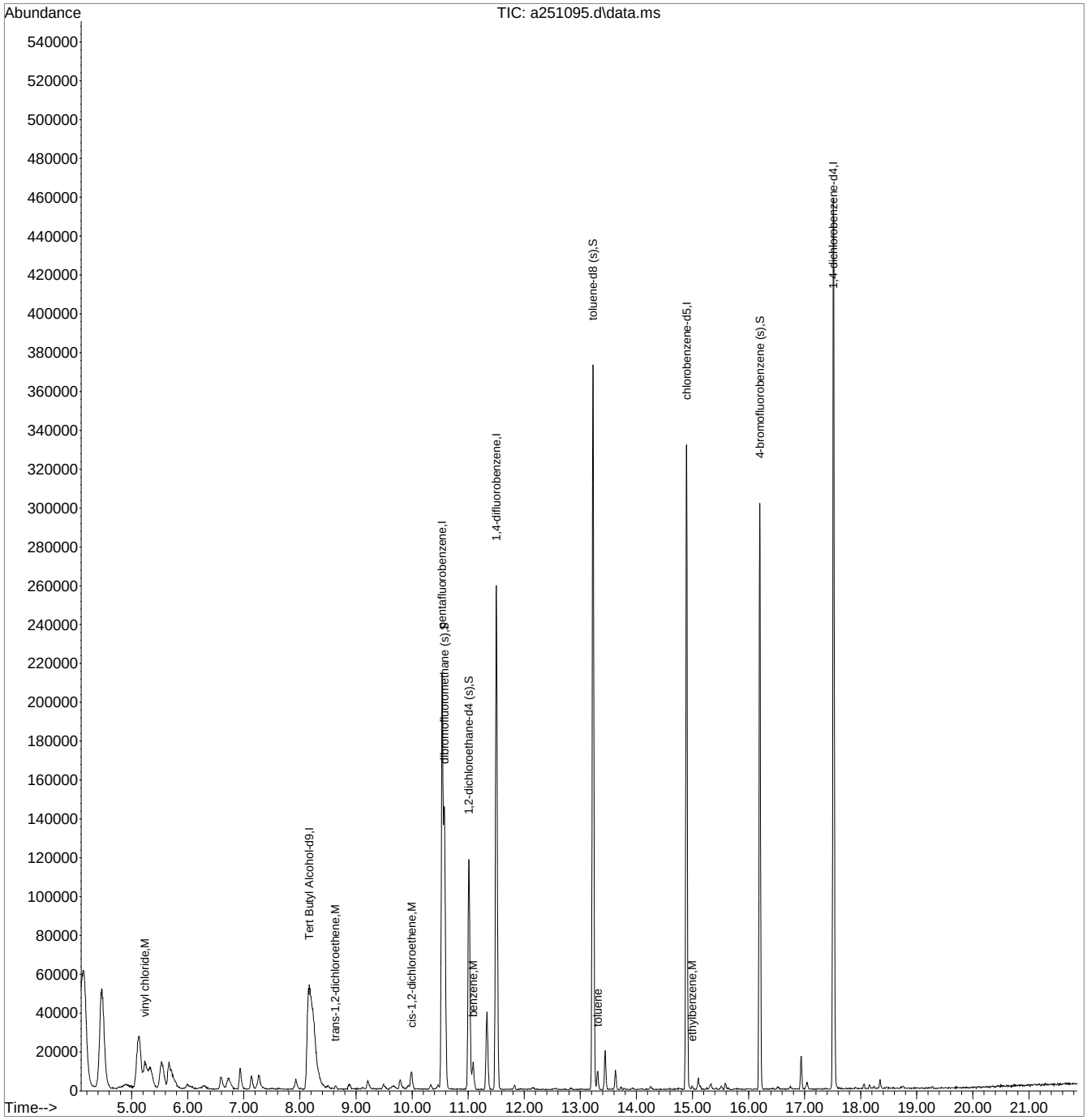
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.166	65	259409	500.00	ug/L	0.00
5) pentafluorobenzene	10.535	168	190868	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.503	114	268806	50.00	ug/L	0.00
74) chlorobenzene-d5	14.897	117	219161	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.512	152	137871	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.577	113	96806	51.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.92%			
53) 1,2-dichloroethane-d4 (s)	11.011	65	100779	52.19	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.38%			
75) toluene-d8 (s)	13.223	98	292046	50.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.22%			
99) 4-bromofluorobenzene (s)	16.199	95	104094	48.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.94%			
Target Compounds						Qvalue
9) vinyl chloride	5.237	62	14896	3.59	ug/L	98
26) trans-1,2-dichloroethene	8.626	96	1038	0.58	ug/L #	67
37) cis-1,2-dichloroethene	9.991	96	6021	2.91	ug/L	85
54) benzene	11.089	78	14226	2.07	ug/L	95
76) toluene	13.312	92	5053	1.30	ug/L	96
89) ethylbenzene	14.991	91	1667	0.23	ug/L	93

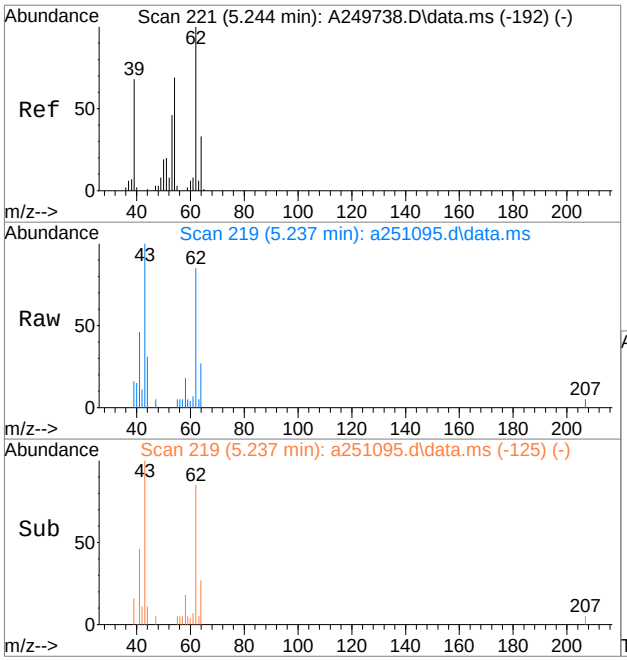
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251095.d
Acq On : 26 Jun 2019 3:39 am
Operator : brittank
Sample : JC90121-30 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 69 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:18:34 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

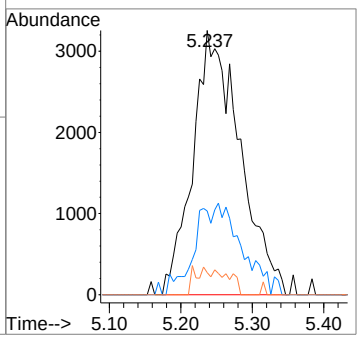


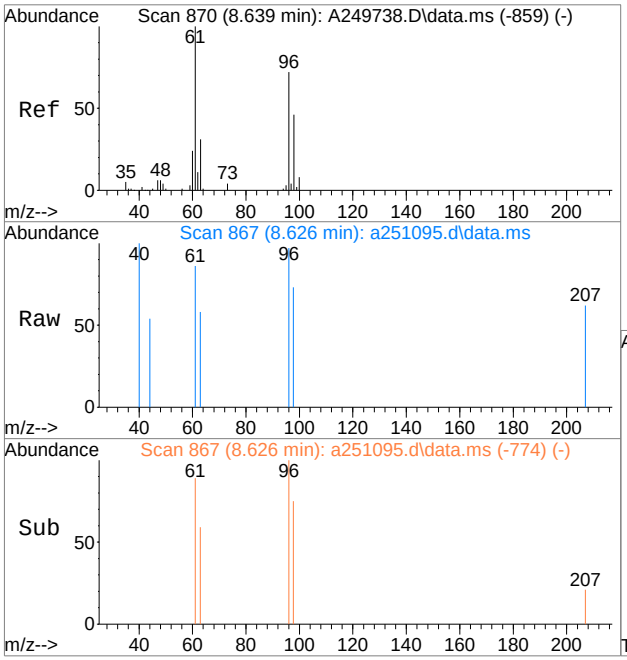


#9
vinyl chloride
Concen: 3.59 ug/L
RT: 5.237 min Scan# 219
Delta R.T. -0.007 min
Lab File: a251095.d
Acq: 26 Jun 2019 3:39 am

Tgt Ion: 62 Resp: 14896

Ion	Ratio	Lower	Upper
62	100		
64	31.7	2.5	62.5
61	8.4	0.0	37.6

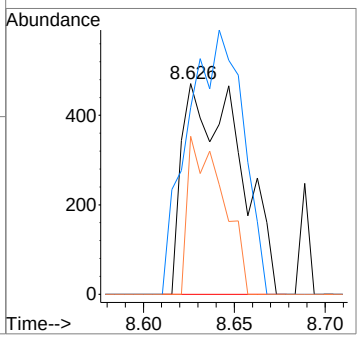


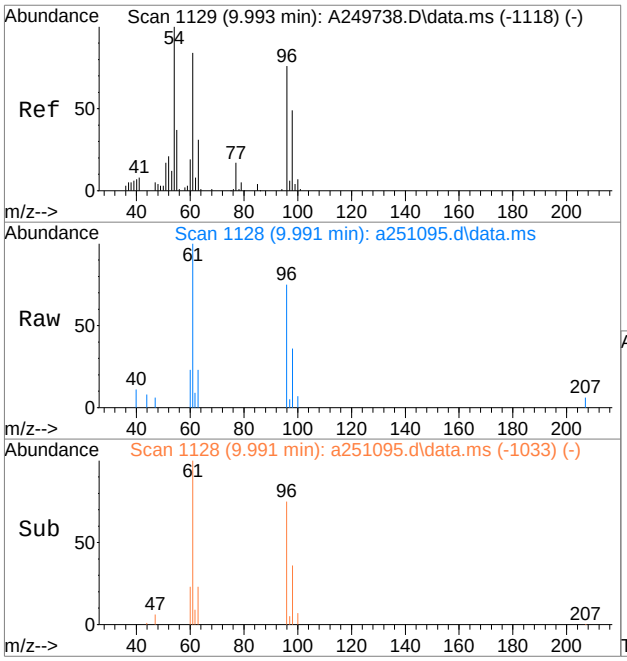


#26
trans-1,2-dichloroethene
Concen: 0.58 ug/L
RT: 8.626 min Scan# 867
Delta R.T. -0.013 min
Lab File: a251095.d
Acq: 26 Jun 2019 3:39 am

Tgt Ion: 96 Resp: 1038

Ion	Ratio	Lower	Upper
96	100		
61	88.5	108.5	168.5#
98	74.9	33.4	93.4

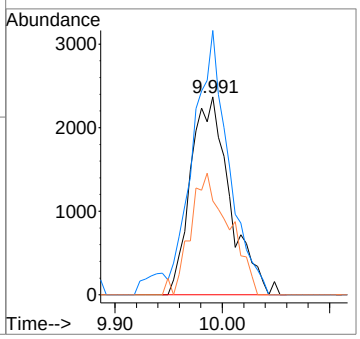


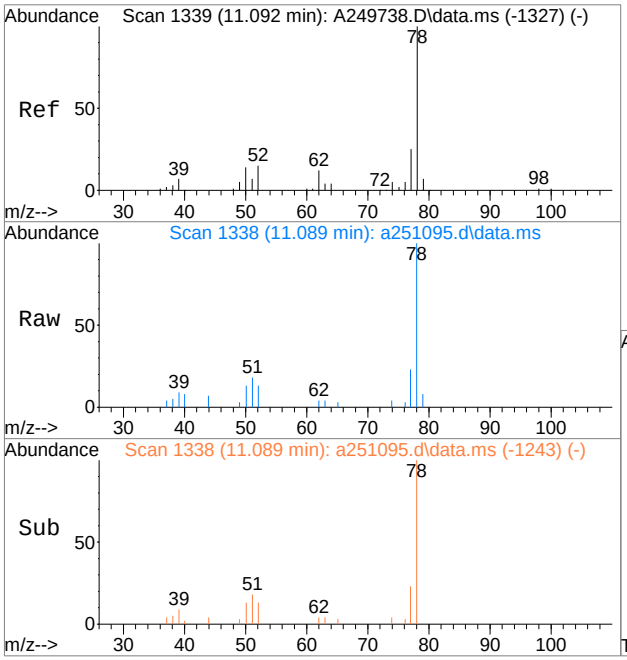


#37
cis-1,2-dichloroethene
Concen: 2.91 ug/L
RT: 9.991 min Scan# 1128
Delta R.T. -0.002 min
Lab File: a251095.d
Acq: 26 Jun 2019 3:39 am

Tgt Ion: 96 Resp: 6021

Ion	Ratio	Lower	Upper
96	100		
61	133.6	91.3	151.3
98	47.5	34.7	94.7

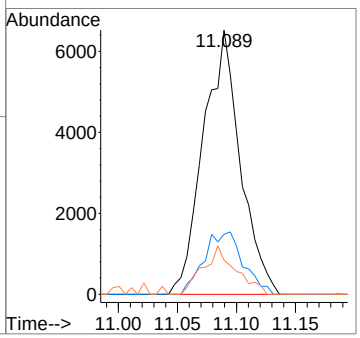


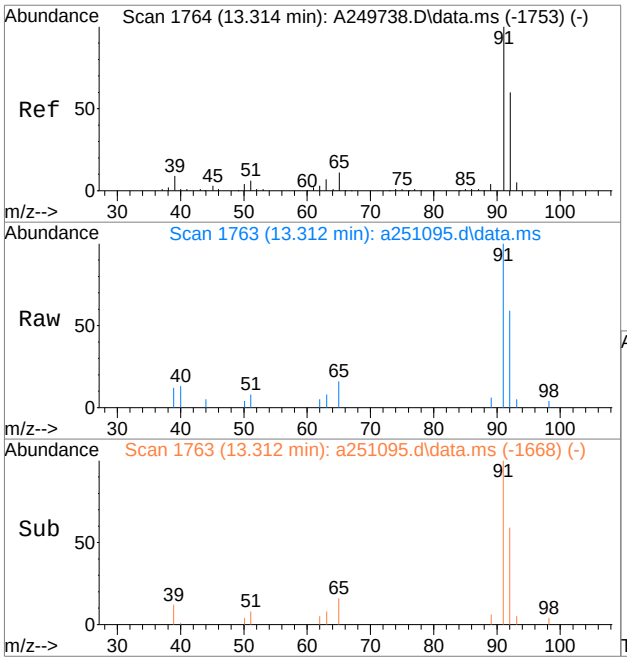


#54
benzene
Concen: 2.07 ug/L
RT: 11.089 min Scan# 1338
Delta R.T. -0.002 min
Lab File: a251095.d
Acq: 26 Jun 2019 3:39 am

Tgt Ion: 78 Resp: 14226

Ion	Ratio	Lower	Upper
78	100		
77	22.7	0.0	54.7
52	13.0	0.0	45.2

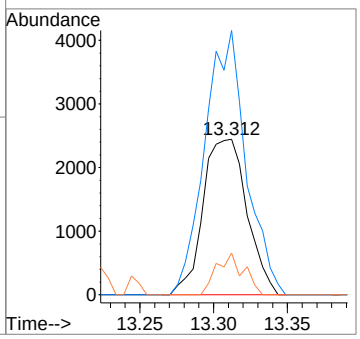


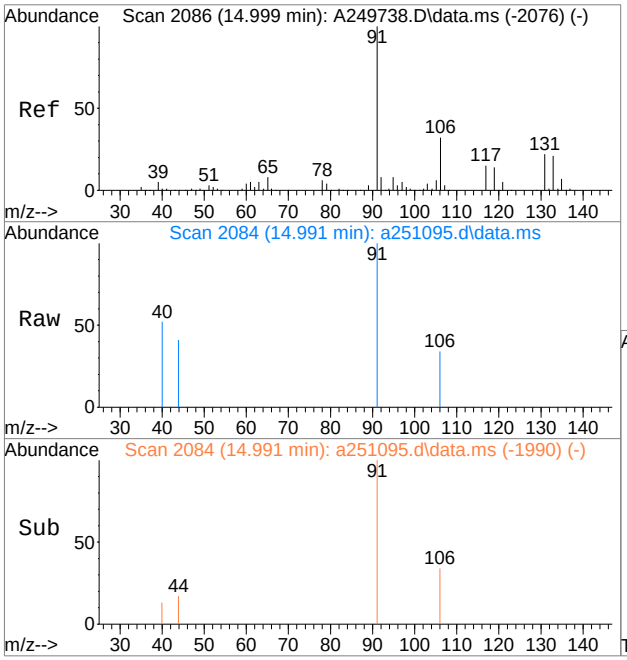


#76
toluene
Concen: 1.30 ug/L
RT: 13.312 min Scan# 1763
Delta R.T. -0.002 min
Lab File: a251095.d
Acq: 26 Jun 2019 3:39 am

Tgt Ion: 92 Resp: 5053

Ion	Ratio	Lower	Upper
92	100		
91	170.1	147.7	187.7
65	26.9	0.0	37.8

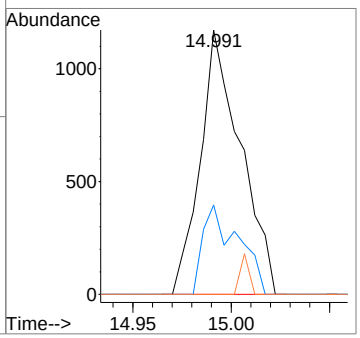




#89
ethylbenzene
Concen: 0.23 ug/L
RT: 14.991 min Scan# 2084
Delta R.T. -0.007 min
Lab File: a251095.d
Acq: 26 Jun 2019 3:39 am

Tgt Ion: 91 Resp: 1667

Ion	Ratio	Lower	Upper
91	100		
106	33.9	2.0	62.0
77	0.0	0.0	38.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91834.d
Acq On : 24 Jun 2019 8:53 am
Operator : edwardd
Sample : mb Inst : MS4B
Misc : MS35402,V4B3896,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:21:04 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

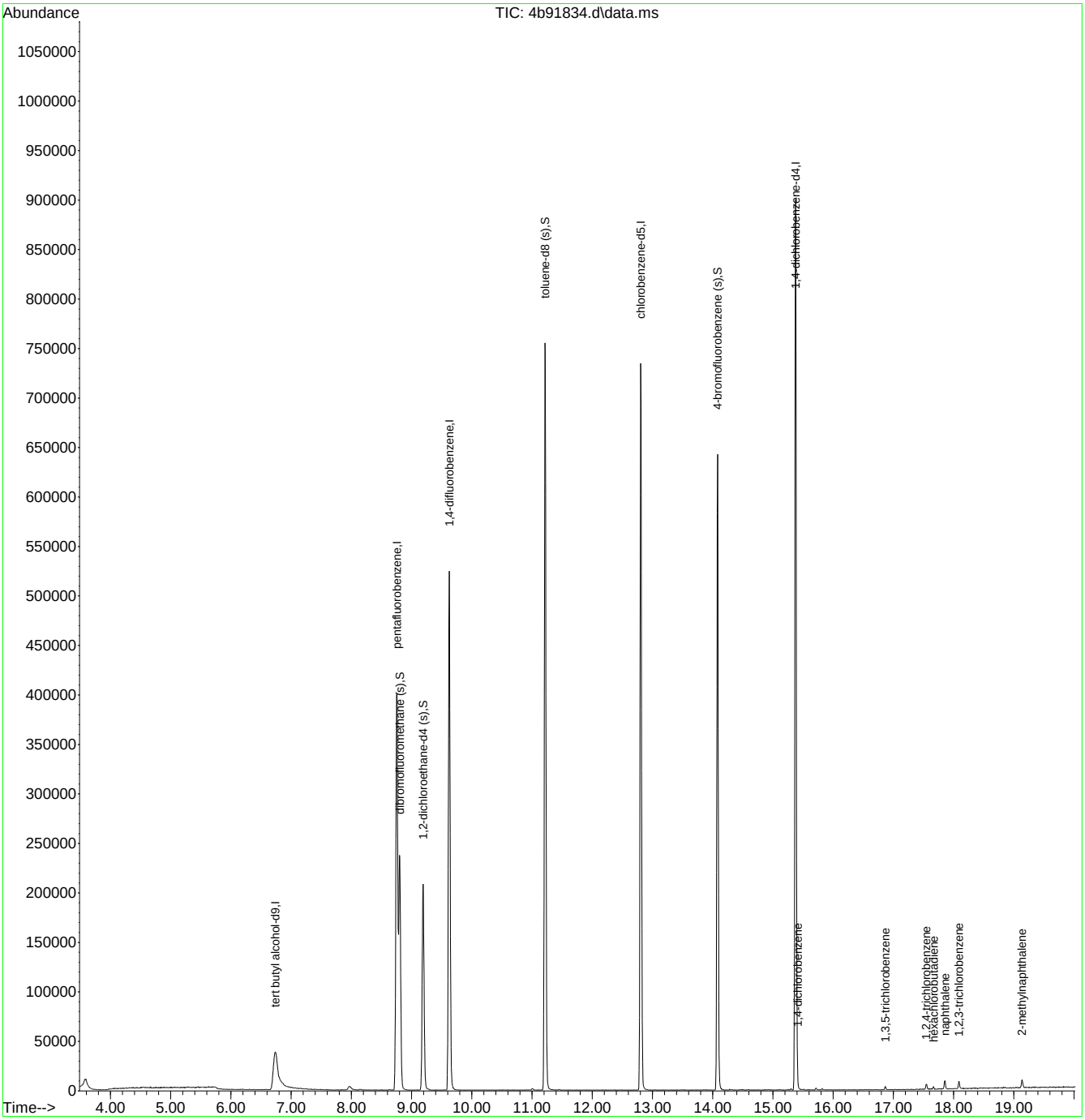
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.738	65	153261	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	334920	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	451852	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	413681	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	244157	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	160511	53.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.00%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	162038	54.38	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 108.76%			
76) toluene-d8 (s)	11.215	98	517234	49.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.36%			
99) 4-bromofluorobenzene (s)	14.081	95	209672	52.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.32%			
Target Compounds						Qvalue
113) 1,4-dichlorobenzene	15.410	146	999	0.11	ug/L	80
119) 1,3,5-trichlorobenzene	16.869	180	1356	0.16	ug/L	89
120) 1,2,4-trichlorobenzene	17.544	180	1885	0.25	ug/L	95
122) hexachlorobutadiene	17.669	225	865	0.21	ug/L	83
123) naphthalene	17.858	128	7390	0.49	ug/L	96
124) 1,2,3-trichlorobenzene	18.088	180	2983	0.44	ug/L	97
125) 2-methylnaphthalene	19.134	142	4924	0.66	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

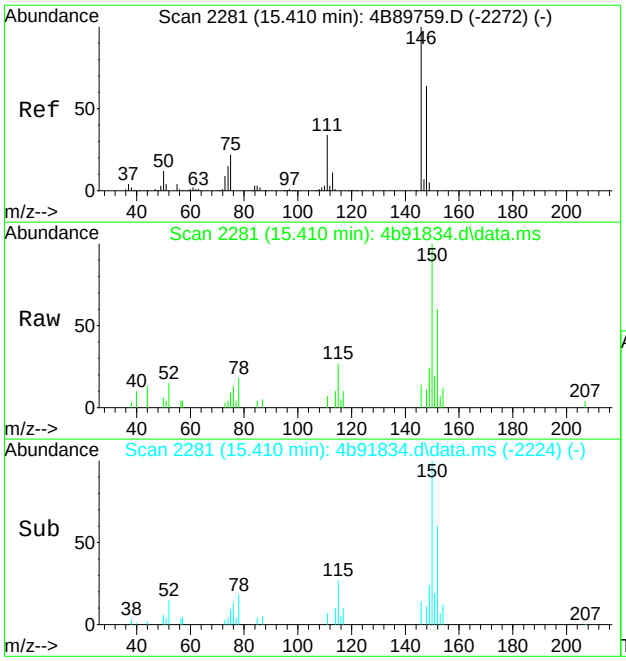
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91834.d
Acq On : 24 Jun 2019 8:53 am
Operator : edwardd
Sample : mb Inst : MS4B
Misc : MS35402,V4B3896,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:21:04 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



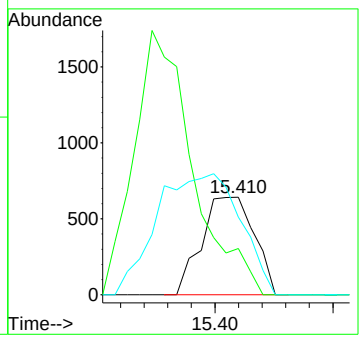
M4B3793.M Tue Jun 25 04:21:31 2019 Page: 2

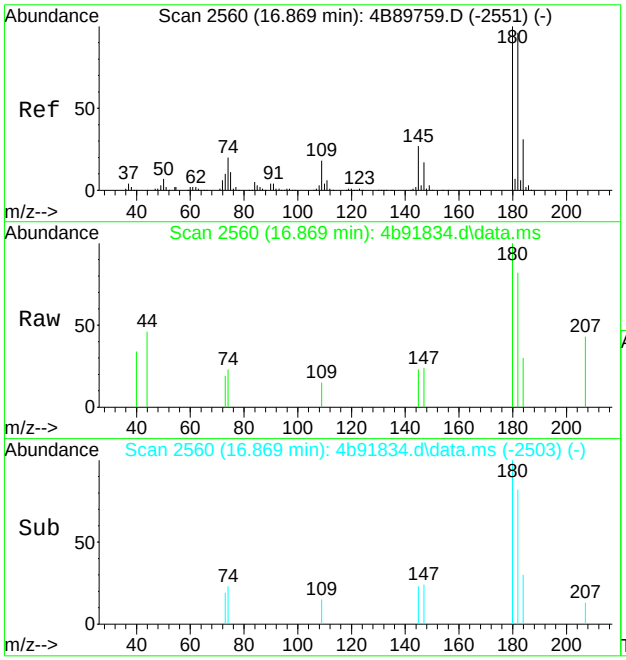


#113
1,4-dichlorobenzene
Concen: 0.11 ug/L
RT: 15.410 min Scan# 2281
Delta R.T. -0.000 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:146 Resp: 999

Ion	Ratio	Lower	Upper
146	100		
111	47.5	4.7	64.7
148	79.6	34.5	94.5

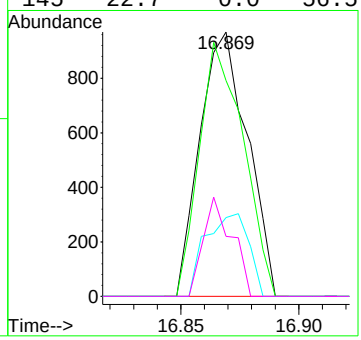


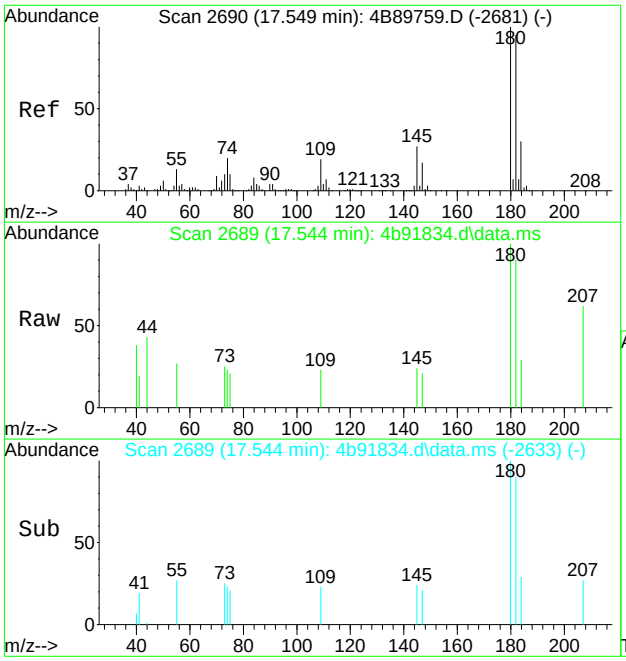


#119
1,3,5-trichlorobenzene
Concen: 0.16 ug/L
RT: 16.869 min Scan# 2560
Delta R.T. -0.000 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:180 Resp: 1356

Ion	Ratio	Lower	Upper
180	100		
182	81.6	65.8	125.8
184	29.8	0.9	60.9
145	22.7	0.0	56.5

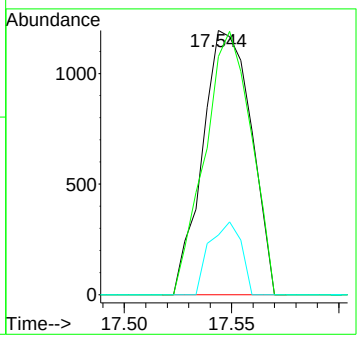


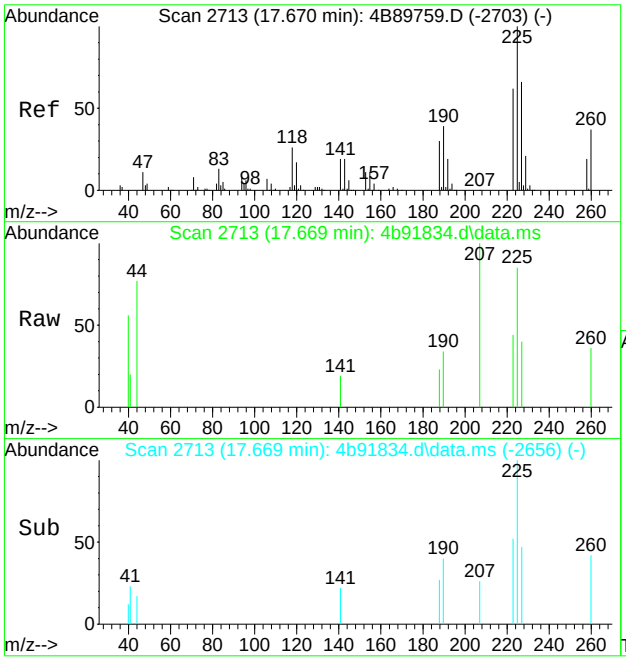


#120
1,2,4-trichlorobenzene
Concen: 0.25 ug/L
RT: 17.544 min Scan# 2689
Delta R.T. -0.005 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:180 Resp: 1885

Ion	Ratio	Lower	Upper
180	100		
182	90.1	65.0	125.0
74	22.6	0.0	49.6

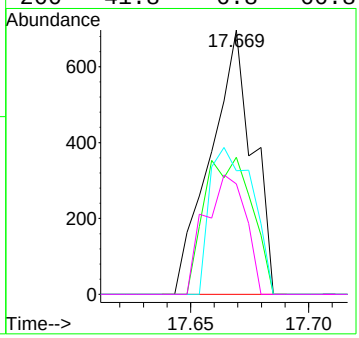


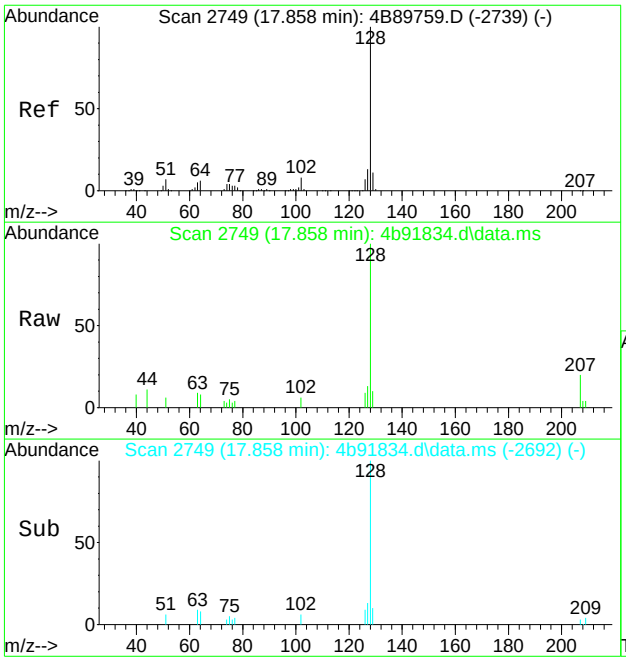


#122
hexachlorobutadiene
Concen: 0.21 ug/L
RT: 17.669 min Scan# 2713
Delta R.T. -0.000 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:225 Resp: 865

Ion	Ratio	Lower	Upper
225	100		
223	51.8	32.4	92.4
227	46.8	36.1	96.1
260	41.8	6.8	66.8

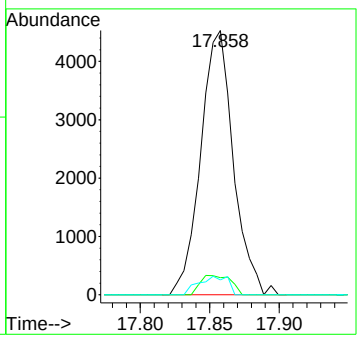


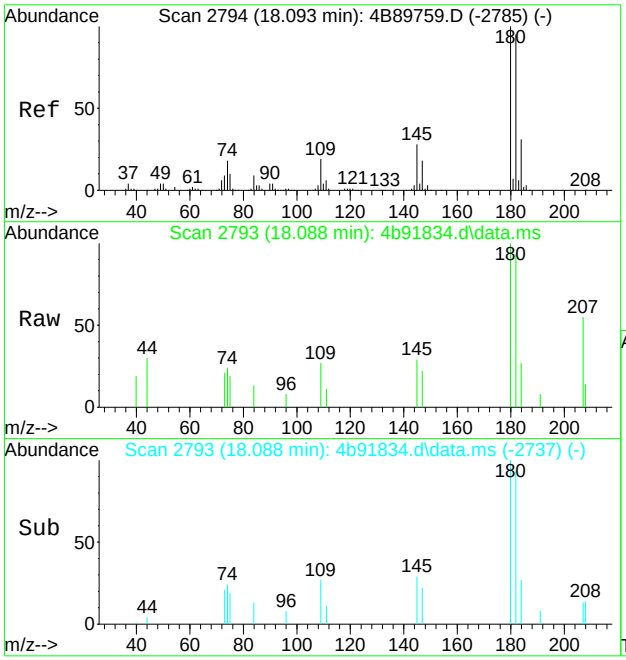


#123
naphthalene
Concen: 0.49 ug/L
RT: 17.858 min Scan# 2749
Delta R.T. -0.000 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:128 Resp: 7390

Ion	Ratio	Lower	Upper
128	100		
102	6.4	0.0	37.6
51	5.6	0.0	37.0

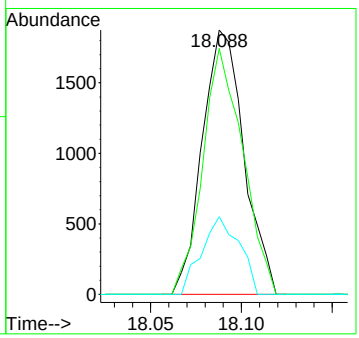


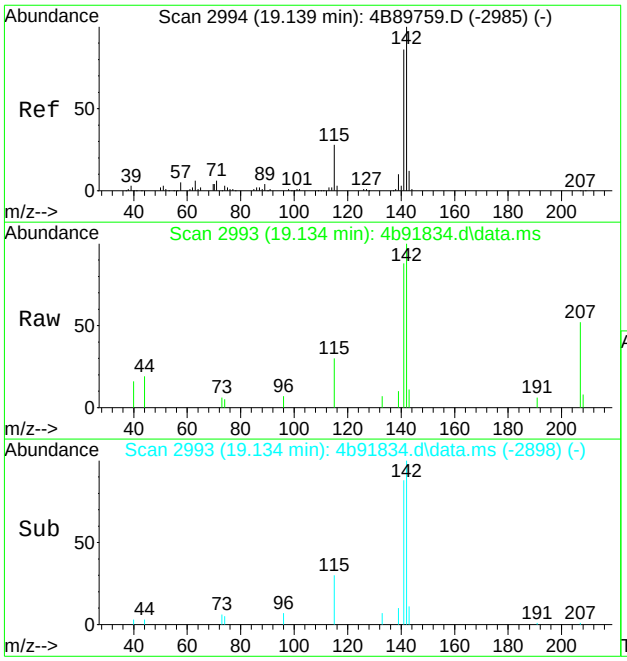


#124
1,2,3-trichlorobenzene
Concen: 0.44 ug/L
RT: 18.088 min Scan# 2793
Delta R.T. -0.005 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:180 Resp: 2983

Ion	Ratio	Lower	Upper
180	100		
182	92.9	65.4	125.4
145	29.4	0.0	57.8

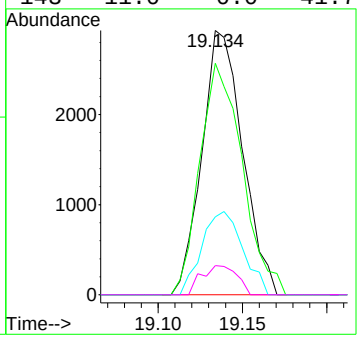




#125
2-methylnaphthalene
Concen: 0.66 ug/L
RT: 19.134 min Scan# 2993
Delta R.T. -0.005 min
Lab File: 4b91834.d
Acq: 24 Jun 2019 8:53 am

Tgt Ion:142 Resp: 4924

Ion	Ratio	Lower	Upper
142	100		
141	87.6	65.8	105.8
115	29.5	0.0	58.1
143	11.0	0.0	41.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251081.d
Acq On : 25 Jun 2019 8:58 pm
Operator : brittank
Sample : mb Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 55 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:06:47 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

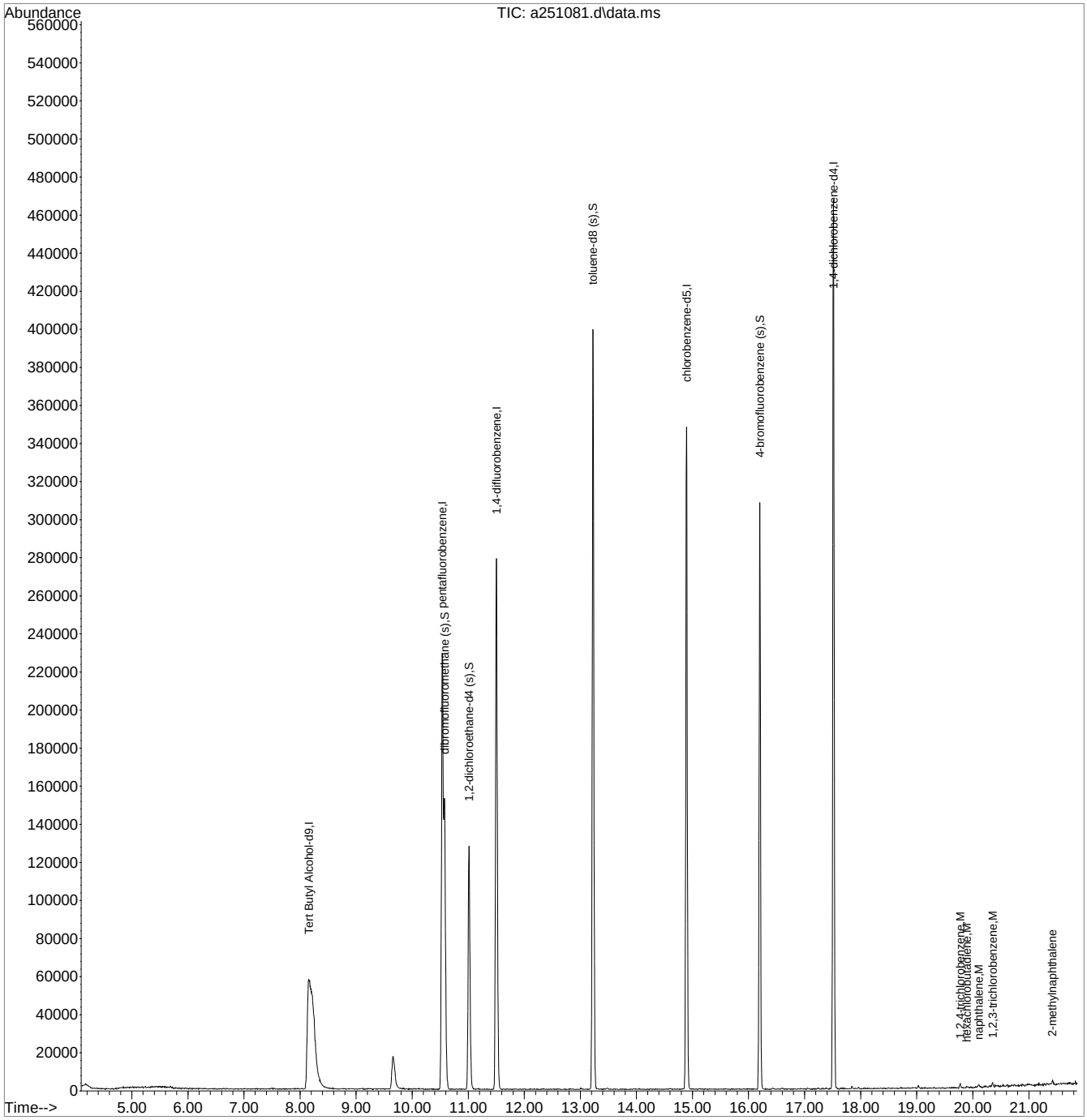
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.157	65	291244	500.00	ug/L	-0.01
5) pentafluorobenzene	10.537	168	201744	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.504	114	287859	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	228103	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	140548	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	102609	51.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.20%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	106489	51.49	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.98%			
75) toluene-d8 (s)	13.225	98	302677	49.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.78%			
99) 4-bromofluorobenzene (s)	16.201	95	107930	49.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.60%			
Target Compounds						Qvalue
119) 1,2,4-trichlorobenzene	19.778	180	1030	0.27	ug/L	82
120) hexachlorobutadiene	19.893	225	301	0.20	ug/L #	49
121) naphthalene	20.108	128	2368	0.22	ug/L	71
122) 1,2,3-trichlorobenzene	20.354	180	959	0.25	ug/L	75
124) 2-methylnaphthalene	21.415	142	1337	0.23	ug/L #	90

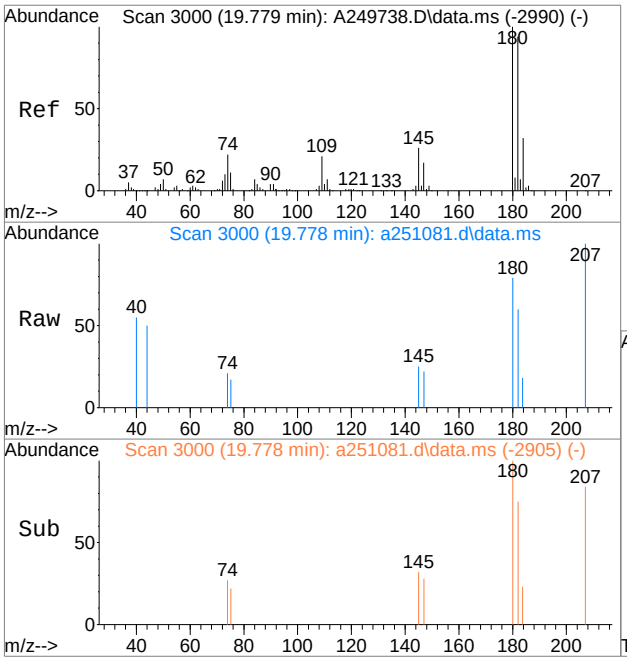
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251081.d
Acq On : 25 Jun 2019 8:58 pm
Operator : brittank
Sample : mb Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 55 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:06:47 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

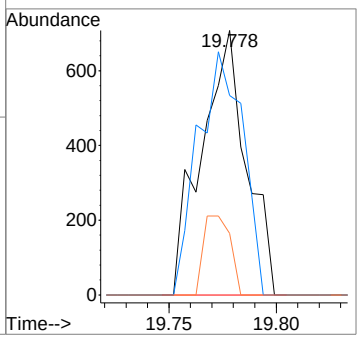


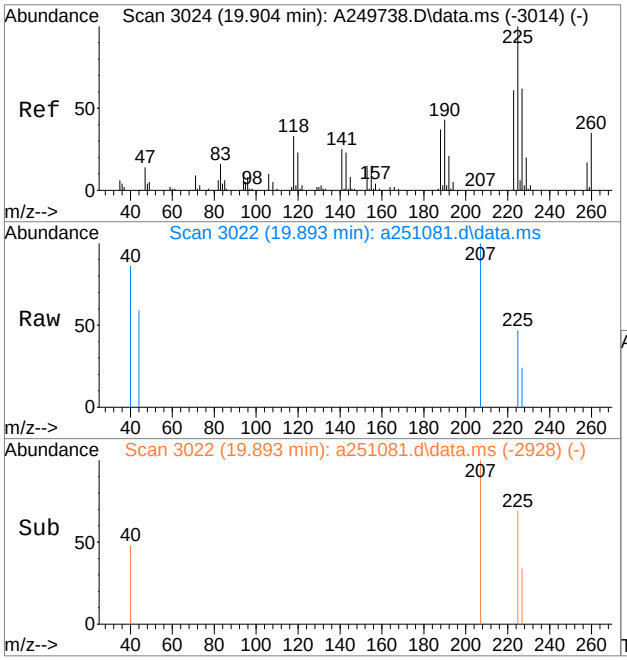


#119
1,2,4-trichlorobenzene
Concen: 0.27 ug/L
RT: 19.778 min Scan# 3000
Delta R.T. -0.001 min
Lab File: a251081.d
Acq: 25 Jun 2019 8:58 pm

Tgt Ion:180 Resp: 1030

Ion	Ratio	Lower	Upper
180	100		
182	75.4	64.1	124.1
184	23.3	1.8	61.8

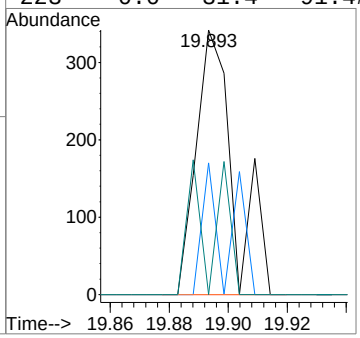


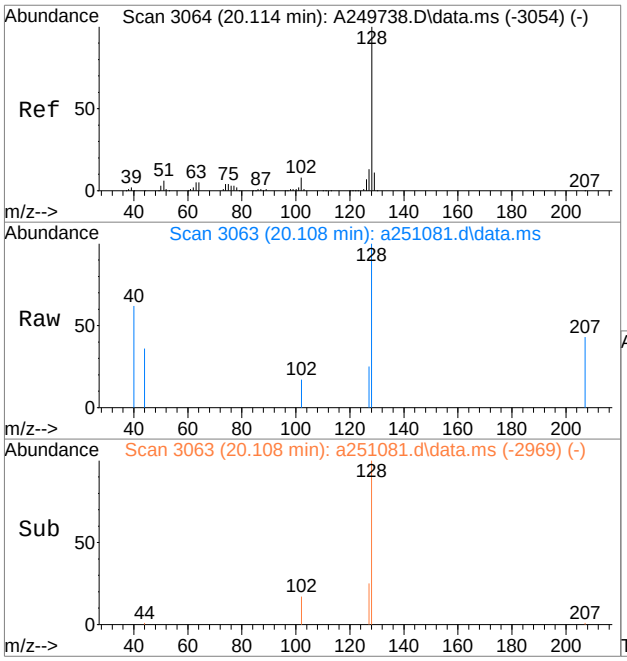


#120
hexachlorobutadiene
Concen: 0.20 ug/L
RT: 19.893 min Scan# 3022
Delta R.T. -0.011 min
Lab File: a251081.d
Acq: 25 Jun 2019 8:58 pm

Tgt Ion:225 Resp: 301

Ion	Ratio	Lower	Upper
225	100		
227	49.7	32.5	92.5
260	0.0	4.5	64.5#
223	0.0	31.4	91.4#

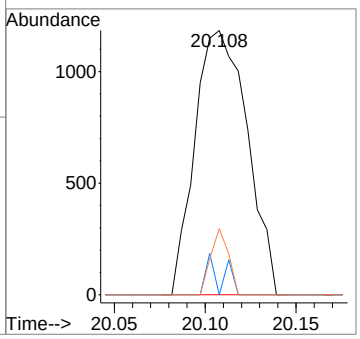


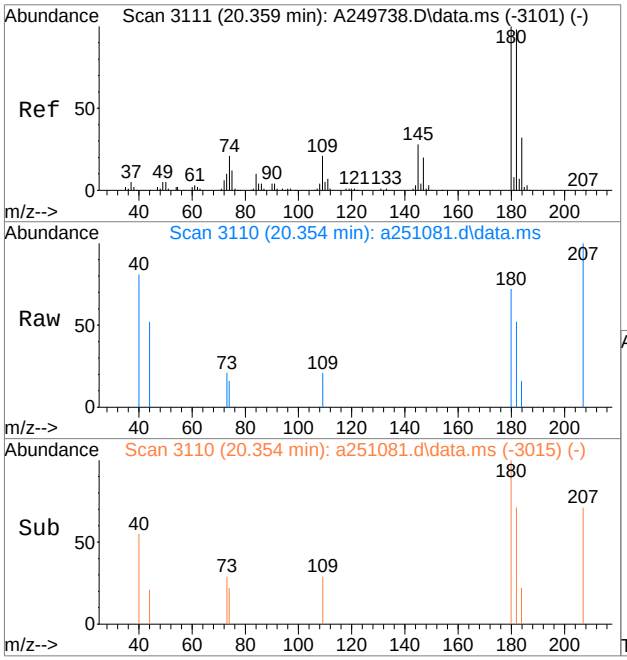


#121
naphthalene
Concen: 0.22 ug/L
RT: 20.108 min Scan# 3063
Delta R.T. -0.006 min
Lab File: a251081.d
Acq: 25 Jun 2019 8:58 pm

Tgt Ion:128 Resp: 2368

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	41.4
127	25.0	0.0	43.3

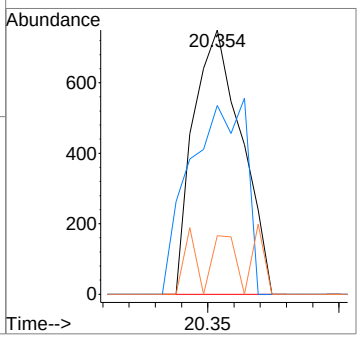


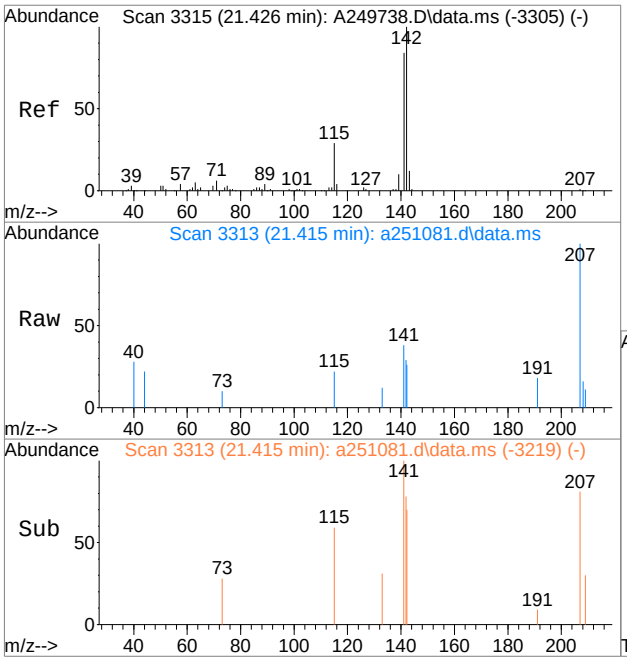


#122
1,2,3-trichlorobenzene
Concen: 0.25 ug/L
RT: 20.354 min Scan# 3110
Delta R.T. -0.005 min
Lab File: a251081.d
Acq: 25 Jun 2019 8:58 pm

Tgt Ion:180 Resp: 959

Ion	Ratio	Lower	Upper
180	100		
182	71.5	68.3	128.3
184	22.1	2.3	62.3

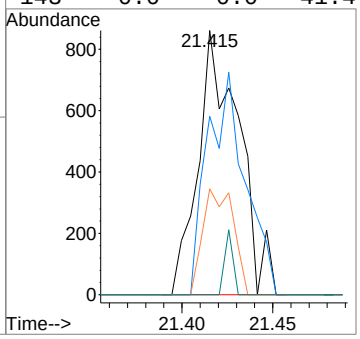




#124
2-methylnaphthalene
Concen: 0.23 ug/L
RT: 21.415 min Scan# 3313
Delta R.T. -0.011 min
Lab File: a251081.d
Acq: 25 Jun 2019 8:58 pm

Tgt Ion:142 Resp: 1337

Ion	Ratio	Lower	Upper
142	100		
141	78.4	67.3	107.3
115	30.1	0.0	59.0
143	0.0	0.0	41.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182397.d
Acq On : 26 Jun 2019 9:08 am
Operator : jessicap
Sample : mb Inst : ACC-VOA-MSX
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:27:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

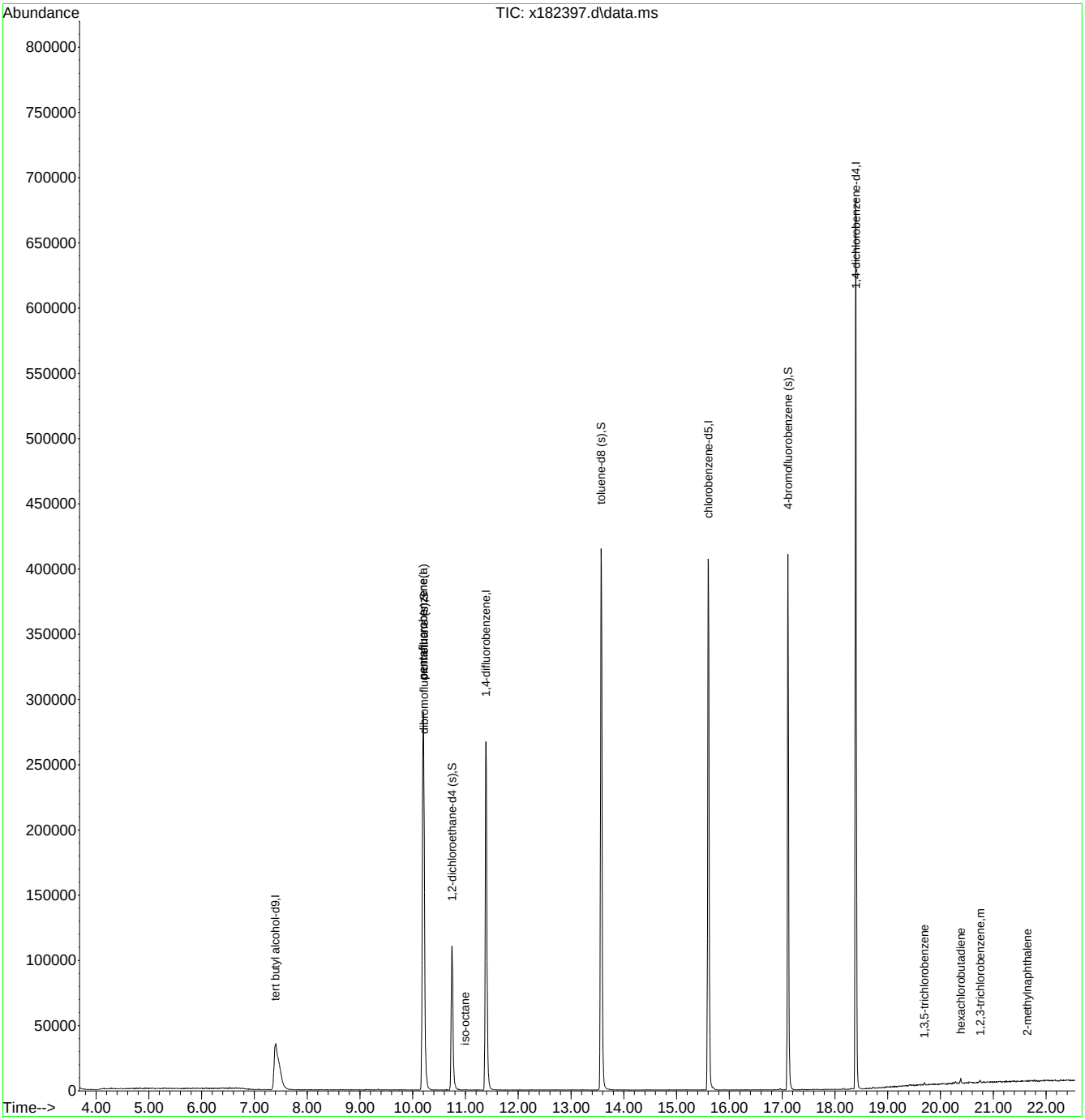
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.393	65	142797	500.00	ug/L	-0.01
5) pentafluorobenzene	10.196	168	204076	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	278274	50.00	ug/L	0.00
74) chlorobenzene-d5	15.604	117	273831	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	183451	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	204076	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	92289	55.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.16%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	94071	51.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.50%			
75) toluene-d8 (s)	13.570	98	335309	51.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.16%			
98) 4-bromofluorobenzene (s)	17.111	95	137097	45.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.24%			
Target Compounds						Qvalue
55) iso-octane	10.991	57	646	0.13	ug/L #	45
117) 1,3,5-trichlorobenzene	19.695	180	635	0.11	ug/L #	64
118) hexachlorobutadiene	20.385	225	854	0.44	ug/L	91
122) 1,2,3-trichlorobenzene	20.751	180	643	0.12	ug/L	79
124) 2-methylnaphthalene	21.645	142	243	3.36	ug/L #	85

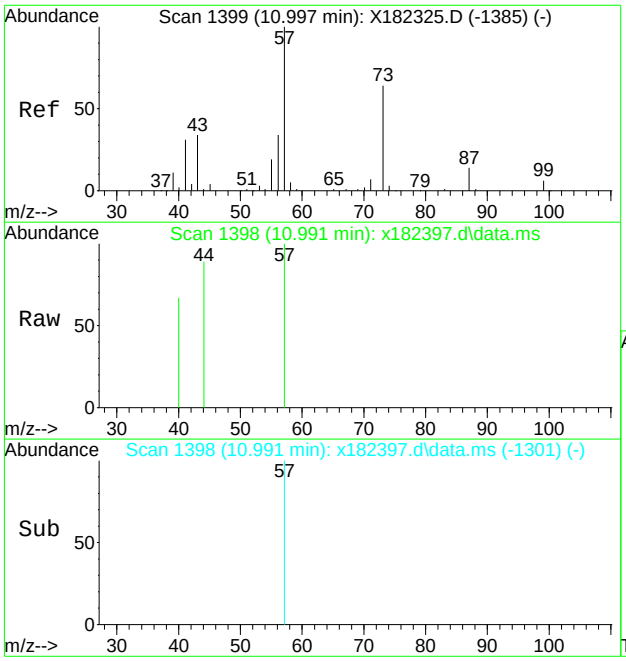
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182397.d
Acq On : 26 Jun 2019 9:08 am
Operator : jessicap
Sample : mb Inst : ACC-VOA-MSX
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:27:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

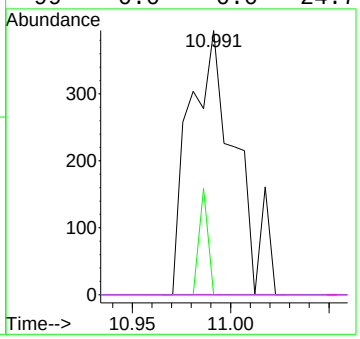


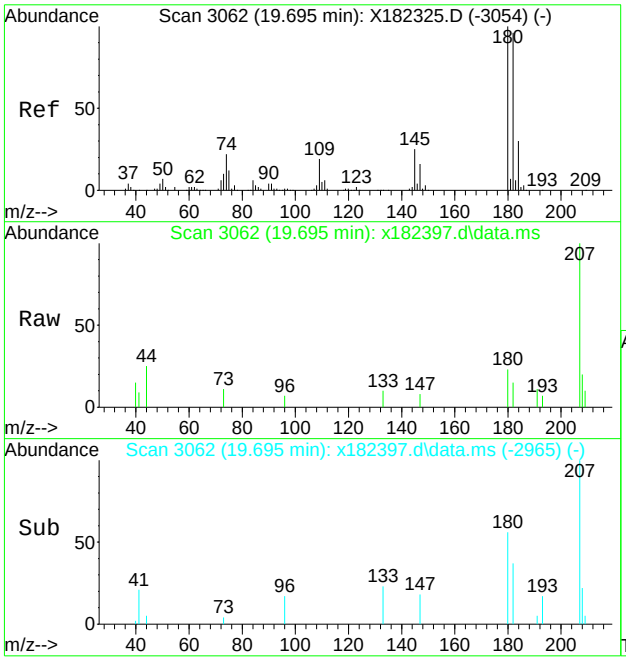


#55
iso-octane
Concen: 0.13 ug/L
RT: 10.991 min Scan# 1398
Delta R.T. 0.005 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion: 57 Resp: 646

Ion	Ratio	Lower	Upper
57	100		
41	0.0	11.7	51.7#
56	0.0	13.2	53.2#
99	0.0	0.0	24.7

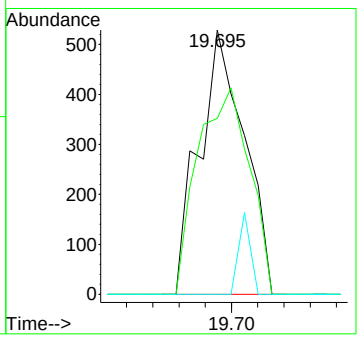


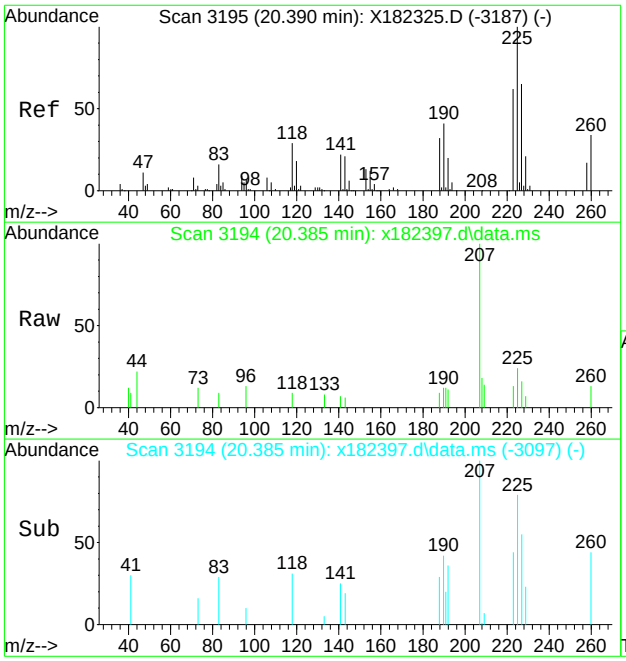


#117
1,3,5-trichlorobenzene
Concen: 0.11 ug/L
RT: 19.695 min Scan# 3062
Delta R.T. 0.005 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:180 Resp: 635

Ion	Ratio	Lower	Upper
180	100		
182	66.5	67.8	127.8#
145	0.0	0.0	55.9

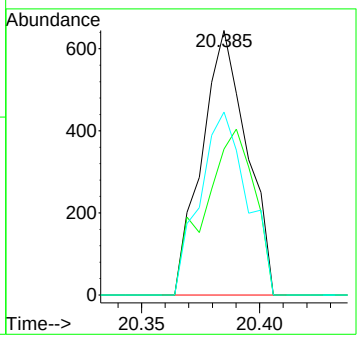


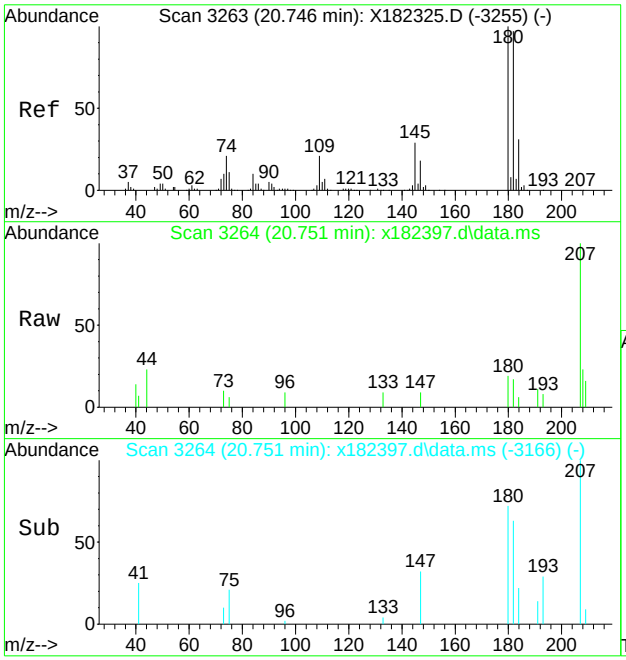


#118
hexachlorobutadiene
Concen: 0.44 ug/L
RT: 20.385 min Scan# 3194
Delta R.T. 0.005 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:225 Resp: 854

Ion	Ratio	Lower	Upper
225	100		
223	55.2	33.3	93.3
227	69.1	33.1	93.1

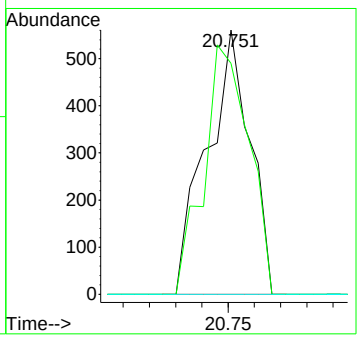


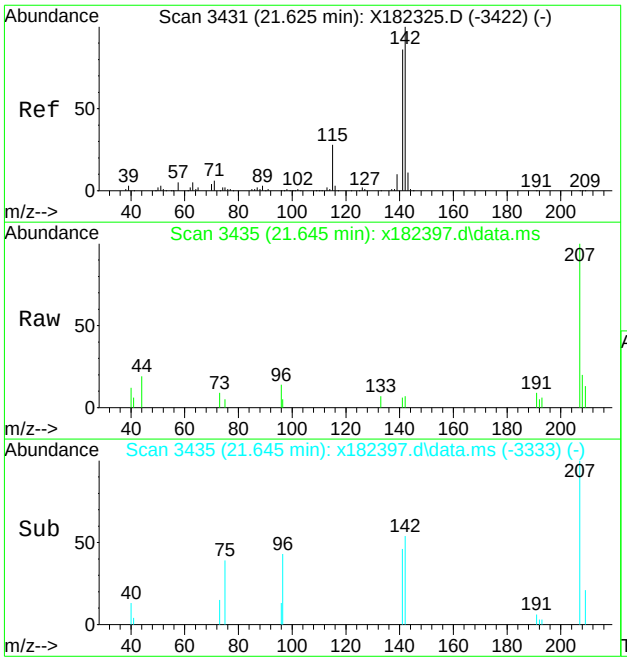


#122
1,2,3-trichlorobenzene
Concen: 0.12 ug/L
RT: 20.751 min Scan# 3264
Delta R.T. 0.010 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:180 Resp: 643

Ion	Ratio	Lower	Upper
180	100		
182	87.3	68.0	128.0
145	0.0	0.0	59.6

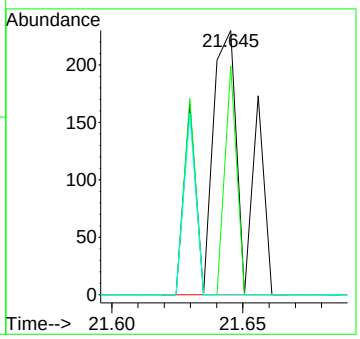




#124
2-methylnaphthalene
Concen: 3.36 ug/L
RT: 21.645 min Scan# 3435
Delta R.T. 0.031 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:142 Resp: 243

Ion	Ratio	Lower	Upper
142	100		
141	86.5	65.5	105.5
115	0.0	10.3	50.3#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91832.d
Acq On : 24 Jun 2019 7:57 am
Operator : edwardd
Sample : bs Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:17:21 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	6.749	65	144178	500.00	ug/L		0.00
5) pentafluorobenzene	8.757	168	335079	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.625	114	433432	50.00	ug/L		0.00
75) chlorobenzene-d5	12.805	117	402176	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.378	152	245994	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.799	113	148707	49.08	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.16%				
55) 1,2-dichloroethane-d4 (s)	9.191	65	140985	49.33	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.66%				
76) toluene-d8 (s)	11.215	98	493605	48.77	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.54%				
99) 4-bromofluorobenzene (s)	14.081	95	200264	49.45	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.90%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.848	59	105077	257.73	ug/L		97
4) 1,4-dioxane	10.242	88	38784	1273.91	ug/L		94
6) chlorodifluoromethane	3.909	51	292411	42.49	ug/L		99
7) dichlorodifluoromethane	3.888	85	275011	40.92	ug/L		98
8) chloromethane	4.243	50	335282	43.42	ug/L		98
9) vinyl chloride	4.447	62	308970	46.20	ug/L		99
10) 1,3-butadiene	4.473	54	219728	43.33	ug/L	#	83
11) bromomethane	4.986	94	206548	45.92	ug/L		99
12) chloroethane	5.117	64	157893	46.22	ug/L		97
13) trichlorofluoromethane	5.519	101	315626	48.74	ug/L		99
14) vinyl bromide	5.420	106	194254	55.42	ug/L		96
15) ethyl ether	5.823	74	95752	47.35	ug/L		90
16) 2-chloropropane	6.022	43	333710	44.20	ug/L		98
17) acrolein	6.027	56	29164	37.99	ug/L		94
18) freon 113	6.215	151	170158	46.39	ug/L		97
19) 1,1-dichloroethene	6.210	61	323251	46.82	ug/L		98
20) acetone	6.189	58	72945	212.83	ug/L		87
21) acetonitrile	6.545	41	233047	417.90	ug/L		99
22) iodomethane	6.445	142	353442	48.67	ug/L		97
23) carbon disulfide	6.581	76	640372	43.49	ug/L		99
24) methylene chloride	6.817	84	228221	47.40	ug/L		99
25) methyl acetate	6.576	43	129532	43.94	ug/L		100
26) methyl tert butyl ether	7.115	73	485160	43.81	ug/L		99
27) trans-1,2-dichloroethene	7.151	61	281545	47.49	ug/L		98
28) hexane	7.449	56	135722	42.94	ug/L		98
29) di-isopropyl ether	7.632	45	656346	44.52	ug/L		97
30) 2-butanone	8.208	72	77563	193.61	ug/L	#	88
31) 1,1-dichloroethane	7.653	63	344030	47.14	ug/L		98
32) chloroprene	7.742	53	254821	45.32	ug/L		98
33) acrylonitrile	7.047	53	68400	44.84	ug/L		95
34) vinyl acetate	7.580	86	28930	48.79	ug/L	#	92
35) ethyl tert-butyl ether	8.040	59	561571	43.33	ug/L		98
36) ethyl acetate	8.218	45	25789	47.71	ug/L		96
37) 2,2-dichloropropane	8.323	77	268439	46.95	ug/L		97
38) cis-1,2-dichloroethene	8.286	96	211772	47.89	ug/L		99
39) propionitrile	8.281	54	248664	426.29	ug/L		92
40) methyl acrylate	8.302	85	24358	48.28	ug/L	#	86
41) methacrylonitrile	8.459	67	66316	47.15	ug/L		92
42) bromochloromethane	8.558	128	104318	49.25	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91832.d
Acq On : 24 Jun 2019 7:57 am
Operator : edwardd
Sample : bs Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:17:21 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	8.574	72	22055	43.85	ug/L		89
44) chloroform	8.626	83	329156	47.33	ug/L		98
45) tert-butyl formate	8.663	59	132047	43.62	ug/L		100
47) 1,1,1-trichloroethane	8.883	97	303689	49.31	ug/L		99
48) cyclohexane	8.987	84	287345	46.04	ug/L		96
50) 1,1-dichloropropene	9.029	75	233732	47.40	ug/L		98
51) carbon tetrachloride	9.066	117	268993	52.24	ug/L		100
52) tert-amyl alcohol	9.118	73	45348	176.18	ug/L	#	84
53) isopropyl acetate	9.144	87	34031	48.64	ug/L	#	86
56) n-butyl alcohol	9.651	41	160691	1830.47	ug/L		100
57) 2,2,4-trimethylpentane	9.338	57	700056	45.58	ug/L		98
58) benzene	9.259	78	703422	47.79	ug/L		99
59) tert-amyl methyl ether	9.322	73	530066	43.94	ug/L		98
60) heptane	9.479	57	123864	46.37	ug/L		98
61) 1,2-dichloroethane	9.275	62	213790	49.22	ug/L		97
62) ethyl acrylate	9.892	55	181682	47.19	ug/L		99
63) trichloroethene	9.929	95	179537	50.96	ug/L		97
64) 2-chloroethyl vinyl ether	10.676	63	492893	249.40	ug/L		98
65) methyl methacrylate	10.148	100	37732	48.28	ug/L		95
66) methylcyclohexane	10.221	83	341608	45.88	ug/L		99
67) 1,2-dichloropropane	10.206	63	183803	50.18	ug/L		98
68) dibromomethane	10.310	93	108682	51.13	ug/L		96
69) bromodichloromethane	10.452	83	238088	53.38	ug/L		98
70) 2-nitropropane	10.640	41	51044	61.95	ug/L		97
71) epichlorohydrin	10.765	57	77948	228.91	ug/L		98
72) cis-1,3-dichloropropene	10.901	75	271044	51.61	ug/L		99
73) 4-methyl-2-pentanone	10.996	58	261601	185.70	ug/L		92
74) isoamyl alcohol	10.985	70	85646	772.57	ug/L		96
77) toluene	11.294	92	406482	48.49	ug/L		100
78) ethyl methacrylate	11.461	69	193992	47.57	ug/L		96
79) trans-1,3-dichloropropene	11.477	75	233076	51.36	ug/L		96
80) 1,1,2-trichloroethane	11.707	83	127815	50.53	ug/L		99
81) tetrachloroethene	11.869	164	157787	50.22	ug/L		98
82) 2-hexanone	11.869	58	241744	182.76	ug/L		99
83) 1,3-dichloropropane	11.900	76	232664	49.52	ug/L		96
84) butyl acetate	11.953	56	108130	46.97	ug/L		99
85) dibromochloromethane	12.162	129	183118	55.38	ug/L		99
86) 1,2-dibromoethane	12.329	107	177526	44.85	ug/L		99
87) n-butyl ether	12.789	57	731458	47.72	ug/L		100
88) chlorobenzene	12.842	112	473297	50.38	ug/L		99
89) 1,1,1,2-tetrachloroethane	12.910	131	199454	53.01	ug/L		98
90) ethylbenzene	12.905	91	805365	48.95	ug/L		100
91) m,p-xylene	13.035	106	615759	98.57	ug/L		98
92) o-xylene	13.475	91	690706	49.53	ug/L		100
93) styrene	13.485	104	515628	50.67	ug/L		95
94) butyl acrylate	13.281	55	339306	46.01	ug/L		99
95) isopropylbenzene	13.856	105	858858	48.61	ug/L		100
96) bromoform	13.741	173	136360	57.27	ug/L		99
97) cis-1,4-dichloro-2-butene	13.893	88	67973	55.20	ug/L		97
100) 1,1,2,2-tetrachloroethane	14.160	83	227230	48.29	ug/L		98
101) trans-1,4-dichloro-2-b...	14.196	53	47980	50.90	ug/L		97
102) 1,2,3-trichloropropane	14.259	110	56757	50.80	ug/L		95
103) bromobenzene	14.280	156	236015	50.81	ug/L		94
104) n-propylbenzene	14.317	91	995885	49.27	ug/L		99
105) 2-chlorotoluene	14.463	126	216253	51.03	ug/L		96
106) 4-chlorotoluene	14.589	91	586637	49.46	ug/L		99
107) 1,3,5-trimethylbenzene	14.489	105	740949	48.77	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91832.d
Acq On : 24 Jun 2019 7:57 am
Operator : edwardd
Sample : bs Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:17:21 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

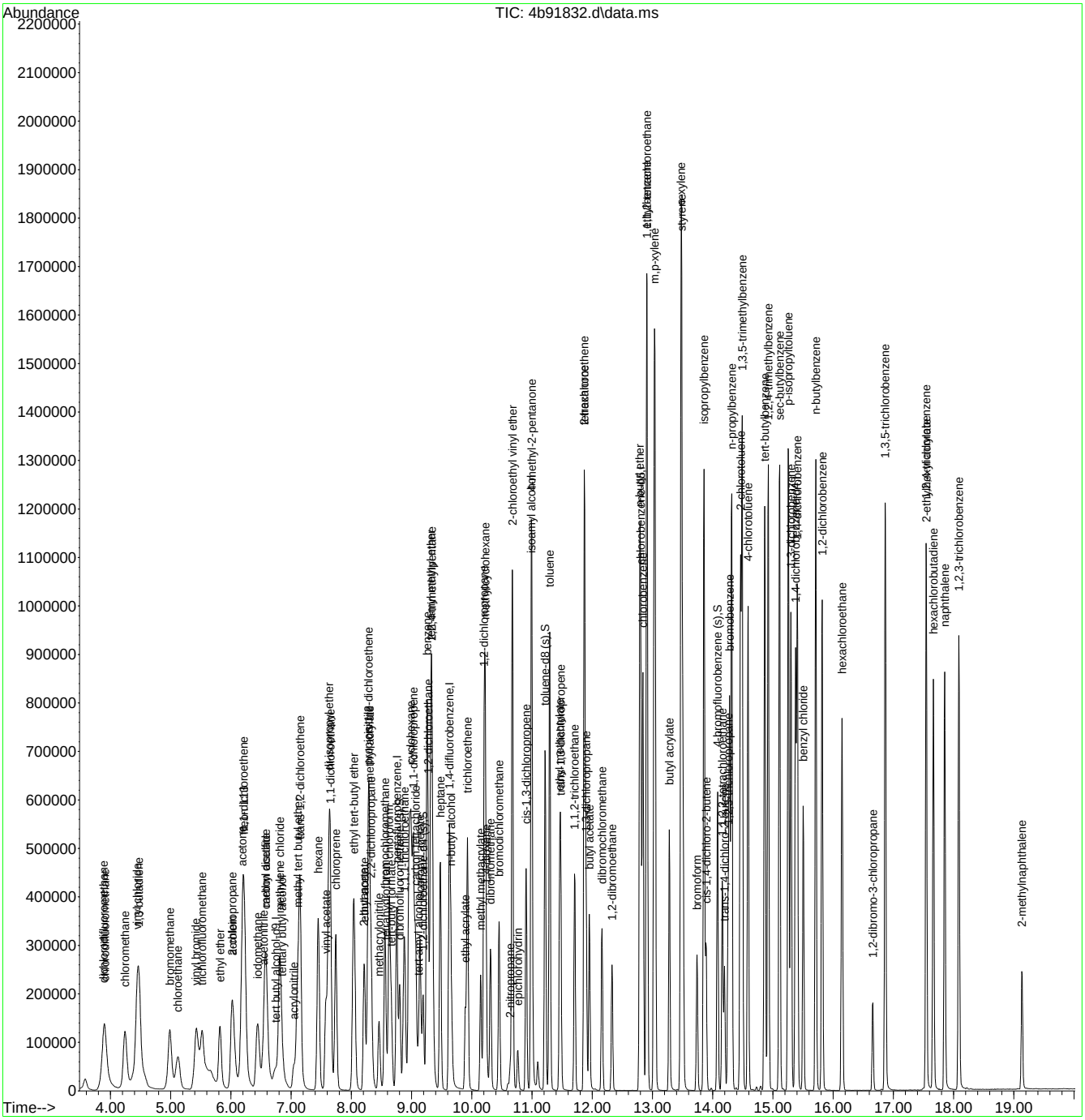
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	14.866	119	622030	47.90	ug/L	97
109) 1,2,4-trimethylbenzene	14.923	105	736989	48.40	ug/L	100
110) sec-butylbenzene	15.112	105	954576	48.33	ug/L	99
111) p-isopropyltoluene	15.258	119	810817	48.23	ug/L	99
112) 1,3-dichlorobenzene	15.300	146	438275	49.27	ug/L	100
113) 1,4-dichlorobenzene	15.405	146	443868	49.68	ug/L	99
114) 1,2-dichlorobenzene	15.818	146	449874	48.90	ug/L	99
115) benzyl chloride	15.504	91	424222	51.28	ug/L	100
116) n-butylbenzene	15.713	92	402374	49.57	ug/L	100
117) hexachloroethane	16.147	201	161637	53.65	ug/L	97
118) 1,2-dibromo-3-chloropr...	16.660	157	56180	48.27	ug/L	97
119) 1,3,5-trichlorobenzene	16.864	180	422604	49.72	ug/L	99
120) 1,2,4-trichlorobenzene	17.544	180	370866	49.67	ug/L	99
121) 2-ethylhexyl acrylate	17.549	70	16698	4.79	ug/L	83
122) hexachlorobutadiene	17.664	225	204940	49.06	ug/L	99
123) naphthalene	17.852	128	691884	45.19	ug/L	100
124) 1,2,3-trichlorobenzene	18.088	180	333932	48.95	ug/L	99
125) 2-methylnaphthalene	19.134	142	134983	17.89	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91832.d
Acq On : 24 Jun 2019 7:57 am
Operator : edwardd
Sample : bs Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:17:21 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251079.d
Acq On : 25 Jun 2019 8:00 pm
Operator : brittank
Sample : bs Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 53 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:09 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.168	65	292513	500.00	ug/L	0.00
5) pentafluorobenzene	10.542	168	217831	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	320146	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	277721	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.519	152	145240	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	111551	51.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.92%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	117117	50.92	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.84%			
75) toluene-d8 (s)	13.230	98	363566	49.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.44%			
99) 4-bromofluorobenzene (s)	16.201	95	122077	53.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.92%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.298	59	155247	256.98	ug/L	98
4) 1,4-dioxane	12.179	88	55561	1419.97	ug/L	99
6) chlorodifluoromethane	4.585	51	178198	42.12	ug/L	94
7) dichlorodifluoromethane	4.554	85	202961	39.44	ug/L	99
8) chloromethane	4.993	50	212588	38.04	ug/L	98
9) vinyl chloride	5.249	62	204360	43.16	ug/L	98
10) 1,3-butadiene	5.270	54	128310	28.43	ug/L	95
11) bromomethane	5.929	94	137305	41.28	ug/L	99
12) chloroethane	6.107	64	107897	44.83	ug/L	99
13) vinyl bromide	6.499	106	142187	44.81	ug/L	100
14) trichlorofluoromethane	6.635	101	218304	44.55	ug/L	100
15) ethyl ether	7.022	74	52087	47.52	ug/L	95
16) acrolein	7.263	56	25286	50.72	ug/L	82
17) freon 113	7.503	151	107061	44.96	ug/L	98
18) 1,1-dichloroethene	7.477	96	112089	47.59	ug/L	100
19) acetone	7.477	58	62042	195.90	ug/L	94
20) acetonitrile	7.917	41	249375	497.36	ug/L	98
21) iodomethane	7.755	142	208033	49.72	ug/L	98
22) carbon disulfide	7.911	76	361807	46.17	ug/L	100
23) methylene chloride	8.230	84	125365	51.11	ug/L	96
24) methyl acetate	7.969	43	108042	48.70	ug/L	99
25) methyl tert butyl ether	8.607	73	339874	48.96	ug/L	99
26) trans-1,2-dichloroethene	8.638	96	101414	49.57	ug/L	96
27) hexane	9.015	57	124841	42.20	ug/L	99
28) di-isopropyl ether	9.229	45	345069	48.53	ug/L	97
29) ethyl tert-butyl ether	9.711	59	339374	49.90	ug/L	96
30) 2-butanone	9.915	72	75190	205.76	ug/L #	84
31) 1,1-dichloroethane	9.240	63	175994	47.86	ug/L	98
32) chloroprene	9.350	53	138365	46.42	ug/L	99
33) acrylonitrile	8.529	53	56567	50.05	ug/L	96
34) vinyl acetate	9.172	86	23143	49.27	ug/L	96
35) ethyl acetate	9.930	45	21445	52.51	ug/L #	70
36) 2,2-dichloropropane	10.030	77	183348	51.15	ug/L	98
37) cis-1,2-dichloroethene	9.988	96	115462	48.97	ug/L	99
38) methyl acrylate	10.019	85	20649	50.68	ug/L #	84
39) propionitrile	9.998	54	242469	502.20	ug/L	96
40) bromochloromethane	10.296	128	59734	49.65	ug/L	98
41) tetrahydrofuran	10.323	42	47316	45.14	ug/L	96
42) chloroform	10.385	83	177937	46.55	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251079.d
Acq On : 25 Jun 2019 8:00 pm
Operator : brittank
Sample : bs Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 53 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:09 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.422	59	108064	55.65	ug/L	97
45) methacrylonitrile	10.197	67	52209	49.96	ug/L	87
46) cyclohexane	10.778	84	180495	45.43	ug/L	97
47) 1,1,1-trichloroethane	10.657	97	186838	49.88	ug/L	97
48) iso-butyl alcohol	10.783	43	174381	483.32	ug/L	87
49) 1,1-dichloropropene	10.830	75	131067	46.83	ug/L	97
50) carbon tetrachloride	10.866	117	163839	48.94	ug/L	99
51) tert-amyl alcohol	10.961	73	76923	229.34	ug/L	97
54) benzene	11.091	78	388496	47.54	ug/L	98
55) iso-octane	11.185	57	365557	47.66	ug/L	99
56) tert-amyl methyl ether	11.165	73	344450	49.49	ug/L	98
57) heptane	11.342	71	69048	45.44	ug/L	98
58) isopropyl acetate	10.982	87	30238	50.43	ug/L	95
59) 1,2-dichloroethane	11.112	62	133049	45.37	ug/L	96
60) n-butyl alcohol	11.552	56	351110	2498.97	ug/L	98
61) ethyl acrylate	11.803	55	136307	51.14	ug/L	100
62) trichloroethene	11.839	95	100746	48.40	ug/L	96
63) 2-nitropropane	12.624	41	43301	49.04	ug/L	91
64) methylcyclohexane	12.148	83	190557	44.36	ug/L	100
65) 2-chloroethyl vinyl ether	12.650	63	305159	275.99	ug/L	99
66) methyl methacrylate	12.085	100	32078	54.45	ug/L	97
67) 1,2-dichloropropane	12.132	63	101238	51.33	ug/L	95
68) dibromomethane	12.252	93	69823	52.60	ug/L	97
69) bromodichloromethane	12.409	83	142058	52.13	ug/L	98
70) epichlorohydrin	12.744	57	76195	257.25	ug/L	99
71) cis-1,3-dichloropropene	12.896	75	160396	55.08	ug/L	98
72) 4-methyl-2-pentanone	13.000	58	242154	198.70	ug/L	95
73) 3-methyl-1-butanol	13.000	55	220234	962.88	ug/L	98
76) toluene	13.309	92	235851	48.05	ug/L	97
77) trans-1,3-dichloropropene	13.508	75	133200	52.75	ug/L	97
78) ethyl methacrylate	13.487	69	130410	51.05	ug/L	97
79) 1,1,2-trichloroethane	13.748	83	72740	51.87	ug/L	97
80) 2-hexanone	13.921	58	196466	189.54	ug/L	98
81) tetrachloroethene	13.921	166	107597	44.78	ug/L	98
82) 1,3-dichloropropane	13.952	76	135128	50.07	ug/L	95
83) butyl acetate	13.999	56	76635	49.69	ug/L	94
84) dibromochloromethane	14.224	129	107757	51.30	ug/L	96
85) 1,2-dibromoethane	14.397	107	102173	53.20	ug/L	96
86) n-butyl ether	14.867	57	389429	48.32	ug/L	99
87) chlorobenzene	14.930	112	249804	48.95	ug/L	98
88) 1,1,1,2-tetrachloroethane	15.003	131	125961	49.26	ug/L	96
89) ethylbenzene	14.998	91	434318	47.63	ug/L	100
90) m,p-xylene	15.129	106	342076	96.50	ug/L	98
91) o-xylene	15.584	106	192073	48.97	ug/L	98
92) styrene	15.594	104	270764	48.02	ug/L	99
93) butyl acrylate	15.375	55	200981	50.00	ug/L	99
94) n-amyl acetate	15.605	70	87203	48.26	ug/L	95
95) bromoform	15.856	173	79386	54.28	ug/L	94
96) isopropylbenzene	15.971	105	519742	49.00	ug/L	99
97) cis-1,4-dichloro-2-butene	16.008	75	50425	159.80	ug/L	93
100) bromobenzene	16.410	156	116789	54.68	ug/L	95
101) 1,1,2,2-tetrachloroethane	16.285	83	155039	55.89	ug/L	97
102) trans-1,4-dichloro-2-b...	16.316	53	30152	140.17	ug/L	91
103) 1,2,3-trichloropropane	16.384	110	41882	52.72	ug/L	100
104) n-propylbenzene	16.442	91	539049	51.73	ug/L	99
105) 2-chlorotoluene	16.593	126	120615	51.96	ug/L	99
106) 4-chlorotoluene	16.719	91	282072	52.00	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251079.d
Acq On : 25 Jun 2019 8:00 pm
Operator : brittank
Sample : bs Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 53 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:09 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

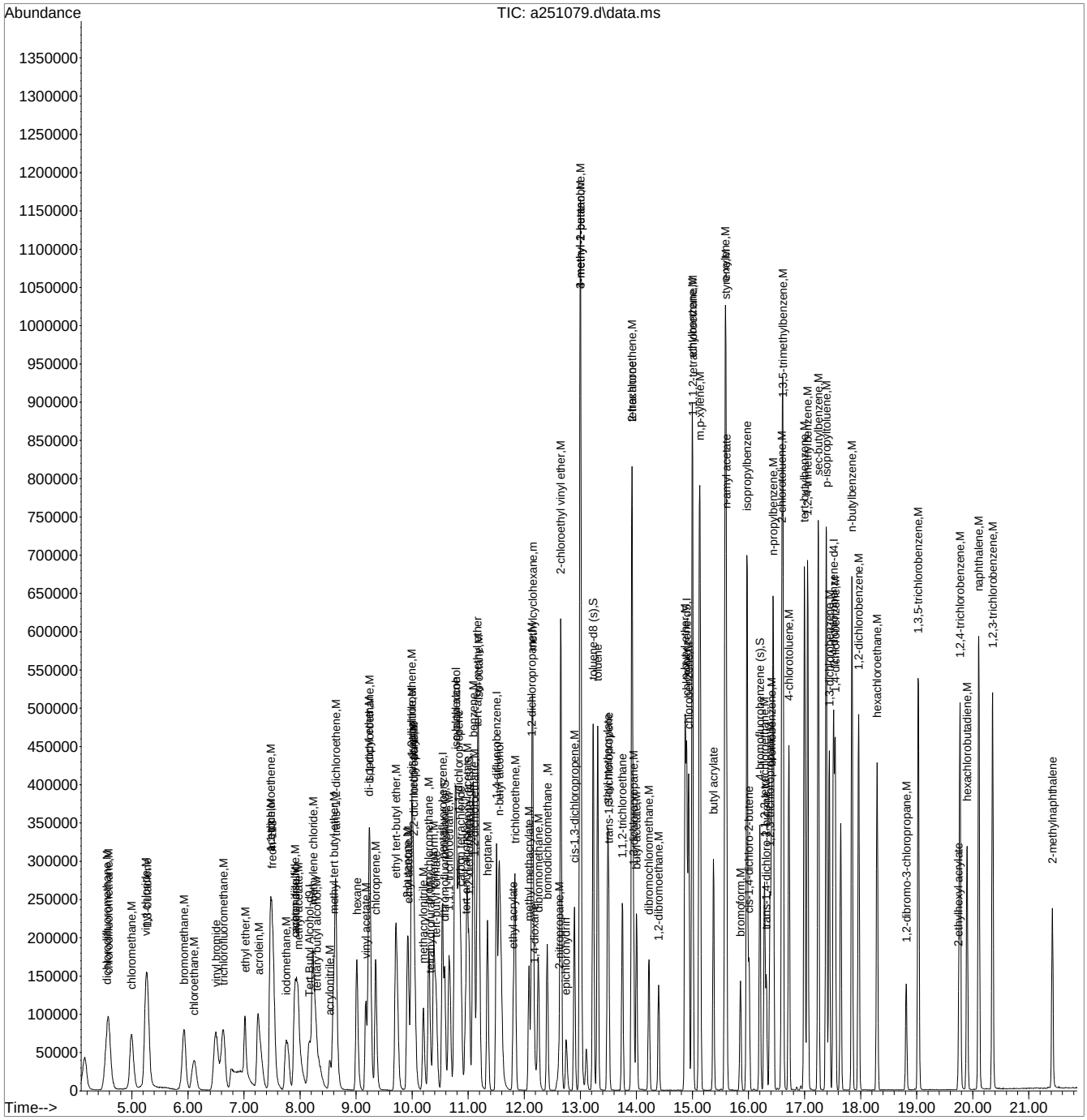
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.614	105	431263	53.67	ug/L	99
108) tert-butylbenzene	16.996	134	97236	52.24	ug/L	97
109) 1,2,4-trimethylbenzene	17.054	105	416544	52.39	ug/L	99
110) sec-butylbenzene	17.242	105	575970	52.50	ug/L	100
111) 1,3-dichlorobenzene	17.441	146	212905	50.28	ug/L	97
112) p-isopropyltoluene	17.388	119	484661	53.01	ug/L	99
113) 1,4-dichlorobenzene	17.545	146	209060	48.78	ug/L	98
114) 1,2-dichlorobenzene	17.964	146	232668	50.71	ug/L	98
115) n-butylbenzene	17.843	92	223294	49.96	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.816	157	50050	51.66	ug/L	96
117) 1,3,5-trichlorobenzene	19.025	180	209479	48.43	ug/L	100
118) 2-ethylhexyl acrylate	19.747	70	23403	9.80	ug/L	94
119) 1,2,4-trichlorobenzene	19.773	180	196163	50.41	ug/L	98
120) hexachlorobutadiene	19.899	225	81889	52.89	ug/L	98
121) naphthalene	20.108	128	553680	48.67	ug/L	99
122) 1,2,3-trichlorobenzene	20.354	180	199547	51.09	ug/L	95
123) hexachloroethane	18.293	201	89414	62.16	ug/L	97
124) 2-methylnaphthalene	21.421	142	144278	23.78	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251079.d
Acq On : 25 Jun 2019 8:00 pm
Operator : brittank
Sample : bs Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 53 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:09 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	138229	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	191602	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	260813	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	266607	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.39	152	143631	50.00	ug/L		0.00
127) pentafluorobenzene(a)	10.20	168	191602	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.21	113	83735	53.71	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.42%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	82861	48.16	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.32%				
75) toluene-d8 (s)	13.57	98	314394	49.19	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.38%				
98) 4-bromofluorobenzene (s)	17.11	95	123061	52.30	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.60%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.54	59	76181	243.09	ug/L		94
4) 1,4-dioxane	12.24	88	37154	1437.88	ug/L		95
6) chlorodifluoromethane	3.90	51	246030	42.03	ug/L		99
7) dichlorodifluoromethane	3.89	85	288005	49.51	ug/L		98
8) chloromethane	4.28	50	329670	44.66	ug/L		100
9) vinyl chloride	4.52	62	296942	48.79	ug/L		99
10) bromomethane	5.13	96	155290	51.27	ug/L		97
11) chloroethane	5.31	64	100407	49.22	ug/L		94
12) vinyl bromide	5.66	106	122811	53.88	ug/L		94
13) trichlorofluoromethane	5.81	101	204325	55.09	ug/L		98
14) 1,3-butadiene	4.53	54	110063	42.34	ug/L		98
15) ethyl ether	6.22	74	42343	51.32	ug/L		87
16) acrolein	6.44	56	12810	33.37	ug/L		96
17) 1,1-dichloroethene	6.67	96	71104	51.47	ug/L		97
18) freon 113	6.70	101	123250	55.45	ug/L		97
19) acetone	6.66	43	101677	201.79	ug/L		96
20) acetonitrile	7.10	41	154990	464.20	ug/L		99
21) iodomethane	6.93	142	134291	50.50	ug/L		97
22) carbon disulfide	7.10	76	245096	49.89	ug/L		95
23) methylene chloride	7.46	84	90760	51.95	ug/L		91
24) methyl acetate	7.18	43	59229	44.48	ug/L		95
25) methyl tert butyl ether	7.88	73	284441	47.29	ug/L		100
26) trans-1,2-dichloroethene	7.92	96	79708	53.40	ug/L		99
27) hexane	8.36	57	115735	52.90	ug/L		95
28) di-isopropyl ether	8.62	45	308289	44.67	ug/L		97
29) 2-butanone	9.39	72	40123	232.49	ug/L	#	82
30) 1,1-dichloroethane	8.60	63	149901	52.38	ug/L		98
31) chloroprene	8.73	53	106457	49.92	ug/L		92
32) acrylonitrile	7.77	53	32941	52.85	ug/L		94
33) vinyl acetate	8.53	86	14380	49.19	ug/L	#	69
34) ethyl tert-butyl ether	9.18	59	312846	48.96	ug/L		98
35) ethyl acetate	9.44	45	13692	51.38	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.53	77	160778	54.76	ug/L		94
37) cis-1,2-dichloroethene	9.48	96	91417	53.18	ug/L		97
38) methyl acrylate	9.54	85	11569	56.99	ug/L		97
39) propionitrile	9.47	54	130566	531.13	ug/L		98
40) tert-butyl formate	10.02	59	73358	45.71	ug/L		95
41) bromochloromethane	9.85	128	46740	53.38	ug/L		98
42) tetrahydrofuran	9.88	72	10660	50.93	ug/L		97
43) chloroform	9.97	83	143521	51.34	ug/L		97
45) methacrylonitrile	9.73	67	33287	52.67	ug/L		85
46) 1,1,1-trichloroethane	10.30	97	155100	54.05	ug/L		99
47) cyclohexane	10.45	84	161393	50.90	ug/L		89
48) tert amyl alcohol	10.69	55	27290	273.64	ug/L	#	76
49) 1,1-dichloropropene	10.52	75	99040	53.78	ug/L		96
51) carbon tetrachloride	10.56	117	129226	53.62	ug/L		100
52) isopropyl acetate	10.75	87	18117	54.67	ug/L	#	74
55) iso-octane	10.99	57	259317	55.97	ug/L		98
56) epichlorohydrin	12.96	57	45662	247.90	ug/L		94
57) n-butyl alcohol	11.46	56	172143	2893.85	ug/L		92
58) benzene	10.83	78	310890	51.37	ug/L		98
59) tert-amyl methyl ether	10.97	73	280593	47.74	ug/L		97
60) heptane	11.21	57	53919	58.42	ug/L		91
61) 1,2-dichloroethane	10.86	62	92862	45.49	ug/L		99
62) trichloroethene	11.80	130	86836	54.68	ug/L		97
63) ethyl acrylate	11.80	55	100211	50.29	ug/L		99
64) 2-nitropropane	12.79	41	17696	38.04	ug/L		95
65) 2-chloroethyl vinyl ether	12.87	63	297657	263.68	ug/L		100
66) methyl methacrylate	12.15	100	21203	50.32	ug/L	#	85
67) 1,2-dichloropropane	12.17	76	33718	50.52	ug/L		92
68) dibromomethane	12.31	93	52052	51.62	ug/L		97
69) methylcyclohexane	12.20	83	160981	57.95	ug/L		95
70) bromodichloromethane	12.53	83	114247	50.71	ug/L		96
71) cis-1,3-dichloropropene	13.16	75	140238	51.67	ug/L		90
72) 4-methyl-2-pentanone	13.30	58	148496	217.15	ug/L		88
73) 3-methyl-1-butanol	13.32	70	64754	1151.82	ug/L		93
76) toluene	13.67	92	196111	49.50	ug/L		99
77) trans-1,3-dichloropropene	13.93	75	125615	48.84	ug/L		96
78) ethyl methacrylate	13.95	69	106570	50.28	ug/L		93
79) 1,1,2-trichloroethane	14.22	83	68755	51.08	ug/L		94
80) tetrachloroethene	14.43	164	73765	51.01	ug/L		99
81) 1,3-dichloropropane	14.46	76	120951	47.91	ug/L		91
82) 2-hexanone	14.46	58	131631	205.38	ug/L		93
83) butyl acetate	14.60	56	62216	48.07	ug/L		92
84) dibromochloromethane	14.79	129	94566	50.41	ug/L		98
85) 1,2-dibromoethane	14.99	107	94470	52.55	ug/L		99
86) n-butyl ether	15.66	57	346767	48.51	ug/L		100
87) chlorobenzene	15.64	112	229125	50.63	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	98610	49.34	ug/L		97
89) ethylbenzene	15.74	91	360756	48.67	ug/L		99
90) m,p-xylene	15.91	106	288069	97.40	ug/L		99
91) o-xylene	16.43	91	328086	48.29	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

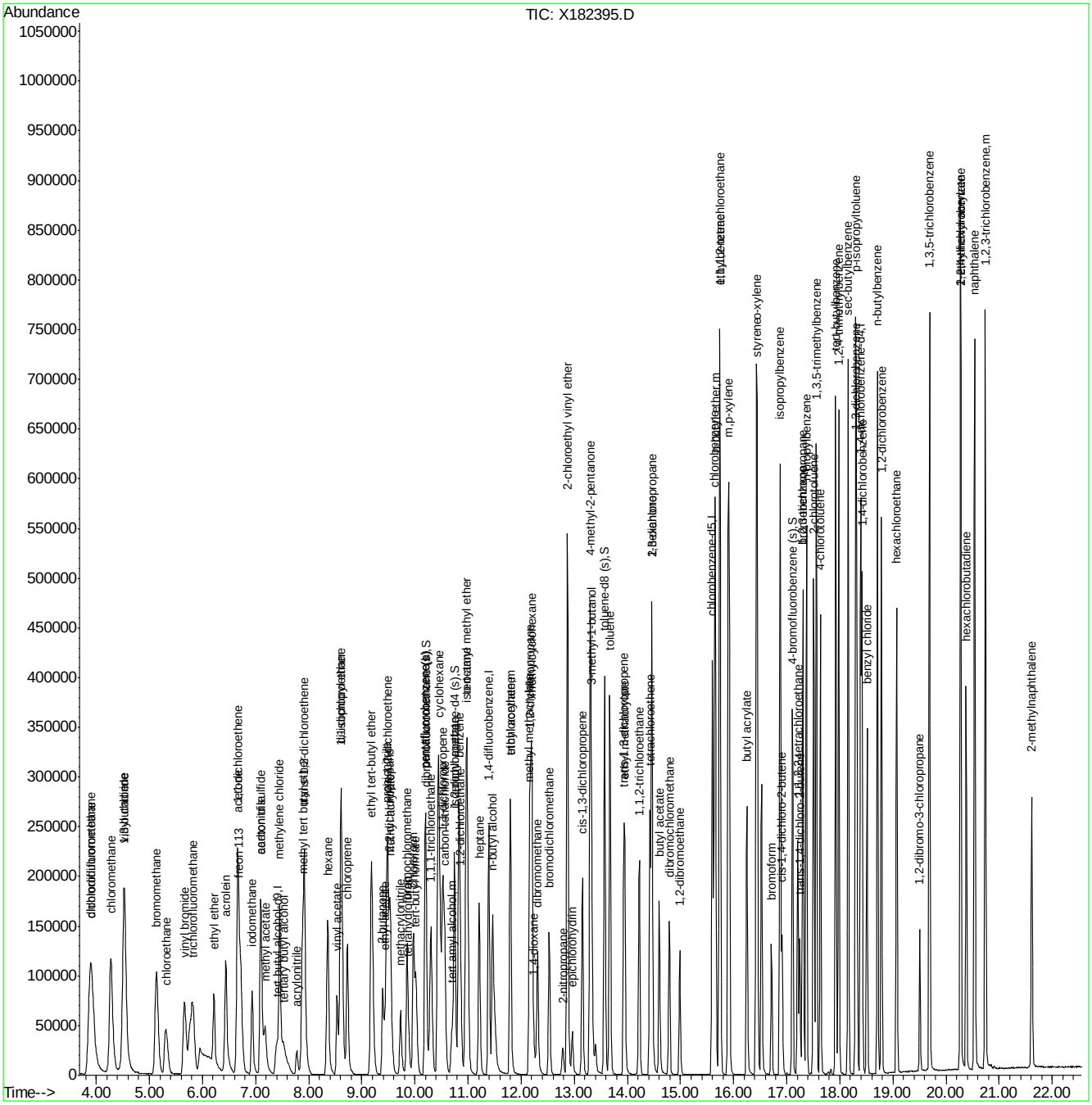
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) styrene	16.45	104	242512	49.46	ug/L		97
93) butyl acrylate	16.25	55	185394	44.86	ug/L		99
94) bromoform	16.72	173	67488	50.99	ug/L		96
95) isopropylbenzene	16.88	105	430321	49.41	ug/L		99
96) cis-1,4-dichloro-2-butene	16.91	88	34438	47.86	ug/L		91
99) bromobenzene	17.31	156	105864	50.86	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.21	83	120831	53.66	ug/L		98
101) trans-1,4-dichloro-2-buten	17.25	53	25079	49.05	ug/L		84
102) 1,2,3-trichloropropane	17.30	110	29106	51.51	ug/L	#	75
103) n-propylbenzene	17.37	91	441421	50.85	ug/L		98
104) 2-chlorotoluene	17.51	126	102589	52.15	ug/L		98
105) 4-chlorotoluene	17.63	91	260662	49.32	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	341980	51.84	ug/L		100
107) tert-butylbenzene	17.92	119	327120	54.57	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	349536	50.79	ug/L		99
109) sec-butylbenzene	18.16	105	482391	53.13	ug/L		98
110) 1,3-dichlorobenzene	18.32	146	196247	48.91	ug/L		99
111) p-isopropyltoluene	18.30	119	404056	51.11	ug/L		98
112) 1,4-dichlorobenzene	18.42	146	198952	51.12	ug/L		98
113) 1,2-dichlorobenzene	18.78	146	223288	50.40	ug/L		98
114) benzyl chloride	18.51	91	234997	52.50	ug/L		99
115) n-butylbenzene	18.71	92	201183	53.39	ug/L		99
116) 1,2-dibromo-3-chloropropan	19.51	157	39829	54.01	ug/L		96
117) 1,3,5-trichlorobenzene	19.69	180	238566	53.67	ug/L		99
118) hexachlorobutadiene	20.38	225	82284	54.39	ug/L		98
119) naphthalene	20.54	128	584235	55.60	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	22111	11.57	ug/L	#	87
121) 1,2,4-trichlorobenzene	20.28	180	251142	58.94	ug/L		98
122) 1,2,3-trichlorobenzene	20.74	180	256851	59.48	ug/L		98
123) hexachloroethane	19.07	201	80275	57.39	ug/L		98
124) 2-methylnaphthalene	21.61	142	142780	20.46	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91837.d
Acq On : 24 Jun 2019 10:21 am
Operator : edwardd
Sample : JC90121-16ms Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:28:53 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	6.738	65	138636	500.00	ug/L		0.00
5) pentafluorobenzene	8.757	168	335865	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.625	114	440292	50.00	ug/L		0.00
75) chlorobenzene-d5	12.805	117	411553	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.379	152	243868	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.804	113	150526	49.56	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.12%				
55) 1,2-dichloroethane-d4 (s)	9.191	65	140501	48.39	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.78%				
76) toluene-d8 (s)	11.215	98	498421	48.12	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.24%				
99) 4-bromofluorobenzene (s)	14.082	95	202312	50.39	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.838	59	81418	207.68	ug/L		97
4) 1,4-dioxane	10.243	88	33812	1154.99	ug/L		93
6) chlorodifluoromethane	3.909	51	310697	45.04	ug/L		99
7) dichlorodifluoromethane	3.883	85	352749	52.36	ug/L		97
8) chloromethane	4.238	50	343403	44.37	ug/L		98
9) vinyl chloride	4.442	62	330487	49.31	ug/L		99
10) 1,3-butadiene	4.474	54	242920	47.79	ug/L	#	82
11) bromomethane	4.986	94	205861	45.66	ug/L		99
12) chloroethane	5.122	64	159679	46.64	ug/L		99
13) trichlorofluoromethane	5.520	101	348432	53.68	ug/L		98
14) vinyl bromide	5.426	106	203846	58.02	ug/L		96
15) ethyl ether	5.823	74	91526	45.15	ug/L		94
16) 2-chloropropane	6.027	43	327708	43.31	ug/L		97
17) acrolein	6.027	56	28140	36.57	ug/L		90
18) freon 113	6.220	151	177371	48.24	ug/L		99
19) 1,1-dichloroethene	6.210	61	329248	47.58	ug/L		98
20) acetone	6.189	58	57869	168.45	ug/L		97
21) acetonitrile	6.545	41	203737	364.49	ug/L		99
22) iodomethane	6.445	142	344153	47.28	ug/L		99
23) carbon disulfide	6.581	76	624768	42.33	ug/L		98
24) methylene chloride	6.811	84	213389	44.22	ug/L		99
25) methyl acetate	6.576	43	115649	39.14	ug/L		97
26) methyl tert butyl ether	7.120	73	436537	39.33	ug/L		99
27) trans-1,2-dichloroethene	7.151	61	271611	45.71	ug/L		98
28) hexane	7.450	56	141277	44.59	ug/L		97
29) di-isopropyl ether	7.627	45	599008	40.54	ug/L		99
30) 2-butanone	8.213	72	66611	165.88	ug/L		94
31) 1,1-dichloroethane	7.654	63	325725	44.53	ug/L		98
32) chloroprene	7.742	53	248710	44.13	ug/L		96
33) acrylonitrile	7.042	53	60651	39.67	ug/L		98
34) vinyl acetate	7.580	86	26872	45.21	ug/L	#	78
35) ethyl tert-butyl ether	8.041	59	508755	39.16	ug/L		99
36) ethyl acetate	8.224	45	23171	42.77	ug/L	#	83
37) 2,2-dichloropropane	8.328	77	262457	45.80	ug/L		95
38) cis-1,2-dichloroethene	8.286	96	202296	45.64	ug/L		99
39) propionitrile	8.281	54	223492	382.24	ug/L		92
40) methyl acrylate	8.302	85	21233	41.99	ug/L	#	82
41) methacrylonitrile	8.459	67	58902	41.78	ug/L		92
42) bromochloromethate	8.558	128	97296	45.83	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91837.d
Acq On : 24 Jun 2019 10:21 am
Operator : edwardd
Sample : JC90121-16ms Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:28:53 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	8.569	72	19587	38.85	ug/L	#	83
44) chloroform	8.626	83	307835	44.16	ug/L		99
45) tert-butyl formate	8.658	59	99161	32.68	ug/L		97
47) 1,1,1-trichloroethane	8.883	97	295217	47.82	ug/L		98
48) cyclohexane	8.993	84	302149	48.30	ug/L		90
50) 1,1-dichloropropene	9.029	75	230260	46.59	ug/L		98
51) carbon tetrachloride	9.066	117	261819	50.72	ug/L		99
52) tert-amyl alcohol	9.123	73	36691	142.21	ug/L		96
53) isopropyl acetate	9.144	87	31123	44.38	ug/L	#	79
56) n-butyl alcohol	9.646	41	133490	1496.92	ug/L		99
57) 2,2,4-trimethylpentane	9.338	57	696492	44.65	ug/L		98
58) benzene	9.259	78	668992	44.74	ug/L		99
59) tert-amyl methyl ether	9.322	73	477969	39.01	ug/L		97
60) heptane	9.479	57	125288	46.17	ug/L		97
61) 1,2-dichloroethane	9.275	62	194669	44.12	ug/L		96
62) ethyl acrylate	9.892	55	165225	42.24	ug/L		100
63) trichloroethene	9.929	95	176563	49.33	ug/L		97
65) methyl methacrylate	10.148	100	34372	43.29	ug/L		91
66) methylcyclohexane	10.222	83	343560	45.42	ug/L		98
67) 1,2-dichloropropane	10.201	63	171185	46.01	ug/L		99
68) dibromomethane	10.311	93	100150	46.38	ug/L		94
69) bromodichloromethane	10.452	83	218320	48.18	ug/L		99
70) 2-nitropropane	10.640	41	29233	37.35	ug/L		98
71) epichlorohydrin	10.760	57	69078	199.70	ug/L		97
72) cis-1,3-dichloropropene	10.902	75	254472	47.70	ug/L		99
73) 4-methyl-2-pentanone	10.996	58	237957	166.28	ug/L		88
74) isoamyl alcohol	10.985	70	72511	643.89	ug/L	#	91
77) toluene	11.294	92	391211	45.61	ug/L		99
78) ethyl methacrylate	11.461	69	175579	42.07	ug/L		96
79) trans-1,3-dichloropropene	11.477	75	215079	46.32	ug/L		94
80) 1,1,2-trichloroethane	11.707	83	116712	45.09	ug/L		97
81) tetrachloroethene	11.869	164	154166	47.95	ug/L		99
82) 2-hexanone	11.869	58	213701	157.88	ug/L		97
83) 1,3-dichloropropane	11.895	76	212454	44.19	ug/L		99
84) butyl acetate	11.953	56	98831	41.96	ug/L		99
85) dibromochloromethane	12.162	129	164105	48.50	ug/L		99
86) 1,2-dibromoethane	12.329	107	167502	41.35	ug/L		97
87) n-butyl ether	12.790	57	684314	43.62	ug/L		99
88) chlorobenzene	12.842	112	444884	46.27	ug/L		100
89) 1,1,1,2-tetrachloroethane	12.910	131	184991	48.04	ug/L		99
90) ethylbenzene	12.905	91	775466	46.06	ug/L		99
91) m,p-xylene	13.035	106	585225	91.55	ug/L		99
92) o-xylene	13.475	91	642739	45.04	ug/L		98
93) styrene	13.485	104	474290	45.55	ug/L		94
94) butyl acrylate	13.281	55	304179	40.31	ug/L		99
95) isopropylbenzene	13.857	105	819405	45.32	ug/L		99
96) bromoform	13.742	173	121334	49.79	ug/L		97
97) cis-1,4-dichloro-2-butene	13.893	88	60015	47.62	ug/L		96
100) 1,1,2,2-tetrachloroethane	14.160	83	208086	44.61	ug/L		97
101) trans-1,4-dichloro-2-b...	14.197	53	43561	46.61	ug/L		96
102) 1,2,3-trichloropropane	14.259	110	50563	45.65	ug/L		98
103) bromobenzene	14.280	156	218657	47.48	ug/L		96
104) n-propylbenzene	14.317	91	943443	47.08	ug/L		100
105) 2-chlorotoluene	14.463	126	200738	47.78	ug/L		95
106) 4-chlorotoluene	14.589	91	539889	45.92	ug/L		98
107) 1,3,5-trimethylbenzene	14.490	105	691162	45.89	ug/L		99
108) tert-butylbenzene	14.866	119	582084	45.21	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91837.d
Acq On : 24 Jun 2019 10:21 am
Operator : edwardd
Sample : JC90121-16ms Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:28:53 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

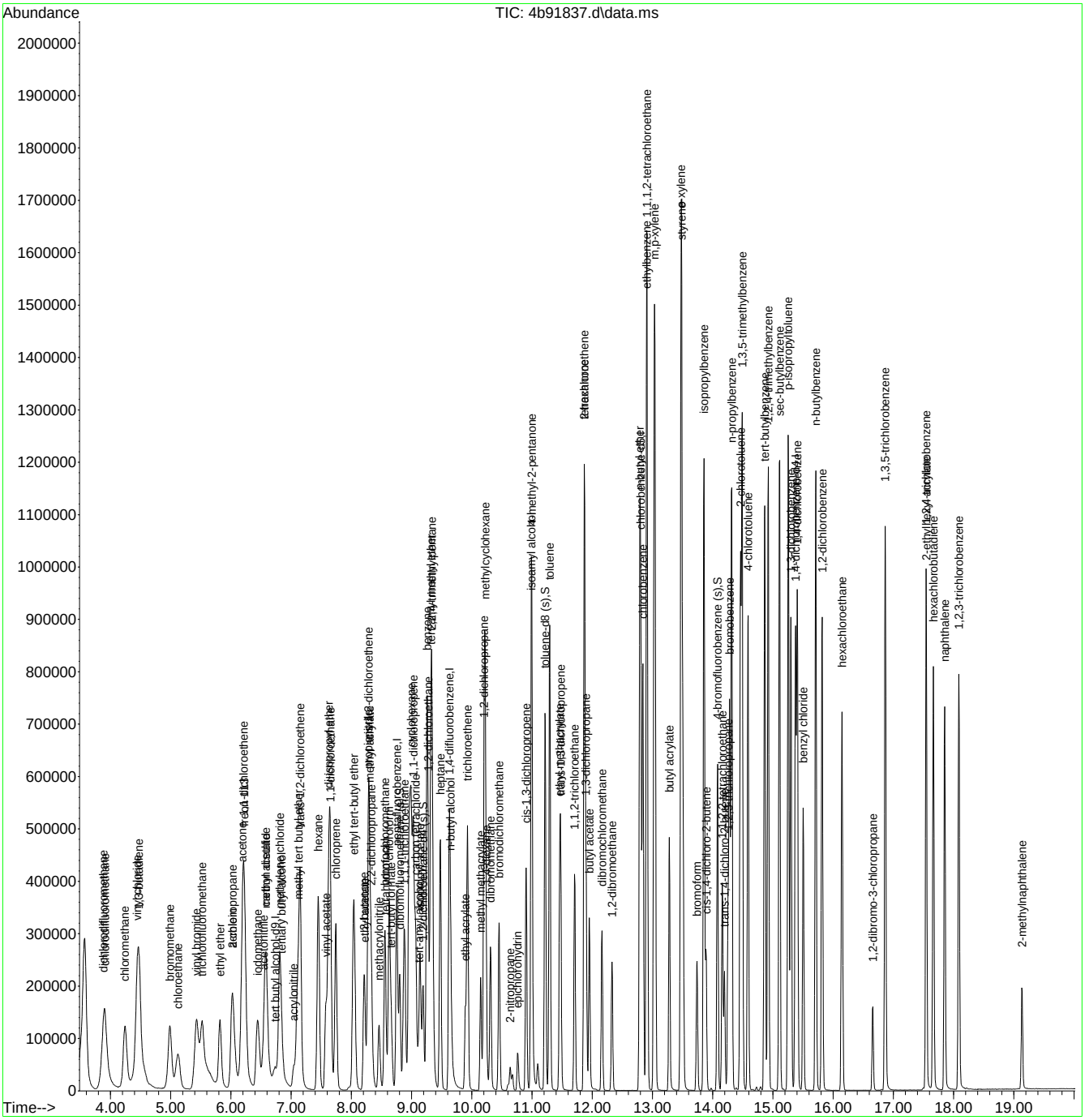
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
109) 1,2,4-trimethylbenzene	14.924	105	677805	44.90	ug/L		99
110) sec-butylbenzene	15.112	105	897277	45.83	ug/L		98
111) p-isopropyltoluene	15.253	119	758494	45.52	ug/L		98
112) 1,3-dichlorobenzene	15.300	146	403543	45.76	ug/L		99
113) 1,4-dichlorobenzene	15.405	146	405581	45.79	ug/L		99
114) 1,2-dichlorobenzene	15.818	146	407509	44.68	ug/L		99
115) benzyl chloride	15.504	91	391723	47.76	ug/L		99
116) n-butylbenzene	15.713	92	373834	46.45	ug/L		98
117) hexachloroethane	16.147	201	148460	49.70	ug/L		98
118) 1,2-dibromo-3-chloropr...	16.660	157	48924	42.40	ug/L		97
119) 1,3,5-trichlorobenzene	16.864	180	376879	44.73	ug/L		100
120) 1,2,4-trichlorobenzene	17.544	180	321590	43.44	ug/L		98
121) 2-ethylhexyl acrylate	17.549	70	12241	3.86	ug/L	#	73
122) hexachlorobutadiene	17.664	225	193770	46.79	ug/L		98
123) naphthalene	17.853	128	593351	39.09	ug/L		100
124) 1,2,3-trichlorobenzene	18.088	180	286104	42.31	ug/L		100
125) 2-methylnaphthalene	19.139	142	105195	14.07	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91837.d
Acq On : 24 Jun 2019 10:21 am
Operator : edwardd
Sample : JC90121-16ms Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:28:53 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91838.d
Acq On : 24 Jun 2019 10:49 am
Operator : edwardd
Sample : JC90121-16msd Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:30:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.744	65	146266	500.00	ug/L	0.00
5) pentafluorobenzene	8.757	168	328369	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.625	114	432825	50.00	ug/L	0.00
75) chlorobenzene-d5	12.805	117	404062	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.379	152	240751	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.804	113	148152	49.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.78%			
55) 1,2-dichloroethane-d4 (s)	9.191	65	141149	49.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.92%			
76) toluene-d8 (s)	11.221	98	496353	48.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.62%			
99) 4-bromofluorobenzene (s)	14.082	95	197268	49.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.843	59	95040	229.78	ug/L	98
4) 1,4-dioxane	10.243	88	43992	1424.34	ug/L	93
6) chlorodifluoromethane	3.909	51	318796	47.27	ug/L	99
7) dichlorodifluoromethane	3.888	85	353469	53.66	ug/L	99
8) chloromethane	4.238	50	354768	46.88	ug/L	97
9) vinyl chloride	4.442	62	342180	52.22	ug/L	99
10) 1,3-butadiene	4.468	54	260460	52.41	ug/L	98
11) bromomethane	4.991	94	209169	47.45	ug/L	98
12) chloroethane	5.122	64	162682	48.60	ug/L	98
13) trichlorofluoromethane	5.525	101	359027	56.57	ug/L	97
14) vinyl bromide	5.426	106	204805	59.62	ug/L	99
15) ethyl ether	5.818	74	92965	46.91	ug/L	99
16) 2-chloropropane	6.022	43	358156	48.41	ug/L	97
17) acrolein	6.017	56	30036	39.93	ug/L	93
18) freon 113	6.205	151	177275	49.32	ug/L	99
19) 1,1-dichloroethene	6.210	61	345861	51.12	ug/L	96
20) acetone	6.189	58	60928	181.40	ug/L	89
21) acetonitrile	6.540	41	220451	403.39	ug/L	99
22) iodomethane	6.440	142	344364	48.39	ug/L	96
23) carbon disulfide	6.581	76	659896	45.73	ug/L	98
24) methylene chloride	6.806	84	222375	47.13	ug/L	97
25) methyl acetate	6.576	43	125774	43.53	ug/L	99
26) methyl tert butyl ether	7.115	73	458902	42.29	ug/L	98
27) trans-1,2-dichloroethene	7.152	61	291309	50.14	ug/L	98
28) hexane	7.450	56	153505	49.56	ug/L	97
29) di-isopropyl ether	7.627	45	649264	44.94	ug/L	99
30) 2-butanone	8.213	72	69662	177.44	ug/L	100
31) 1,1-dichloroethane	7.654	63	343429	48.02	ug/L	100
32) chloroprene	7.743	53	268001	48.64	ug/L	98
33) acrylonitrile	7.042	53	66625	44.57	ug/L	94
34) vinyl acetate	7.575	86	28753	49.48	ug/L	99
35) ethyl tert-butyl ether	8.041	59	539714	42.50	ug/L	97
36) ethyl acetate	8.219	45	24782	46.78	ug/L #	92
37) 2,2-dichloropropane	8.323	77	279587	49.90	ug/L	98
38) cis-1,2-dichloroethene	8.286	96	205401	47.40	ug/L	98
39) propionitrile	8.281	54	238766	417.69	ug/L	93
40) methyl acrylate	8.302	85	22899	46.32	ug/L #	89
41) methacrylonitrile	8.459	67	61956	44.95	ug/L	94
42) bromochloromethane	8.558	128	98599	47.50	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91838.d
Acq On : 24 Jun 2019 10:49 am
Operator : edwardd
Sample : JC90121-16msd Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:30:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	8.579	72	20729	42.06	ug/L		93
44) chloroform	8.626	83	314484	46.14	ug/L		99
45) tert-butyl formate	8.658	59	90936	30.66	ug/L		98
47) 1,1,1-trichloroethane	8.877	97	301636	49.98	ug/L		98
48) cyclohexane	8.987	84	304052	49.72	ug/L		98
50) 1,1-dichloropropene	9.029	75	235773	48.79	ug/L		97
51) carbon tetrachloride	9.066	117	268990	53.30	ug/L		98
52) tert-amyl alcohol	9.118	73	40379	160.08	ug/L	#	86
53) isopropyl acetate	9.139	87	31939	46.58	ug/L	#	85
56) n-butyl alcohol	9.652	41	160267	1828.20	ug/L		98
57) 2,2,4-trimethylpentane	9.338	57	727495	47.44	ug/L		98
58) benzene	9.259	78	682620	46.44	ug/L		99
59) tert-amyl methyl ether	9.322	73	484341	40.21	ug/L		97
60) heptane	9.479	57	131792	49.40	ug/L		97
61) 1,2-dichloroethane	9.275	62	196789	45.36	ug/L		96
62) ethyl acrylate	9.892	55	166499	43.30	ug/L		99
63) trichloroethene	9.929	95	177317	50.40	ug/L		97
65) methyl methacrylate	10.148	100	35400	45.36	ug/L		93
66) methylcyclohexane	10.222	83	358060	48.15	ug/L		99
67) 1,2-dichloropropane	10.201	63	173387	47.41	ug/L		99
68) dibromomethane	10.311	93	101502	47.82	ug/L		94
69) bromodichloromethane	10.452	83	220564	49.52	ug/L		99
70) 2-nitropropane	10.640	41	29229	37.89	ug/L		96
71) epichlorohydrin	10.766	57	70021	205.92	ug/L		96
72) cis-1,3-dichloropropene	10.902	75	258138	49.22	ug/L		99
73) 4-methyl-2-pentanone	10.996	58	243440	173.05	ug/L		91
74) isoamyl alcohol	10.991	70	84608	764.27	ug/L	#	85
77) toluene	11.294	92	397594	47.21	ug/L		99
78) ethyl methacrylate	11.456	69	179107	43.71	ug/L		97
79) trans-1,3-dichloropropene	11.477	75	217805	47.78	ug/L		95
80) 1,1,2-trichloroethane	11.707	83	119824	47.15	ug/L		99
81) tetrachloroethene	11.869	164	157338	49.85	ug/L		98
82) 2-hexanone	11.869	58	217609	163.75	ug/L		99
83) 1,3-dichloropropane	11.901	76	216364	45.83	ug/L		96
84) butyl acetate	11.953	56	101114	43.72	ug/L		97
85) dibromochloromethane	12.162	129	166735	50.19	ug/L		97
86) 1,2-dibromoethane	12.329	107	167035	42.00	ug/L		99
87) n-butyl ether	12.790	57	674902	43.82	ug/L		100
88) chlorobenzene	12.842	112	449754	47.65	ug/L		99
89) 1,1,1,2-tetrachloroethane	12.910	131	186618	49.36	ug/L		99
90) ethylbenzene	12.905	91	773687	46.80	ug/L		100
91) m,p-xylene	13.036	106	594649	94.75	ug/L		100
92) o-xylene	13.475	91	643492	45.93	ug/L		99
93) styrene	13.485	104	479914	46.94	ug/L		97
94) butyl acrylate	13.281	55	302925	40.89	ug/L		99
95) isopropylbenzene	13.857	105	835202	47.05	ug/L		100
96) bromoform	13.742	173	124855	52.19	ug/L		99
97) cis-1,4-dichloro-2-butene	13.893	88	59200	47.85	ug/L		94
100) 1,1,2,2-tetrachloroethane	14.160	83	206195	44.78	ug/L		99
101) trans-1,4-dichloro-2-b...	14.197	53	42233	45.78	ug/L		99
102) 1,2,3-trichloropropane	14.259	110	51452	47.06	ug/L		96
103) bromobenzene	14.280	156	225781	49.67	ug/L		98
104) n-propylbenzene	14.317	91	952065	48.13	ug/L		100
105) 2-chlorotoluene	14.463	126	206325	49.75	ug/L		95
106) 4-chlorotoluene	14.589	91	550315	47.41	ug/L		99
107) 1,3,5-trimethylbenzene	14.490	105	701451	47.17	ug/L		100
108) tert-butylbenzene	14.866	119	602794	47.43	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91838.d
Acq On : 24 Jun 2019 10:49 am
Operator : edwardd
Sample : JC90121-16msd Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:30:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

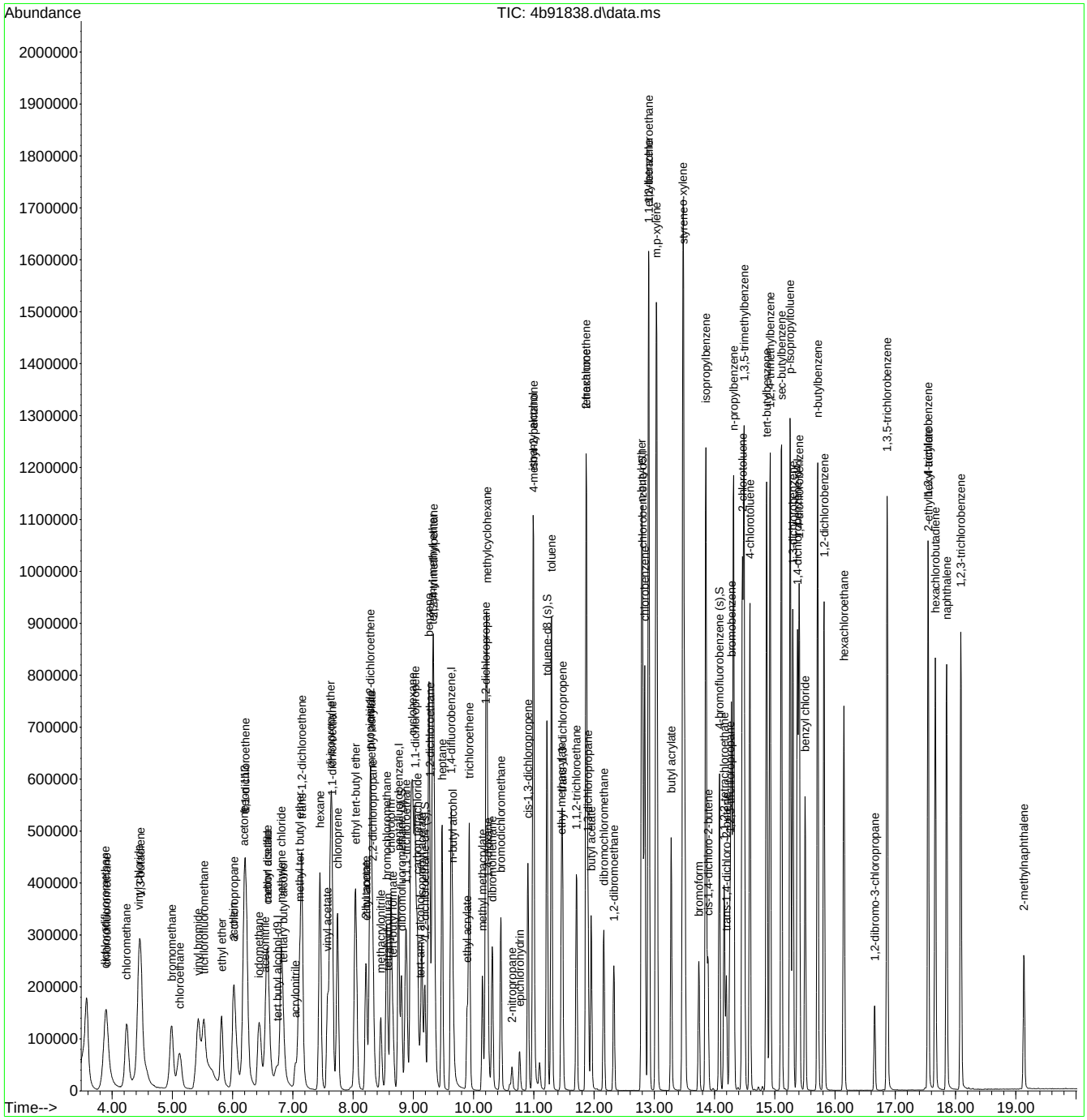
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2,4-trimethylbenzene	14.924	105	695223	46.65	ug/L	100
110) sec-butylbenzene	15.112	105	927519	47.99	ug/L	99
111) p-isopropyltoluene	15.253	119	780621	47.45	ug/L	98
112) 1,3-dichlorobenzene	15.300	146	415575	47.74	ug/L	99
113) 1,4-dichlorobenzene	15.405	146	419550	47.98	ug/L	98
114) 1,2-dichlorobenzene	15.818	146	420906	46.75	ug/L	100
115) benzyl chloride	15.504	91	403729	49.86	ug/L	100
116) n-butylbenzene	15.713	92	386905	48.70	ug/L	97
117) hexachloroethane	16.148	201	153678	52.12	ug/L	98
118) 1,2-dibromo-3-chloropr...	16.660	157	51247	44.99	ug/L	98
119) 1,3,5-trichlorobenzene	16.864	180	393498	47.31	ug/L	100
120) 1,2,4-trichlorobenzene	17.544	180	346502	47.42	ug/L	99
121) 2-ethylhexyl acrylate	17.549	70	17277	5.00	ug/L	88
122) hexachlorobutadiene	17.664	225	202474	49.52	ug/L	99
123) naphthalene	17.853	128	660900	44.11	ug/L	100
124) 1,2,3-trichlorobenzene	18.088	180	311824	46.71	ug/L	99
125) 2-methylnaphthalene	19.134	142	141966	19.23	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91838.d
Acq On : 24 Jun 2019 10:49 am
Operator : edwardd
Sample : JC90121-16msd Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:30:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251097.d
Acq On : 26 Jun 2019 4:36 am
Operator : brittank
Sample : JC90121-19MS Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 71 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:37 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.159	65	267194	500.00	ug/L	0.00
5) pentafluorobenzene	10.538	168	195357	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	288537	50.00	ug/L	0.00
74) chlorobenzene-d5	14.895	117	244760	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.515	152	139307	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.575	113	99435	51.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.28%			
53) 1,2-dichloroethane-d4 (s)	11.009	65	105943	51.11	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.22%			
75) toluene-d8 (s)	13.227	98	329864	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
99) 4-bromofluorobenzene (s)	16.197	95	111503	51.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.289	59	136830	247.96	ug/L	96
4) 1,4-dioxane	12.170	88	42493	1188.90	ug/L	97
6) chlorodifluoromethane	4.581	51	181138	47.74	ug/L	95
7) dichlorodifluoromethane	4.555	85	276613	59.94	ug/L	95
8) chloromethane	4.989	50	256941	51.26	ug/L	97
9) vinyl chloride	5.245	62	292751	68.93	ug/L	98
10) 1,3-butadiene	5.266	54	178841	44.19	ug/L	97
11) bromomethane	5.925	94	156366	52.42	ug/L	100
12) chloroethane	6.098	64	118952	55.11	ug/L	98
13) vinyl bromide	6.485	106	141641	49.77	ug/L	99
14) trichlorofluoromethane	6.621	101	258442	58.81	ug/L	98
15) ethyl ether	7.018	74	43844	44.60	ug/L	92
16) acrolein	7.259	56	23025	51.50	ug/L	93
17) freon 113	7.510	151	99115	46.42	ug/L	97
18) 1,1-dichloroethene	7.463	96	94044	44.52	ug/L	91
19) acetone	7.468	58	51653	181.86	ug/L	99
20) acetonitrile	7.913	41	199770	444.26	ug/L	94
21) iodomethane	7.745	142	165883	44.21	ug/L	98
22) carbon disulfide	7.897	76	300485	42.76	ug/L	99
23) methylene chloride	8.221	84	94914	43.14	ug/L	95
24) methyl acetate	7.960	43	80438	40.43	ug/L	99
25) methyl tert butyl ether	8.598	73	276445	44.40	ug/L	99
26) trans-1,2-dichloroethene	8.629	96	85428	46.56	ug/L	92
27) hexane	9.006	57	114661	43.21	ug/L	99
28) di-isopropyl ether	9.231	45	287223	45.05	ug/L	98
29) ethyl tert-butyl ether	9.702	59	277879	45.56	ug/L	94
30) 2-butanone	9.906	72	58922	179.79	ug/L #	87
31) 1,1-dichloroethane	9.241	63	148503	45.03	ug/L	98
32) chloroprene	9.346	53	120003	44.89	ug/L	97
33) acrylonitrile	8.520	53	44125	43.53	ug/L	91
34) vinyl acetate	9.168	86	16639	39.50	ug/L #	89
35) ethyl acetate	9.932	45	16642	45.44	ug/L #	71
36) 2,2-dichloropropane	10.026	77	139635	43.44	ug/L	99
37) cis-1,2-dichloroethene	9.989	96	103515	48.95	ug/L	98
38) methyl acrylate	10.015	85	15728	43.05	ug/L #	86
39) propionitrile	9.994	54	194627	449.49	ug/L	85
40) bromochloromethane	10.293	128	49277	45.67	ug/L	97
41) tetrahydrofuran	10.313	42	38626	41.09	ug/L	98
42) chloroform	10.376	83	147243	42.95	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251097.d
Acq On : 26 Jun 2019 4:36 am
Operator : brittank
Sample : JC90121-19MS Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 71 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:37 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.423	59	761	0.44	ug/L	#	13
45) methacrylonitrile	10.204	67	42044	44.87	ug/L		83
46) cyclohexane	10.779	84	201969	56.68	ug/L		86
47) 1,1,1-trichloroethane	10.653	97	162324	48.32	ug/L		99
48) iso-butyl alcohol	10.774	43	151169	467.18	ug/L		94
49) 1,1-dichloropropene	10.826	75	112958	45.01	ug/L		98
50) carbon tetrachloride	10.863	117	146501	48.79	ug/L		99
51) tert-amyl alcohol	10.972	73	63828	212.19	ug/L		97
54) benzene	11.082	78	323514	43.92	ug/L		98
55) iso-octane	11.187	57	321442	46.50	ug/L		99
56) tert-amyl methyl ether	11.161	73	276946	44.15	ug/L		98
57) heptane	11.344	71	61131	44.63	ug/L		97
58) isopropyl acetate	10.983	87	23939	44.29	ug/L		94
59) 1,2-dichloroethane	11.108	62	107127	40.53	ug/L		99
60) n-butyl alcohol	11.548	56	288370	2277.27	ug/L		99
61) ethyl acrylate	11.804	55	107395	44.71	ug/L		97
62) trichloroethene	11.835	95	82352	43.90	ug/L		97
63) 2-nitropropane	12.615	41	25154	31.61	ug/L	#	77
64) methylcyclohexane	12.149	83	174899	45.18	ug/L		98
66) methyl methacrylate	12.076	100	23717	44.67	ug/L		95
67) 1,2-dichloropropane	12.128	63	82503	46.42	ug/L		97
68) dibromomethane	12.249	93	55019	45.99	ug/L		98
69) bromodichloromethane	12.406	83	113819	46.35	ug/L		99
70) epichlorohydrin	12.751	57	29925	112.10	ug/L		99
71) cis-1,3-dichloropropene	12.892	75	120161	45.78	ug/L		98
72) 4-methyl-2-pentanone	12.997	58	200730	182.75	ug/L		98
73) 3-methyl-1-butanol	12.997	55	183825	891.74	ug/L		98
76) toluene	13.305	92	195291	45.15	ug/L		100
77) trans-1,3-dichloropropene	13.499	75	100172	45.02	ug/L		96
78) ethyl methacrylate	13.483	69	104717	46.51	ug/L		98
79) 1,1,2-trichloroethane	13.750	83	58134	47.04	ug/L		97
80) 2-hexanone	13.917	58	164244	179.79	ug/L		97
81) tetrachloroethene	13.917	166	91273	43.10	ug/L		99
82) 1,3-dichloropropane	13.948	76	106043	44.58	ug/L		96
83) butyl acetate	14.001	56	58435	42.99	ug/L		96
84) dibromochloromethane	14.220	129	85613	46.25	ug/L		99
85) 1,2-dibromoethane	14.398	107	81965	48.43	ug/L		99
86) n-butyl ether	14.869	57	326136	45.92	ug/L		99
87) chlorobenzene	14.932	112	201896	44.89	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.000	131	104619	46.42	ug/L		99
89) ethylbenzene	14.994	91	365093	45.43	ug/L		100
90) m,p-xylene	15.130	106	287920	92.16	ug/L		99
91) o-xylene	15.580	106	160109	46.32	ug/L		95
92) styrene	15.591	104	221475	44.57	ug/L		99
93) butyl acrylate	15.371	55	164857	46.54	ug/L		99
94) n-amyl acetate	15.606	70	64963	40.79	ug/L		94
95) bromoform	15.857	173	63550	49.30	ug/L		100
96) isopropylbenzene	15.972	105	446051	47.71	ug/L		98
97) cis-1,4-dichloro-2-butene	16.004	75	10298	37.03	ug/L		86
100) bromobenzene	16.412	156	94972	46.36	ug/L		97
101) 1,1,2,2-tetrachloroethane	16.281	83	128014	48.11	ug/L		97
102) trans-1,4-dichloro-2-b...	16.318	53	7382	35.78	ug/L		81
103) 1,2,3-trichloropropane	16.380	110	34600	45.41	ug/L		96
104) n-propylbenzene	16.438	91	461262	46.15	ug/L		100
105) 2-chlorotoluene	16.595	126	103075	46.30	ug/L		98
106) 4-chlorotoluene	16.720	91	232738	44.73	ug/L		99
107) 1,3,5-trimethylbenzene	16.611	105	367285	47.65	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251097.d
Acq On : 26 Jun 2019 4:36 am
Operator : brittank
Sample : JC90121-19MS Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 71 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:37 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

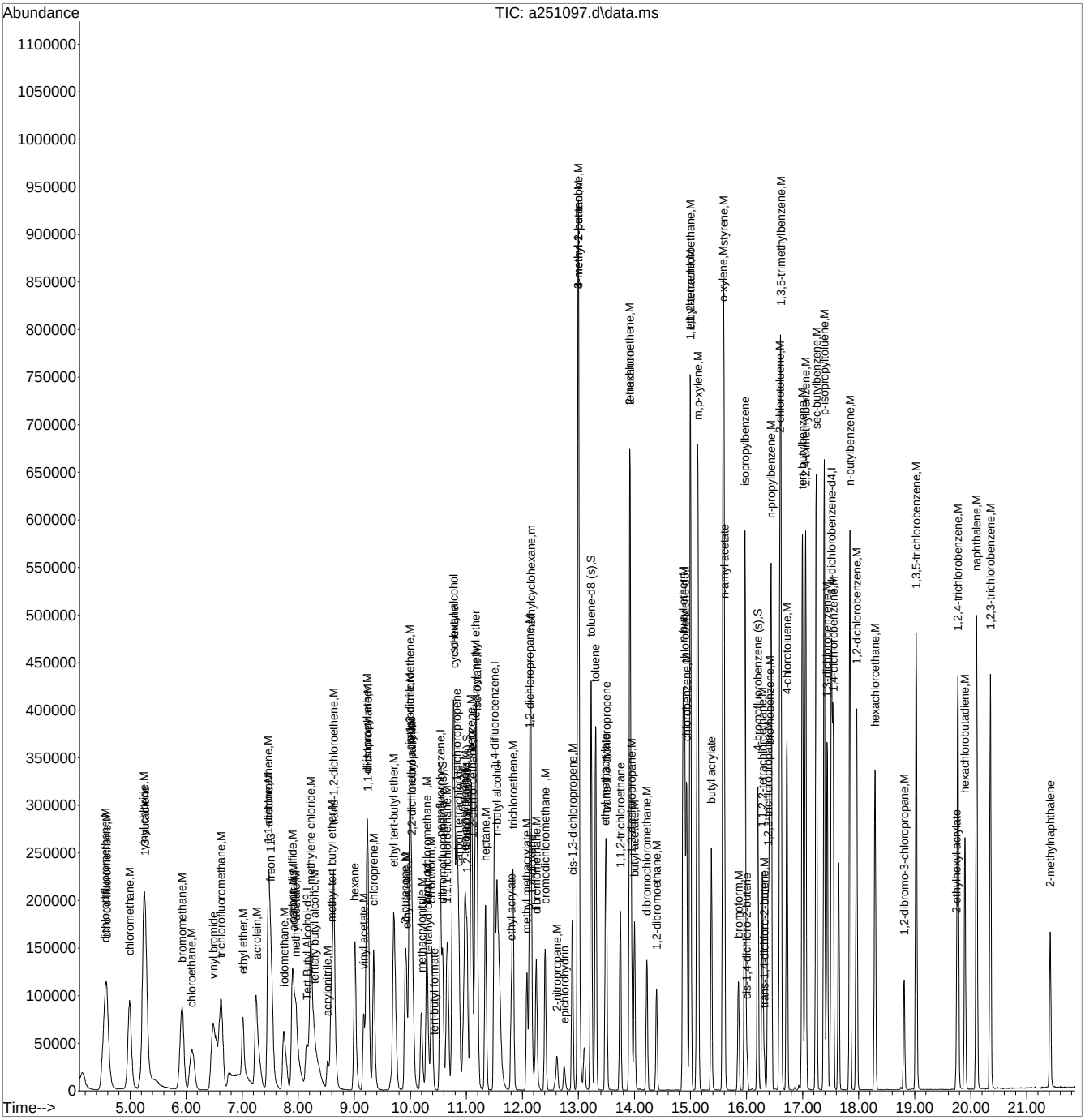
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.998	134	82462	46.19	ug/L	99
109) 1,2,4-trimethylbenzene	17.055	105	354340	46.46	ug/L	99
110) sec-butylbenzene	17.243	105	498749	47.40	ug/L	99
111) 1,3-dichlorobenzene	17.437	146	176841	43.55	ug/L	97
112) p-isopropyltoluene	17.385	119	414309	47.25	ug/L	98
113) 1,4-dichlorobenzene	17.547	146	175055	42.59	ug/L	98
114) 1,2-dichlorobenzene	17.965	146	195874	44.51	ug/L	98
115) n-butylbenzene	17.845	92	196478	45.83	ug/L	96
116) 1,2-dibromo-3-chloropr...	18.812	157	42095	45.30	ug/L	94
117) 1,3,5-trichlorobenzene	19.027	180	178711	43.07	ug/L	99
118) 2-ethylhexyl acrylate	19.749	70	19348	8.57	ug/L	96
119) 1,2,4-trichlorobenzene	19.770	180	166265	44.55	ug/L	100
120) hexachlorobutadiene	19.895	225	66497	44.78	ug/L	98
121) naphthalene	20.104	128	457383	41.92	ug/L	100
122) 1,2,3-trichlorobenzene	20.350	180	165703	44.23	ug/L	97
123) hexachloroethane	18.295	201	72228	52.35	ug/L	98
124) 2-methylnaphthalene	21.417	142	100719	17.31	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251097.d
Acq On : 26 Jun 2019 4:36 am
Operator : brittank
Sample : JC90121-19MS Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 71 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:37 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251098.d
Acq On : 26 Jun 2019 5:05 am
Operator : brittank
Sample : JC90121-19MSD Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 72 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:59 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.169	65	282373	500.00	ug/L	0.00
5) pentafluorobenzene	10.538	168	200421	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.506	114	299526	50.00	ug/L	0.00
74) chlorobenzene-d5	14.895	117	248392	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.515	152	135633	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.580	113	101543	51.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.80%			
53) 1,2-dichloroethane-d4 (s)	11.014	65	107697	50.05	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.10%			
75) toluene-d8 (s)	13.226	98	337195	51.04	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.08%			
99) 4-bromofluorobenzene (s)	16.197	95	109343	51.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.50%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.289	59	146078	250.48	ug/L	99
4) 1,4-dioxane	12.175	88	45034	1192.26	ug/L	97
6) chlorodifluoromethane	4.581	51	178707	45.91	ug/L	94
7) dichlorodifluoromethane	4.549	85	263029	55.56	ug/L	99
8) chloromethane	4.999	50	244810	47.61	ug/L	97
9) vinyl chloride	5.256	62	270679	62.13	ug/L	97
10) 1,3-butadiene	5.271	54	181695	43.76	ug/L	99
11) bromomethane	5.930	94	147932	48.34	ug/L	99
12) chloroethane	6.113	64	114780	51.83	ug/L	96
13) vinyl bromide	6.495	106	135881	46.54	ug/L	99
14) trichlorofluoromethane	6.631	101	246450	54.67	ug/L	98
15) ethyl ether	7.013	74	43560	43.19	ug/L	88
16) acrolein	7.259	56	24923	54.34	ug/L	92
17) freon 113	7.504	151	99988	45.64	ug/L	98
18) 1,1-dichloroethene	7.473	96	98800	45.59	ug/L	96
19) acetone	7.484	58	52777	181.12	ug/L	95
20) acetonitrile	7.923	41	207567	449.94	ug/L	98
21) iodomethane	7.750	142	180800	46.97	ug/L	98
22) carbon disulfide	7.907	76	319288	44.29	ug/L	99
23) methylene chloride	8.231	84	100929	44.72	ug/L	97
24) methyl acetate	7.960	43	84009	41.16	ug/L	99
25) methyl tert butyl ether	8.603	73	286964	44.93	ug/L	99
26) trans-1,2-dichloroethene	8.634	96	88086	46.80	ug/L	93
27) hexane	9.011	57	113005	41.51	ug/L	99
28) di-isopropyl ether	9.230	45	289535	44.26	ug/L	97
29) ethyl tert-butyl ether	9.706	59	283188	45.25	ug/L	97
30) 2-butanone	9.910	72	61262	182.21	ug/L	92
31) 1,1-dichloroethane	9.241	63	149354	44.14	ug/L	98
32) chloroprene	9.351	53	122470	44.66	ug/L	100
33) acrylonitrile	8.530	53	46493	44.71	ug/L	97
34) vinyl acetate	9.173	86	18496	42.80	ug/L	99
35) ethyl acetate	9.926	45	16204	43.12	ug/L #	78
36) 2,2-dichloropropane	10.025	77	142211	43.12	ug/L	98
37) cis-1,2-dichloroethene	9.989	96	107358	49.49	ug/L	93
38) methyl acrylate	10.010	85	16672	44.48	ug/L #	89
39) propionitrile	9.994	54	204466	460.28	ug/L	90
40) bromochloromethane	10.292	128	49965	45.14	ug/L	96
41) tetrahydrofuran	10.313	42	40194	41.67	ug/L	98
42) chloroform	10.381	83	151385	43.04	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251098.d
Acq On : 26 Jun 2019 5:05 am
Operator : brittank
Sample : JC90121-19MSD Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 72 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:59 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.423	59	852	0.48	ug/L	#	28
45) methacrylonitrile	10.198	67	43086	44.82	ug/L		92
46) cyclohexane	10.779	84	189482	51.83	ug/L		92
47) 1,1,1-trichloroethane	10.658	97	164136	47.62	ug/L		97
48) iso-butyl alcohol	10.768	43	154400	465.11	ug/L		93
49) 1,1-dichloropropene	10.831	75	114756	44.57	ug/L		97
50) carbon tetrachloride	10.862	117	148238	48.12	ug/L		99
51) tert-amyl alcohol	10.956	73	68040	220.48	ug/L	#	86
54) benzene	11.087	78	330980	43.29	ug/L		98
55) iso-octane	11.186	57	327869	45.69	ug/L		98
56) tert-amyl methyl ether	11.166	73	287629	44.17	ug/L		98
57) heptane	11.343	71	60822	42.78	ug/L		98
58) isopropyl acetate	10.977	87	23840	42.49	ug/L		97
59) 1,2-dichloroethane	11.108	62	110358	40.22	ug/L		96
60) n-butyl alcohol	11.547	56	306230	2329.59	ug/L		99
61) ethyl acrylate	11.804	55	110606	44.35	ug/L		99
62) trichloroethene	11.835	95	83843	43.06	ug/L		99
63) 2-nitropropane	12.620	41	25728	31.14	ug/L	#	74
64) methylcyclohexane	12.149	83	174895	43.52	ug/L		99
66) methyl methacrylate	12.081	100	24916	45.21	ug/L		85
67) 1,2-dichloropropane	12.133	63	83748	45.39	ug/L		98
68) dibromomethane	12.248	93	56809	45.74	ug/L		96
69) bromodichloromethane	12.405	83	116513	45.70	ug/L		97
70) epichlorohydrin	12.750	57	32389	116.88	ug/L		98
71) cis-1,3-dichloropropene	12.892	75	123867	45.47	ug/L		97
72) 4-methyl-2-pentanone	12.996	58	201122	176.39	ug/L		100
73) 3-methyl-1-butanol	12.996	55	193401	903.77	ug/L		98
76) toluene	13.310	92	195767	44.59	ug/L		97
77) trans-1,3-dichloropropene	13.503	75	103229	45.71	ug/L		96
78) ethyl methacrylate	13.483	69	105763	46.29	ug/L		97
79) 1,1,2-trichloroethane	13.749	83	60189	47.99	ug/L		97
80) 2-hexanone	13.922	58	164838	177.80	ug/L		98
81) tetrachloroethene	13.917	166	92516	43.05	ug/L		96
82) 1,3-dichloropropane	13.948	76	109367	45.31	ug/L		97
83) butyl acetate	14.000	56	57902	41.98	ug/L		94
84) dibromochloromethane	14.220	129	88054	46.87	ug/L		99
85) 1,2-dibromoethane	14.393	107	83100	48.38	ug/L		99
86) n-butyl ether	14.868	57	321973	44.67	ug/L		99
87) chlorobenzene	14.931	112	204188	44.74	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.999	131	105129	45.97	ug/L		99
89) ethylbenzene	14.994	91	360128	44.16	ug/L		100
90) m,p-xylene	15.130	106	281974	88.94	ug/L		100
91) o-xylene	15.580	106	160254	45.68	ug/L		99
92) styrene	15.590	104	220247	43.67	ug/L		97
93) butyl acrylate	15.371	55	163405	45.46	ug/L		99
94) n-amyl acetate	15.606	70	65885	40.76	ug/L		98
95) bromoform	15.857	173	62959	48.13	ug/L		97
96) isopropylbenzene	15.972	105	438680	46.24	ug/L		99
97) cis-1,4-dichloro-2-butene	16.003	75	9615	34.07	ug/L		93
100) bromobenzene	16.411	156	93371	46.81	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.281	83	129083	49.83	ug/L		99
102) trans-1,4-dichloro-2-b...	16.317	53	7725	38.46	ug/L		94
103) 1,2,3-trichloropropane	16.385	110	34835	46.96	ug/L		97
104) n-propylbenzene	16.438	91	447931	46.03	ug/L		98
105) 2-chlorotoluene	16.594	126	101068	46.63	ug/L		95
106) 4-chlorotoluene	16.720	91	230798	45.56	ug/L		97
107) 1,3,5-trimethylbenzene	16.610	105	361727	48.20	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251098.d
Acq On : 26 Jun 2019 5:05 am
Operator : brittank
Sample : JC90121-19MSD Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 72 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:59 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

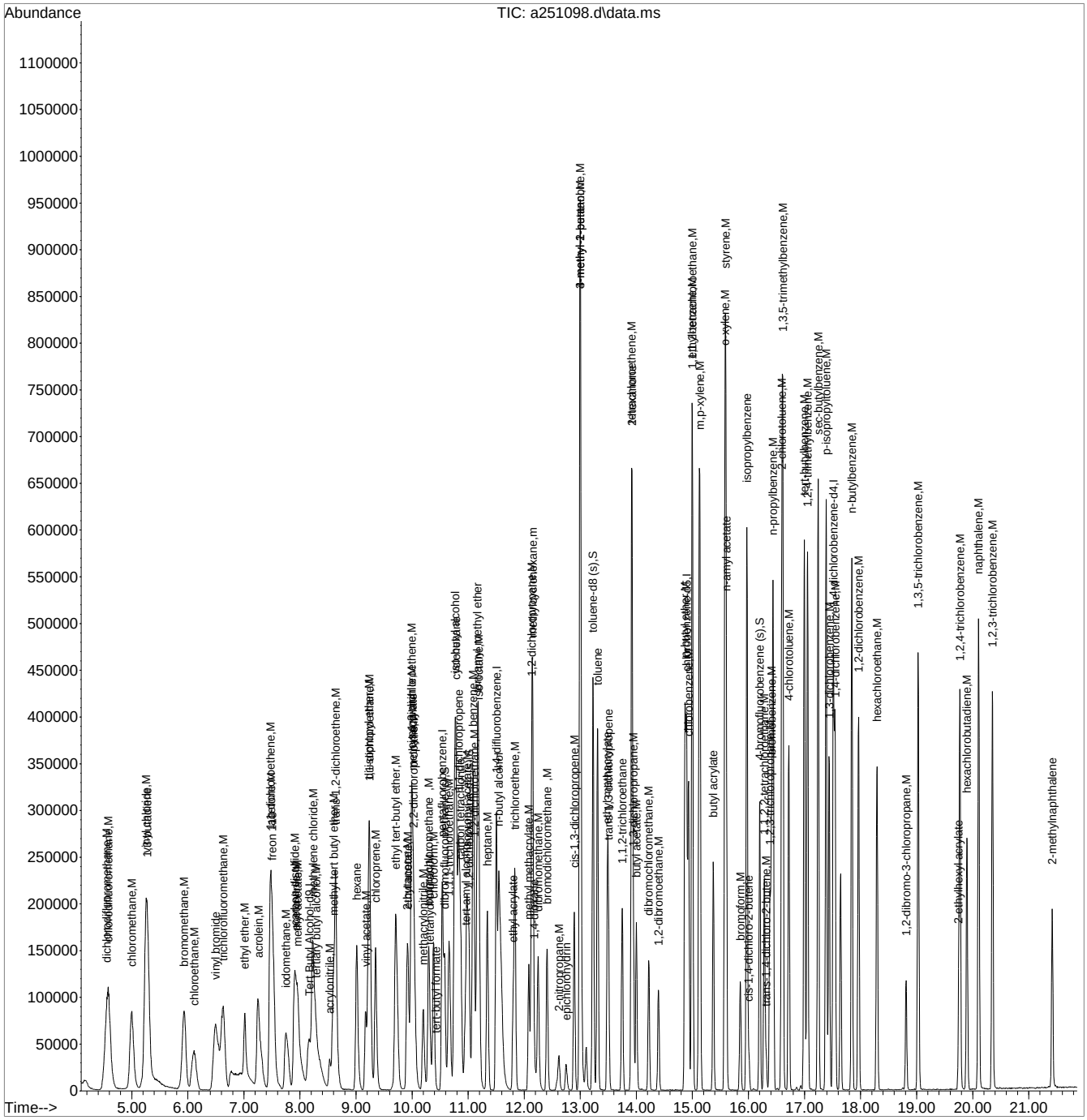
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.997	134	82788	47.63	ug/L	95
109) 1,2,4-trimethylbenzene	17.055	105	349497	47.07	ug/L	97
110) sec-butylbenzene	17.243	105	495990	48.41	ug/L	100
111) 1,3-dichlorobenzene	17.442	146	171136	43.28	ug/L	97
112) p-isopropyltoluene	17.384	119	411504	48.20	ug/L	99
113) 1,4-dichlorobenzene	17.546	146	174484	43.60	ug/L	98
114) 1,2-dichlorobenzene	17.965	146	189947	44.33	ug/L	99
115) n-butylbenzene	17.844	92	188140	45.07	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.812	157	42858	47.37	ug/L	96
117) 1,3,5-trichlorobenzene	19.026	180	174297	43.15	ug/L	100
118) 2-ethylhexyl acrylate	19.748	70	19797	8.96	ug/L	96
119) 1,2,4-trichlorobenzene	19.774	180	162257	44.65	ug/L	96
120) hexachlorobutadiene	19.895	225	67806	46.90	ug/L	96
121) naphthalene	20.104	128	466504	43.91	ug/L	98
122) 1,2,3-trichlorobenzene	20.350	180	168165	46.11	ug/L	95
123) hexachloroethane	18.294	201	73079	54.40	ug/L	98
124) 2-methylnaphthalene	21.417	142	114311	20.18	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251098.d
Acq On : 26 Jun 2019 5:05 am
Operator : brittank
Sample : JC90121-19MSD Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 72 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 12:01:59 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.409	65	116734	500.00	ug/L		0.00
5) pentafluorobenzene	10.196	168	186221	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.389	114	257095	50.00	ug/L		0.00
74) chlorobenzene-d5	15.605	117	260327	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.392	152	142889	50.00	ug/L		0.00
127) pentafluorobenzene(a)	10.196	168	186221	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.212	113	82701	54.58	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.16%				
54) 1,2-dichloroethane-d4 (s)	10.746	65	80207	47.29	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 94.58%				
75) toluene-d8 (s)	13.575	98	310002	49.67	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.34%				
98) 4-bromofluorobenzene (s)	17.111	95	122080	52.15	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.30%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.539	59	59576	225.11	ug/L		93
4) 1,4-dioxane	12.241	88	27182	1245.66	ug/L	#	78
6) chlorodifluoromethane	3.910	51	177527	31.20	ug/L		99
7) dichlorodifluoromethane	3.878	85	286617	50.70	ug/L		97
8) chloromethane	4.286	50	317213	44.22	ug/L		99
9) vinyl chloride	4.527	62	302309	51.11	ug/L		100
10) bromomethane	5.149	96	168892	57.37	ug/L		99
11) chloroethane	5.317	64	111961	56.47	ug/L		97
12) vinyl bromide	5.672	106	143432	64.74	ug/L		94
13) trichlorofluoromethane	5.829	101	237661	65.93	ug/L		98
14) 1,3-butadiene	4.537	54	130534	51.66	ug/L		95
15) ethyl ether	6.216	74	34336	42.82	ug/L		88
16) acrolein	6.446	56	12241	32.81	ug/L		94
17) 1,1-dichloroethene	6.666	96	70310	52.36	ug/L		95
18) freon 113	6.713	101	124725	57.73	ug/L		97
19) acetone	6.661	43	71271	145.53	ug/L		92
20) acetonitrile	7.105	41	122054	376.12	ug/L		96
21) iodomethane	6.938	142	126725	49.04	ug/L		98
22) carbon disulfide	7.100	76	247153	51.76	ug/L		97
23) methylene chloride	7.461	84	82073	48.34	ug/L		91
24) methyl acetate	7.184	43	46262	35.75	ug/L		93
25) methyl tert butyl ether	7.895	73	243927	41.73	ug/L		99
26) trans-1,2-dichloroethene	7.921	96	73320	50.54	ug/L		98
27) hexane	8.361	57	108375	50.97	ug/L		95
28) di-isopropyl ether	8.617	45	274896	40.98	ug/L		97
29) 2-butanone	9.396	72	34010	202.76	ug/L		89
30) 1,1-dichloroethane	8.601	63	134511	48.36	ug/L		98
31) chloroprene	8.727	53	99143	47.84	ug/L		95
32) acrylonitrile	7.780	53	26759	44.17	ug/L		96
33) vinyl acetate	8.538	86	13234	46.58	ug/L	#	70
34) ethyl tert-butyl ether	9.187	59	279176	44.96	ug/L		98
35) ethyl acetate	9.443	45	10513	40.59	ug/L		83
36) 2,2-dichloropropane	9.527	77	156168	54.72	ug/L		97
37) cis-1,2-dichloroethene	9.485	96	81286	48.66	ug/L		99
38) methyl acrylate	9.537	85	9048	45.86	ug/L	#	86
39) propionitrile	9.469	54	102277	428.08	ug/L		99
40) tert-butyl formate	10.024	59	50063	32.09	ug/L		94
41) bromochloromethane	9.856	128	41944	49.28	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.888	72	8904	43.77	ug/L		99
43) chloroform	9.972	83	130111	47.89	ug/L		96
45) methacrylonitrile	9.731	67	26397	42.98	ug/L		93
46) 1,1,1-trichloroethane	10.301	97	146742	52.61	ug/L		98
47) cyclohexane	10.453	84	170836	55.43	ug/L		89
48) tert amyl alcohol	10.699	55	22314	230.21	ug/L	#	80
49) 1,1-dichloropropene	10.526	75	91592	51.17	ug/L		96
51) carbon tetrachloride	10.557	117	119313	50.94	ug/L		96
52) isopropyl acetate	10.756	87	15233	47.30	ug/L	#	70
55) iso-octane	10.991	57	250633	54.88	ug/L		97
56) epichlorohydrin	12.968	57	36838	202.89	ug/L		96
57) n-butyl alcohol	11.467	56	140528	2396.54	ug/L		92
58) benzene	10.829	78	281667	47.21	ug/L		99
59) tert-amyl methyl ether	10.965	73	249689	43.09	ug/L		98
60) heptane	11.211	57	49688	54.62	ug/L		95
61) 1,2-dichloroethane	10.861	62	82063	40.79	ug/L		99
62) trichloroethene	11.797	130	78944	50.43	ug/L		98
63) ethyl acrylate	11.802	55	85124	43.33	ug/L		99
64) 2-nitropropane	12.791	41	14693	32.04	ug/L		98
66) methyl methacrylate	12.158	100	17364	41.80	ug/L	#	73
67) 1,2-dichloropropane	12.173	76	28349	43.09	ug/L		96
68) dibromomethane	12.309	93	44649	44.91	ug/L		96
69) methylcyclohexane	12.200	83	145312	53.06	ug/L		99
70) bromodichloromethane	12.534	83	103509	46.61	ug/L		99
71) cis-1,3-dichloropropene	13.157	75	128211	47.92	ug/L		92
72) 4-methyl-2-pentanone	13.303	58	131563	195.17	ug/L		93
73) 3-methyl-1-butanol	13.324	70	57826	1043.46	ug/L		92
76) toluene	13.675	92	180736	46.72	ug/L		99
77) trans-1,3-dichloropropene	13.936	75	109433	43.57	ug/L		100
78) ethyl methacrylate	13.952	69	95466	46.13	ug/L		91
79) 1,1,2-trichloroethane	14.224	83	60207	45.81	ug/L		96
80) tetrachloroethene	14.428	164	69093	48.94	ug/L		95
81) 1,3-dichloropropane	14.464	76	109012	44.22	ug/L		92
82) 2-hexanone	14.464	58	119887	191.56	ug/L		88
83) butyl acetate	14.637	56	599434	474.34	ug/L	#	1
84) dibromochloromethane	14.794	129	78144	42.66	ug/L		99
85) 1,2-dibromoethane	14.987	107	81036	46.16	ug/L		96
86) n-butyl ether	15.662	57	315441	45.19	ug/L		97
87) chlorobenzene	15.646	112	211479	47.85	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.740	131	89350	45.78	ug/L		96
89) ethylbenzene	15.746	91	333680	46.10	ug/L		99
90) m,p-xylene	15.913	106	265861	92.06	ug/L		97
91) o-xylene	16.431	91	297317	44.82	ug/L		99
92) styrene	16.447	104	221047	46.17	ug/L		98
93) butyl acrylate	16.248	55	172737	42.81	ug/L		99
94) bromoform	16.719	173	58117	44.97	ug/L		96
95) isopropylbenzene	16.881	105	397740	46.77	ug/L		99
96) cis-1,4-dichloro-2-butene	16.917	88	14802	21.07	ug/L		92
99) bromobenzene	17.310	156	99404	48.01	ug/L		99
100) 1,1,2,2-tetrachloroethane	17.210	83	105466	47.08	ug/L		100
101) trans-1,4-dichloro-2-b...	17.247	53	11529	22.67	ug/L		86
102) 1,2,3-trichloropropane	17.299	110	25638	45.61	ug/L	#	76
103) n-propylbenzene	17.372	91	414431	47.99	ug/L		99
104) 2-chlorotoluene	17.508	126	93997	48.03	ug/L		99
105) 4-chlorotoluene	17.639	91	243916	46.39	ug/L		98
106) 1,3,5-trimethylbenzene	17.561	105	314548	47.93	ug/L		99
107) tert-butylbenzene	17.927	119	291813	48.94	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

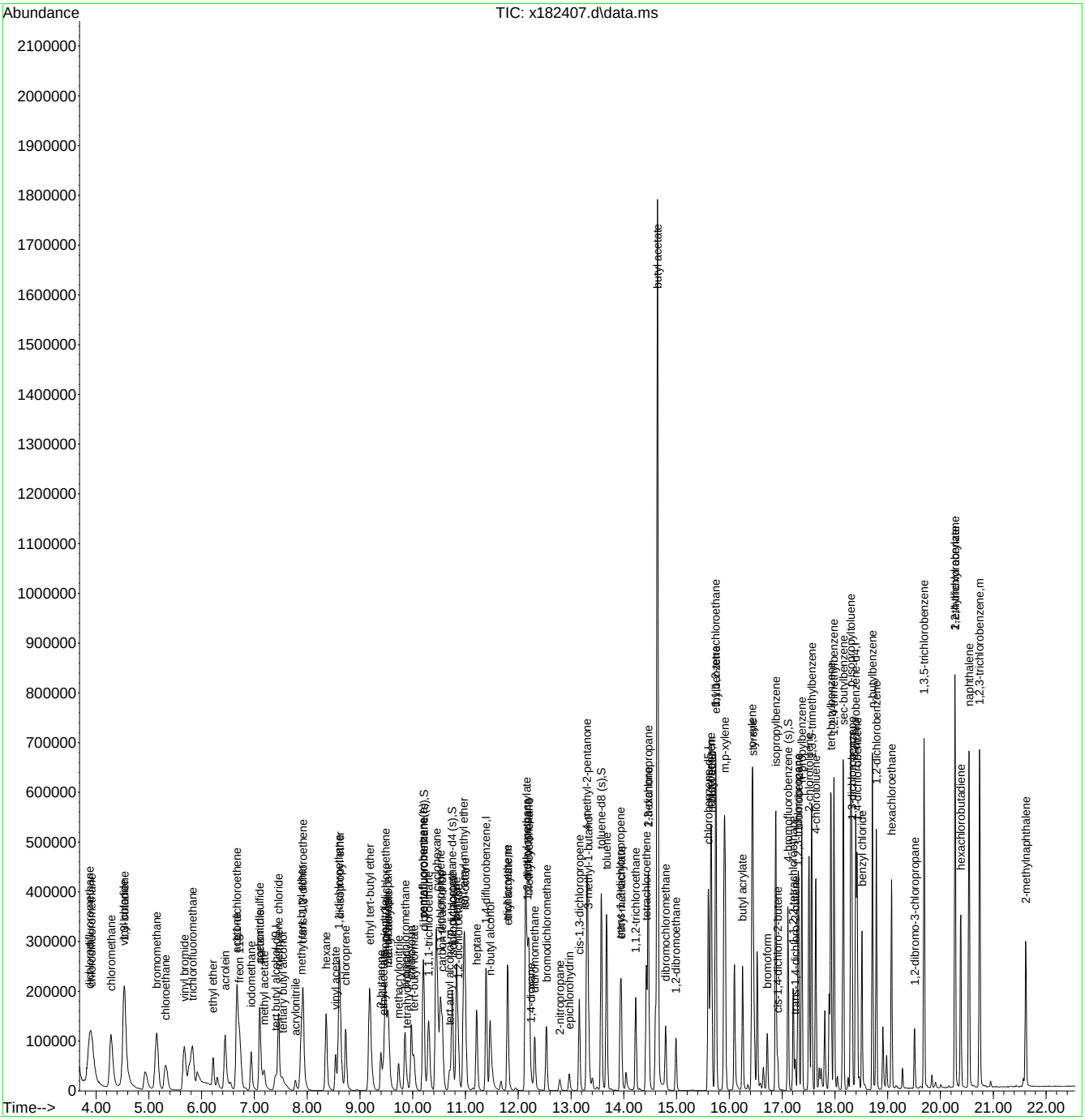
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	17.979	105	313417	45.78	ug/L	100
109) sec-butylbenzene	18.162	105	443372	49.09	ug/L	99
110) 1,3-dichlorobenzene	18.324	146	179672	45.02	ug/L	98
111) p-isopropyltoluene	18.303	119	372594	47.37	ug/L	97
112) 1,4-dichlorobenzene	18.424	146	182180	47.05	ug/L	98
113) 1,2-dichlorobenzene	18.784	146	202086	45.85	ug/L	99
114) benzyl chloride	18.513	91	214514	48.17	ug/L	100
115) n-butylbenzene	18.711	92	186949	49.87	ug/L	99
116) 1,2-dibromo-3-chloropr...	19.511	157	34831	47.48	ug/L	96
117) 1,3,5-trichlorobenzene	19.689	180	214753	48.57	ug/L	98
118) hexachlorobutadiene	20.385	225	74626	49.58	ug/L	96
119) naphthalene	20.542	128	530324	50.73	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	28628	15.05	ug/L	91
121) 1,2,4-trichlorobenzene	20.275	180	227010	53.55	ug/L	98
122) 1,2,3-trichlorobenzene	20.741	180	230363	53.62	ug/L	97
123) hexachloroethane	19.072	201	70381	50.58	ug/L	99
124) 2-methylnaphthalene	21.619	142	151692	21.62	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	115566	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	191547	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.394	114	263658	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	268048	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	141930	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	191547	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	82495	52.93	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.86%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	80776	46.44	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 92.88%			
75) toluene-d8 (s)	13.575	98	318414	49.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.10%			
98) 4-bromofluorobenzene (s)	17.111	95	124105	53.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.74%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.545	59	62459	238.39	ug/L	94
4) 1,4-dioxane	12.242	88	26506	1226.96	ug/L #	75
6) chlorodifluoromethane	3.905	51	163393	27.92	ug/L	99
7) dichlorodifluoromethane	3.878	85	276896	47.62	ug/L	98
8) chloromethane	4.281	50	332535	45.07	ug/L	99
9) vinyl chloride	4.522	62	316300	51.99	ug/L	98
10) bromomethane	5.144	96	173296	57.23	ug/L	99
11) chloroethane	5.322	64	116604	57.18	ug/L	97
12) vinyl bromide	5.672	106	149079	65.42	ug/L	95
13) trichlorofluoromethane	5.829	101	237006	63.92	ug/L	100
14) 1,3-butadiene	4.537	54	134931	51.92	ug/L	95
15) ethyl ether	6.222	74	35551	43.10	ug/L	91
16) acrolein	6.441	56	12681	33.04	ug/L	89
17) 1,1-dichloroethene	6.671	96	70991	51.40	ug/L	93
18) freon 113	6.708	101	124723	56.13	ug/L	98
19) acetone	6.656	43	69388	137.75	ug/L	95
20) acetonitrile	7.105	41	122022	365.57	ug/L	97
21) iodomethane	6.938	142	128170	48.22	ug/L	99
22) carbon disulfide	7.105	76	249738	50.85	ug/L	95
23) methylene chloride	7.461	84	82868	47.45	ug/L	89
24) methyl acetate	7.184	43	45645	34.29	ug/L	92
25) methyl tert butyl ether	7.895	73	253460	42.15	ug/L	99
26) trans-1,2-dichloroethene	7.921	96	74564	49.96	ug/L	95
27) hexane	8.361	57	109160	49.91	ug/L	93
28) di-isopropyl ether	8.617	45	282976	41.01	ug/L	97
29) 2-butanone	9.396	72	35314	204.68	ug/L #	82
30) 1,1-dichloroethane	8.601	63	137882	48.19	ug/L	99
31) chloroprene	8.732	53	100101	46.95	ug/L	92
32) acrylonitrile	7.780	53	26714	42.87	ug/L	94
33) vinyl acetate	8.533	86	13018	44.54	ug/L #	68
34) ethyl tert-butyl ether	9.187	59	284154	44.48	ug/L	97
35) ethyl acetate	9.443	45	9520	35.73	ug/L	74
36) 2,2-dichloropropane	9.527	77	155268	52.89	ug/L	95
37) cis-1,2-dichloroethene	9.485	96	82505	48.01	ug/L	98
38) methyl acrylate	9.543	85	9913	48.84	ug/L #	69
39) propionitrile	9.470	54	104794	426.41	ug/L	99
40) tert-butyl formate	10.024	59	39996	24.93	ug/L	95
41) bromochloromethane	9.851	128	42700	48.78	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.883	72	9386	44.86	ug/L		92
43) chloroform	9.977	83	132460	47.40	ug/L		98
45) methacrylonitrile	9.736	67	27486	43.51	ug/L		91
46) 1,1,1-trichloroethane	10.301	97	146986	51.24	ug/L		99
47) cyclohexane	10.453	84	189383	59.74	ug/L		90
48) tert amyl alcohol	10.699	55	22110	221.76	ug/L	#	74
49) 1,1-dichloropropene	10.526	75	93245	50.65	ug/L		97
51) carbon tetrachloride	10.557	117	120758	50.13	ug/L		95
52) isopropyl acetate	10.751	87	15872	47.91	ug/L	#	71
55) iso-octane	10.992	57	244071	52.11	ug/L		96
56) epichlorohydrin	12.969	57	36016	193.43	ug/L		95
57) n-butyl alcohol	11.467	56	139173	2314.35	ug/L		93
58) benzene	10.829	78	286843	46.88	ug/L		99
59) tert-amyl methyl ether	10.965	73	255881	43.06	ug/L		99
60) heptane	11.211	57	49255	52.79	ug/L		93
61) 1,2-dichloroethane	10.861	62	83448	40.44	ug/L		100
62) trichloroethene	11.797	130	81579	50.82	ug/L		96
63) ethyl acrylate	11.802	55	88847	44.10	ug/L		97
64) 2-nitropropane	12.791	41	14876	31.63	ug/L		98
66) methyl methacrylate	12.153	100	18747	44.01	ug/L	#	56
67) 1,2-dichloropropane	12.174	76	28373	42.06	ug/L	#	85
68) dibromomethane	12.310	93	45332	44.47	ug/L		96
69) methylcyclohexane	12.200	83	144257	51.37	ug/L		97
70) bromodichloromethane	12.529	83	104067	45.69	ug/L		99
71) cis-1,3-dichloropropene	13.157	75	131544	47.94	ug/L		93
72) 4-methyl-2-pentanone	13.303	58	135991	196.71	ug/L		90
73) 3-methyl-1-butanol	13.324	70	57441	1010.71	ug/L		92
76) toluene	13.675	92	185297	46.52	ug/L		99
77) trans-1,3-dichloropropene	13.936	75	111470	43.10	ug/L		99
78) ethyl methacrylate	13.952	69	100454	47.14	ug/L		90
79) 1,1,2-trichloroethane	14.229	83	61722	45.61	ug/L		96
80) tetrachloroethene	14.428	164	70908	48.77	ug/L		96
81) 1,3-dichloropropane	14.464	76	110501	43.54	ug/L		92
82) 2-hexanone	14.464	58	124483	193.18	ug/L		92
83) butyl acetate	14.637	56	617227	474.35	ug/L	#	1
84) dibromochloromethane	14.794	129	80602	42.74	ug/L		97
85) 1,2-dibromoethane	14.987	107	84416	46.70	ug/L		95
86) n-butyl ether	15.662	57	326441	45.42	ug/L		97
87) chlorobenzene	15.646	112	216362	47.55	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.741	131	90886	45.23	ug/L		99
89) ethylbenzene	15.746	91	340066	45.63	ug/L		98
90) m,p-xylene	15.913	106	270658	91.02	ug/L		97
91) o-xylene	16.431	91	304140	44.52	ug/L		99
92) styrene	16.447	104	223701	45.38	ug/L		98
93) butyl acrylate	16.248	55	177168	42.64	ug/L		98
94) bromoform	16.719	173	59445	44.67	ug/L		96
95) isopropylbenzene	16.881	105	401342	45.83	ug/L		100
96) cis-1,4-dichloro-2-butene	16.917	88	12800	17.69	ug/L		94
99) bromobenzene	17.310	156	100280	48.76	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.210	83	105074	47.22	ug/L		97
101) trans-1,4-dichloro-2-b...	17.247	53	10209	20.21	ug/L		90
102) 1,2,3-trichloropropane	17.299	110	26147	46.83	ug/L	#	72
103) n-propylbenzene	17.372	91	417427	48.66	ug/L		99
104) 2-chlorotoluene	17.508	126	95477	49.12	ug/L		99
105) 4-chlorotoluene	17.639	91	242806	46.49	ug/L		98
106) 1,3,5-trimethylbenzene	17.561	105	316074	48.48	ug/L		99
107) tert-butylbenzene	17.927	119	290073	48.97	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

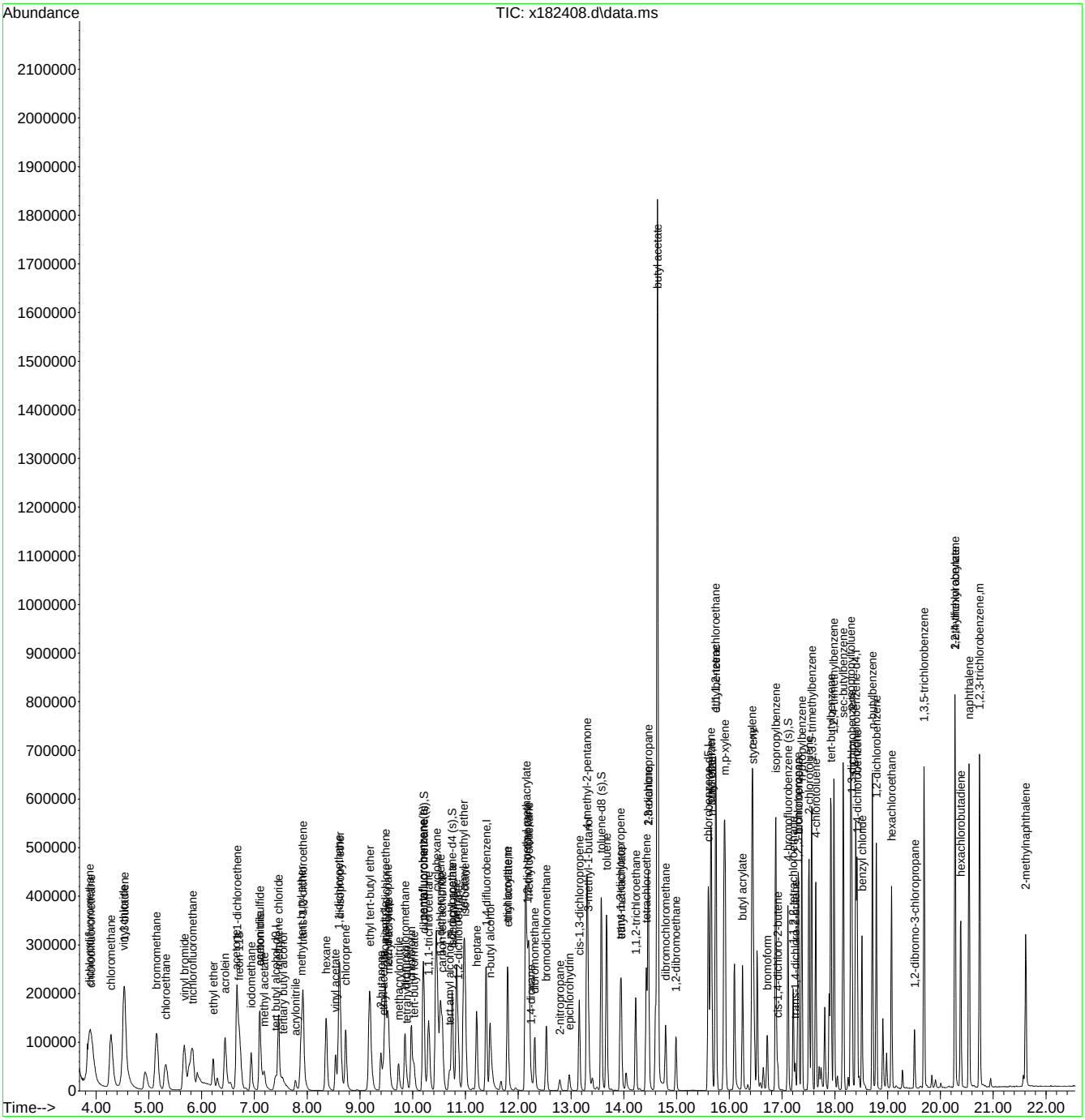
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	17.979	105	316093	46.48	ug/L	100
109) sec-butylbenzene	18.157	105	442315	49.30	ug/L	99
110) 1,3-dichlorobenzene	18.319	146	177432	44.75	ug/L	100
111) p-isopropyltoluene	18.298	119	369982	47.36	ug/L	99
112) 1,4-dichlorobenzene	18.424	146	179373	46.64	ug/L	98
113) 1,2-dichlorobenzene	18.785	146	199943	45.67	ug/L	98
114) benzyl chloride	18.513	91	209090	47.27	ug/L	99
115) n-butylbenzene	18.711	92	182244	48.94	ug/L	99
116) 1,2-dibromo-3-chloropr...	19.512	157	34101	46.80	ug/L	93
117) 1,3,5-trichlorobenzene	19.689	180	205751	46.85	ug/L	99
118) hexachlorobutadiene	20.385	225	73773	49.35	ug/L	99
119) naphthalene	20.542	128	522986	50.37	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	29029	15.37	ug/L	98
121) 1,2,4-trichlorobenzene	20.275	180	218184	51.82	ug/L	99
122) 1,2,3-trichlorobenzene	20.741	180	227609	53.34	ug/L	100
123) hexachloroethane	19.072	201	69585	50.35	ug/L	98
124) 2-methylnaphthalene	21.614	142	165088	23.37	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

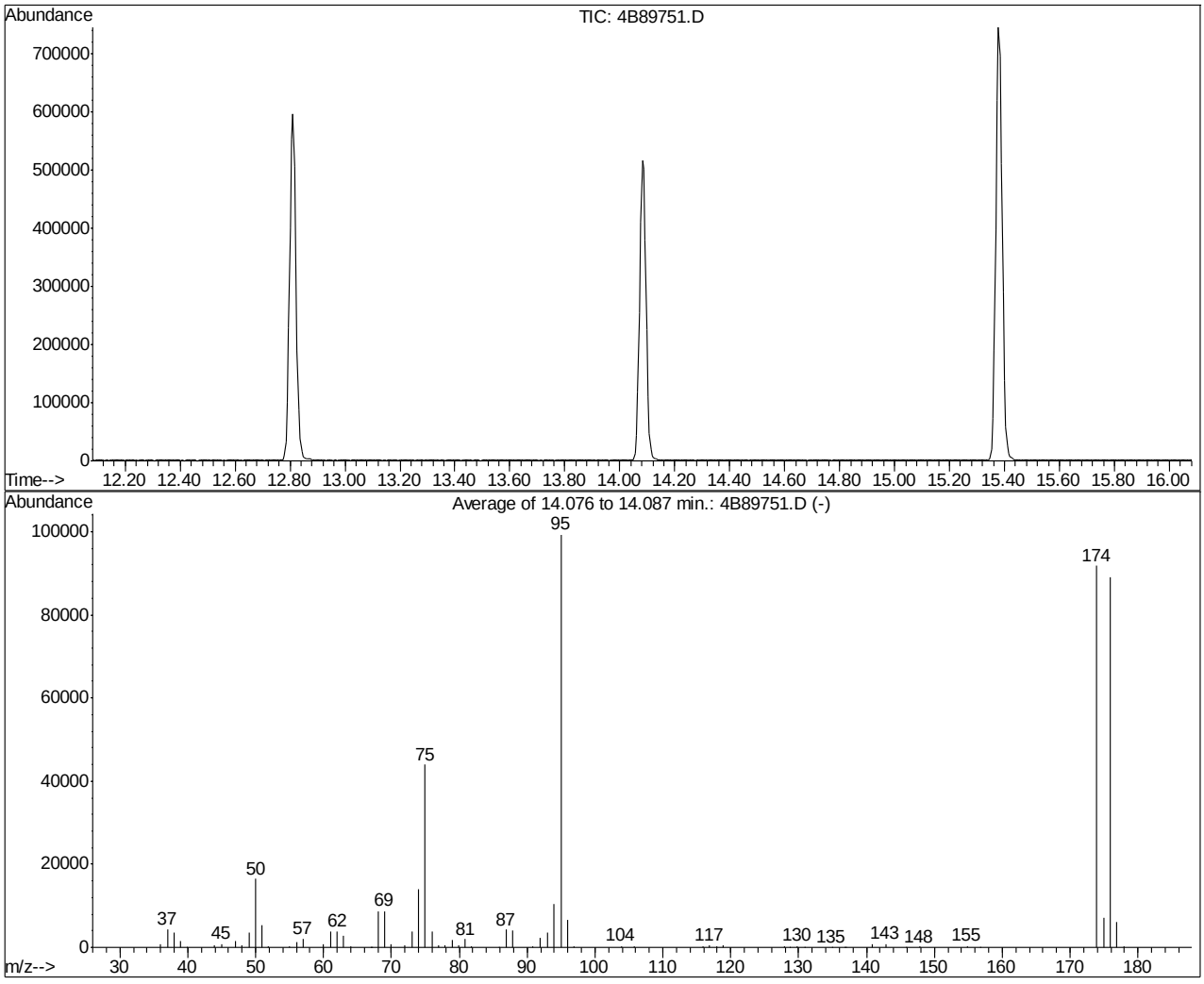
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\V4B3793\4B89751.D Vial: 1
Acq On : 6 Apr 2019 5:47 pm Operator: CHELSEAS
Sample : BFB Inst : MS4B
Misc : MS33655,V4B3793,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3793.M (RTE Integrator)
Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2026, 2027, 2028; Background Corrected with Scan 2018

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.6	16461	PASS
75	95	30	60	44.2	43936	PASS
95	95	100	100	100.0	99336	PASS
96	95	5	9	6.6	6566	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	92.4	91778	PASS
175	174	5	9	7.7	7111	PASS
176	174	95	101	96.9	88976	PASS
177	176	5	9	7.0	6193	PASS

4B89751.D M4B3793.M Mon Apr 08 14:27:47 2019 GCMS4B

Average of 14.076 to 14.087 min.: 4B89751.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	853	51.00	5395	67.10	106	78.90	1758
37.00	4340	51.90	246	68.00	8658	79.90	542
38.00	3692	54.95	225	69.00	8660	80.90	1920
39.00	1569	56.00	1185	69.95	655	81.85	387
39.90	14	56.95	2128	71.95	482	85.90	55
43.95	450	59.95	843	73.00	3741	86.90	4322
44.95	822	61.00	3845	74.00	13995	87.90	4127
47.00	1413	62.00	3854	75.00	43936	90.85	304
47.95	569	63.00	2747	76.00	3844	91.95	2402
49.00	3518	64.00	301	76.95	552	92.95	3547
50.00	16461	66.90	91	77.95	468	94.00	10368

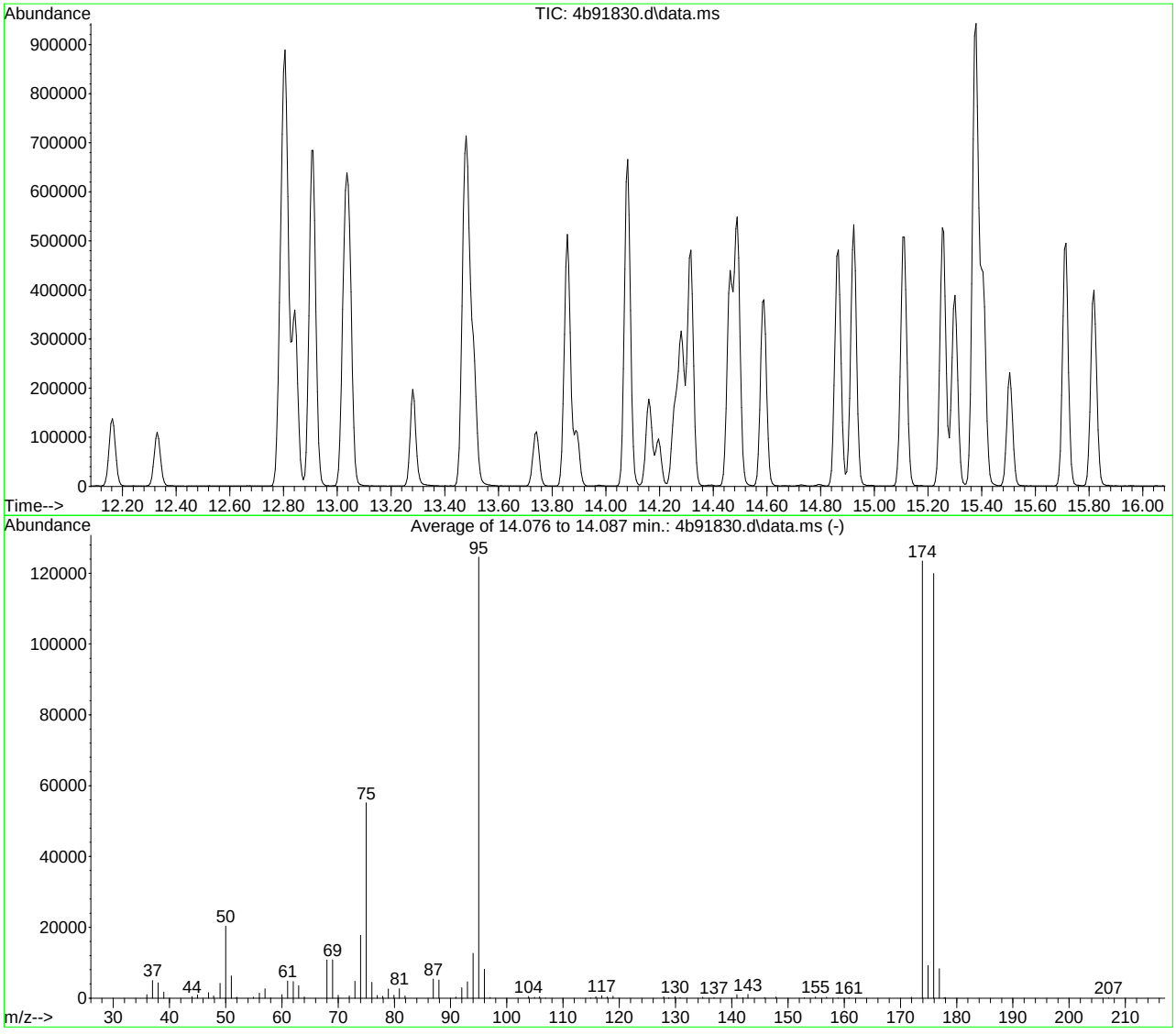
Average of 14.076 to 14.087 min.: 4B89751.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	99336	129.85	330	173.90	91778		
96.00	6566	130.80	54	174.90	7111		
96.90	256	134.85	119	175.90	88976		
103.85	382	136.80	61	176.90	6193		
105.85	304	137.00	55	177.90	172		
115.85	252	140.85	729				
116.85	509	142.85	780				
117.90	277	145.80	57				
118.85	393	147.85	195				
127.85	328	154.85	257				
128.75	113	156.80	65				

SW-846 Method 8260

Data File : C:\msdchem\1\data\lo...-25\v4b3896\4b91830.d Vial: 4
Acq On : 24 Jun 2019 7:01 am Operator: edwardd
Sample : bfb Inst : MS4B
Misc : MS35593,V4B3896,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3793.M (RTE Integrator)
Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2026, 2027, 2028; Background Corrected with Scan 2017

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.3	20344	PASS
75	95	30	60	44.3	55179	PASS
95	95	100	100	100.0	124531	PASS
96	95	5	9	6.6	8184	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	99.2	123483	PASS
175	174	5	9	7.5	9212	PASS
176	174	95	101	97.1	119925	PASS
177	176	5	9	6.9	8306	PASS

4b91830.d M4B3793.M Tue Jun 25 04:00:16 2019

Average of 14.076 to 14.087 min.: 4b91830.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1003	51.80	72	68.00	10799	79.95	865
37.00	4975	52.00	274	69.00	10848	80.90	2655
38.00	4331	54.95	261	70.00	866	81.90	639
39.00	1721	56.00	1436	72.00	609	86.90	5436
44.00	375	57.00	2652	73.00	4790	87.90	5121
45.00	906	58.00	74	74.00	17718	90.95	366
46.95	1573	60.00	997	75.00	55179	92.00	2917
47.85	635	61.00	4829	76.00	4496	93.00	4634
49.00	4148	62.00	4715	76.95	776	94.00	12688
50.00	20344	63.00	3507	77.90	535	95.00	124531
51.00	6275	64.00	315	78.90	2554	96.00	8184

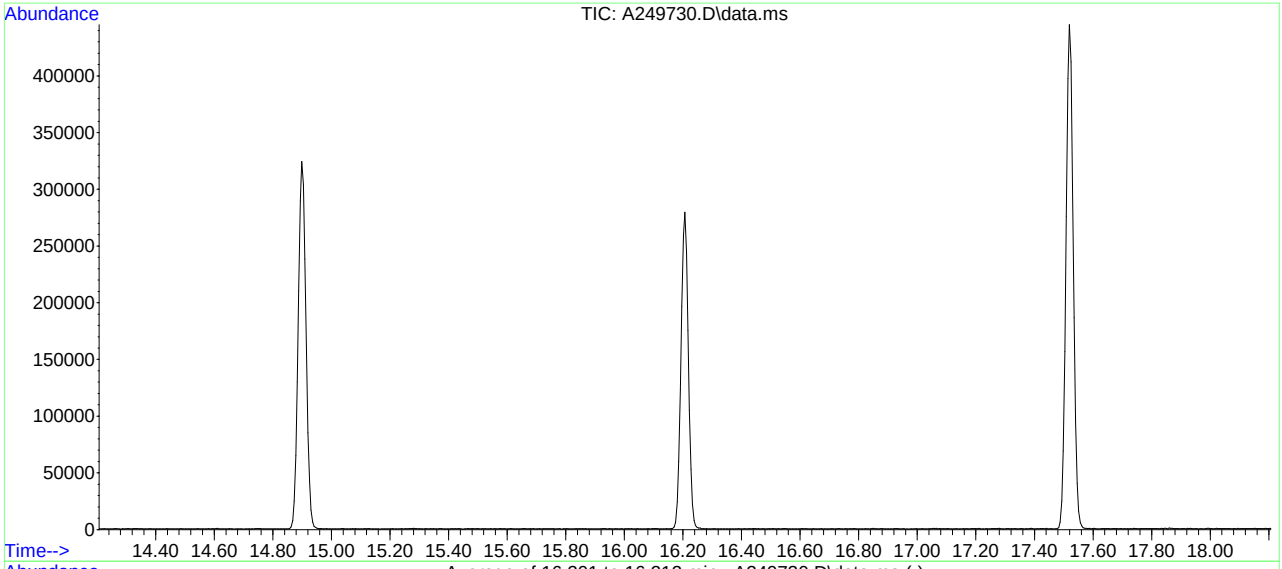
Average of 14.076 to 14.087 min.: 4b91830.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	168	128.80	134	154.90	308	207.00	54
103.85	498	129.90	433	156.85	220		
104.90	226	130.80	120	158.90	64		
105.85	429	134.85	235	160.85	120		
106.90	62	136.85	214	171.95	232		
114.90	51	140.90	957	173.90	123483		
115.85	383	141.95	118	174.90	9212		
116.90	662	142.90	1021	175.90	119925		
117.85	359	145.85	199	176.90	8306		
118.90	571	147.85	301	177.80	86		
127.90	395	152.90	105	177.95	156		

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9645\A249730.D Vial: 1
Acq On : 11 May 2019 2:52 pm Operator: PrashanS
Sample : BFB Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019



AutoFind: Scans 2316, 2317, 2318; Background Corrected with Scan 2307

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	8968	PASS
75	95	30	60	47.2	24730	PASS
95	95	100	100	100.0	52402	PASS
96	95	5	9	6.7	3491	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.1	49818	PASS
175	174	5	9	8.1	4035	PASS
176	174	95	101	97.5	48597	PASS
177	176	5	9	6.8	3296	PASS

A249730.D MA9645.M Tue May 14 14:01:29 2019 RPT1

Average of 16.201 to 16.212 min.: A249730.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	435	52.00	60	69.95	342	80.90	1231
37.10	2409	56.00	704	72.05	388	81.95	303
38.10	2281	57.10	1127	73.00	2203	87.00	2321
39.10	829	60.00	464	74.05	8060	88.00	2105
44.00	331	61.00	2273	75.00	24730	90.90	204
45.00	450	62.00	2162	76.00	1930	91.10	59
47.05	674	63.00	1760	77.00	327	92.00	1245
48.05	305	64.10	69	77.95	160	93.00	1937
49.00	2029	67.10	71	78.20	82	94.00	6272
50.05	8968	68.00	4803	78.95	1202	95.00	52402
51.05	2980	69.00	5104	79.95	477	96.00	3491

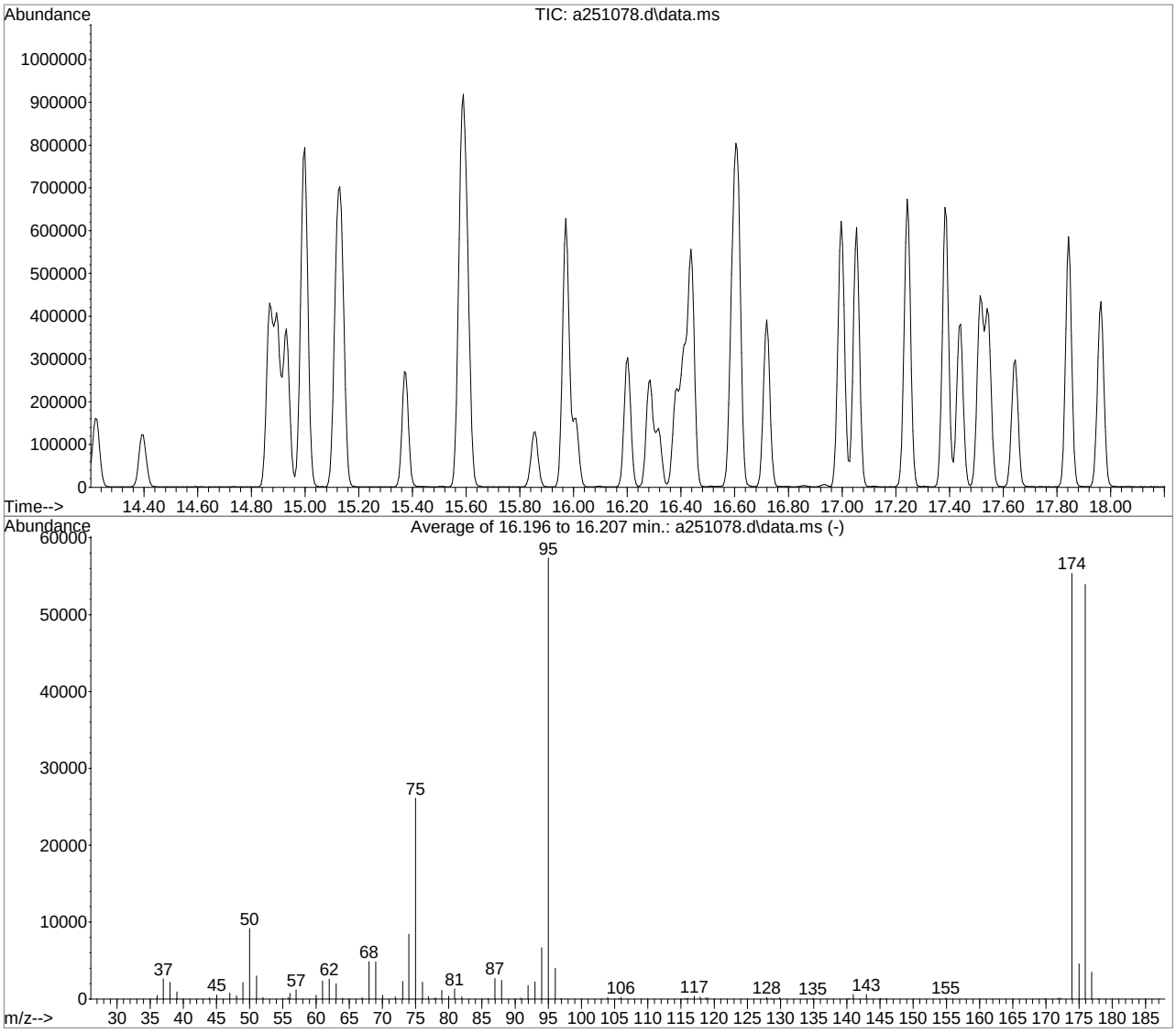
Average of 16.201 to 16.212 min.: A249730.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.10	56	140.90	498				
103.95	213	142.90	400				
105.80	166	148.00	57				
115.10	56	172.30	87				
115.90	138	173.90	49818				
116.95	252	175.00	4035				
117.90	237	175.95	48597				
118.90	314	176.90	3296				
127.90	117						
128.90	52						
129.85	188						

SW-846 Method 8260

Data File : C:\msdchem\1\data\jonkm\va9710\a251078.d Vial: 52
Acq On : 25 Jun 2019 7:20 pm Operator: edwardd
Sample : bfb Inst : MSA
Misc : MS35609,VA9710,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019



AutoFind: Scans 2315, 2316, 2317; Background Corrected with Scan 2306

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.0	9165	PASS
75	95	30	60	45.6	26133	PASS
95	95	100	100	100.0	57360	PASS
96	95	5	9	7.0	4001	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.5	55373	PASS
175	174	5	9	8.2	4548	PASS
176	174	95	101	97.4	53925	PASS
177	176	5	9	6.5	3497	PASS

a251078.d MA9645.M Wed Jun 26 11:54:59 2019

Average of 16.196 to 16.207 min.: a251078.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	463	52.00	200	68.00	4881	78.95	1113
37.00	2613	55.00	54	69.00	4824	80.00	346
38.00	2170	55.80	158	70.05	477	80.90	1334
39.05	920	56.05	722	71.95	287	81.95	276
43.95	160	57.00	1188	73.05	2294	85.90	54
45.05	528	60.00	498	74.00	8434	86.95	2642
47.00	753	61.00	2336	75.00	26133	87.95	2430
48.00	428	62.00	2584	76.05	2205	90.85	129
49.00	2161	63.05	1993	76.95	313	91.95	1764
50.00	9165	64.00	70	77.80	63	93.00	2214
51.05	3001	66.95	163	78.00	157	94.00	6672

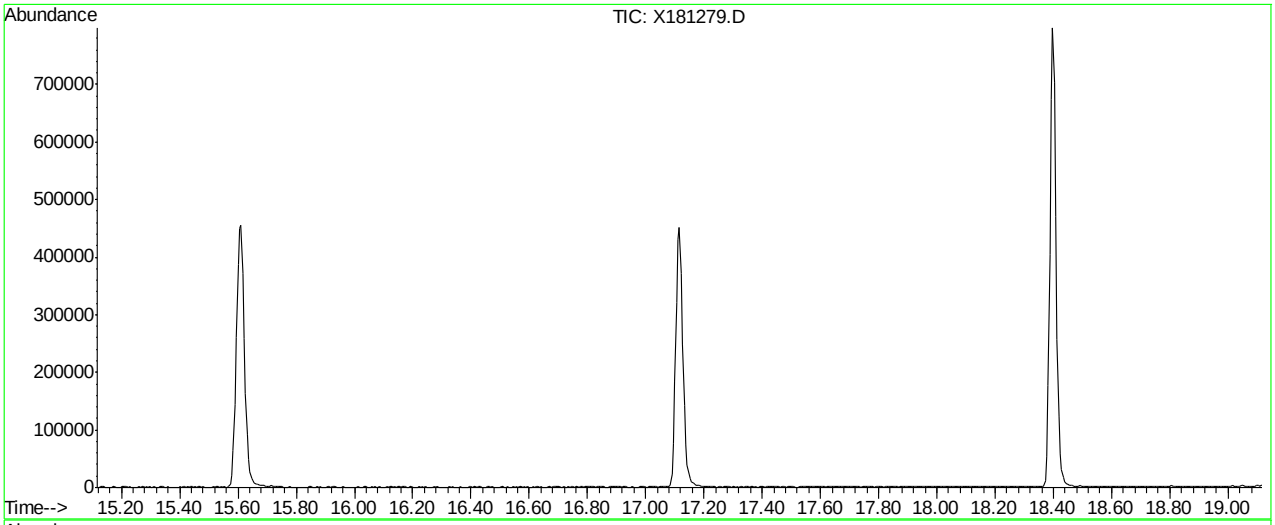
Average of 16.196 to 16.207 min.: a251078.d\data.ms
bfb
Modified:subtracted

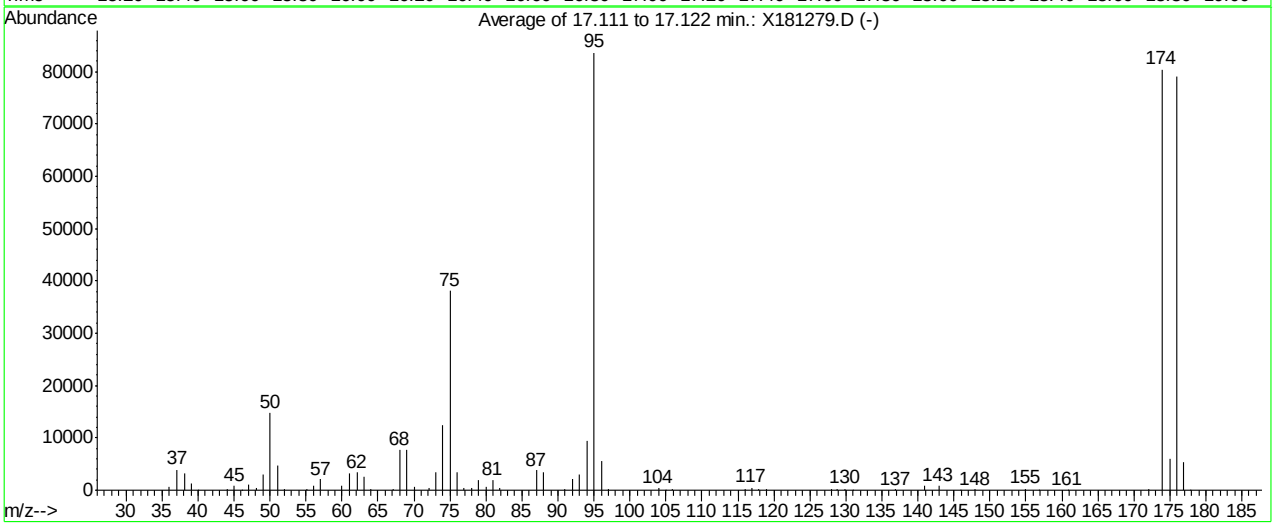
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	57360	119.00	136	169.80	58		
96.05	4001	127.90	172	171.80	131		
96.90	67	128.70	59	172.20	105		
103.95	181	129.85	152	173.90	55373		
105.60	62	134.90	69	175.00	4548		
105.95	194	140.30	78	175.90	53925		
115.70	70	140.95	571	176.90	3497		
116.00	90	142.95	598	177.90	58		
117.00	355	145.10	59				
117.90	255	145.90	53				
118.75	138	154.90	135				

BFB

Data File : C:\msdchem\1\data\VX7749\X181279.D Vial: 1
Acq On : 2 May 2019 4:28 pm Operator: juntaep
Sample : bfb Inst : ACC-VOA-M
Misc : MS34046,VX7749,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)





AutoFind: Scans 2568, 2569, 2570; Background Corrected with Scan 2559

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	14769	PASS
75	95	30	60	45.6	38133	PASS
95	95	100	100	100.0	83690	PASS
96	95	5	9	6.6	5531	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.1	80445	PASS
175	174	5	9	7.5	6070	PASS
176	174	95	101	98.4	79192	PASS
177	176	5	9	6.8	5418	PASS

X181279.D MX7749.M Thu May 09 14:29:09 2019 GCMSX

Average of 17.111 to 17.122 min.: X181279.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	700	50.05	14769	67.05	176	78.95	1869
37.10	3885	51.05	4651	68.00	7681	80.00	553
38.10	3296	52.05	142	69.00	7640	80.90	1971
39.10	1282	55.05	303	70.00	664	81.95	424
39.95	40	56.10	918	72.05	460	87.00	3794
44.00	275	57.05	2119	73.00	3444	88.00	3484
45.05	769	60.00	761	74.00	12373	90.95	273
46.10	52	61.00	3260	75.00	38133	92.00	2062
47.05	1053	62.05	3428	76.00	3411	93.00	3068
48.10	449	63.05	2500	76.95	411	94.00	9437
49.05	3104	64.00	270	77.95	429	95.00	83690

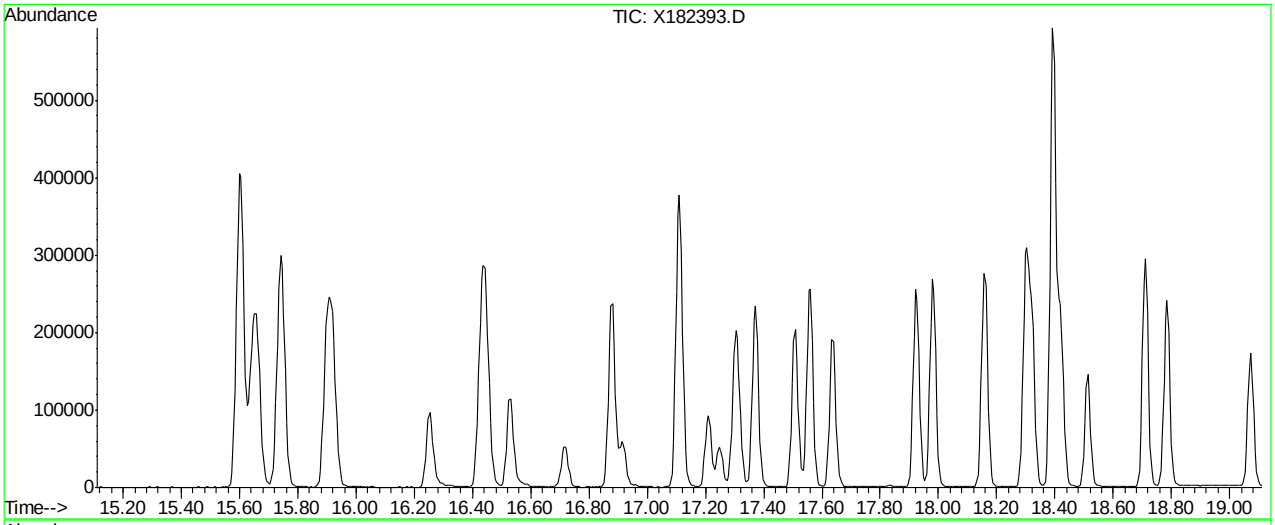
Average of 17.111 to 17.122 min.: X181279.D
bfb
Modified:subtracted

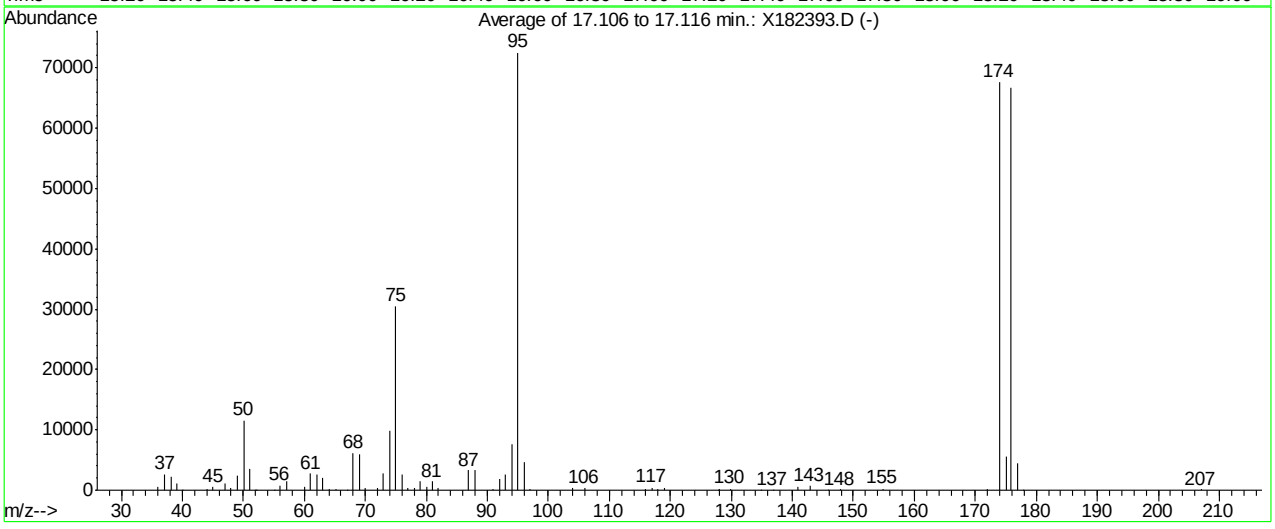
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.05	5531	129.90	311	173.90	80445		
97.00	210	130.90	54	174.95	6070		
103.95	381	136.95	183	175.90	79192		
104.90	105	140.90	806	176.95	5418		
105.95	325	142.95	858	177.80	101		
115.95	293	145.90	64				
116.90	536	147.95	116				
117.95	328	154.95	245				
118.90	320	156.80	69				
127.95	274	160.80	50				
128.85	190	172.10	120				

BFB

Data File : C:\MSDCHEM\1\DATA\VX7807\X182393.D Vial: 2
Acq On : 26 Jun 2019 6:55 am Operator: deving
Sample : bfb Inst : ACC-VOA-M
Misc : MS35756,VX7807,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)





AutoFind: Scans 2567, 2568, 2569; Background Corrected with Scan 2558

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	11533	PASS
75	95	30	60	42.1	30520	PASS
95	95	100	100	100.0	72544	PASS
96	95	5	9	6.4	4626	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.3	67712	PASS
175	174	5	9	8.1	5506	PASS
176	174	95	101	98.5	66677	PASS
177	176	5	9	6.6	4392	PASS

X182393.D MX7749.M Wed Jun 26 14:44:41 2019 GCMSX

Average of 17.106 to 17.116 min.: X182393.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	555	51.05	3447	65.10	120	78.05	365
37.10	2643	52.00	50	67.00	68	78.90	1455
38.10	2325	52.20	52	68.00	6227	80.00	481
39.05	1063	55.00	83	69.00	5917	80.95	1485
40.05	40	56.00	753	70.00	427	81.85	331
44.00	122	57.05	1435	72.00	291	86.95	3336
45.05	510	60.00	472	73.00	2830	87.95	3301
47.05	1063	61.05	2726	74.00	9813	90.95	234
48.00	313	62.00	2540	75.00	30520	91.95	1796
49.05	2485	63.05	2008	76.00	2649	93.00	2604
50.05	11533	64.05	178	77.00	418	94.00	7680

Average of 17.106 to 17.116 min.: X182393.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	72544	129.85	234	175.90	66677		
96.00	4626	134.90	50	176.90	4392		
97.00	106	136.80	58	177.90	70		
103.90	297	140.95	616	207.00	126		
105.90	300	142.90	676				
115.85	214	145.90	50				
116.95	412	147.85	177				
117.95	181	154.85	214				
118.95	342	171.95	269				
127.80	75	173.90	67712				
128.00	162	175.00	5506				

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89752.D
Acq On : 6 Apr 2019 6:21 pm
Operator : CHELSEAS
Sample : IC3793-0.2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 08 14:30:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.75	65	166369	500.00	ug/L	0.00
5) pentafluorobenzene	8.76	168	273237	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	358437	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	321412	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	196898	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	123229	49.72	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.44%			
55) 1,2-dichloroethane-d4 (s)	9.19	65	120667	52.31	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.62%			
76) toluene-d8 (s)	11.22	98	402238	50.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%			
99) 4-bromofluorobenzene (s)	14.08	95	163405	50.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.00%			
Target Compounds						Qvalue
22) iodomethane	6.45	142	1048	0.18	ug/L #	50
23) carbon disulfide	6.58	76	2905	0.26	ug/L	77
27) trans-1,2-dichloroethene	7.15	61	921	0.20	ug/L #	80
29) di-isopropyl ether	7.63	45	2597	0.23	ug/L	91
31) 1,1-dichloroethane	7.65	63	1182	0.21	ug/L	88
32) chloroprene	7.75	53	862	0.20	ug/L	68
35) ethyl tert-butyl ether	8.04	59	2137	0.21	ug/L	90
37) 2,2-dichloropropane	8.32	77	968	0.23	ug/L	76
38) cis-1,2-dichloroethene	8.29	96	684	0.20	ug/L	96
47) 1,1,1-trichloroethane	8.88	97	976	0.20	ug/L	83
48) cyclohexane	8.99	84	934	0.19	ug/L #	68
50) 1,1-dichloropropene	9.02	75	723	0.19	ug/L #	63
51) carbon tetrachloride	9.07	117	772	0.19	ug/L	79
57) 2,2,4-trimethylpentane	9.34	57	2490	0.21	ug/L	86
58) benzene	9.26	78	2528	0.22	ug/L	76
59) tert-amyl methyl ether	9.32	73	2089	0.23	ug/L	94
60) heptane	9.48	57	344	0.16	ug/L #	64
63) trichloroethene	9.94	95	526	0.19	ug/L	90
66) methylcyclohexane	10.23	83	1169	0.20	ug/L	86
67) 1,2-dichloropropane	10.21	63	512	0.18	ug/L #	47
69) bromodichloromethane	10.46	83	678	0.19	ug/L	94
72) cis-1,3-dichloropropene	10.91	75	766	0.18	ug/L	66
77) toluene	11.29	92	1296	0.20	ug/L	96
79) trans-1,3-dichloropropene	11.48	75	655	0.18	ug/L	83
80) 1,1,2-trichloroethane	11.72	83	363	0.18	ug/L #	80
81) tetrachloroethene	11.87	164	452	0.19	ug/L	91
83) 1,3-dichloropropane	11.90	76	699	0.19	ug/L #	63
85) dibromochloromethane	12.17	129	442	0.17	ug/L	74
86) 1,2-dibromoethane	12.33	107	592	0.19	ug/L	89
87) n-butyl ether	12.79	57	2401	0.21	ug/L #	18
88) chlorobenzene	12.85	112	1469	0.21	ug/L	95
89) 1,1,1,2-tetrachloroethane	12.92	131	492	0.17	ug/L	91
90) ethylbenzene	12.91	91	2628	0.21	ug/L	88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89752.D
Acq On : 6 Apr 2019 6:21 pm
Operator : CHELSEAS
Sample : IC3793-0.2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 08 14:30:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

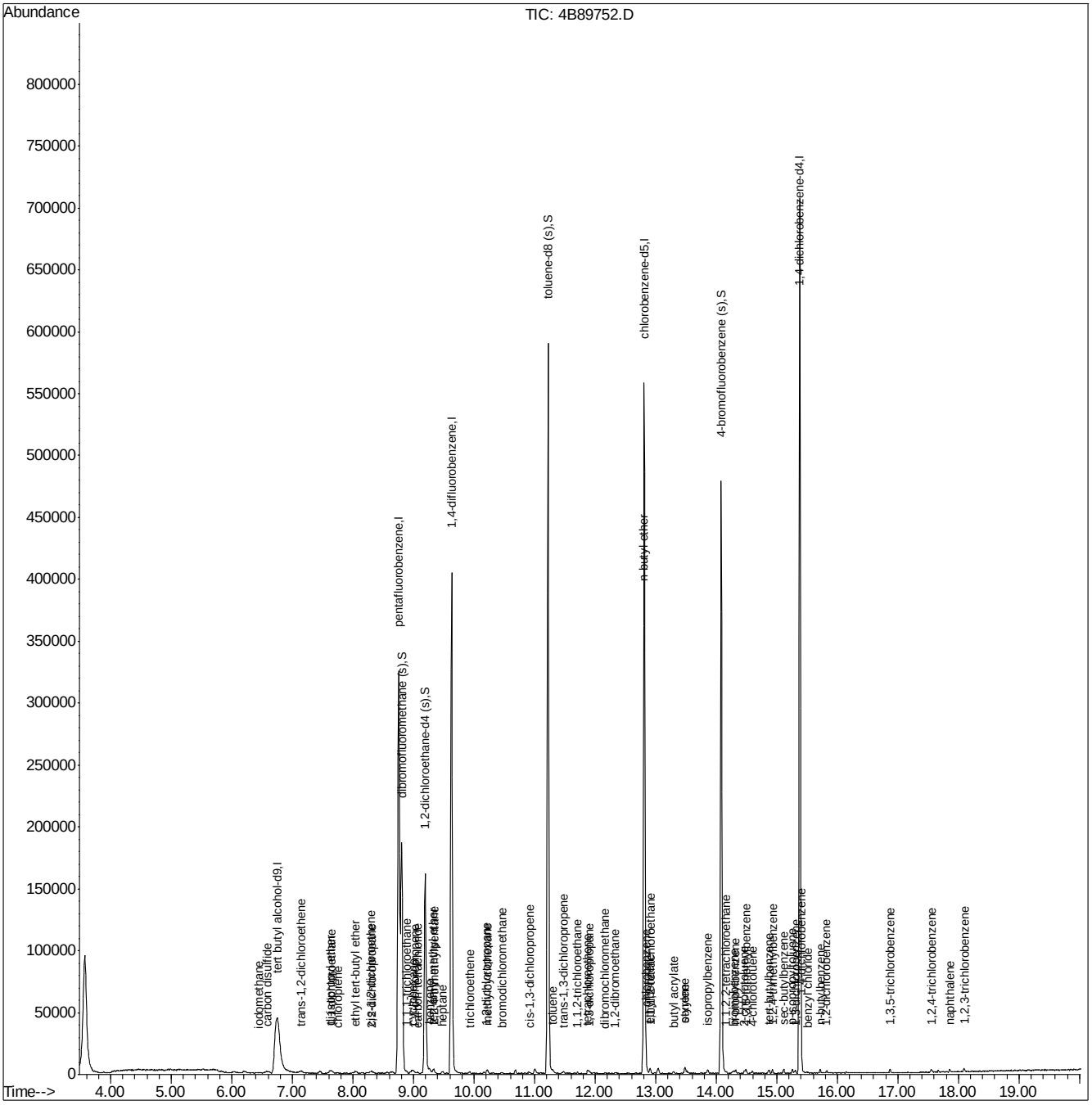
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
92) o-xylene	13.47	91	2192	0.21 ug/L	83
93) styrene	13.49	104	1511	0.19 ug/L	79
94) butyl acrylate	13.29	55	1047	0.19 ug/L	92
95) isopropylbenzene	13.86	105	2632	0.19 ug/L	91
100) 1,1,2,2-tetrachloroethane	14.17	83	752	0.20 ug/L	94
103) bromobenzene	14.29	156	624	0.17 ug/L	90
104) n-propylbenzene	14.32	91	3107	0.20 ug/L	95
105) 2-chlorotoluene	14.47	126	573	0.17 ug/L	92
106) 4-chlorotoluene	14.59	91	1834	0.20 ug/L	88
107) 1,3,5-trimethylbenzene	14.49	105	2255	0.19 ug/L	98
108) tert-butylbenzene	14.87	119	1939	0.19 ug/L	93
109) 1,2,4-trimethylbenzene	14.93	105	2279	0.19 ug/L	95
110) sec-butylbenzene	15.12	105	2894	0.18 ug/L	90
111) p-isopropyltoluene	15.26	119	2423	0.18 ug/L	97
112) 1,3-dichlorobenzene	15.31	146	1389	0.20 ug/L	97
113) 1,4-dichlorobenzene	15.42	146	1281	0.18 ug/L	84
114) 1,2-dichlorobenzene	15.82	146	1442	0.20 ug/L	87
115) benzyl chloride	15.51	91	1267	0.19 ug/L	55
116) n-butylbenzene	15.72	92	1173	0.18 ug/L	97
119) 1,3,5-trichlorobenzene	16.87	180	1356	0.20 ug/L	97
120) 1,2,4-trichlorobenzene	17.55	180	1213	0.20 ug/L	87
123) naphthalene	17.86	128	2471	0.19 ug/L	79
124) 1,2,3-trichlorobenzene	18.09	180	1110	0.19 ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89752.D
Acq On : 6 Apr 2019 6:21 pm
Operator : CHELSEAS
Sample : IC3793-0.2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 08 14:30:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89753.D
Acq On : 6 Apr 2019 6:50 pm
Operator : CHELSEAS
Sample : IC3793-0.5
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 08 14:33:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.75	65	162567	500.00	ug/L	0.00
5) pentafluorobenzene	8.76	168	282570	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	367999	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	333266	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	205128	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	127046	49.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.12%			
55) 1,2-dichloroethane-d4 (s)	9.19	65	123727	52.24	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.48%			
76) toluene-d8 (s)	11.22	98	415934	50.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.50%			
99) 4-bromofluorobenzene (s)	14.08	95	170705	50.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.28%			
Target Compounds						Qvalue
8) chloromethane	4.23	50	3736	0.59	ug/L	82
9) vinyl chloride	4.44	62	2678	0.46	ug/L	75
14) vinyl bromide	5.41	106	1447	0.48	ug/L #	75
19) 1,1-dichloroethene	6.20	61	3066	0.55	ug/L	86
22) iodomethane	6.45	142	3223	0.54	ug/L	88
23) carbon disulfide	6.60	76	6382	0.56	ug/L	77
24) methylene chloride	6.81	84	2221	0.58	ug/L	96
26) methyl tert butyl ether	7.12	73	5251	0.60	ug/L	88
27) trans-1,2-dichloroethene	7.15	61	2582	0.54	ug/L	90
28) hexane	7.45	56	1462	0.59	ug/L	82
29) di-isopropyl ether	7.63	45	7044	0.61	ug/L	97
31) 1,1-dichloroethane	7.65	63	3211	0.55	ug/L	92
32) chloroprene	7.74	53	2506	0.55	ug/L	89
35) ethyl tert-butyl ether	8.05	59	6213	0.60	ug/L	95
37) 2,2-dichloropropane	8.32	77	2700	0.62	ug/L	91
38) cis-1,2-dichloroethene	8.30	96	1952	0.55	ug/L	90
39) propionitrile	8.30	54	2283	4.78	ug/L	96
42) bromochloromethane	8.55	128	880	0.51	ug/L	85
44) chloroform	8.63	83	3268	0.60	ug/L	96
45) tert-butyl formate	8.66	59	1272	0.50	ug/L	77
47) 1,1,1-trichloroethane	8.87	97	2688	0.54	ug/L	94
48) cyclohexane	9.00	84	2695	0.52	ug/L #	73
50) 1,1-dichloropropene	9.03	75	2231	0.57	ug/L	88
51) carbon tetrachloride	9.07	117	2137	0.50	ug/L	97
56) n-butyl alcohol	9.67	41	1967	27.64	ug/L	78
57) 2,2,4-trimethylpentane	9.33	57	6930	0.56	ug/L	93
58) benzene	9.26	78	6823	0.59	ug/L	89
59) tert-amyl methyl ether	9.32	73	5746	0.61	ug/L	89
60) heptane	9.47	57	1236	0.56	ug/L	93
62) ethyl acrylate	9.91	55	1578	0.49	ug/L	81
63) trichloroethene	9.93	95	1669	0.58	ug/L	94
66) methylcyclohexane	10.22	83	3510	0.58	ug/L	92
67) 1,2-dichloropropane	10.21	63	1719	0.57	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89753.D
Acq On : 6 Apr 2019 6:50 pm
Operator : CHELSEAS
Sample : IC3793-0.5
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 08 14:33:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

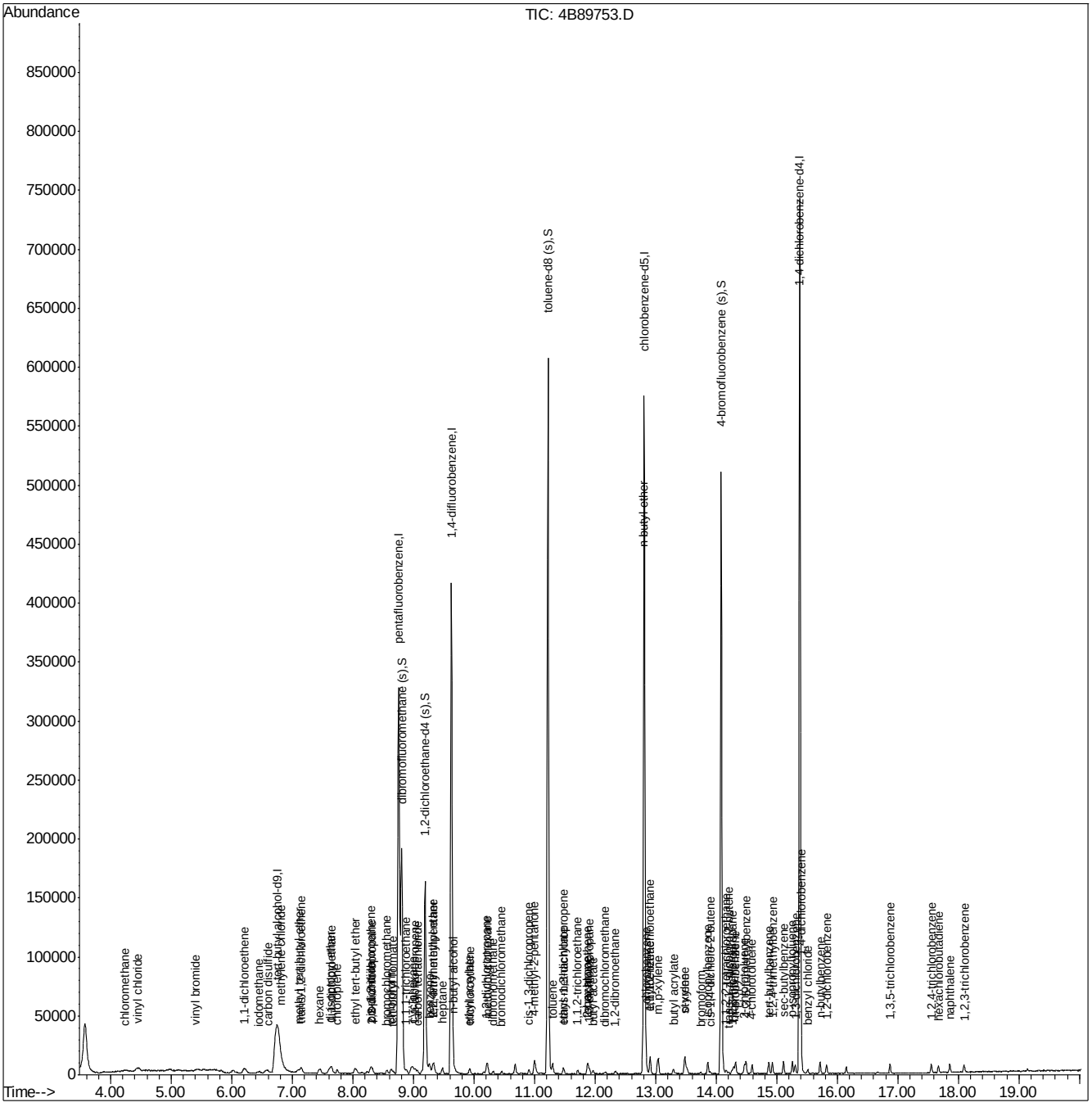
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
68) dibromomethane	10.31	93	844	0.48 ug/L		95
69) bromodichloromethane	10.45	83	1966	0.53 ug/L		97
72) cis-1,3-dichloropropene	10.91	75	2347	0.53 ug/L		93
73) 4-methyl-2-pentanone	11.00	58	2483	2.16 ug/L		99
77) toluene	11.29	92	3606	0.54 ug/L		90
78) ethyl methacrylate	11.47	69	1583	0.47 ug/L		94
79) trans-1,3-dichloropropene	11.48	75	1795	0.49 ug/L		82
80) 1,1,2-trichloroethane	11.71	83	989	0.49 ug/L	#	86
81) tetrachloroethene	11.87	164	1464	0.59 ug/L		96
82) 2-hexanone	11.87	58	2031	1.94 ug/L		93
83) 1,3-dichloropropane	11.90	76	2073	0.56 ug/L		81
84) butyl acetate	11.96	56	924	0.51 ug/L	#	77
85) dibromochloromethane	12.16	129	1331	0.48 ug/L		93
86) 1,2-dibromoethane	12.33	107	1706	0.53 ug/L		89
87) n-butyl ether	12.79	57	6830	0.57 ug/L		71
88) chlorobenzene	12.85	112	4122	0.56 ug/L		97
89) 1,1,1,2-tetrachloroethane	12.92	131	1760	0.57 ug/L		97
90) ethylbenzene	12.91	91	7463	0.58 ug/L		97
91) m,p-xylene	13.04	106	5473	1.11 ug/L		93
92) o-xylene	13.48	91	6216	0.57 ug/L		95
93) styrene	13.49	104	4337	0.52 ug/L		88
94) butyl acrylate	13.29	55	3299	0.56 ug/L		95
95) isopropylbenzene	13.86	105	7852	0.56 ug/L		93
96) bromoform	13.74	173	846	0.42 ug/L		84
97) cis-1,4-dichloro-2-butene	13.90	88	439	0.43 ug/L		87
100) 1,1,2,2-tetrachloroethane	14.17	83	1983	0.52 ug/L		80
101) trans-1,4-dichloro-2-buten	14.21	53	313	0.39 ug/L	#	73
102) 1,2,3-trichloropropane	14.26	110	423	0.46 ug/L	#	45
103) bromobenzene	14.29	156	2016	0.53 ug/L		93
104) n-propylbenzene	14.32	91	8926	0.54 ug/L		97
105) 2-chlorotoluene	14.46	126	1828	0.52 ug/L		94
106) 4-chlorotoluene	14.59	91	5199	0.55 ug/L		98
107) 1,3,5-trimethylbenzene	14.49	105	6473	0.52 ug/L		97
108) tert-butylbenzene	14.87	119	5387	0.50 ug/L		97
109) 1,2,4-trimethylbenzene	14.93	105	6472	0.52 ug/L		96
110) sec-butylbenzene	15.11	105	8327	0.51 ug/L		98
111) p-isopropyltoluene	15.26	119	7187	0.51 ug/L		97
112) 1,3-dichlorobenzene	15.31	146	3760	0.53 ug/L		99
113) 1,4-dichlorobenzene	15.41	146	3957	0.54 ug/L		99
114) 1,2-dichlorobenzene	15.82	146	3941	0.53 ug/L		94
115) benzyl chloride	15.50	91	3620	0.53 ug/L		87
116) n-butylbenzene	15.72	92	3366	0.50 ug/L		93
119) 1,3,5-trichlorobenzene	16.87	180	3329	0.47 ug/L		90
120) 1,2,4-trichlorobenzene	17.55	180	2852	0.44 ug/L		98
122) hexachlorobutadiene	17.67	225	1665	0.48 ug/L		84
123) naphthalene	17.86	128	5766	0.43 ug/L		96
124) 1,2,3-trichlorobenzene	18.09	180	2620	0.44 ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89753.D
Acq On : 6 Apr 2019 6:50 pm
Operator : CHELSEAS
Sample : IC3793-0.5
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 08 14:33:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89754.D
Acq On : 6 Apr 2019 7:17 pm
Operator : CHELSEAS
Sample : IC3793-1
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 08 14:34:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.75	65	169431	500.00	ug/L	0.00
5) pentafluorobenzene	8.76	168	286713	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	377562	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	334230	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	206481	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	130001	49.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.96%			
55) 1,2-dichloroethane-d4 (s)	9.19	65	125047	51.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.92%			
76) toluene-d8 (s)	11.22	98	426086	51.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.66%			
99) 4-bromofluorobenzene (s)	14.08	95	169189	49.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.72%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.86	59	2049	4.19	ug/L	77
6) chlorodifluoromethane	3.90	51	5663	1.00	ug/L	94
7) dichlorodifluoromethane	3.88	85	5127	0.84	ug/L	94
8) chloromethane	4.24	50	6934	1.09	ug/L	91
9) vinyl chloride	4.44	62	5637	0.95	ug/L	84
10) 1,3-butadiene	4.46	54	4339	1.03	ug/L	91
12) chloroethane	5.13	64	3364	1.18	ug/L	91
13) trichlorofluoromethane	5.52	101	5239	0.92	ug/L	94
14) vinyl bromide	5.43	106	3134	1.03	ug/L	91
15) ethyl ether	5.82	74	1601	0.94	ug/L #	75
16) 2-chloropropane	6.03	43	7607	1.29	ug/L	96
18) freon 113	6.22	151	2987	0.97	ug/L	84
19) 1,1-dichloroethene	6.21	61	5785	1.03	ug/L	91
20) acetone	6.19	58	1014	3.35	ug/L #	35
22) iodomethane	6.45	142	5902	0.97	ug/L	98
23) carbon disulfide	6.58	76	11958	1.03	ug/L	98
24) methylene chloride	6.82	84	4069	1.05	ug/L	95
26) methyl tert butyl ether	7.11	73	9470	1.06	ug/L	97
27) trans-1,2-dichloroethene	7.15	61	4945	1.02	ug/L	94
28) hexane	7.45	56	2636	1.04	ug/L	86
29) di-isopropyl ether	7.62	45	12414	1.06	ug/L	94
31) 1,1-dichloroethane	7.65	63	6113	1.03	ug/L	93
32) chloroprene	7.74	53	4481	0.97	ug/L	93
35) ethyl tert-butyl ether	8.04	59	10556	1.01	ug/L	96
37) 2,2-dichloropropane	8.32	77	5105	1.15	ug/L	97
38) cis-1,2-dichloroethene	8.29	96	3891	1.07	ug/L	99
39) propionitrile	8.29	54	4654	9.61	ug/L	86
41) methacrylonitrile	8.47	67	1024	0.84	ug/L #	77
42) bromochloromethane	8.56	128	1660	0.94	ug/L	85
44) chloroform	8.63	83	6053	1.09	ug/L	98
45) tert-butyl formate	8.66	59	2281	0.89	ug/L	91
47) 1,1,1-trichloroethane	8.88	97	4967	0.98	ug/L	97
48) cyclohexane	8.99	84	5571	1.06	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89754.D
Acq On : 6 Apr 2019 7:17 pm
Operator : CHELSEAS
Sample : IC3793-1
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 08 14:34:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
50) 1,1-dichloropropene	9.03	75	4188	1.05 ug/L		93
51) carbon tetrachloride	9.06	117	4158	0.97 ug/L		92
52) tert-amyl alcohol	9.13	73	1177	5.76 ug/L	#	67
56) n-butyl alcohol	9.67	41	3277	44.88 ug/L	#	74
57) 2,2,4-trimethylpentane	9.34	57	13308	1.04 ug/L		93
58) benzene	9.26	78	12490	1.04 ug/L		94
59) tert-amyl methyl ether	9.32	73	10570	1.08 ug/L		97
60) heptane	9.48	57	2216	0.97 ug/L		91
61) 1,2-dichloroethane	9.28	62	4034	1.15 ug/L		98
62) ethyl acrylate	9.91	55	3129	0.95 ug/L		81
63) trichloroethene	9.93	95	2961	1.01 ug/L		96
64) 2-chloroethyl vinyl ether	10.68	63	7966	4.63 ug/L		94
66) methylcyclohexane	10.22	83	6271	1.02 ug/L		97
67) 1,2-dichloropropane	10.21	63	3085	1.00 ug/L		97
68) dibromomethane	10.31	93	1832	1.02 ug/L		93
69) bromodichloromethane	10.46	83	3732	0.98 ug/L		92
71) epichlorohydrin	10.77	57	1232	4.19 ug/L		91
72) cis-1,3-dichloropropene	10.91	75	4320	0.96 ug/L		93
73) 4-methyl-2-pentanone	11.00	58	4777	4.05 ug/L		92
74) isoamyl alcohol	11.00	70	1732	17.78 ug/L	#	73
77) toluene	11.29	92	6493	0.98 ug/L		94
78) ethyl methacrylate	11.47	69	3130	0.93 ug/L		93
79) trans-1,3-dichloropropene	11.48	75	3710	1.00 ug/L		94
80) 1,1,2-trichloroethane	11.71	83	2102	1.03 ug/L		92
81) tetrachloroethene	11.87	164	2566	1.03 ug/L		85
82) 2-hexanone	11.88	58	4307	4.10 ug/L		99
83) 1,3-dichloropropane	11.90	76	3818	1.02 ug/L		98
84) butyl acetate	11.96	56	1793	0.99 ug/L		98
85) dibromochloromethane	12.17	129	2619	0.94 ug/L		91
86) 1,2-dibromoethane	12.33	107	3190	0.99 ug/L		98
87) n-butyl ether	12.79	57	12743	1.07 ug/L		81
88) chlorobenzene	12.84	112	7754	1.05 ug/L		95
89) 1,1,1,2-tetrachloroethane	12.91	131	2906	0.94 ug/L		96
90) ethylbenzene	12.91	91	13001	1.01 ug/L		97
91) m,p-xylene	13.04	106	10142	2.05 ug/L		97
92) o-xylene	13.47	91	11213	1.02 ug/L		99
93) styrene	13.49	104	8015	0.96 ug/L		94
94) butyl acrylate	13.29	55	6029	1.03 ug/L		96
95) isopropylbenzene	13.86	105	13945	0.99 ug/L		96
96) bromoform	13.74	173	1798	0.89 ug/L		93
97) cis-1,4-dichloro-2-butene	13.89	88	914	0.89 ug/L		96
100) 1,1,2,2-tetrachloroethane	14.17	83	3698	0.96 ug/L		97
101) trans-1,4-dichloro-2-buten	14.20	53	741	0.92 ug/L		86
102) 1,2,3-trichloropropane	14.26	110	847	0.91 ug/L	#	73
103) bromobenzene	14.29	156	3715	0.96 ug/L		95
104) n-propylbenzene	14.32	91	15982	0.96 ug/L		98
105) 2-chlorotoluene	14.46	126	3400	0.96 ug/L		95
106) 4-chlorotoluene	14.59	91	9657	1.01 ug/L		95
107) 1,3,5-trimethylbenzene	14.49	105	11848	0.94 ug/L		93
108) tert-butylbenzene	14.87	119	10049	0.92 ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89754.D
Acq On : 6 Apr 2019 7:17 pm
Operator : CHELSEAS
Sample : IC3793-1
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 08 14:34:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration

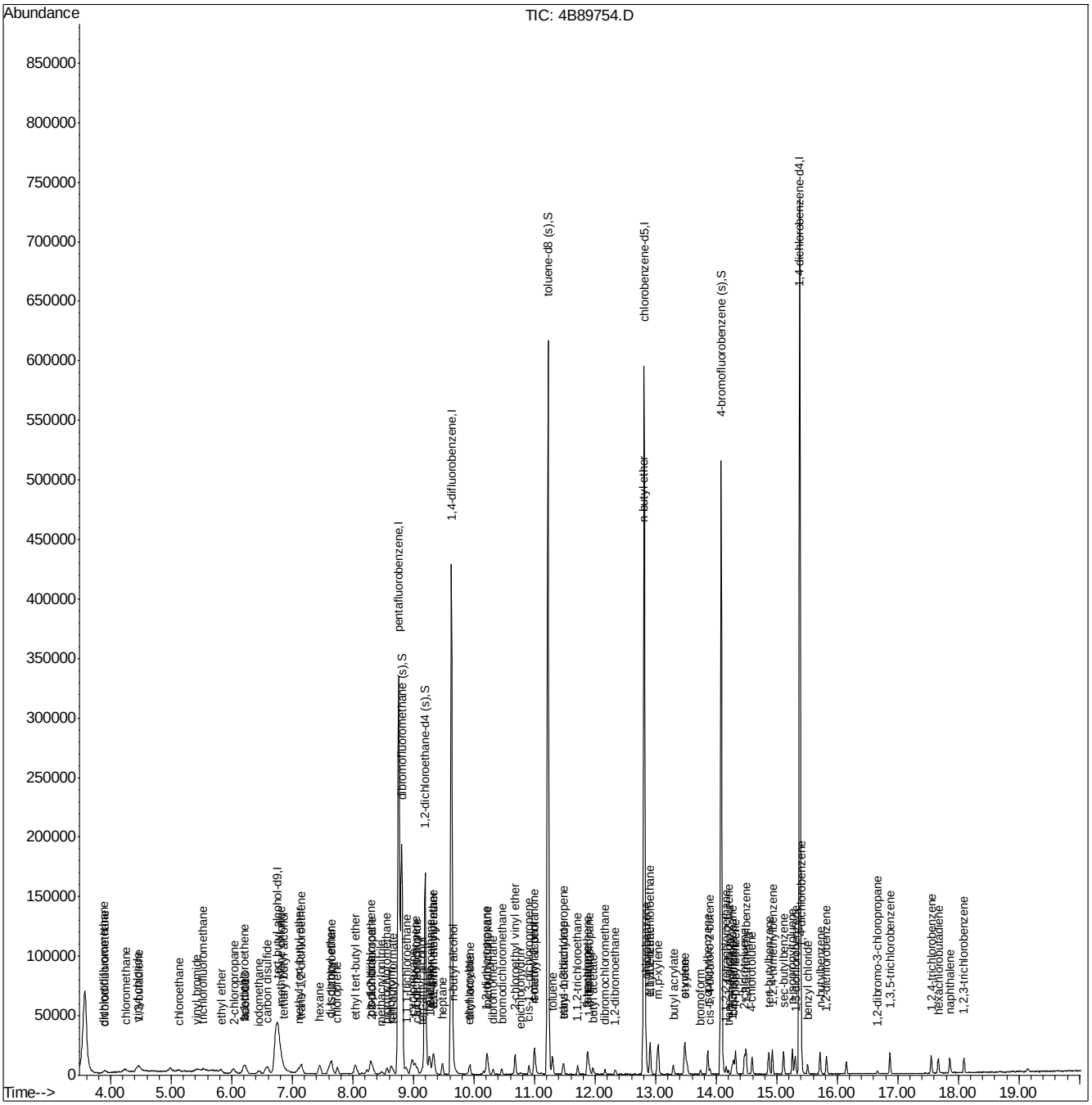
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2,4-trimethylbenzene	14.93	105	11918	0.95	ug/L	93
110) sec-butylbenzene	15.11	105	15258	0.92	ug/L	98
111) p-isopropyltoluene	15.26	119	13022	0.92	ug/L	99
112) 1,3-dichlorobenzene	15.31	146	7009	0.97	ug/L	97
113) 1,4-dichlorobenzene	15.41	146	7214	0.98	ug/L	96
114) 1,2-dichlorobenzene	15.82	146	7245	0.97	ug/L	91
115) benzyl chloride	15.51	91	6479	0.94	ug/L	99
116) n-butylbenzene	15.71	92	6321	0.93	ug/L	95
118) 1,2-dibromo-3-chloropropan	16.66	157	788	0.76	ug/L	91
119) 1,3,5-trichlorobenzene	16.87	180	6400	0.89	ug/L	95
120) 1,2,4-trichlorobenzene	17.55	180	5485	0.85	ug/L	95
122) hexachlorobutadiene	17.67	225	3063	0.89	ug/L	93
123) naphthalene	17.86	128	11175	0.83	ug/L	98
124) 1,2,3-trichlorobenzene	18.09	180	4937	0.82	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89754.D
Acq On : 6 Apr 2019 7:17 pm
Operator : CHELSEAS
Sample : IC3793-1
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 08 14:34:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:07:07 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89755.D
Acq On : 6 Apr 2019 7:45 pm
Operator : CHELSEAS
Sample : IC3793-2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 08 14:35:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:26:23 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	6.75	65	167565	500.00	ug/L		0.00
5) pentafluorobenzene	8.76	168	277642	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.63	114	363763	50.00	ug/L		0.00
75) chlorobenzene-d5	12.81	117	328216	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.38	152	204195	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.80	113	126142	50.08	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%				
55) 1,2-dichloroethane-d4 (s)	9.19	65	123715	52.85	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.70%				
76) toluene-d8 (s)	11.22	98	414245	50.82	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.64%				
99) 4-bromofluorobenzene (s)	14.08	95	166777	49.70	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.40%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.86	59	5080	10.49	ug/L		77
4) 1,4-dioxane	10.25	88	1548	41.42	ug/L		96
6) chlorodifluoromethane	3.90	51	12863	2.35	ug/L		92
7) dichlorodifluoromethane	3.90	85	11042	1.87	ug/L		83
8) chloromethane	4.24	50	13223	2.14	ug/L		94
9) vinyl chloride	4.45	62	11346	1.97	ug/L		93
10) 1,3-butadiene	4.46	54	9029	2.22	ug/L		97
11) bromomethane	4.98	94	8262	2.19	ug/L		91
12) chloroethane	5.11	64	6119	2.21	ug/L		89
13) trichlorofluoromethane	5.52	101	11020	1.99	ug/L		97
14) vinyl bromide	5.42	106	5843	1.98	ug/L		89
15) ethyl ether	5.82	74	3702	2.25	ug/L		89
16) 2-chloropropane	6.03	43	14665	2.58	ug/L		98
18) freon 113	6.22	151	6647	2.24	ug/L		93
19) 1,1-dichloroethene	6.20	61	12493	2.29	ug/L		97
20) acetone	6.20	58	2438	8.32	ug/L	#	71
22) iodomethane	6.44	142	13389	2.27	ug/L		95
23) carbon disulfide	6.57	76	26493	2.35	ug/L		98
24) methylene chloride	6.80	84	8840	2.35	ug/L		98
26) methyl tert butyl ether	7.12	73	20317	2.35	ug/L		95
27) trans-1,2-dichloroethene	7.15	61	10903	2.33	ug/L		97
28) hexane	7.44	56	5655	2.31	ug/L		90
29) di-isopropyl ether	7.63	45	26950	2.37	ug/L		94
30) 2-butanone	8.22	72	2732	8.20	ug/L	#	90
31) 1,1-dichloroethane	7.65	63	13313	2.31	ug/L		97
32) chloroprene	7.74	53	10340	2.30	ug/L		99
33) acrylonitrile	7.05	53	2653	2.14	ug/L		87
34) vinyl acetate	7.59	86	902	1.80	ug/L	#	82
35) ethyl tert-butyl ether	8.04	59	24050	2.37	ug/L		98
36) ethyl acetate	8.23	45	971	2.24	ug/L	#	26
37) 2,2-dichloropropane	8.32	77	10882	2.53	ug/L		92
38) cis-1,2-dichloroethene	8.29	96	8051	2.29	ug/L		99
39) propionitrile	8.29	54	11087	23.65	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89755.D
Acq On : 6 Apr 2019 7:45 pm
Operator : CHELSEAS
Sample : IC3793-2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 08 14:35:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:26:23 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) methyl acrylate	8.31	85	726	1.69 ug/L #	18
41) methacrylonitrile	8.47	67	2446	2.08 ug/L	85
42) bromochloromethane	8.56	128	3833	2.24 ug/L	93
43) tetrahydrofuran	8.58	72	939	2.30 ug/L #	42
44) chloroform	8.63	83	12793	2.39 ug/L	97
45) tert-butyl formate	8.66	59	5609	2.25 ug/L	94
47) 1,1,1-trichloroethane	8.88	97	11191	2.28 ug/L	95
48) cyclohexane	8.99	84	10550	2.07 ug/L	95
50) 1,1-dichloropropene	9.03	75	8893	2.29 ug/L	97
51) carbon tetrachloride	9.06	117	9534	2.29 ug/L	94
52) tert-amyl alcohol	9.13	73	2351	11.88 ug/L #	83
53) isopropyl acetate	9.14	87	1110	1.93 ug/L #	41
56) n-butyl alcohol	9.66	41	8474	120.45 ug/L	94
57) 2,2,4-trimethylpentane	9.34	57	28076	2.29 ug/L	99
58) benzene	9.26	78	27172	2.36 ug/L	97
59) tert-amyl methyl ether	9.32	73	23436	2.50 ug/L	95
60) heptane	9.47	57	5007	2.28 ug/L	97
61) 1,2-dichloroethane	9.28	62	8469	2.51 ug/L	92
62) ethyl acrylate	9.90	55	7097	2.24 ug/L	92
63) trichloroethene	9.93	95	6350	2.24 ug/L	92
64) 2-chloroethyl vinyl ether	10.68	63	17805	10.74 ug/L	100
65) methyl methacrylate	10.15	100	1187	1.73 ug/L #	69
66) methylcyclohexane	10.22	83	13688	2.30 ug/L	94
67) 1,2-dichloropropane	10.21	63	6759	2.28 ug/L	96
68) dibromomethane	10.32	93	4006	2.31 ug/L	95
69) bromodichloromethane	10.46	83	7975	2.17 ug/L	95
71) epichlorohydrin	10.77	57	3161	11.17 ug/L	97
72) cis-1,3-dichloropropene	10.91	75	9618	2.21 ug/L	98
73) 4-methyl-2-pentanone	11.00	58	10507	9.24 ug/L	93
74) isoamyl alcohol	11.00	70	4052	43.18 ug/L	91
77) toluene	11.29	92	14911	2.28 ug/L	96
78) ethyl methacrylate	11.47	69	7246	2.19 ug/L	96
79) trans-1,3-dichloropropene	11.48	75	8199	2.26 ug/L	87
80) 1,1,2-trichloroethane	11.71	83	4689	2.34 ug/L	96
81) tetrachloroethene	11.87	164	5360	2.20 ug/L	96
82) 2-hexanone	11.87	58	10269	9.95 ug/L	96
83) 1,3-dichloropropane	11.91	76	8640	2.36 ug/L	87
84) butyl acetate	11.96	56	4438	2.49 ug/L	98
85) dibromochloromethane	12.16	129	5747	2.10 ug/L	98
86) 1,2-dibromoethane	12.33	107	6822	2.15 ug/L	98
87) n-butyl ether	12.79	57	27944	2.38 ug/L	97
88) chlorobenzene	12.84	112	16477	2.26 ug/L	97
89) 1,1,1,2-tetrachloroethane	12.92	131	6755	2.23 ug/L	97
90) ethylbenzene	12.91	91	29285	2.31 ug/L	97
91) m,p-xylene	13.04	106	21970	4.53 ug/L	98
92) o-xylene	13.47	91	24928	2.31 ug/L	99
93) styrene	13.49	104	17721	2.17 ug/L	97
94) butyl acrylate	13.29	55	13305	2.31 ug/L	96
95) isopropylbenzene	13.86	105	31875	2.31 ug/L	96
96) bromoform	13.75	173	4129	2.09 ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89755.D
Acq On : 6 Apr 2019 7:45 pm
Operator : CHELSEAS
Sample : IC3793-2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 08 14:35:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:26:23 2019
Response via : Initial Calibration

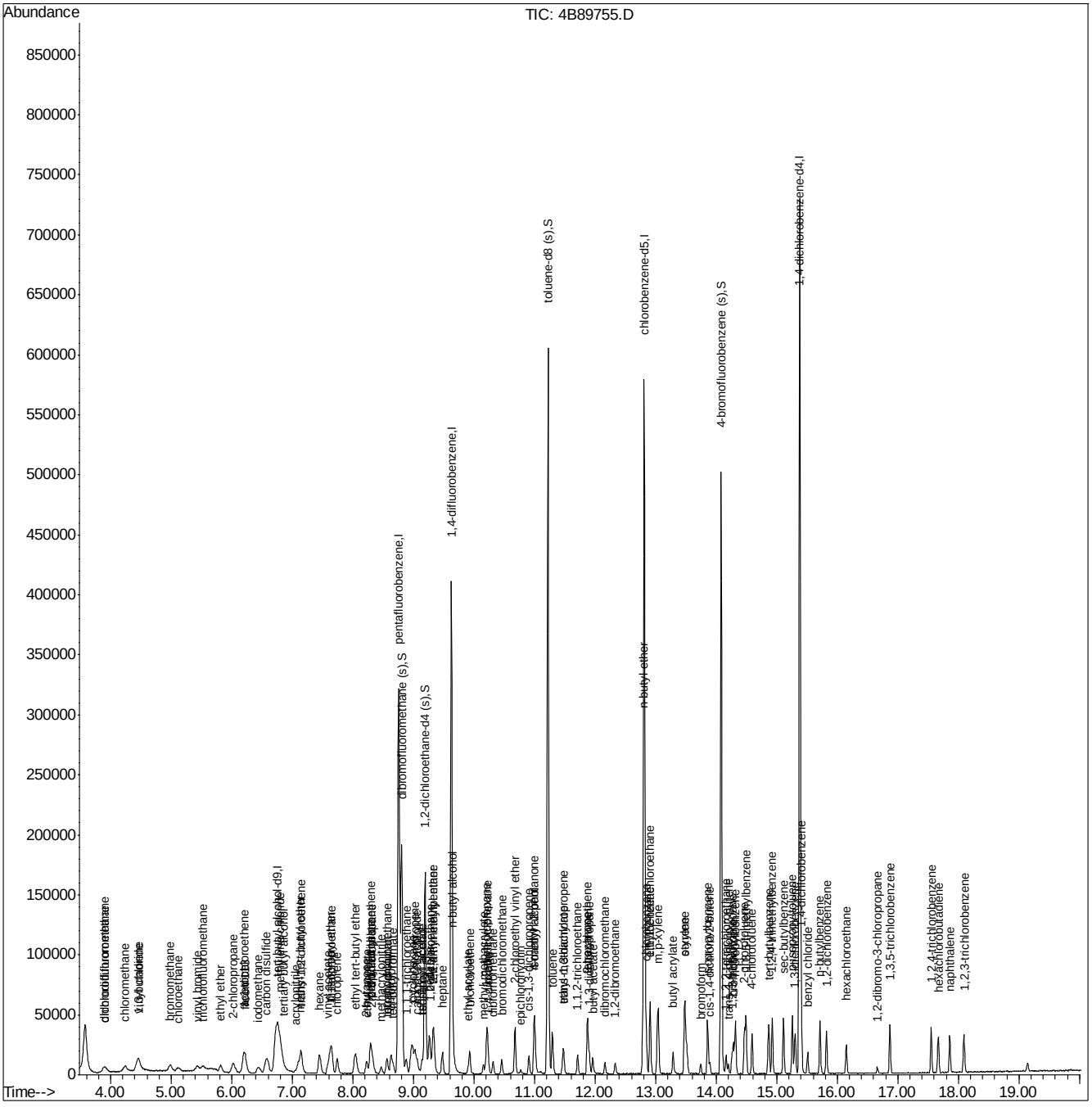
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
97) cis-1,4-dichloro-2-butene	13.89	88	2157	2.13	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.17	83	8471	2.23	ug/L	97
101) trans-1,4-dichloro-2-buten	14.20	53	1676	2.10	ug/L	89
102) 1,2,3-trichloropropane	14.26	110	2005	2.17	ug/L	90
103) bromobenzene	14.29	156	8302	2.17	ug/L	97
104) n-propylbenzene	14.32	91	35483	2.16	ug/L	98
105) 2-chlorotoluene	14.47	126	7561	2.16	ug/L	90
106) 4-chlorotoluene	14.59	91	21005	2.22	ug/L	99
107) 1,3,5-trimethylbenzene	14.49	105	26901	2.17	ug/L	99
108) tert-butylbenzene	14.87	119	22131	2.05	ug/L	98
109) 1,2,4-trimethylbenzene	14.92	105	27307	2.20	ug/L	99
110) sec-butylbenzene	15.11	105	34420	2.10	ug/L	99
111) p-isopropyltoluene	15.26	119	29294	2.10	ug/L	99
112) 1,3-dichlorobenzene	15.31	146	15970	2.24	ug/L	93
113) 1,4-dichlorobenzene	15.41	146	15889	2.19	ug/L	99
114) 1,2-dichlorobenzene	15.82	146	16546	2.23	ug/L	99
115) benzyl chloride	15.51	91	14445	2.12	ug/L	98
116) n-butylbenzene	15.71	92	13829	2.06	ug/L	98
117) hexachloroethane	16.15	201	4382	1.71	ug/L	90
118) 1,2-dibromo-3-chloropropan	16.66	157	1889	1.85	ug/L	79
119) 1,3,5-trichlorobenzene	16.87	180	14457	2.03	ug/L	97
120) 1,2,4-trichlorobenzene	17.55	180	12109	1.89	ug/L	93
122) hexachlorobutadiene	17.67	225	7608	2.22	ug/L	93
123) naphthalene	17.86	128	25405	1.91	ug/L	99
124) 1,2,3-trichlorobenzene	18.09	180	11242	1.90	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89755.D
Acq On : 6 Apr 2019 7:45 pm
Operator : CHELSEAS
Sample : IC3793-2
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 08 14:35:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:26:23 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89756.D
Acq On : 6 Apr 2019 8:13 pm
Operator : CHELSEAS
Sample : IC3793-4
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 08 14:36:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	6.75	65	161750	500.00	ug/L		0.00
5) pentafluorobenzene	8.76	168	282478	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.63	114	369759	50.00	ug/L		0.00
75) chlorobenzene-d5	12.81	117	333267	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.38	152	203628	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.80	113	126991	49.56	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.12%				
55) 1,2-dichloroethane-d4 (s)	9.20	65	122920	51.66	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.32%				
76) toluene-d8 (s)	11.22	98	418067	50.51	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.02%				
99) 4-bromofluorobenzene (s)	14.08	95	167342	50.01	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.02%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.85	59	9371	20.05	ug/L		87
4) 1,4-dioxane	10.25	88	3128	86.70	ug/L		92
6) chlorodifluoromethane	3.91	51	23553	4.23	ug/L		97
7) dichlorodifluoromethane	3.89	85	18363	3.06	ug/L		95
8) chloromethane	4.23	50	21457	3.41	ug/L		99
9) vinyl chloride	4.45	62	18250	3.12	ug/L		98
10) 1,3-butadiene	4.47	54	17547	4.24	ug/L		97
11) bromomethane	4.98	94	13114	3.41	ug/L		94
12) chloroethane	5.12	64	9604	3.41	ug/L		97
13) trichlorofluoromethane	5.51	101	17612	3.13	ug/L		95
14) vinyl bromide	5.42	106	9607	3.20	ug/L		94
15) ethyl ether	5.82	74	6840	4.09	ug/L		96
16) 2-chloropropane	6.02	43	26729	4.61	ug/L		97
17) acrolein	6.03	56	2563	4.01	ug/L		94
18) freon 113	6.22	151	12249	4.05	ug/L		95
19) 1,1-dichloroethene	6.20	61	23562	4.25	ug/L		92
20) acetone	6.20	58	4552	15.27	ug/L	#	70
21) acetonitrile	6.55	41	20301	44.48	ug/L		93
22) iodomethane	6.45	142	24824	4.14	ug/L		97
23) carbon disulfide	6.59	76	49158	4.28	ug/L		99
24) methylene chloride	6.81	84	16347	4.26	ug/L		92
25) methyl acetate	6.58	43	10496	4.22	ug/L		99
26) methyl tert butyl ether	7.12	73	38025	4.33	ug/L		97
27) trans-1,2-dichloroethene	7.15	61	20934	4.39	ug/L		97
28) hexane	7.45	56	11073	4.45	ug/L		88
29) di-isopropyl ether	7.63	45	50131	4.33	ug/L		97
30) 2-butanone	8.22	72	4885	14.42	ug/L		91
31) 1,1-dichloroethane	7.65	63	25266	4.31	ug/L		97
32) chloroprene	7.74	53	19352	4.24	ug/L		98
33) acrylonitrile	7.06	53	5047	4.01	ug/L		95
34) vinyl acetate	7.59	86	1799	3.52	ug/L	#	86
35) ethyl tert-butyl ether	8.04	59	44309	4.29	ug/L		98
36) ethyl acetate	8.22	45	1718	3.90	ug/L	#	70

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89756.D
Acq On : 6 Apr 2019 8:13 pm
Operator : CHELSEAS
Sample : IC3793-4
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 08 14:36:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	8.33	77	19467	4.45	ug/L		93
38) cis-1,2-dichloroethene	8.29	96	15307	4.29	ug/L		90
39) propionitrile	8.28	54	20485	42.95	ug/L		83
40) methyl acrylate	8.31	85	1573	3.61	ug/L	#	57
41) methacrylonitrile	8.46	67	4572	3.81	ug/L		93
42) bromochloromethane	8.56	128	7182	4.13	ug/L		99
43) tetrahydrofuran	8.58	72	1639	3.94	ug/L	#	76
44) chloroform	8.63	83	23601	4.33	ug/L		99
45) tert-butyl formate	8.66	59	10497	4.13	ug/L		95
47) 1,1,1-trichloroethane	8.88	97	21012	4.21	ug/L		98
48) cyclohexane	8.99	84	17053	3.28	ug/L		98
50) 1,1-dichloropropene	9.03	75	17103	4.33	ug/L		98
51) carbon tetrachloride	9.06	117	17638	4.16	ug/L		98
52) tert-amyl alcohol	9.13	73	4488	22.29	ug/L	#	81
53) isopropyl acetate	9.15	87	2220	3.79	ug/L	#	75
56) n-butyl alcohol	9.66	41	16296	227.87	ug/L		95
57) 2,2,4-trimethylpentane	9.34	57	54126	4.33	ug/L		99
58) benzene	9.26	78	50831	4.34	ug/L		99
59) tert-amyl methyl ether	9.32	73	42270	4.43	ug/L		99
60) heptane	9.48	57	9717	4.36	ug/L		94
61) 1,2-dichloroethane	9.27	62	15374	4.49	ug/L		95
62) ethyl acrylate	9.90	55	13023	4.04	ug/L		98
63) trichloroethene	9.93	95	12148	4.21	ug/L		99
64) 2-chloroethyl vinyl ether	10.68	63	33327	19.78	ug/L		98
65) methyl methacrylate	10.15	100	2495	3.57	ug/L		98
66) methylcyclohexane	10.22	83	26244	4.34	ug/L		96
67) 1,2-dichloropropane	10.21	63	13159	4.36	ug/L		97
68) dibromomethane	10.31	93	7271	4.13	ug/L		92
69) bromodichloromethane	10.46	83	15009	4.02	ug/L		96
71) epichlorohydrin	10.77	57	6007	20.88	ug/L		93
72) cis-1,3-dichloropropene	10.91	75	17865	4.05	ug/L		97
73) 4-methyl-2-pentanone	11.00	58	19565	16.92	ug/L		96
74) isoamyl alcohol	10.99	70	8301	87.02	ug/L		96
77) toluene	11.30	92	27992	4.22	ug/L		98
78) ethyl methacrylate	11.47	69	13537	4.03	ug/L		98
79) trans-1,3-dichloropropene	11.48	75	15301	4.15	ug/L		99
80) 1,1,2-trichloroethane	11.71	83	8395	4.12	ug/L		97
81) tetrachloroethene	11.87	164	10582	4.28	ug/L		92
82) 2-hexanone	11.87	58	18546	17.70	ug/L		98
83) 1,3-dichloropropane	11.90	76	15652	4.21	ug/L		94
84) butyl acetate	11.96	56	7857	4.34	ug/L		97
85) dibromochloromethane	12.16	129	10883	3.92	ug/L		94
86) 1,2-dibromoethane	12.33	107	12502	3.88	ug/L		96
87) n-butyl ether	12.79	57	52373	4.40	ug/L		97
88) chlorobenzene	12.85	112	30965	4.19	ug/L		94
89) 1,1,1,2-tetrachloroethane	12.92	131	12403	4.03	ug/L		97
90) ethylbenzene	12.91	91	55688	4.33	ug/L		98
91) m,p-xylene	13.04	106	41793	8.48	ug/L		94
92) o-xylene	13.47	91	46823	4.27	ug/L		100
93) styrene	13.49	104	34228	4.13	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89756.D
Acq On : 6 Apr 2019 8:13 pm
Operator : CHELSEAS
Sample : IC3793-4
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 08 14:36:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

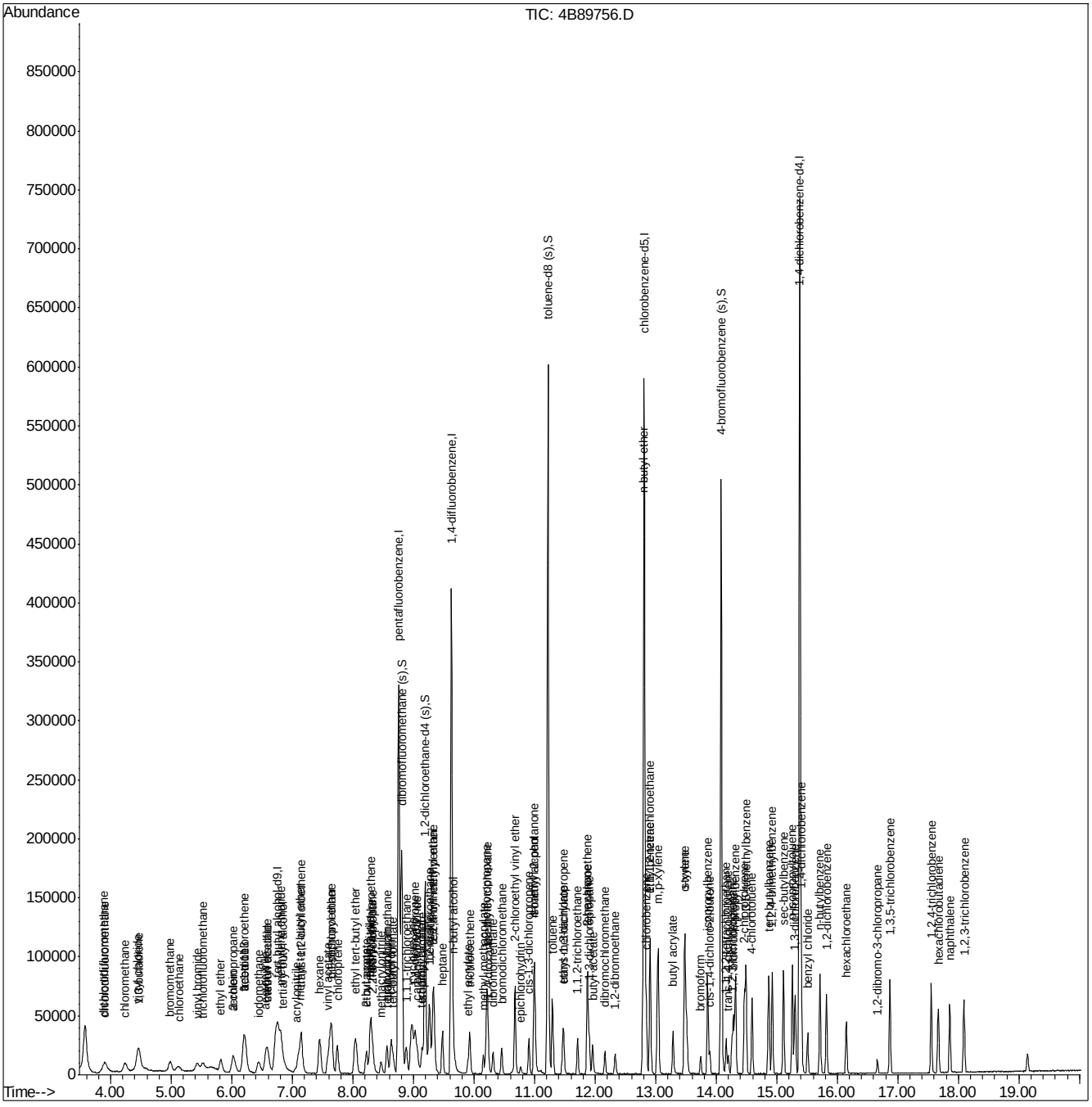
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
94) butyl acrylate	13.29	55	25510	4.36 ug/L	99
95) isopropylbenzene	13.86	105	58816	4.20 ug/L	99
96) bromoform	13.74	173	7620	3.80 ug/L	95
97) cis-1,4-dichloro-2-butene	13.89	88	4031	3.93 ug/L	96
100) 1,1,2,2-tetrachloroethane	14.17	83	15832	4.17 ug/L	98
101) trans-1,4-dichloro-2-buten	14.20	53	3235	4.07 ug/L	91
102) 1,2,3-trichloropropane	14.26	110	3898	4.24 ug/L	96
103) bromobenzene	14.29	156	15680	4.12 ug/L	100
104) n-propylbenzene	14.32	91	66829	4.09 ug/L	100
105) 2-chlorotoluene	14.46	126	14293	4.10 ug/L	98
106) 4-chlorotoluene	14.59	91	39835	4.22 ug/L	97
107) 1,3,5-trimethylbenzene	14.49	105	50741	4.10 ug/L	98
108) tert-butylbenzene	14.87	119	42027	3.91 ug/L	98
109) 1,2,4-trimethylbenzene	14.92	105	51079	4.13 ug/L	99
110) sec-butylbenzene	15.11	105	64671	3.96 ug/L	98
111) p-isopropyltoluene	15.26	119	56060	4.03 ug/L	97
112) 1,3-dichlorobenzene	15.31	146	29942	4.22 ug/L	98
113) 1,4-dichlorobenzene	15.41	146	29841	4.13 ug/L	98
114) 1,2-dichlorobenzene	15.82	146	30506	4.13 ug/L	99
115) benzyl chloride	15.51	91	26839	3.95 ug/L	99
116) n-butylbenzene	15.71	92	27509	4.11 ug/L	94
117) hexachloroethane	16.15	201	8223	3.23 ug/L	90
118) 1,2-dibromo-3-chloropropan	16.67	157	3674	3.61 ug/L	99
119) 1,3,5-trichlorobenzene	16.87	180	27234	3.83 ug/L	96
120) 1,2,4-trichlorobenzene	17.55	180	23879	3.74 ug/L	96
122) hexachlorobutadiene	17.67	225	13410	3.93 ug/L	97
123) naphthalene	17.86	128	49562	3.73 ug/L	99
124) 1,2,3-trichlorobenzene	18.09	180	21780	3.69 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89756.D
Acq On : 6 Apr 2019 8:13 pm
Operator : CHELSEAS
Sample : IC3793-4
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 08 14:36:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89757.D
Acq On : 6 Apr 2019 8:41 pm
Operator : CHELSEAS
Sample : IC3793-8
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 08 11:36:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	6.76	65	163373	500.00	ug/L		0.01
5) pentafluorobenzene	8.76	168	274393	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.63	114	361773	50.00	ug/L		0.00
75) chlorobenzene-d5	12.81	117	327378	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.38	152	200226	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.80	113	124785	50.13	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.26%				
55) 1,2-dichloroethane-d4 (s)	9.19	65	121062	52.00	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.00%				
76) toluene-d8 (s)	11.22	98	410996	50.55	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.10%				
99) 4-bromofluorobenzene (s)	14.08	95	164775	50.07	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.14%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.85	59	19049	40.36	ug/L		97
4) 1,4-dioxane	10.25	88	6485	177.97	ug/L		95
6) chlorodifluoromethane	3.91	51	45098	8.34	ug/L		99
7) dichlorodifluoromethane	3.88	85	43993	7.55	ug/L		99
8) chloromethane	4.24	50	50934	8.33	ug/L		97
9) vinyl chloride	4.44	62	45392	7.98	ug/L		99
10) 1,3-butadiene	4.47	54	33641	8.36	ug/L		96
11) bromomethane	4.98	94	30882	8.27	ug/L		99
12) chloroethane	5.12	64	23273	8.50	ug/L		97
13) trichlorofluoromethane	5.52	101	43120	7.89	ug/L		99
14) vinyl bromide	5.43	106	23602	8.10	ug/L		99
15) ethyl ether	5.82	74	13548	8.34	ug/L		91
16) 2-chloropropane	6.02	43	47123	8.37	ug/L		96
17) acrolein	6.03	56	5091	8.21	ug/L		92
18) freon 113	6.21	151	23507	8.00	ug/L		94
19) 1,1-dichloroethene	6.20	61	45333	8.41	ug/L		95
20) acetone	6.18	58	9330	32.21	ug/L	#	82
21) acetonitrile	6.57	41	39435	88.94	ug/L		96
22) iodomethane	6.45	142	47992	8.25	ug/L		97
23) carbon disulfide	6.58	76	94021	8.42	ug/L		99
24) methylene chloride	6.81	84	30959	8.31	ug/L		98
25) methyl acetate	6.58	43	20823	8.61	ug/L		96
26) methyl tert butyl ether	7.11	73	73451	8.60	ug/L		99
27) trans-1,2-dichloroethene	7.15	61	38835	8.38	ug/L		99
28) hexane	7.45	56	20003	8.27	ug/L		95
29) di-isopropyl ether	7.63	45	95682	8.50	ug/L		98
30) 2-butanone	8.21	72	10463	31.79	ug/L	#	88
31) 1,1-dichloroethane	7.65	63	48067	8.45	ug/L		97
32) chloroprene	7.74	53	37427	8.44	ug/L		98
33) acrylonitrile	7.05	53	10249	8.38	ug/L		98
34) vinyl acetate	7.58	86	3821	7.69	ug/L	#	85
35) ethyl tert-butyl ether	8.04	59	86511	8.63	ug/L		98
36) ethyl acetate	8.22	45	3648	8.53	ug/L	#	81

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89757.D
Acq On : 6 Apr 2019 8:41 pm
Operator : CHELSEAS
Sample : IC3793-8
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 08 11:36:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	8.32	77	37023	8.71 ug/L	99
38) cis-1,2-dichloroethene	8.29	96	28685	8.27 ug/L	97
39) propionitrile	8.29	54	39745	85.78 ug/L	98
40) methyl acrylate	8.30	85	3236	7.64 ug/L	99
41) methacrylonitrile	8.46	67	9301	7.99 ug/L	95
42) bromochloromethane	8.56	128	14206	8.41 ug/L	97
43) tetrahydrofuran	8.58	72	3183	7.87 ug/L	99
44) chloroform	8.63	83	44164	8.34 ug/L	98
45) tert-butyl formate	8.66	59	20421	8.28 ug/L	92
47) 1,1,1-trichloroethane	8.88	97	40456	8.35 ug/L	97
48) cyclohexane	8.99	84	40840	8.10 ug/L	93
50) 1,1-dichloropropene	9.03	75	32003	8.35 ug/L	97
51) carbon tetrachloride	9.07	117	33727	8.18 ug/L	97
52) tert-amyl alcohol	9.13	73	8797	44.98 ug/L	92
53) isopropyl acetate	9.14	87	4430	7.78 ug/L	97
56) n-butyl alcohol	9.66	41	31396	448.71 ug/L	96
57) 2,2,4-trimethylpentane	9.34	57	100357	8.21 ug/L	98
58) benzene	9.26	78	96095	8.39 ug/L	99
59) tert-amyl methyl ether	9.32	73	82285	8.81 ug/L	99
60) heptane	9.48	57	17450	8.00 ug/L	97
61) 1,2-dichloroethane	9.27	62	28448	8.49 ug/L	98
62) ethyl acrylate	9.90	55	26210	8.32 ug/L	100
63) trichloroethene	9.93	95	23156	8.21 ug/L	97
64) 2-chloroethyl vinyl ether	10.68	63	66784	40.50 ug/L	99
65) methyl methacrylate	10.15	100	5032	7.36 ug/L	92
66) methylcyclohexane	10.23	83	49368	8.34 ug/L	99
67) 1,2-dichloropropane	10.21	63	25048	8.49 ug/L	98
68) dibromomethane	10.32	93	14331	8.32 ug/L	91
69) bromodichloromethane	10.46	83	29558	8.09 ug/L	97
70) 2-nitropropane	10.64	41	3847	7.49 ug/L	89
71) epichlorohydrin	10.77	57	11690	41.53 ug/L	95
72) cis-1,3-dichloropropene	10.91	75	34941	8.09 ug/L	96
73) 4-methyl-2-pentanone	11.00	58	38905	34.38 ug/L	100
74) isoamyl alcohol	10.99	70	16116	172.68 ug/L	96
77) toluene	11.30	92	53938	8.28 ug/L	99
78) ethyl methacrylate	11.46	69	26981	8.18 ug/L	98
79) trans-1,3-dichloropropene	11.48	75	29623	8.17 ug/L	97
80) 1,1,2-trichloroethane	11.71	83	16411	8.20 ug/L	97
81) tetrachloroethene	11.87	164	20063	8.26 ug/L	99
82) 2-hexanone	11.87	58	35495	34.48 ug/L	99
83) 1,3-dichloropropane	11.90	76	30563	8.36 ug/L	93
84) butyl acetate	11.96	56	15877	8.94 ug/L	92
85) dibromochloromethane	12.16	129	21121	7.75 ug/L	99
86) 1,2-dibromoethane	12.33	107	25786	8.14 ug/L	97
87) n-butyl ether	12.79	57	99805	8.53 ug/L	99
88) chlorobenzene	12.84	112	60260	8.30 ug/L	95
89) 1,1,1,2-tetrachloroethane	12.92	131	24164	8.00 ug/L	97
90) ethylbenzene	12.91	91	105268	8.34 ug/L	100
91) m,p-xylene	13.04	106	80513	16.63 ug/L	99
92) o-xylene	13.47	91	90025	8.36 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89757.D
Acq On : 6 Apr 2019 8:41 pm
Operator : CHELSEAS
Sample : IC3793-8
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 08 11:36:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

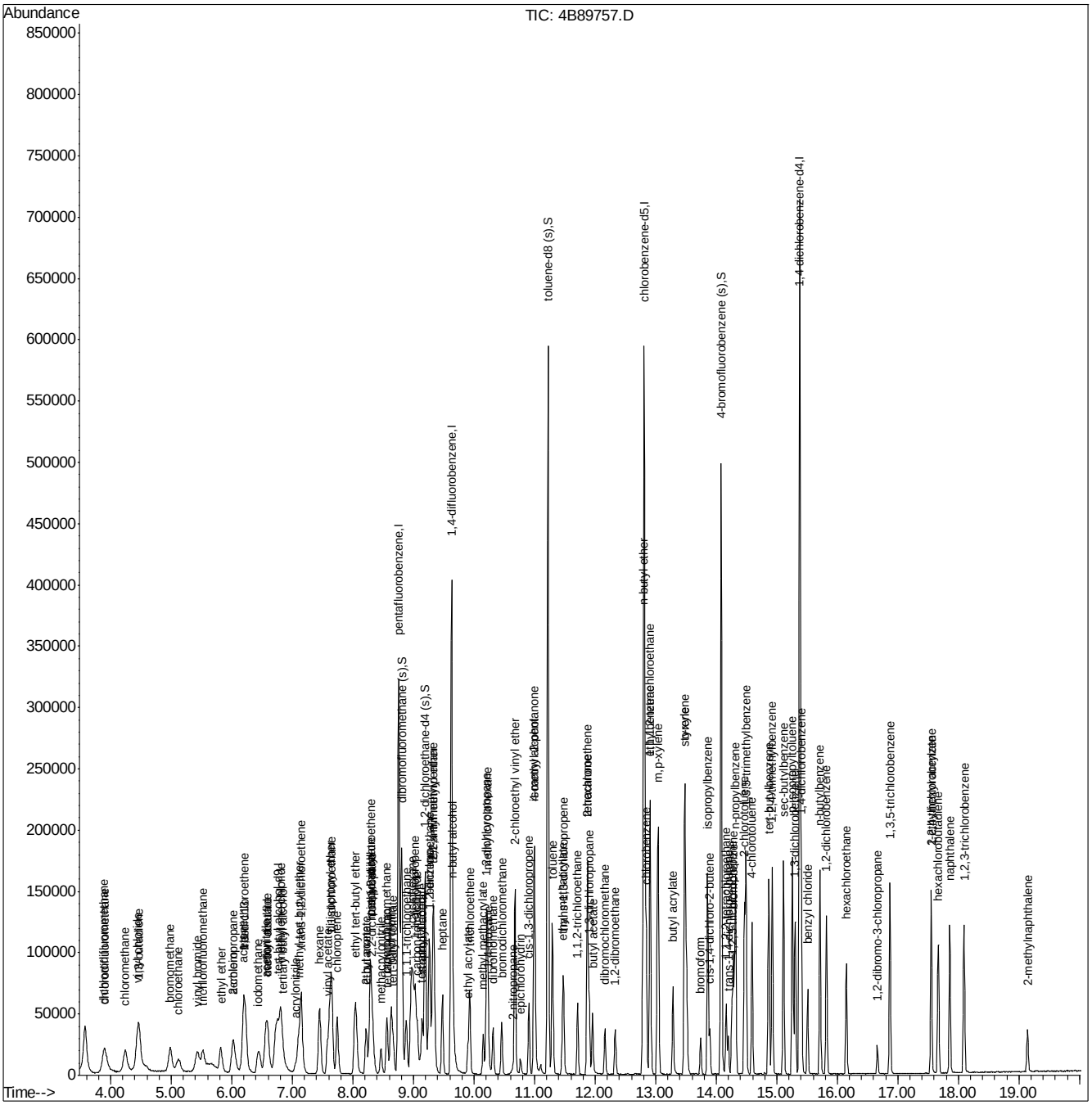
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.49	104	66705	8.20	ug/L	99
94) butyl acrylate	13.29	55	49567	8.63	ug/L	97
95) isopropylbenzene	13.86	105	114201	8.30	ug/L	98
96) bromoform	13.74	173	15114	7.67	ug/L	99
97) cis-1,4-dichloro-2-butene	13.90	88	8217	8.15	ug/L	94
100) 1,1,2,2-tetrachloroethane	14.17	83	30250	8.11	ug/L	99
101) trans-1,4-dichloro-2-buten	14.20	53	6163	7.89	ug/L	89
102) 1,2,3-trichloropropane	14.26	110	7294	8.06	ug/L	97
103) bromobenzene	14.29	156	29898	7.98	ug/L	95
104) n-propylbenzene	14.32	91	129447	8.05	ug/L	98
105) 2-chlorotoluene	14.47	126	27364	7.98	ug/L	93
106) 4-chlorotoluene	14.59	91	75903	8.18	ug/L	100
107) 1,3,5-trimethylbenzene	14.49	105	97598	8.02	ug/L	98
108) tert-butylbenzene	14.87	119	80943	7.66	ug/L	96
109) 1,2,4-trimethylbenzene	14.92	105	97956	8.05	ug/L	99
110) sec-butylbenzene	15.11	105	126564	7.88	ug/L	99
111) p-isopropyltoluene	15.26	119	108176	7.91	ug/L	99
112) 1,3-dichlorobenzene	15.31	146	57412	8.23	ug/L	99
113) 1,4-dichlorobenzene	15.41	146	56791	7.99	ug/L	100
114) 1,2-dichlorobenzene	15.82	146	58880	8.11	ug/L	98
115) benzyl chloride	15.51	91	52197	7.81	ug/L	99
116) n-butylbenzene	15.71	92	52159	7.93	ug/L	99
117) hexachloroethane	16.15	201	16951	6.76	ug/L	94
118) 1,2-dibromo-3-chloropropan	16.67	157	7508	7.50	ug/L	96
119) 1,3,5-trichlorobenzene	16.87	180	53992	7.73	ug/L	99
120) 1,2,4-trichlorobenzene	17.55	180	47222	7.52	ug/L	99
121) 2-ethylhexyl acrylate	17.55	70	2923	1.06	ug/L	94
122) hexachlorobutadiene	17.67	225	26217	7.81	ug/L	97
123) naphthalene	17.86	128	97831	7.49	ug/L	100
124) 1,2,3-trichlorobenzene	18.09	180	43707	7.53	ug/L	98
125) 2-methylnaphthalene	19.14	142	19191	3.07	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89757.D
Acq On : 6 Apr 2019 8:41 pm
Operator : CHELSEAS
Sample : IC3793-8
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 08 11:36:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89758.D
Acq On : 6 Apr 2019 9:09 pm
Operator : CHELSEAS
Sample : IC3793-20
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 08 11:36:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.75	65	161319	500.00	ug/L	0.00
5) pentafluorobenzene	8.76	168	286411	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	378214	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	335641	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	201471	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	128884	49.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.22%			
55) 1,2-dichloroethane-d4 (s)	9.19	65	125433	51.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.06%			
76) toluene-d8 (s)	11.22	98	425324	51.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.04%			
99) 4-bromofluorobenzene (s)	14.08	95	165697	50.04	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.86	59	44741	96.00	ug/L	98
4) 1,4-dioxane	10.24	88	16602	461.41	ug/L	97
6) chlorodifluoromethane	3.90	51	112797	19.98	ug/L	99
7) dichlorodifluoromethane	3.89	85	121752	20.01	ug/L	99
8) chloromethane	4.24	50	129006	20.22	ug/L	99
9) vinyl chloride	4.45	62	118869	20.03	ug/L	100
10) 1,3-butadiene	4.47	54	84531	20.13	ug/L	98
11) bromomethane	4.99	94	78912	20.25	ug/L	98
12) chloroethane	5.13	64	59474	20.80	ug/L	98
13) trichlorofluoromethane	5.53	101	117362	20.57	ug/L	99
14) vinyl bromide	5.43	106	61947	20.37	ug/L	97
15) ethyl ether	5.82	74	34357	20.27	ug/L	92
16) 2-chloropropane	6.02	43	119443	20.34	ug/L	98
17) acrolein	6.03	56	13479	20.82	ug/L	98
18) freon 113	6.21	151	62198	20.28	ug/L	98
19) 1,1-dichloroethene	6.22	61	115138	20.46	ug/L	97
20) acetone	6.19	58	23166	76.62	ug/L	99
21) acetonitrile	6.55	41	92519	199.91	ug/L	97
22) iodomethane	6.46	142	122065	20.09	ug/L	98
23) carbon disulfide	6.60	76	236569	20.31	ug/L	99
24) methylene chloride	6.81	84	78899	20.30	ug/L	96
25) methyl acetate	6.58	43	48077	19.05	ug/L	99
26) methyl tert butyl ether	7.11	73	179557	20.15	ug/L	98
27) trans-1,2-dichloroethene	7.15	61	99479	20.57	ug/L	99
28) hexane	7.45	56	52725	20.88	ug/L	99
29) di-isopropyl ether	7.63	45	238780	20.33	ug/L	99
30) 2-butanone	8.21	72	27157	79.05	ug/L	99
31) 1,1-dichloroethane	7.65	63	122419	20.62	ug/L	99
32) chloroprene	7.74	53	94584	20.43	ug/L	98
33) acrylonitrile	7.05	53	25630	20.08	ug/L	98
34) vinyl acetate	7.57	86	10150	19.58	ug/L	98
35) ethyl tert-butyl ether	8.04	59	210696	20.14	ug/L	98
36) ethyl acetate	8.22	45	9275	20.78	ug/L #	92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89758.D
Acq On : 6 Apr 2019 9:09 pm
Operator : CHELSEAS
Sample : IC3793-20
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 08 11:36:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	8.32	77	90200	20.33	ug/L		99
38) cis-1,2-dichloroethene	8.29	96	72238	19.96	ug/L		98
39) propionitrile	8.29	54	99987	206.75	ug/L		94
40) methyl acrylate	8.30	85	9039	20.44	ug/L	#	86
41) methacrylonitrile	8.46	67	24500	20.16	ug/L		98
42) bromochloromethane	8.56	128	35814	20.31	ug/L		96
43) tetrahydrofuran	8.58	72	8276	19.61	ug/L		94
44) chloroform	8.63	83	112812	20.40	ug/L		99
45) tert-butyl formate	8.66	59	50130	19.47	ug/L		97
47) 1,1,1-trichloroethane	8.88	97	101665	20.10	ug/L		98
48) cyclohexane	8.99	84	122305	23.23	ug/L		98
50) 1,1-dichloropropene	9.03	75	83001	20.75	ug/L		97
51) carbon tetrachloride	9.07	117	86039	20.00	ug/L		99
52) tert-amyl alcohol	9.13	73	20959	102.67	ug/L		93
53) isopropyl acetate	9.14	87	12002	20.19	ug/L		96
56) n-butyl alcohol	9.66	41	79400	1085.45	ug/L		95
57) 2,2,4-trimethylpentane	9.34	57	269172	21.08	ug/L		99
58) benzene	9.26	78	247976	20.71	ug/L		97
59) tert-amyl methyl ether	9.32	73	199077	20.40	ug/L		99
60) heptane	9.48	57	47695	20.92	ug/L		99
61) 1,2-dichloroethane	9.27	62	72900	20.80	ug/L		99
62) ethyl acrylate	9.90	55	67321	20.43	ug/L		99
63) trichloroethene	9.93	95	60412	20.48	ug/L		99
64) 2-chloroethyl vinyl ether	10.68	63	171474	99.47	ug/L		99
65) methyl methacrylate	10.15	100	13727	19.20	ug/L		96
66) methylcyclohexane	10.23	83	128665	20.80	ug/L		100
67) 1,2-dichloropropane	10.21	63	62639	20.30	ug/L		99
68) dibromomethane	10.32	93	36392	20.21	ug/L		96
69) bromodichloromethane	10.46	83	76801	20.10	ug/L		99
70) 2-nitropropane	10.65	41	9997	18.61	ug/L		100
71) epichlorohydrin	10.77	57	30288	102.92	ug/L		97
72) cis-1,3-dichloropropene	10.91	75	91627	20.29	ug/L		99
73) 4-methyl-2-pentanone	11.00	58	97293	82.25	ug/L		98
74) isoamyl alcohol	10.99	70	40865	418.83	ug/L		97
77) toluene	11.29	92	138913	20.80	ug/L		99
78) ethyl methacrylate	11.46	69	68574	20.28	ug/L		99
79) trans-1,3-dichloropropene	11.48	75	76159	20.49	ug/L		98
80) 1,1,2-trichloroethane	11.71	83	42462	20.70	ug/L		97
81) tetrachloroethene	11.87	164	51321	20.61	ug/L		99
82) 2-hexanone	11.87	58	88417	83.78	ug/L		97
83) 1,3-dichloropropane	11.90	76	76522	20.42	ug/L		95
84) butyl acetate	11.96	56	38492	21.14	ug/L		98
85) dibromochloromethane	12.17	129	55271	19.78	ug/L		99
86) 1,2-dibromoethane	12.33	107	65891	20.28	ug/L		97
87) n-butyl ether	12.79	57	247421	20.64	ug/L		100
88) chlorobenzene	12.85	112	153198	20.59	ug/L		99
89) 1,1,1,2-tetrachloroethane	12.92	131	61999	20.03	ug/L		99
90) ethylbenzene	12.91	91	268069	20.71	ug/L		100
91) m,p-xylene	13.04	106	204705	41.23	ug/L		99
92) o-xylene	13.47	91	227821	20.62	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89758.D
Acq On : 6 Apr 2019 9:09 pm
Operator : CHELSEAS
Sample : IC3793-20
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 08 11:36:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

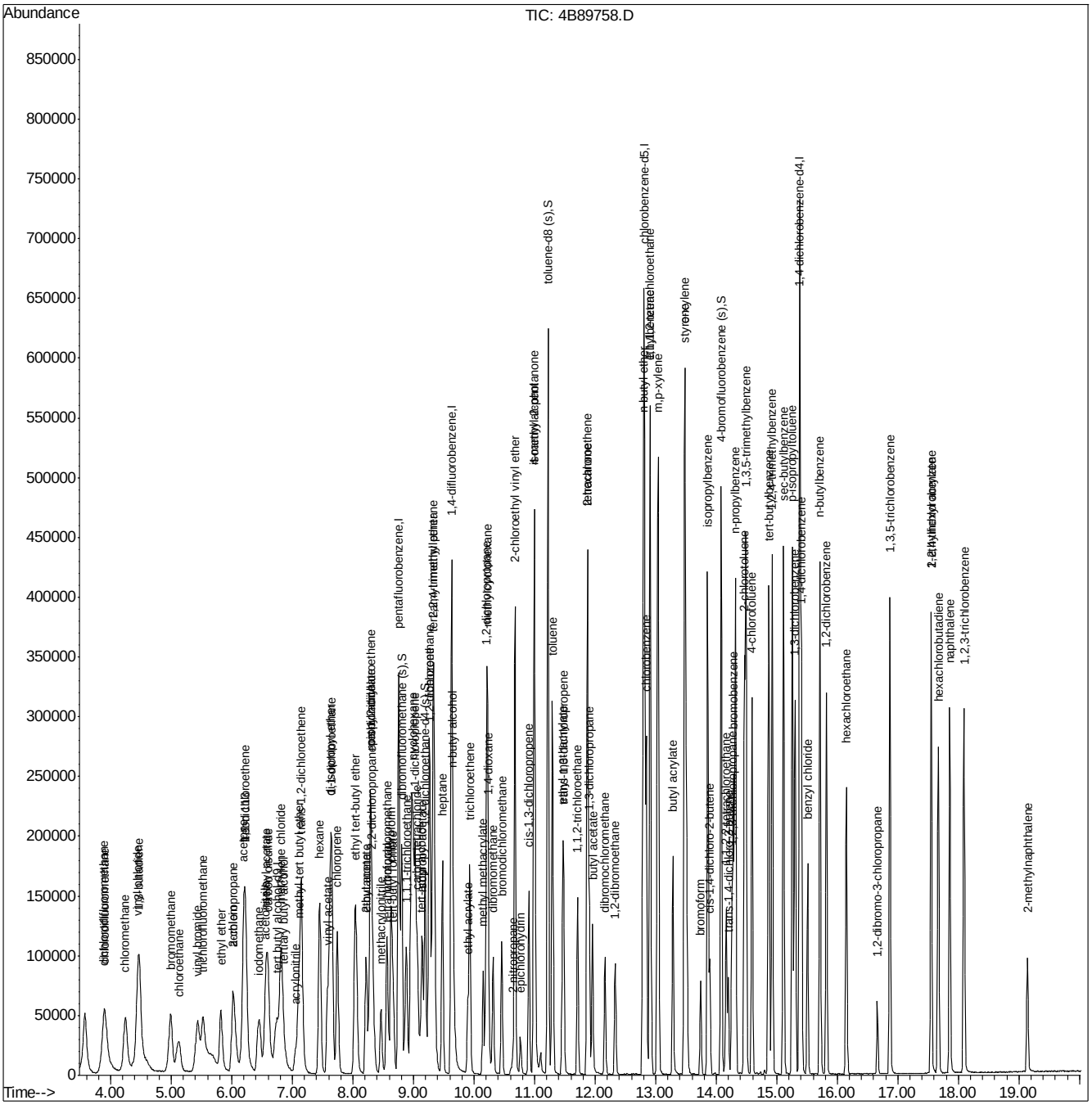
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	13.49	104	170837	20.48 ug/L	100
94) butyl acrylate	13.29	55	122737	20.85 ug/L	99
95) isopropylbenzene	13.86	105	290152	20.58 ug/L	99
96) bromoform	13.74	173	38673	19.14 ug/L	98
97) cis-1,4-dichloro-2-butene	13.90	88	20811	20.14 ug/L	96
100) 1,1,2,2-tetrachloroethane	14.17	83	74731	19.90 ug/L	100
101) trans-1,4-dichloro-2-buten	14.20	53	15506	19.72 ug/L	93
102) 1,2,3-trichloropropane	14.26	110	18544	20.36 ug/L	98
103) bromobenzene	14.29	156	75122	19.93 ug/L	99
104) n-propylbenzene	14.32	91	326963	20.20 ug/L	99
105) 2-chlorotoluene	14.46	126	69189	20.06 ug/L	97
106) 4-chlorotoluene	14.59	91	190038	20.36 ug/L	98
107) 1,3,5-trimethylbenzene	14.49	105	247604	20.21 ug/L	100
108) tert-butylbenzene	14.87	119	212887	20.03 ug/L	99
109) 1,2,4-trimethylbenzene	14.92	105	246137	20.09 ug/L	100
110) sec-butylbenzene	15.11	105	323878	20.04 ug/L	100
111) p-isopropyltoluene	15.26	119	272767	19.83 ug/L	100
112) 1,3-dichlorobenzene	15.31	146	142664	20.32 ug/L	99
113) 1,4-dichlorobenzene	15.41	146	143543	20.08 ug/L	100
114) 1,2-dichlorobenzene	15.82	146	146152	19.99 ug/L	99
115) benzyl chloride	15.51	91	132122	19.65 ug/L	100
116) n-butylbenzene	15.71	92	133442	20.16 ug/L	99
117) hexachloroethane	16.15	201	46949	18.62 ug/L	97
118) 1,2-dibromo-3-chloropropan	16.67	157	18964	18.82 ug/L	98
119) 1,3,5-trichlorobenzene	16.87	180	137636	19.58 ug/L	100
120) 1,2,4-trichlorobenzene	17.55	180	122792	19.43 ug/L	98
121) 2-ethylhexyl acrylate	17.55	70	8549	3.08 ug/L	96
122) hexachlorobutadiene	17.67	225	67681	20.05 ug/L	98
123) naphthalene	17.86	128	252833	19.23 ug/L	99
124) 1,2,3-trichlorobenzene	18.09	180	109830	18.81 ug/L	100
125) 2-methylnaphthalene	19.14	142	53432	8.50 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89758.D
Acq On : 6 Apr 2019 9:09 pm
Operator : CHELSEAS
Sample : IC3793-20
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 08 11:36:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89759.D
Acq On : 6 Apr 2019 9:37 pm
Operator : CHELSEAS
Sample : ICC3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 08 11:36:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.75	65	148583	500.00	ug/L	0.00
5) pentafluorobenzene	8.76	168	271758	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	363211	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	328528	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	193379	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	123262	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
55) 1,2-dichloroethane-d4 (s)	9.19	65	116870	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
76) toluene-d8 (s)	11.22	98	407954	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
99) 4-bromofluorobenzene (s)	14.08	95	158903	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.85	59	103869	241.98	ug/L	100
4) 1,4-dioxane	10.25	88	41425	1250.00	ug/L	100
6) chlorodifluoromethane	3.90	51	268262	50.07	ug/L	100
7) dichlorodifluoromethane	3.89	85	288382	49.96	ug/L	100
8) chloromethane	4.24	50	302629	50.00	ug/L	100
9) vinyl chloride	4.45	62	281555	50.00	ug/L	100
10) 1,3-butadiene	4.47	54	199232	50.00	ug/L	100
11) bromomethane	4.99	94	184907	50.00	ug/L	100
12) chloroethane	5.12	64	136050	50.15	ug/L	100
13) trichlorofluoromethane	5.52	101	270618	50.00	ug/L	100
14) vinyl bromide	5.43	106	144306	50.00	ug/L	100
15) ethyl ether	5.82	74	80414	50.00	ug/L	100
16) 2-chloropropane	6.03	43	278147	49.91	ug/L	100
17) acrolein	6.02	56	30712	50.00	ug/L	100
18) freon 113	6.20	151	145491	50.00	ug/L	100
19) 1,1-dichloroethene	6.21	61	266935	50.00	ug/L	100
20) acetone	6.19	58	57376	200.00	ug/L	100
21) acetonitrile	6.55	41	219561	500.00	ug/L	100
22) iodomethane	6.44	142	288237	50.00	ug/L	100
23) carbon disulfide	6.59	76	552660	50.00	ug/L	100
24) methylene chloride	6.81	84	184392	50.00	ug/L	100
25) methyl acetate	6.58	43	119752	50.00	ug/L	100
26) methyl tert butyl ether	7.11	73	422814	50.01	ug/L	100
27) trans-1,2-dichloroethene	7.15	61	229430	50.00	ug/L	100
28) hexane	7.45	56	119777	50.00	ug/L	100
29) di-isopropyl ether	7.63	45	557130	50.00	ug/L	100
30) 2-butanone	8.21	72	65195	200.00	ug/L	100
31) 1,1-dichloroethane	7.65	63	281703	50.00	ug/L	100
32) chloroprene	7.74	53	219680	50.00	ug/L	100
33) acrylonitrile	7.05	53	60563	50.00	ug/L	100
34) vinyl acetate	7.58	86	24592	50.00	ug/L	100
35) ethyl tert-butyl ether	8.04	59	496353	50.00	ug/L	100
36) ethyl acetate	8.22	45	21177	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89759.D
Acq On : 6 Apr 2019 9:37 pm
Operator : CHELSEAS
Sample : ICC3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 08 11:36:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.32	77	210447	50.00	ug/L	100
38) cis-1,2-dichloroethene	8.29	96	171720	50.00	ug/L	100
39) propionitrile	8.28	54	229436	500.00	ug/L	100
40) methyl acrylate	8.30	85	20979	50.00	ug/L	100
41) methacrylonitrile	8.46	67	57669	50.00	ug/L	100
42) bromochloromethane	8.56	128	83677	50.00	ug/L	100
43) tetrahydrofuran	8.57	72	20020	50.00	ug/L	100
44) chloroform	8.63	83	262326	50.00	ug/L	100
45) tert-butyl formate	8.66	59	122135	50.00	ug/L	100
47) 1,1,1-trichloroethane	8.88	97	239969	50.00	ug/L	100
48) cyclohexane	8.99	84	249805	50.00	ug/L	100
50) 1,1-dichloropropene	9.03	75	189798	50.00	ug/L	100
51) carbon tetrachloride	9.07	117	204111	50.00	ug/L	100
52) tert-amyl alcohol	9.13	73	48998	252.95	ug/L	100
53) isopropyl acetate	9.14	87	28202	50.00	ug/L	100
56) n-butyl alcohol	9.65	41	175620	2500.00	ug/L	100
57) 2,2,4-trimethylpentane	9.34	57	613261	50.00	ug/L	100
58) benzene	9.26	78	574972	50.00	ug/L	100
59) tert-amyl methyl ether	9.32	73	468590	50.00	ug/L	100
60) heptane	9.48	57	109480	50.00	ug/L	100
61) 1,2-dichloroethane	9.28	62	168297	50.00	ug/L	100
62) ethyl acrylate	9.89	55	158210	50.00	ug/L	100
63) trichloroethene	9.93	95	141652	50.00	ug/L	100
64) 2-chloroethyl vinyl ether	10.68	63	413862	250.00	ug/L	100
65) methyl methacrylate	10.15	100	34328	50.00	ug/L	100
66) methylcyclohexane	10.22	83	296984	50.00	ug/L	100
67) 1,2-dichloropropane	10.21	63	148174	50.00	ug/L	100
68) dibromomethane	10.31	93	86443	50.00	ug/L	100
69) bromodichloromethane	10.46	83	183508	50.00	ug/L	100
70) 2-nitropropane	10.65	41	25787	50.00	ug/L	100
71) epichlorohydrin	10.77	57	70650	250.00	ug/L	100
72) cis-1,3-dichloropropene	10.91	75	216834	50.00	ug/L	100
73) 4-methyl-2-pentanone	11.00	58	227195	200.00	ug/L	100
74) isoamyl alcohol	10.99	70	93700	1000.00	ug/L	100
77) toluene	11.29	92	326805	50.00	ug/L	100
78) ethyl methacrylate	11.46	69	165495	50.00	ug/L	100
79) trans-1,3-dichloropropene	11.48	75	181942	50.00	ug/L	100
80) 1,1,2-trichloroethane	11.71	83	100371	50.00	ug/L	100
81) tetrachloroethene	11.87	164	121886	50.00	ug/L	100
82) 2-hexanone	11.87	58	206596	200.00	ug/L	100
83) 1,3-dichloropropane	11.90	76	183414	50.00	ug/L	100
84) butyl acetate	11.95	56	89130	50.00	ug/L	100
85) dibromochloromethane	12.16	129	136788	50.00	ug/L	100
86) 1,2-dibromoethane	12.33	107	159019	50.00	ug/L	100
87) n-butyl ether	12.79	57	585737	49.91	ug/L	100
88) chlorobenzene	12.84	112	364090	50.00	ug/L	100
89) 1,1,1,2-tetrachloroethane	12.92	131	151523	50.00	ug/L	100
90) ethylbenzene	12.90	91	633452	50.00	ug/L	100
91) m,p-xylene	13.04	106	485917	100.00	ug/L	100
92) o-xylene	13.47	91	540634	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89759.D
Acq On : 6 Apr 2019 9:37 pm
Operator : CHELSEAS
Sample : ICC3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 08 11:36:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

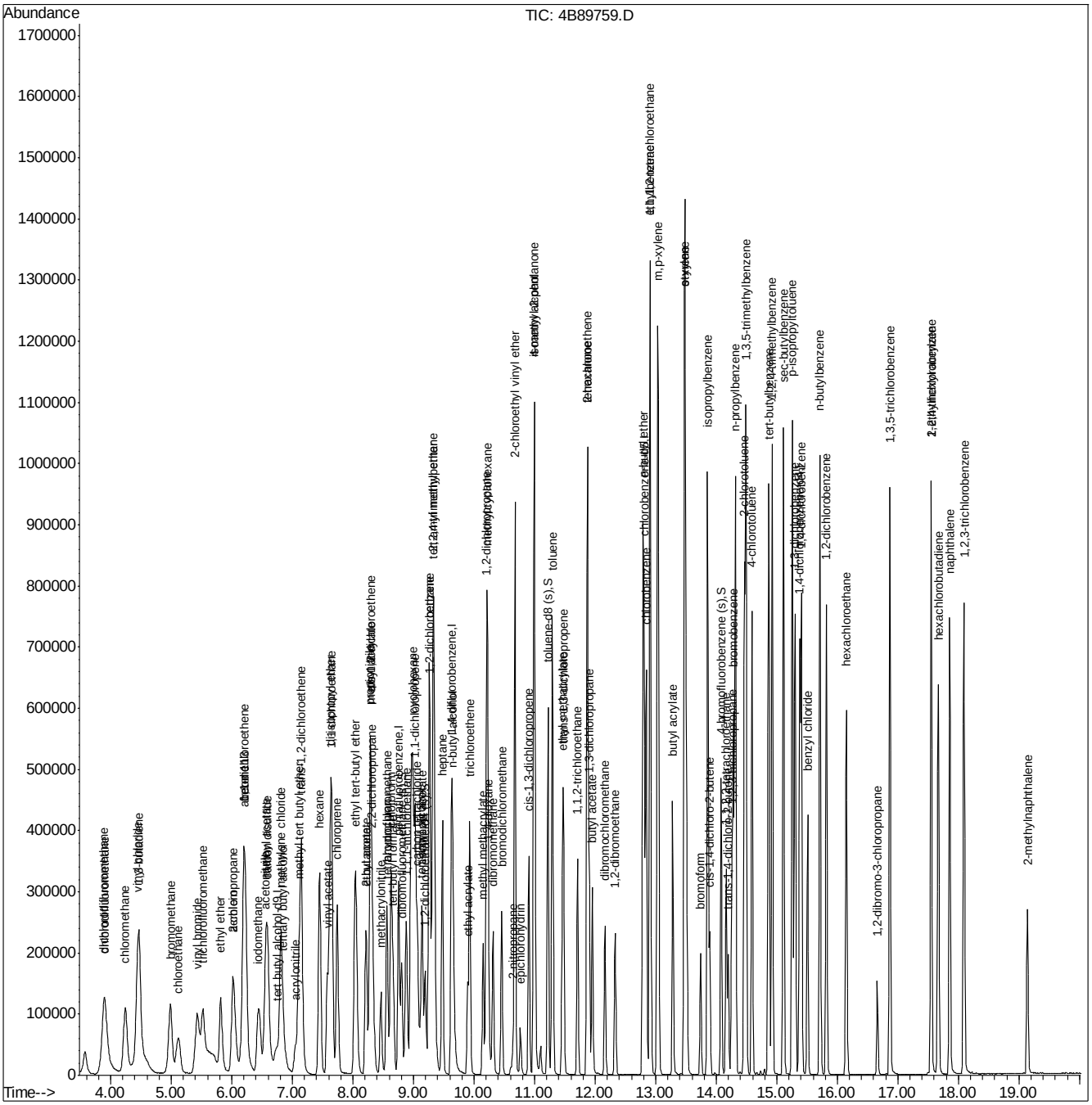
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.49	104	408309	50.00	ug/L	100
94) butyl acrylate	13.28	55	288154	50.00	ug/L	100
95) isopropylbenzene	13.86	105	689959	50.00	ug/L	100
96) bromoform	13.74	173	98901	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	13.89	88	50569	50.00	ug/L	100
100) 1,1,2,2-tetrachloroethane	14.17	83	180212	50.00	ug/L	100
101) trans-1,4-dichloro-2-buten	14.20	53	37741	50.00	ug/L	100
102) 1,2,3-trichloropropane	14.26	110	43703	50.00	ug/L	100
103) bromobenzene	14.29	156	180879	50.00	ug/L	100
104) n-propylbenzene	14.32	91	776704	50.00	ug/L	100
105) 2-chlorotoluene	14.46	126	165568	50.00	ug/L	100
106) 4-chlorotoluene	14.59	91	448023	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	14.49	105	587898	50.00	ug/L	100
108) tert-butylbenzene	14.87	119	510039	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	14.92	105	587922	50.00	ug/L	100
110) sec-butylbenzene	15.11	105	775747	50.00	ug/L	100
111) p-isopropyltoluene	15.26	119	660029	50.00	ug/L	100
112) 1,3-dichlorobenzene	15.30	146	337014	50.00	ug/L	100
113) 1,4-dichlorobenzene	15.41	146	343047	50.00	ug/L	100
114) 1,2-dichlorobenzene	15.82	146	350800	50.00	ug/L	100
115) benzyl chloride	15.51	91	322714	50.00	ug/L	100
116) n-butylbenzene	15.71	92	317699	50.00	ug/L	100
117) hexachloroethane	16.15	201	121014	50.00	ug/L	100
118) 1,2-dibromo-3-chloropropan	16.66	157	48365	50.00	ug/L	100
119) 1,3,5-trichlorobenzene	16.87	180	337381	50.00	ug/L	100
120) 1,2,4-trichlorobenzene	17.55	180	303363	50.00	ug/L	100
121) 2-ethylhexyl acrylate	17.55	70	26651	10.00	ug/L	100
122) hexachlorobutadiene	17.67	225	162035	50.00	ug/L	100
123) naphthalene	17.86	128	630857	50.00	ug/L	100
124) 1,2,3-trichlorobenzene	18.09	180	280262	50.00	ug/L	100
125) 2-methylnaphthalene	19.14	142	150804	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89759.D
Acq On : 6 Apr 2019 9:37 pm
Operator : CHELSEAS
Sample : ICC3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 08 11:36:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89760.D
Acq On : 6 Apr 2019 10:05 pm
Operator : CHELSEAS
Sample : IC3793-100
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 08 11:36:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.76	65	143196	500.00	ug/L	0.01
5) pentafluorobenzene	8.76	168	272038	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	370455	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	330545	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	190585	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	122991	49.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.68%			
55) 1,2-dichloroethane-d4 (s)	9.20	65	117147	49.14	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.28%			
76) toluene-d8 (s)	11.22	98	416028	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
99) 4-bromofluorobenzene (s)	14.08	95	157703	50.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.70%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.86	59	210109	507.89	ug/L	99
4) 1,4-dioxane	10.25	88	84671	2651.07	ug/L	98
6) chlorodifluoromethane	3.91	51	561965	104.78	ug/L	100
7) dichlorodifluoromethane	3.89	85	611813	105.87	ug/L	100
8) chloromethane	4.24	50	644441	106.36	ug/L	99
9) vinyl chloride	4.45	62	598589	106.19	ug/L	99
10) 1,3-butadiene	4.47	54	414400	103.89	ug/L	98
11) bromomethane	4.99	94	379519	102.52	ug/L	99
12) chloroethane	5.12	64	279641	102.97	ug/L	99
13) trichlorofluoromethane	5.52	101	578865	106.84	ug/L	100
14) vinyl bromide	5.43	106	309435	107.10	ug/L	97
15) ethyl ether	5.82	74	167036	103.75	ug/L	97
16) 2-chloropropane	6.02	43	576399	103.33	ug/L	99
17) acrolein	6.02	56	63947	104.00	ug/L	97
18) freon 113	6.21	151	306091	105.08	ug/L	99
19) 1,1-dichloroethene	6.21	61	558198	104.45	ug/L	97
20) acetone	6.19	58	117279	408.39	ug/L	90
21) acetonitrile	6.55	41	445980	1014.57	ug/L	99
22) iodomethane	6.45	142	604495	104.75	ug/L	99
23) carbon disulfide	6.59	76	1158892	104.74	ug/L	99
24) methylene chloride	6.81	84	383714	103.94	ug/L	99
25) methyl acetate	6.58	43	235190	98.10	ug/L	99
26) methyl tert butyl ether	7.11	73	860070	101.63	ug/L	99
27) trans-1,2-dichloroethene	7.15	61	482006	104.94	ug/L	98
28) hexane	7.45	56	253575	105.74	ug/L	99
29) di-isopropyl ether	7.63	45	1126253	100.97	ug/L	98
30) 2-butanone	8.22	72	136599	418.62	ug/L	96
31) 1,1-dichloroethane	7.65	63	584941	103.72	ug/L	99
32) chloroprene	7.74	53	463388	105.36	ug/L	99
33) acrylonitrile	7.05	53	126587	104.40	ug/L	99
34) vinyl acetate	7.58	86	52901	107.45	ug/L	99
35) ethyl tert-butyl ether	8.05	59	1007412	101.38	ug/L	99
36) ethyl acetate	8.22	45	44357	104.62	ug/L #	88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89760.D
Acq On : 6 Apr 2019 10:05 pm
Operator : CHELSEAS
Sample : IC3793-100
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 08 11:36:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	8.33	77	433590	102.91 ug/L	97
38) cis-1,2-dichloroethene	8.29	96	357956	104.12 ug/L	99
39) propionitrile	8.29	54	475016	1034.12 ug/L	89
40) methyl acrylate	8.30	85	44516	105.99 ug/L	97
41) methacrylonitrile	8.46	67	120775	104.61 ug/L	98
42) bromochloromethane	8.56	128	175781	104.93 ug/L	100
43) tetrahydrofuran	8.58	72	41633	103.87 ug/L	92
44) chloroform	8.63	83	549026	104.54 ug/L	99
45) tert-butyl formate	8.66	59	249797	102.16 ug/L	98
47) 1,1,1-trichloroethane	8.88	97	509215	105.99 ug/L	100
48) cyclohexane	8.99	84	536720	107.32 ug/L	98
50) 1,1-dichloropropene	9.03	75	406352	106.94 ug/L	98
51) carbon tetrachloride	9.07	117	437332	107.02 ug/L	98
52) tert-amyl alcohol	9.13	73	99184	511.51 ug/L	98
53) isopropyl acetate	9.15	87	61438	108.81 ug/L	94
56) n-butyl alcohol	9.65	41	347721	4853.11 ug/L	98
57) 2,2,4-trimethylpentane	9.34	57	1296492	103.64 ug/L	98
58) benzene	9.26	78	1224902	104.44 ug/L	99
59) tert-amyl methyl ether	9.32	73	945133	98.88 ug/L	99
60) heptane	9.48	57	236702	105.99 ug/L	98
61) 1,2-dichloroethane	9.28	62	355893	103.67 ug/L	97
62) ethyl acrylate	9.90	55	337841	104.68 ug/L	100
63) trichloroethene	9.93	95	307832	106.53 ug/L	100
64) 2-chloroethyl vinyl ether	10.68	63	873383	517.26 ug/L	99
65) methyl methacrylate	10.15	100	72165	103.06 ug/L	99
66) methylcyclohexane	10.23	83	625751	103.29 ug/L	99
67) 1,2-dichloropropane	10.21	63	314773	104.14 ug/L	100
68) dibromomethane	10.32	93	184623	104.70 ug/L	96
69) bromodichloromethane	10.46	83	399675	106.77 ug/L	99
70) 2-nitropropane	10.65	41	60699	115.39 ug/L	93
71) epichlorohydrin	10.77	57	149079	517.21 ug/L	98
72) cis-1,3-dichloropropene	10.91	75	469025	106.04 ug/L	100
73) 4-methyl-2-pentanone	11.00	58	469308	405.05 ug/L	97
74) isoamyl alcohol	10.99	70	176173	1843.42 ug/L	98
77) toluene	11.30	92	710482	108.04 ug/L	99
78) ethyl methacrylate	11.46	69	349188	104.85 ug/L	98
79) trans-1,3-dichloropropene	11.48	75	389151	106.29 ug/L	95
80) 1,1,2-trichloroethane	11.71	83	216155	107.02 ug/L	99
81) tetrachloroethene	11.87	164	265958	108.44 ug/L	99
82) 2-hexanone	11.87	58	421966	406.00 ug/L	99
83) 1,3-dichloropropane	11.90	76	387568	105.01 ug/L	100
84) butyl acetate	11.95	56	181515	101.20 ug/L	100
85) dibromochloromethane	12.17	129	299178	108.69 ug/L	99
86) 1,2-dibromoethane	12.33	107	341760	106.80 ug/L	98
87) n-butyl ether	12.79	57	1224724	103.73 ug/L	100
88) chlorobenzene	12.85	112	782618	106.82 ug/L	99
89) 1,1,1,2-tetrachloroethane	12.92	131	325148	106.64 ug/L	98
90) ethylbenzene	12.91	91	1346333	105.62 ug/L	99
91) m,p-xylene	13.04	106	1029525	210.58 ug/L	100
92) o-xylene	13.47	91	1140361	104.82 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89760.D
Acq On : 6 Apr 2019 10:05 pm
Operator : CHELSEAS
Sample : IC3793-100
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 08 11:36:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

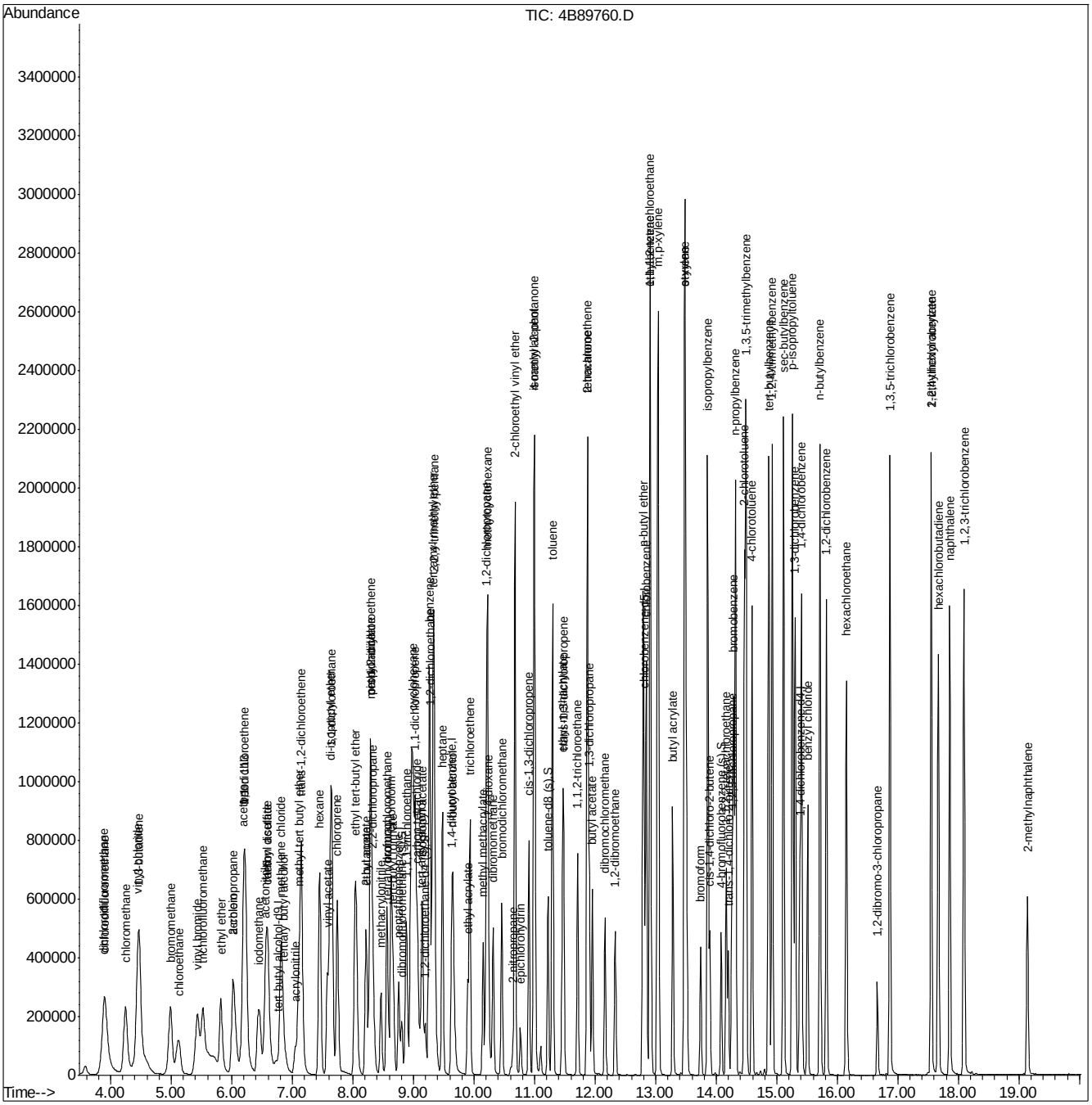
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	13.49	104	865593	105.35 ug/L	100
94) butyl acrylate	13.28	55	594276	102.49 ug/L	100
95) isopropylbenzene	13.86	105	1480005	106.60 ug/L	99
96) bromoform	13.74	173	220073	110.58 ug/L	99
97) cis-1,4-dichloro-2-butene	13.89	88	109274	107.39 ug/L	99
100) 1,1,2,2-tetrachloroethane	14.17	83	379384	106.80 ug/L	98
101) trans-1,4-dichloro-2-buten	14.20	53	79451	106.80 ug/L	93
102) 1,2,3-trichloropropane	14.26	110	91392	106.09 ug/L	97
103) bromobenzene	14.29	156	386300	108.35 ug/L	99
104) n-propylbenzene	14.32	91	1636908	106.92 ug/L	100
105) 2-chlorotoluene	14.47	126	350729	107.47 ug/L	96
106) 4-chlorotoluene	14.59	91	944286	106.93 ug/L	100
107) 1,3,5-trimethylbenzene	14.49	105	1258184	108.58 ug/L	98
108) tert-butylbenzene	14.87	119	1117861	111.19 ug/L	99
109) 1,2,4-trimethylbenzene	14.92	105	1245332	107.46 ug/L	100
110) sec-butylbenzene	15.11	105	1670013	109.22 ug/L	99
111) p-isopropyltoluene	15.26	119	1412662	108.58 ug/L	100
112) 1,3-dichlorobenzene	15.31	146	716816	107.91 ug/L	99
113) 1,4-dichlorobenzene	15.41	146	726313	107.41 ug/L	100
114) 1,2-dichlorobenzene	15.82	146	743741	107.56 ug/L	98
115) benzyl chloride	15.51	91	680500	106.98 ug/L	100
116) n-butylbenzene	15.71	92	685519	109.47 ug/L	99
117) hexachloroethane	16.15	201	283597	118.89 ug/L	98
118) 1,2-dibromo-3-chloropropan	16.66	157	100808	105.74 ug/L	97
119) 1,3,5-trichlorobenzene	16.87	180	727539	109.40 ug/L	99
120) 1,2,4-trichlorobenzene	17.55	180	654128	109.39 ug/L	99
121) 2-ethylhexyl acrylate	17.55	70	68080	25.92 ug/L	97
122) hexachlorobutadiene	17.67	225	357370	111.89 ug/L	99
123) naphthalene	17.86	128	1332415	107.15 ug/L	99
124) 1,2,3-trichlorobenzene	18.09	180	600158	108.64 ug/L	100
125) 2-methylnaphthalene	19.14	142	342955	57.69 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89760.D
Acq On : 6 Apr 2019 10:05 pm
Operator : CHELSEAS
Sample : IC3793-100
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 08 11:36:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89761.D
Acq On : 6 Apr 2019 10:33 pm
Operator : CHELSEAS
Sample : IC3793-200
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 08 11:36:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	6.76	65	134884	500.00	ug/L		0.01
5) pentafluorobenzene	8.76	168	265489	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.63	114	368802	50.00	ug/L		0.00
75) chlorobenzene-d5	12.81	117	327463	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.38	152	193300	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.80	113	120284	49.94	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.88%				
55) 1,2-dichloroethane-d4 (s)	9.20	65	116583	49.12	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.24%				
76) toluene-d8 (s)	11.22	98	415849	51.13	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.26%				
99) 4-bromofluorobenzene (s)	14.08	95	157850	49.69	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.38%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.86	59	385188	988.48	ug/L		100
4) 1,4-dioxane	10.25	88	159250	5293.41	ug/L		96
6) chlorodifluoromethane	3.90	51	1057189	201.98	ug/L		100
7) dichlorodifluoromethane	3.89	85	1138656	201.90	ug/L		99
8) chloromethane	4.24	50	1183877	200.22	ug/L		99
9) vinyl chloride	4.45	62	1075608	195.52	ug/L		99
10) 1,3-butadiene	4.47	54	752471	193.30	ug/L		98
11) bromomethane	4.98	94	641660	177.61	ug/L		100
12) chloroethane	5.12	64	479074	180.76	ug/L		98
13) trichlorofluoromethane	5.52	101	1040007	196.69	ug/L		100
14) vinyl bromide	5.42	106	551880	195.73	ug/L		97
15) ethyl ether	5.82	74	305414	194.39	ug/L		98
16) 2-chloropropane	6.02	43	1044333	191.83	ug/L		98
17) acrolein	6.02	56	116462	194.08	ug/L		96
18) freon 113	6.22	151	574454	202.08	ug/L		98
19) 1,1-dichloroethene	6.22	61	1024137	196.36	ug/L		99
20) acetone	6.18	58	209569	747.76	ug/L		89
21) acetonitrile	6.54	41	808188	1883.92	ug/L		99
22) iodomethane	6.45	142	1138605	202.18	ug/L		100
23) carbon disulfide	6.59	76	2165621	200.55	ug/L		99
24) methylene chloride	6.81	84	714952	198.45	ug/L		100
25) methyl acetate	6.58	43	433461	185.26	ug/L		98
26) methyl tert butyl ether	7.11	73	1564642	189.44	ug/L		99
27) trans-1,2-dichloroethene	7.15	61	888131	198.12	ug/L		97
28) hexane	7.45	56	473415	202.29	ug/L		98
29) di-isopropyl ether	7.63	45	2055393	188.82	ug/L		98
30) 2-butanone	8.22	72	260492	817.99	ug/L		95
31) 1,1-dichloroethane	7.65	63	1075964	195.48	ug/L		100
32) chloroprene	7.74	53	857385	199.75	ug/L		98
33) acrylonitrile	7.04	53	231870	195.95	ug/L		99
34) vinyl acetate	7.58	86	101099	210.41	ug/L	#	91
35) ethyl tert-butyl ether	8.05	59	1837269	189.45	ug/L		99
36) ethyl acetate	8.22	45	82474	199.32	ug/L	#	83

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89761.D
Acq On : 6 Apr 2019 10:33 pm
Operator : CHELSEAS
Sample : IC3793-200
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 08 11:36:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	8.33	77	803978	195.53	ug/L		97
38) cis-1,2-dichloroethene	8.29	96	665612	198.38	ug/L		97
39) propionitrile	8.29	54	864499	1928.45	ug/L		88
40) methyl acrylate	8.30	85	85355	208.23	ug/L	#	94
41) methacrylonitrile	8.46	67	231393	205.36	ug/L		96
42) bromochloromethane	8.56	128	332793	203.55	ug/L		98
43) tetrahydrofuran	8.58	72	77859	199.04	ug/L		98
44) chloroform	8.63	83	1026412	200.26	ug/L		99
45) tert-butyl formate	8.66	59	463342	194.16	ug/L		98
47) 1,1,1-trichloroethane	8.88	97	971265	207.15	ug/L		99
48) cyclohexane	8.99	84	981658	201.12	ug/L		100
50) 1,1-dichloropropene	9.03	75	764699	206.21	ug/L		99
51) carbon tetrachloride	9.07	117	831665	208.54	ug/L		100
52) tert-amyl alcohol	9.13	73	185685	981.24	ug/L		94
53) isopropyl acetate	9.15	87	117064	212.45	ug/L		94
56) n-butyl alcohol	9.66	41	642150	9002.61	ug/L		99
57) 2,2,4-trimethylpentane	9.34	57	2394280	192.25	ug/L		100
58) benzene	9.26	78	2341061	200.49	ug/L		99
59) tert-amyl methyl ether	9.33	73	1702936	178.95	ug/L		99
60) heptane	9.48	57	445776	200.50	ug/L		99
61) 1,2-dichloroethane	9.28	62	672550	196.78	ug/L		97
62) ethyl acrylate	9.90	55	644549	200.61	ug/L		100
63) trichloroethene	9.93	95	589691	204.99	ug/L		96
64) 2-chloroethyl vinyl ether	10.68	63	1635747	973.12	ug/L		99
65) methyl methacrylate	10.15	100	141082	202.38	ug/L		96
66) methylcyclohexane	10.23	83	1175330	194.88	ug/L		97
67) 1,2-dichloropropane	10.21	63	595245	197.82	ug/L		99
68) dibromomethane	10.32	93	351698	200.34	ug/L		96
69) bromodichloromethane	10.46	83	775507	208.10	ug/L		100
70) 2-nitropropane	10.65	41	169439	323.56	ug/L		95
71) epichlorohydrin	10.77	57	280190	976.44	ug/L		96
72) cis-1,3-dichloropropene	10.91	75	899618	204.30	ug/L		100
73) 4-methyl-2-pentanone	11.00	58	863601	748.70	ug/L		92
74) isoamyl alcohol	10.99	70	314809	3308.82	ug/L		96
77) toluene	11.30	92	1362173	209.09	ug/L		99
78) ethyl methacrylate	11.46	69	658208	199.51	ug/L		97
79) trans-1,3-dichloropropene	11.48	75	739589	203.91	ug/L		99
80) 1,1,2-trichloroethane	11.71	83	415022	207.42	ug/L		99
81) tetrachloroethene	11.87	164	507374	208.81	ug/L		99
82) 2-hexanone	11.87	58	766519	744.46	ug/L		97
83) 1,3-dichloropropane	11.90	76	735357	201.12	ug/L		100
84) butyl acetate	11.95	56	342823	192.94	ug/L		98
85) dibromochloromethane	12.17	129	584783	214.45	ug/L		99
86) 1,2-dibromoethane	12.33	107	653547	206.16	ug/L		98
87) n-butyl ether	12.79	57	2302627	196.86	ug/L		99
88) chlorobenzene	12.85	112	1494544	205.91	ug/L		100
89) 1,1,1,2-tetrachloroethane	12.92	131	624462	206.73	ug/L		98
90) ethylbenzene	12.91	91	2536552	200.87	ug/L		100
91) m,p-xylene	13.04	106	1939010	400.34	ug/L		99
92) o-xylene	13.47	91	2160022	200.42	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89761.D
Acq On : 6 Apr 2019 10:33 pm
Operator : CHELSEAS
Sample : IC3793-200
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 08 11:36:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration

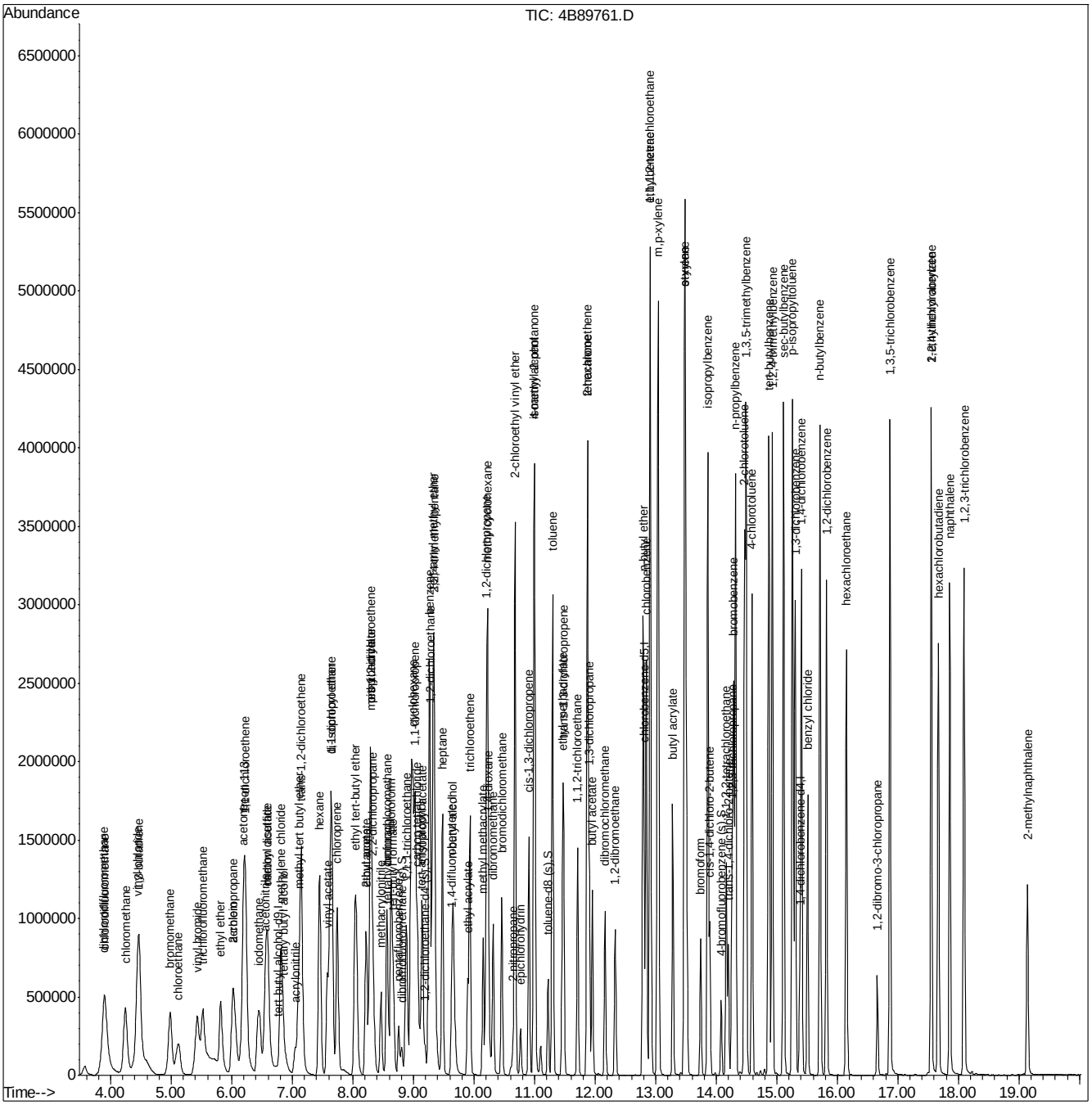
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	13.49	104	1629251	200.16 ug/L	98
94) butyl acrylate	13.28	55	1120136	195.00 ug/L	99
95) isopropylbenzene	13.86	105	2832119	205.91 ug/L	99
96) bromoform	13.74	173	433148	219.69 ug/L	98
97) cis-1,4-dichloro-2-butene	13.89	88	213370	211.66 ug/L	98
100) 1,1,2,2-tetrachloroethane	14.17	83	725959	201.50 ug/L	98
101) trans-1,4-dichloro-2-buten	14.20	53	154847	205.23 ug/L	96
102) 1,2,3-trichloropropane	14.26	110	173264	198.31 ug/L	93
103) bromobenzene	14.29	156	752743	208.16 ug/L	100
104) n-propylbenzene	14.32	91	3139722	202.20 ug/L	100
105) 2-chlorotoluene	14.47	126	679602	205.32 ug/L	94
106) 4-chlorotoluene	14.59	91	1830522	204.37 ug/L	100
107) 1,3,5-trimethylbenzene	14.49	105	2416196	205.58 ug/L	99
108) tert-butylbenzene	14.87	119	2200556	215.81 ug/L	99
109) 1,2,4-trimethylbenzene	14.93	105	2408677	204.93 ug/L	99
110) sec-butylbenzene	15.11	105	3222949	207.82 ug/L	99
111) p-isopropyltoluene	15.26	119	2725648	206.56 ug/L	99
112) 1,3-dichlorobenzene	15.31	146	1397788	207.46 ug/L	99
113) 1,4-dichlorobenzene	15.41	146	1428012	208.22 ug/L	100
114) 1,2-dichlorobenzene	15.82	146	1451096	206.91 ug/L	99
115) benzyl chloride	15.51	91	1341480	207.93 ug/L	98
116) n-butylbenzene	15.71	92	1338901	210.80 ug/L	99
117) hexachloroethane	16.15	201	590756	244.19 ug/L	96
118) 1,2-dibromo-3-chloropropan	16.66	157	201574	208.47 ug/L	98
119) 1,3,5-trichlorobenzene	16.87	180	1463465	216.97 ug/L	99
120) 1,2,4-trichlorobenzene	17.55	180	1304683	215.12 ug/L	99
121) 2-ethylhexyl acrylate	17.55	70	149169	55.99 ug/L	94
122) hexachlorobutadiene	17.67	225	695978	214.85 ug/L	99
123) naphthalene	17.86	128	2599172	206.09 ug/L	100
124) 1,2,3-trichlorobenzene	18.09	180	1174299	209.59 ug/L	99
125) 2-methylnaphthalene	19.14	142	689239	114.31 ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89761.D
Acq On : 6 Apr 2019 10:33 pm
Operator : CHELSEAS
Sample : IC3793-200
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 08 11:36:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Mon Apr 08 11:35:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89764.D
Acq On : 6 Apr 2019 11:57 pm
Operator : CHELSEAS
Sample : ICV3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 09 08:40:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 09 08:39:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.76	65	153329	500.00	ug/L	0.01
5) pentafluorobenzene	8.76	168	274849	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.63	114	367799	50.00	ug/L	0.00
75) chlorobenzene-d5	12.81	117	330488	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.38	152	193382	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.80	113	123997	49.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.78%			
55) 1,2-dichloroethane-d4 (s)	9.20	65	117834	48.59	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.18%			
76) toluene-d8 (s)	11.22	98	413328	49.69	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.38%			
99) 4-bromofluorobenzene (s)	14.08	95	159353	50.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.12%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	6.86	59	106463	245.55	ug/L	97
4) 1,4-dioxane	10.24	88	43818	1353.36	ug/L	95
6) chlorodifluoromethane	3.91	51	283397	50.20	ug/L	100
7) dichlorodifluoromethane	3.88	85	304698	55.27	ug/L	99
8) chloromethane	4.24	50	311578	49.19	ug/L	98
9) vinyl chloride	4.45	62	280327	51.11	ug/L	99
10) 1,3-butadiene	4.47	54	233122	56.04	ug/L	98
11) bromomethane	4.99	94	190177	51.54	ug/L	98
12) chloroethane	5.13	64	139667	49.85	ug/L	98
13) trichlorofluoromethane	5.53	101	278206	52.37	ug/L	98
14) vinyl bromide	5.43	106	151710	52.76	ug/L	97
15) ethyl ether	5.82	74	81975	49.42	ug/L	98
16) 2-chloropropane	6.02	43	301689	48.72	ug/L	99
17) acrolein	6.03	56	32873	52.21	ug/L	99
18) freon 113	6.21	151	168930	56.15	ug/L	99
19) 1,1-dichloroethene	6.22	61	259022	45.74	ug/L	96
20) acetone	6.18	58	57602	204.90	ug/L	94
21) acetonitrile	6.55	41	169467	370.48	ug/L	99
22) iodomethane	6.45	142	336339	56.47	ug/L	100
23) carbon disulfide	6.59	76	722445	59.81	ug/L	99
24) methylene chloride	6.81	84	186204	47.15	ug/L	100
25) methyl acetate	6.58	43	115035	47.57	ug/L	99
26) methyl tert butyl ether	7.11	73	838256	92.28	ug/L	98
27) trans-1,2-dichloroethene	7.15	61	231323	47.57	ug/L	98
28) hexane	7.45	56	123418	47.60	ug/L	98
29) di-isopropyl ether	7.63	45	541928	44.82	ug/L	98
30) 2-butanone	8.21	72	65344	198.86	ug/L	94
31) 1,1-dichloroethane	7.65	63	289652	48.39	ug/L	99
32) chloroprene	7.74	53	230505	49.98	ug/L	98
33) acrylonitrile	7.05	53	67430	53.89	ug/L	97
34) vinyl acetate	7.58	86	23254	47.81	ug/L	98
35) ethyl tert-butyl ether	8.05	59	481008	45.25	ug/L	98
36) ethyl acetate	8.22	45	20926	47.20	ug/L #	74

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89764.D
Acq On : 6 Apr 2019 11:57 pm
Operator : CHELSEAS
Sample : ICV3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 09 08:40:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 09 08:39:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	8.33	77	204419	43.59	ug/L		89
38) cis-1,2-dichloroethene	8.29	96	171270	47.22	ug/L		100
39) propionitrile	8.29	54	239521	500.60	ug/L		90
40) methyl acrylate	8.30	85	21290	51.45	ug/L		97
41) methacrylonitrile	8.46	67	57724	50.04	ug/L		97
42) bromochloromethane	8.56	128	85753	49.36	ug/L		98
43) tetrahydrofuran	8.58	72	20334	49.29	ug/L		97
44) chloroform	8.63	83	268252	47.02	ug/L		99
45) tert-butyl formate	8.66	59	110360	44.45	ug/L		99
47) 1,1,1-trichloroethane	8.88	97	240987	47.70	ug/L		99
48) cyclohexane	8.99	84	300168	58.64	ug/L		97
50) 1,1-dichloropropene	9.03	75	196314	48.54	ug/L		99
51) carbon tetrachloride	9.07	117	211278	50.02	ug/L		99
52) tert-amyl alcohol	9.13	73	53091	251.46	ug/L		97
53) isopropyl acetate	9.14	87	27272	47.52	ug/L		95
56) n-butyl alcohol	9.66	41	182061	2443.98	ug/L		96
57) 2,2,4-trimethylpentane	9.34	57	618226	47.44	ug/L		98
58) benzene	9.26	78	588614	47.13	ug/L		99
59) tert-amyl methyl ether	9.32	73	451227	44.08	ug/L		99
60) heptane	9.48	57	127212	56.12	ug/L		98
61) 1,2-dichloroethane	9.27	62	168406	45.69	ug/L		99
62) ethyl acrylate	9.89	55	161335	49.38	ug/L		100
63) trichloroethene	9.93	95	148579	49.70	ug/L		100
64) 2-chloroethyl vinyl ether	10.68	63	433829	258.68	ug/L		99
65) methyl methacrylate	10.15	100	34639	52.23	ug/L	#	80
66) methylcyclohexane	10.22	83	304396	48.17	ug/L		100
67) 1,2-dichloropropane	10.21	63	150205	48.33	ug/L		100
68) dibromomethane	10.31	93	86315	47.85	ug/L		98
69) bromodichloromethane	10.46	83	184622	48.78	ug/L		98
70) 2-nitropropane	10.65	41	29490	43.95	ug/L		98
71) epichlorohydrin	10.77	57	72178	249.79	ug/L		97
72) cis-1,3-dichloropropene	10.91	75	218337	48.99	ug/L		98
73) 4-methyl-2-pentanone	11.00	58	228727	191.33	ug/L		97
74) isoamyl alcohol	10.99	70	97463	1036.05	ug/L		94
77) toluene	11.29	92	334457	48.56	ug/L		100
78) ethyl methacrylate	11.46	69	168134	50.17	ug/L		99
79) trans-1,3-dichloropropene	11.48	75	187103	50.18	ug/L		98
80) 1,1,2-trichloroethane	11.71	83	101015	48.60	ug/L		99
81) tetrachloroethene	11.87	164	127971	49.57	ug/L		99
82) 2-hexanone	11.87	58	203025	186.78	ug/L		99
83) 1,3-dichloropropane	11.90	76	185967	48.16	ug/L		99
84) butyl acetate	11.95	56	88587	46.83	ug/L		99
85) dibromochloromethane	12.17	129	142864	52.57	ug/L		99
86) 1,2-dibromoethane	12.33	107	161656	49.70	ug/L		96
87) n-butyl ether	12.79	57	619150	49.15	ug/L		100
88) chlorobenzene	12.85	112	375783	48.67	ug/L		98
89) 1,1,1,2-tetrachloroethane	12.92	131	154515	49.97	ug/L		96
90) ethylbenzene	12.91	91	643892	47.62	ug/L		100
91) m,p-xylene	13.04	106	494157	96.27	ug/L		99
92) o-xylene	13.47	91	540458	47.16	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89764.D
Acq On : 6 Apr 2019 11:57 pm
Operator : CHELSEAS
Sample : ICV3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 09 08:40:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 09 08:39:45 2019
Response via : Initial Calibration

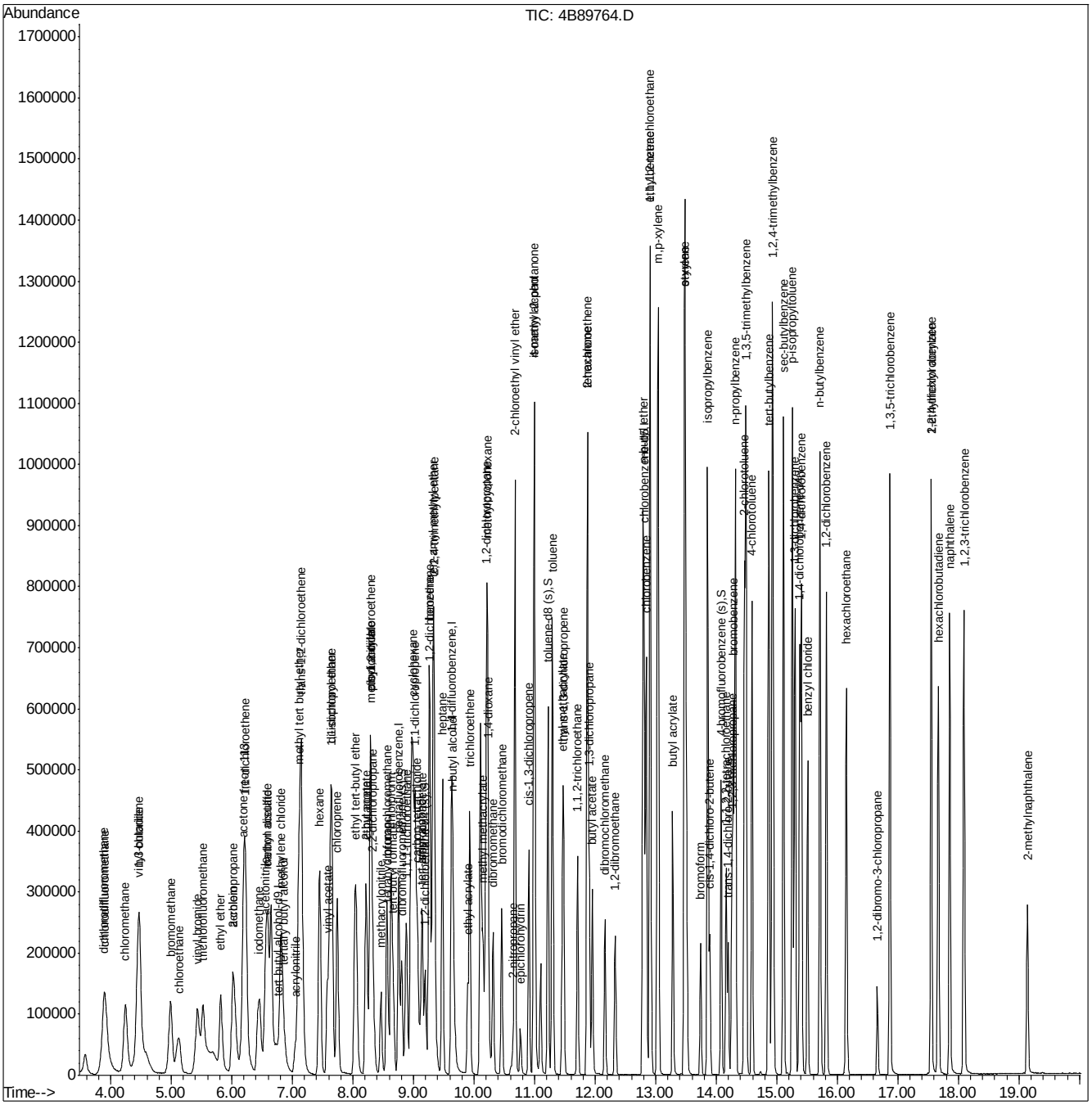
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.49	104	415569	49.70	ug/L	100
94) butyl acrylate	13.28	55	282018	46.54	ug/L	100
95) isopropylbenzene	13.86	105	699316	48.17	ug/L	100
96) bromoform	13.74	173	106600	54.48	ug/L	98
97) cis-1,4-dichloro-2-butene	13.89	88	50722	50.12	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.17	83	178459	48.25	ug/L	97
101) trans-1,4-dichloro-2-buten	14.20	53	41313	55.75	ug/L	98
102) 1,2,3-trichloropropane	14.26	110	42489	48.38	ug/L	94
103) bromobenzene	14.29	156	183910	50.36	ug/L	99
104) n-propylbenzene	14.32	91	791172	49.79	ug/L	99
105) 2-chlorotoluene	14.46	126	164637	49.42	ug/L	99
106) 4-chlorotoluene	14.59	91	460880	49.43	ug/L	100
107) 1,3,5-trimethylbenzene	14.49	105	595509	49.86	ug/L	98
108) tert-butylbenzene	14.87	119	523727	51.30	ug/L	99
109) 1,2,4-trimethylbenzene	14.92	105	605946	50.62	ug/L	100
110) sec-butylbenzene	15.11	105	786377	50.65	ug/L	99
111) p-isopropyltoluene	15.26	119	669622	50.67	ug/L	100
112) 1,3-dichlorobenzene	15.30	146	346791	49.59	ug/L	99
113) 1,4-dichlorobenzene	15.41	146	351200	50.00	ug/L	99
114) 1,2-dichlorobenzene	15.82	146	356837	49.34	ug/L	99
115) benzyl chloride	15.51	91	388331	59.71	ug/L	99
116) n-butylbenzene	15.71	92	320289	50.19	ug/L	99
117) hexachloroethane	16.15	201	130408	55.06	ug/L	98
118) 1,2-dibromo-3-chloropropan	16.66	157	46019	50.30	ug/L	96
119) 1,3,5-trichlorobenzene	16.87	180	340519	50.96	ug/L	99
120) 1,2,4-trichlorobenzene	17.55	180	300343	51.17	ug/L	99
121) 2-ethylhexyl acrylate	17.55	70	30920	9.62	ug/L	97
122) hexachlorobutadiene	17.67	225	157286	47.89	ug/L	99
123) naphthalene	17.86	128	629564	52.31	ug/L	100
124) 1,2,3-trichlorobenzene	18.09	180	280238	52.26	ug/L	99
125) 2-methylnaphthalene	19.14	142	154963	26.13	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3793\
Data File : 4B89764.D
Acq On : 6 Apr 2019 11:57 pm
Operator : CHELSEAS
Sample : ICV3793-50
Misc : MS33655,V4B3793,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 09 08:40:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 09 08:39:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91830.d
Acq On : 24 Jun 2019 7:01 am
Operator : edwardd
Sample : cc3793-20 Inst : MS4B
Misc : MS35593,V4B3896,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 03:59:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	6.733	65	167234	500.00	ug/L		-0.02
5) pentafluorobenzene	8.757	168	382524	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.630	114	486793	50.00	ug/L		0.00
75) chlorobenzene-d5	12.805	117	436864	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.379	152	263515	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.804	113	166155	48.03	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.06%				
55) 1,2-dichloroethane-d4 (s)	9.191	65	161346	50.27	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.54%				
76) toluene-d8 (s)	11.220	98	546715	49.72	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.44%				
99) 4-bromofluorobenzene (s)	14.081	95	213900	49.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.848	59	41655	88.08	ug/L		97
4) 1,4-dioxane	10.237	88	17001	481.43	ug/L		82
6) chlorodifluoromethane	3.903	51	129741	16.51	ug/L		97
7) dichlorodifluoromethane	3.888	85	130502	17.01	ug/L		99
8) chloromethane	4.249	50	150982	17.13	ug/L		98
9) vinyl chloride	4.447	62	135455	17.74	ug/L		98
10) 1,3-butadiene	4.484	54	95710	16.53	ug/L	#	82
11) bromomethane	4.997	94	89362	17.40	ug/L		92
12) chloroethane	5.122	64	67153	17.22	ug/L		97
13) trichlorofluoromethane	5.525	101	129708	17.54	ug/L		100
14) vinyl bromide	5.431	106	81823	20.45	ug/L		96
15) ethyl ether	5.823	74	42697	18.49	ug/L		95
16) 2-chloropropane	6.032	43	151860	17.62	ug/L		97
17) acrolein	6.027	56	12102	13.81	ug/L		93
18) freon 113	6.210	151	67871	16.21	ug/L		98
19) 1,1-dichloroethene	6.210	61	142715	18.11	ug/L		96
20) acetone	6.194	58	34717	88.73	ug/L		89
21) acetonitrile	6.550	41	96444	151.49	ug/L		95
22) iodomethane	6.445	142	148652	17.93	ug/L		98
23) carbon disulfide	6.586	76	277445	16.51	ug/L		99
24) methylene chloride	6.811	84	96284	17.52	ug/L		98
25) methyl acetate	6.581	43	57134	16.98	ug/L		98
26) methyl tert butyl ether	7.115	73	204464	16.17	ug/L		99
27) trans-1,2-dichloroethene	7.151	61	123108	18.19	ug/L		97
28) hexane	7.455	56	56387	15.63	ug/L		96
29) di-isopropyl ether	7.633	45	280388	16.66	ug/L		99
30) 2-butanone	8.218	72	34416	75.25	ug/L		94
31) 1,1-dichloroethane	7.659	63	149533	17.95	ug/L		100
32) chloroprene	7.742	53	108263	16.87	ug/L		98
33) acrylonitrile	7.047	53	29798	17.11	ug/L		98
34) vinyl acetate	7.580	86	12824	18.94	ug/L	#	87
35) ethyl tert-butyl ether	8.040	59	235196	15.90	ug/L		99
36) ethyl acetate	8.224	45	10294	16.68	ug/L	#	93
37) 2,2-dichloropropane	8.323	77	111682	17.11	ug/L		97
38) cis-1,2-dichloroethene	8.292	96	90835	18.00	ug/L		98
39) propionitrile	8.281	54	111919	168.07	ug/L		97
40) methyl acrylate	8.307	85	10280	17.85	ug/L	#	86
41) methacrylonitrile	8.459	67	28210	17.57	ug/L		92
42) bromochloromethane	8.558	128	44642	18.46	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91830.d
Acq On : 24 Jun 2019 7:01 am
Operator : edwardd
Sample : cc3793-20 Inst : MS4B
Misc : MS35593,V4B3896,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 03:59:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	8.579	72	9659	16.82	ug/L		87
44) chloroform	8.632	83	141914	17.87	ug/L		99
45) tert-butyl formate	8.658	59	53729	15.55	ug/L		96
47) 1,1,1-trichloroethane	8.877	97	125472	17.85	ug/L		99
48) cyclohexane	8.992	84	115438	16.20	ug/L		94
50) 1,1-dichloropropene	9.029	75	99611	17.70	ug/L		98
51) carbon tetrachloride	9.066	117	109559	18.64	ug/L		98
52) tert-amyl alcohol	9.123	73	18503	62.97	ug/L		87
53) isopropyl acetate	9.144	87	14406	18.04	ug/L	#	83
56) n-butyl alcohol	9.651	41	71328	723.45	ug/L		98
57) 2,2,4-trimethylpentane	9.343	57	277348	16.08	ug/L		99
58) benzene	9.259	78	298170	18.04	ug/L		100
59) tert-amyl methyl ether	9.322	73	220987	16.31	ug/L		100
60) heptane	9.479	57	50388	16.79	ug/L		97
61) 1,2-dichloroethane	9.275	62	93087	19.08	ug/L		100
62) ethyl acrylate	9.892	55	75864	17.54	ug/L		98
63) trichloroethene	9.929	95	76342	19.29	ug/L		97
64) 2-chloroethyl vinyl ether	10.677	63	204576	92.17	ug/L		100
65) methyl methacrylate	10.148	100	15420	17.57	ug/L		96
66) methylcyclohexane	10.222	83	133967	16.02	ug/L		99
67) 1,2-dichloropropane	10.206	63	77372	18.81	ug/L		98
68) dibromomethane	10.310	93	46337	19.41	ug/L		95
69) bromodichloromethane	10.452	83	99581	19.88	ug/L		98
70) 2-nitropropane	10.640	41	21413	26.62	ug/L		93
71) epichlorohydrin	10.765	57	33352	87.21	ug/L		99
72) cis-1,3-dichloropropene	10.901	75	114180	19.36	ug/L		100
73) 4-methyl-2-pentanone	10.996	58	113067	71.46	ug/L		93
74) isoamyl alcohol	10.990	70	36577	293.77	ug/L	#	77
77) toluene	11.294	92	170479	18.72	ug/L		99
78) ethyl methacrylate	11.461	69	79499	17.95	ug/L		97
79) trans-1,3-dichloropropene	11.477	75	100217	20.33	ug/L		98
80) 1,1,2-trichloroethane	11.707	83	54258	19.75	ug/L		97
81) tetrachloroethene	11.869	164	64528	18.91	ug/L		99
82) 2-hexanone	11.869	58	105863	73.68	ug/L		99
83) 1,3-dichloropropane	11.900	76	98210	19.24	ug/L		90
84) butyl acetate	11.953	56	46695	18.67	ug/L		97
85) dibromochloromethane	12.162	129	74865	20.84	ug/L		98
86) 1,2-dibromoethane	12.329	107	73304	17.05	ug/L		100
87) n-butyl ether	12.790	57	281626	16.91	ug/L		99
88) chlorobenzene	12.842	112	191227	18.74	ug/L		99
89) 1,1,1,2-tetrachloroethane	12.910	131	80448	19.68	ug/L		98
90) ethylbenzene	12.905	91	323617	18.11	ug/L		99
91) m,p-xylene	13.035	106	247922	36.54	ug/L		100
92) o-xylene	13.475	91	274705	18.13	ug/L		100
93) styrene	13.485	104	202693	18.34	ug/L		95
94) butyl acrylate	13.281	55	123363	15.40	ug/L		99
95) isopropylbenzene	13.857	105	340676	17.75	ug/L		99
96) bromoform	13.741	173	54667	21.13	ug/L		98
97) cis-1,4-dichloro-2-butene	13.893	88	25321	18.93	ug/L		95
100) 1,1,2,2-tetrachloroethane	14.160	83	91349	18.12	ug/L		98
101) trans-1,4-dichloro-2-b...	14.196	53	18590	18.41	ug/L		96
102) 1,2,3-trichloropropane	14.259	110	22519	18.82	ug/L		98
103) bromobenzene	14.280	156	95260	19.14	ug/L		97
104) n-propylbenzene	14.317	91	388669	17.95	ug/L		100
105) 2-chlorotoluene	14.463	126	85949	18.93	ug/L		94
106) 4-chlorotoluene	14.589	91	232376	18.29	ug/L		99
107) 1,3,5-trimethylbenzene	14.489	105	293550	18.04	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91830.d
Acq On : 24 Jun 2019 7:01 am
Operator : edwardd
Sample : cc3793-20 Inst : MS4B
Misc : MS35593,V4B3896,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 03:59:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

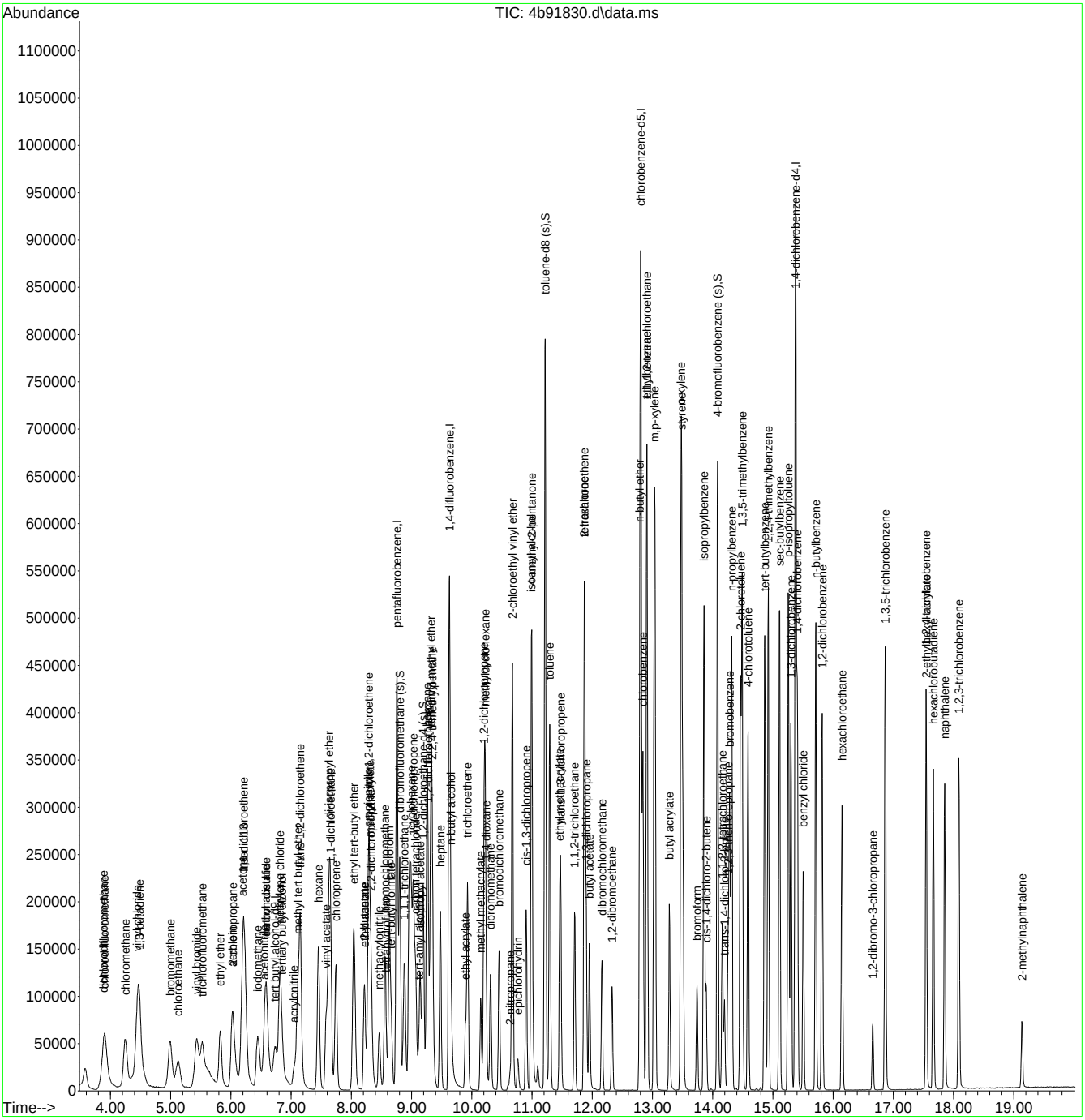
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
108) tert-butylbenzene	14.866	119	245964	17.68	ug/L		98
109) 1,2,4-trimethylbenzene	14.923	105	296947	18.21	ug/L		98
110) sec-butylbenzene	15.112	105	375815	17.76	ug/L		100
111) p-isopropyltoluene	15.258	119	314707	17.48	ug/L		97
112) 1,3-dichlorobenzene	15.300	146	173337	18.19	ug/L		99
113) 1,4-dichlorobenzene	15.405	146	173538	18.13	ug/L		99
114) 1,2-dichlorobenzene	15.818	146	177385	18.00	ug/L		99
115) benzyl chloride	15.504	91	165118	18.63	ug/L		100
116) n-butylbenzene	15.713	92	154761	17.80	ug/L		96
117) hexachloroethane	16.147	201	60396	18.71	ug/L		98
118) 1,2-dibromo-3-chloropr...	16.660	157	21473	17.22	ug/L		97
119) 1,3,5-trichlorobenzene	16.869	180	163399	17.95	ug/L		97
120) 1,2,4-trichlorobenzene	17.544	180	136273	17.04	ug/L		97
121) 2-ethylhexyl acrylate	17.549	70	4203	2.07	ug/L	#	60
122) hexachlorobutadiene	17.664	225	78808	17.61	ug/L		98
123) naphthalene	17.852	128	254931	15.54	ug/L		99
124) 1,2,3-trichlorobenzene	18.088	180	124045	16.98	ug/L		98
125) 2-methylnaphthalene	19.139	142	39142	4.84	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91830.d
Acq On : 24 Jun 2019 7:01 am
Operator : edwardd
Sample : cc3793-20 Inst : MS4B
Misc : MS35593,V4B3896,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 03:59:22 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91853.d
Acq On : 24 Jun 2019 5:50 pm
Operator : edwardd
Sample : ecc3793-50 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:51:24 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	6.743	65	138218	500.00	ug/L		0.00
5) pentafluorobenzene	8.757	168	297602	50.00	ug/L		0.00
54) 1,4-difluorobenzene	9.625	114	413985	50.00	ug/L		0.00
75) chlorobenzene-d5	12.805	117	392553	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	15.379	152	226233	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	8.799	113	146589	54.47	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.94%				
55) 1,2-dichloroethane-d4 (s)	9.191	65	141943	52.00	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.00%				
76) toluene-d8 (s)	11.221	98	481867	48.77	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.54%				
99) 4-bromofluorobenzene (s)	14.081	95	188324	50.57	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.14%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	6.838	59	91935	235.22	ug/L		97
4) 1,4-dioxane	10.242	88	34223	1172.57	ug/L		92
6) chlorodifluoromethane	3.909	51	292121	47.79	ug/L		100
7) dichlorodifluoromethane	3.888	85	274094	45.91	ug/L		99
8) chloromethane	4.238	50	331644	48.36	ug/L		98
9) vinyl chloride	4.442	62	306605	51.62	ug/L		99
10) 1,3-butadiene	4.474	54	252587	56.08	ug/L	#	83
11) bromomethane	4.986	94	201661	50.48	ug/L		99
12) chloroethane	5.127	64	157832	52.03	ug/L		97
13) trichlorofluoromethane	5.525	101	309638	53.83	ug/L		98
14) vinyl bromide	5.420	106	189513	60.87	ug/L		96
15) ethyl ether	5.818	74	94916	52.84	ug/L		98
16) 2-chloropropane	6.022	43	339480	50.63	ug/L		98
17) acrolein	6.016	56	27180	39.87	ug/L		96
18) freon 113	6.210	151	160838	49.37	ug/L		96
19) 1,1-dichloroethene	6.205	61	326275	53.21	ug/L		95
20) acetone	6.184	58	67892	223.04	ug/L		97
21) acetonitrile	6.545	41	231289	466.98	ug/L		99
22) iodomethane	6.440	142	327236	50.74	ug/L		98
23) carbon disulfide	6.587	76	650729	49.76	ug/L		98
24) methylene chloride	6.811	84	227753	53.26	ug/L		99
25) methyl acetate	6.576	43	135078	51.59	ug/L		95
26) methyl tert butyl ether	7.115	73	477895	48.59	ug/L		98
27) trans-1,2-dichloroethene	7.151	61	286543	54.42	ug/L		100
28) hexane	7.450	56	128854	45.90	ug/L		97
29) di-isopropyl ether	7.627	45	667897	51.01	ug/L		100
30) 2-butanone	8.213	72	76344	214.57	ug/L		99
31) 1,1-dichloroethane	7.654	63	351967	54.31	ug/L		99
32) chloroprene	7.742	53	258685	51.80	ug/L		98
33) acrylonitrile	7.047	53	71133	52.51	ug/L		98
34) vinyl acetate	7.580	86	26950	51.17	ug/L	#	90
35) ethyl tert-butyl ether	8.041	59	554956	48.21	ug/L		98
36) ethyl acetate	8.218	45	26885	56.00	ug/L		98
37) 2,2-dichloropropane	8.323	77	233189	45.92	ug/L		98
38) cis-1,2-dichloroethene	8.286	96	212758	54.18	ug/L		98
39) propionitrile	8.281	54	260736	503.27	ug/L		91
40) methyl acrylate	8.302	85	24949	55.68	ug/L	#	82
41) methacrylonitrile	8.459	67	69217	55.41	ug/L		94
42) bromochloromethane	8.558	128	103221	54.87	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91853.d
Acq On : 24 Jun 2019 5:50 pm
Operator : edwardd
Sample : ecc3793-50 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:51:24 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tetrahydrofuran	8.574	72	22592	50.58	ug/L		95
44) chloroform	8.626	83	333825	54.04	ug/L		100
45) tert-butyl formate	8.658	59	115473	42.95	ug/L		95
47) 1,1,1-trichloroethane	8.883	97	304006	55.58	ug/L		97
48) cyclohexane	8.992	84	292044	52.69	ug/L		93
50) 1,1-dichloropropene	9.029	75	237823	54.31	ug/L		99
51) carbon tetrachloride	9.066	117	263251	57.56	ug/L		98
52) tert-amyl alcohol	9.118	73	42920	187.75	ug/L	#	83
53) isopropyl acetate	9.144	87	34276	55.16	ug/L	#	93
56) n-butyl alcohol	9.646	41	154678	1844.74	ug/L		99
57) 2,2,4-trimethylpentane	9.338	57	687131	46.84	ug/L		100
58) benzene	9.259	78	714630	50.83	ug/L		99
59) tert-amyl methyl ether	9.322	73	528112	45.84	ug/L		96
60) heptane	9.479	57	115397	45.23	ug/L		98
61) 1,2-dichloroethane	9.275	62	217967	52.53	ug/L		97
62) ethyl acrylate	9.892	55	182564	49.64	ug/L		100
63) trichloroethene	9.929	95	181652	53.98	ug/L		98
64) 2-chloroethyl vinyl ether	10.677	63	494939	262.20	ug/L		99
65) methyl methacrylate	10.148	100	36750	49.23	ug/L		96
66) methylcyclohexane	10.222	83	339603	47.75	ug/L		99
67) 1,2-dichloropropane	10.201	63	187808	53.68	ug/L		99
68) dibromomethane	10.310	93	110394	54.38	ug/L		99
69) bromodichloromethane	10.452	83	239835	56.30	ug/L		99
70) 2-nitropropane	10.640	41	52038	65.75	ug/L		94
71) epichlorohydrin	10.765	57	75300	231.52	ug/L		99
72) cis-1,3-dichloropropene	10.901	75	262618	52.36	ug/L		100
73) 4-methyl-2-pentanone	10.996	58	276395	205.41	ug/L		92
74) isoamyl alcohol	10.985	70	84110	794.35	ug/L	#	89
77) toluene	11.294	92	407258	49.78	ug/L		99
78) ethyl methacrylate	11.461	69	194698	48.91	ug/L		97
79) trans-1,3-dichloropropene	11.477	75	228808	51.66	ug/L		97
80) 1,1,2-trichloroethane	11.707	83	129082	52.29	ug/L		99
81) tetrachloroethene	11.869	164	158738	51.77	ug/L		97
82) 2-hexanone	11.869	58	243610	188.69	ug/L		99
83) 1,3-dichloropropane	11.900	76	235445	51.34	ug/L		98
84) butyl acetate	11.953	56	109173	48.59	ug/L		98
85) dibromochloromethane	12.162	129	174727	54.13	ug/L		100
86) 1,2-dibromoethane	12.329	107	174326	45.12	ug/L		99
87) n-butyl ether	12.790	57	693178	46.33	ug/L		100
88) chlorobenzene	12.842	112	461382	50.31	ug/L		98
89) 1,1,1,2-tetrachloroethane	12.910	131	195155	53.13	ug/L		97
90) ethylbenzene	12.905	91	794991	49.50	ug/L		100
91) m,p-xylene	13.035	106	597975	98.07	ug/L		96
92) o-xylene	13.475	91	672190	49.38	ug/L		100
93) styrene	13.485	104	508858	51.23	ug/L		94
94) butyl acrylate	13.281	55	323457	44.94	ug/L		99
95) isopropylbenzene	13.857	105	834243	48.37	ug/L		100
96) bromoform	13.742	173	130111	55.98	ug/L		99
97) cis-1,4-dichloro-2-butene	13.893	88	39459	32.83	ug/L		96
100) 1,1,2,2-tetrachloroethane	14.160	83	226339	52.31	ug/L		99
101) trans-1,4-dichloro-2-b...	14.197	53	29334	33.84	ug/L		97
102) 1,2,3-trichloropropane	14.259	110	54781	53.32	ug/L		99
103) bromobenzene	14.285	156	225894	52.88	ug/L		98
104) n-propylbenzene	14.317	91	969084	52.13	ug/L		99
105) 2-chlorotoluene	14.463	126	208166	53.42	ug/L		96
106) 4-chlorotoluene	14.589	91	558501	51.20	ug/L		100
107) 1,3,5-trimethylbenzene	14.489	105	723537	51.78	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91853.d
Acq On : 24 Jun 2019 5:50 pm
Operator : edwardd
Sample : ecc3793-50 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:51:24 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration

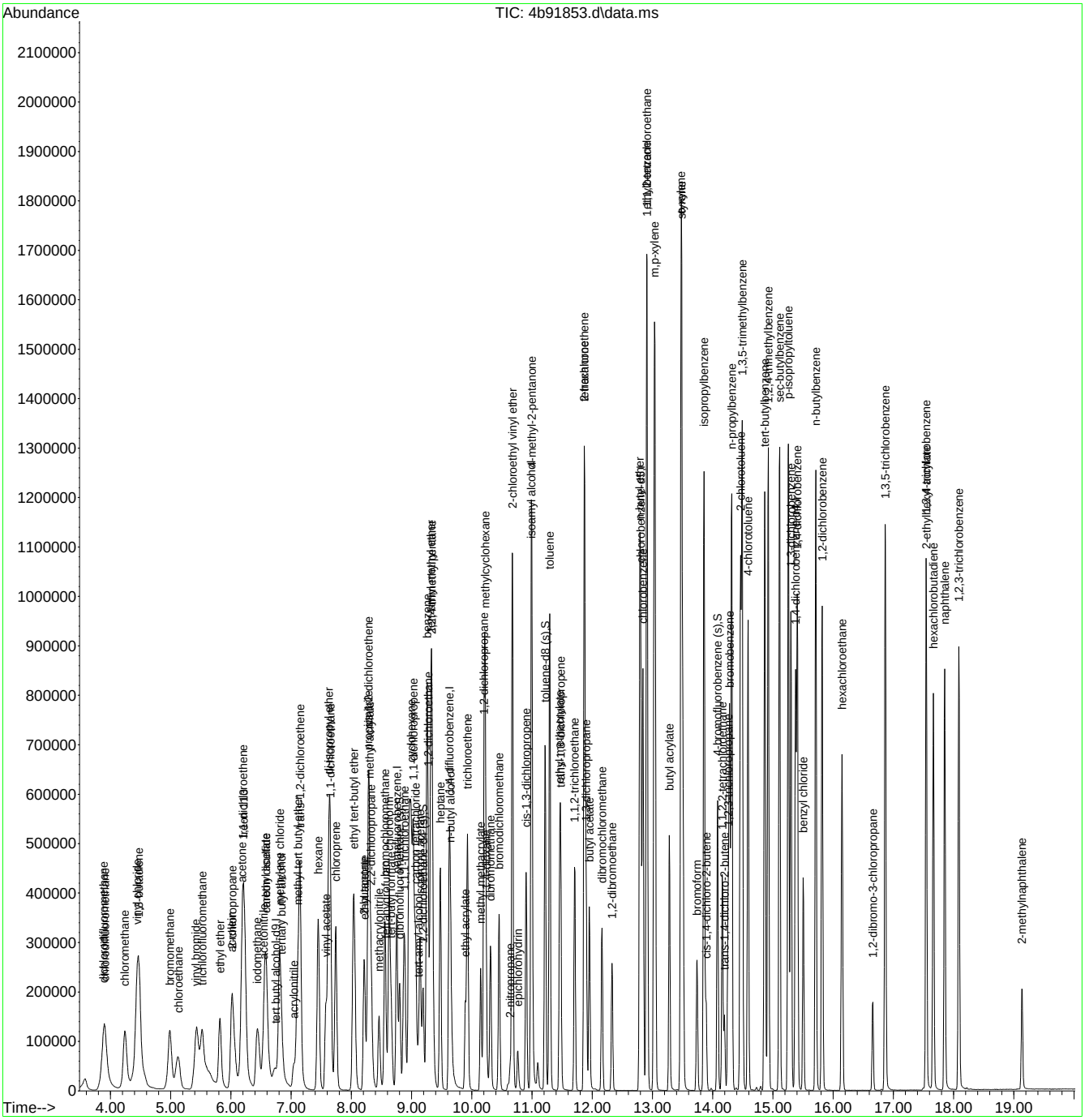
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	14.866	119	609336	51.02	ug/L	98
109) 1,2,4-trimethylbenzene	14.924	105	720843	51.48	ug/L	99
110) sec-butylbenzene	15.112	105	949841	52.29	ug/L	99
111) p-isopropyltoluene	15.258	119	786571	50.88	ug/L	99
112) 1,3-dichlorobenzene	15.300	146	422428	51.64	ug/L	99
113) 1,4-dichlorobenzene	15.405	146	423228	51.51	ug/L	98
114) 1,2-dichlorobenzene	15.818	146	433115	51.19	ug/L	100
115) benzyl chloride	15.504	91	305835	40.19	ug/L	100
116) n-butylbenzene	15.713	92	389337	52.15	ug/L	98
117) hexachloroethane	16.147	201	136267	49.18	ug/L	98
118) 1,2-dibromo-3-chloropr...	16.660	157	52851	49.37	ug/L	94
119) 1,3,5-trichlorobenzene	16.869	180	389259	49.80	ug/L	100
120) 1,2,4-trichlorobenzene	17.544	180	338915	49.35	ug/L	98
121) 2-ethylhexyl acrylate	17.549	70	15623	4.85	ug/L	79
122) hexachlorobutadiene	17.664	225	188084	48.96	ug/L	100
123) naphthalene	17.852	128	665637	47.28	ug/L	100
124) 1,2,3-trichlorobenzene	18.088	180	311810	49.70	ug/L	99
125) 2-methylnaphthalene	19.134	142	113227	16.32	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-25\v4b3896\
Data File : 4b91853.d
Acq On : 24 Jun 2019 5:50 pm
Operator : edwardd
Sample : ecc3793-50 Inst : MS4B
Misc : MS35698,V4B3896,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3793.M
Quant Results File: M4B3793.RES
Quant Time: Jun 25 04:51:24 2019
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Wed Apr 24 12:09:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249731.D
Acq On : 11 May 2019 3:31 pm
Operator : PrashanS
Sample : IC9645-0.2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 14:03:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

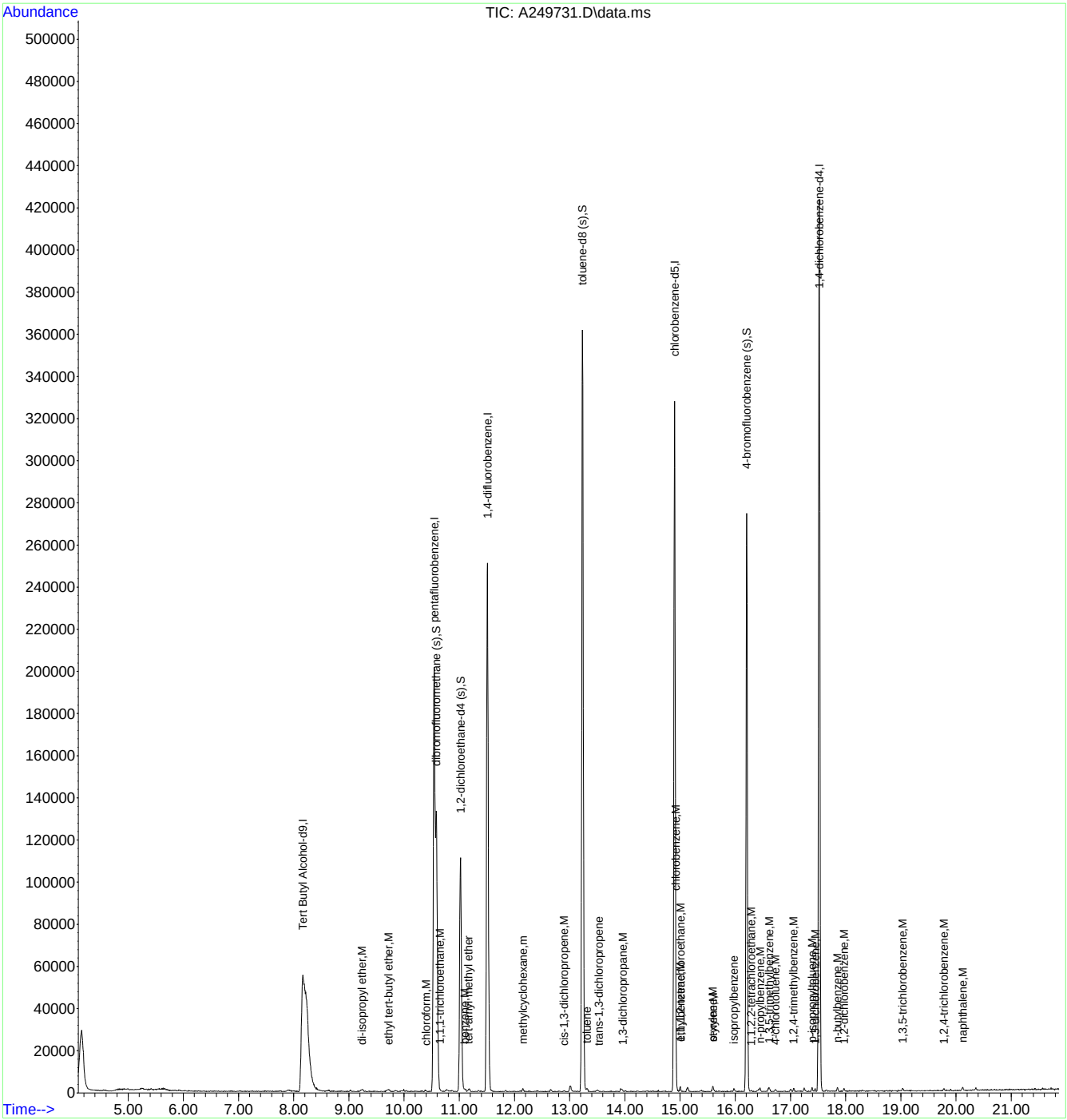
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.169	65	258313	500.00	ug/L		0.00
5) pentafluorobenzene	10.544	168	184209	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	255179	50.00	ug/L		0.00
74) chlorobenzene-d5	14.901	117	210166	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.521	152	127254	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.586	113	87809	48.32	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.64%				
53) 1,2-dichloroethane-d4 (s)	11.025	65	93358	52.21	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.42%				
75) toluene-d8 (s)	13.232	98	280449	50.99	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.98%				
99) 4-bromofluorobenzene (s)	16.208	95	97089	47.70	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.40%				
Target Compounds							Qvalue
28) di-isopropyl ether	9.231	45	1039	0.17	ug/L		63
29) ethyl tert-butyl ether	9.717	59	1001	0.17	ug/L	#	71
42) chloroform	10.392	83	728	0.24	ug/L	#	28
47) 1,1,1-trichloroethane	10.654	97	521	0.16	ug/L	#	69
54) benzene	11.093	78	1164	0.18	ug/L		55
56) tert-amyl methyl ether	11.166	73	989	0.18	ug/L	#	63
64) methylcyclohexane	12.155	83	624	0.18	ug/L	#	71
71) cis-1,3-dichloropropene	12.892	75	387	0.16	ug/L	#	35
76) toluene	13.311	92	674	0.19	ug/L		92
77) trans-1,3-dichloropropene	13.525	75	340	0.17	ug/L	#	49
82) 1,3-dichloropropane	13.959	76	348	0.17	ug/L	#	48
87) chlorobenzene	14.927	112	683	0.18	ug/L	#	42
88) 1,1,1,2-tetrachloroethane	15.005	131	382	0.21	ug/L		82
89) ethylbenzene	15.000	91	1410	0.21	ug/L		92
91) o-xylene	15.586	106	577	0.20	ug/L	#	69
92) styrene	15.601	104	896	0.22	ug/L		93
96) isopropylbenzene	15.978	105	1475	0.19	ug/L		90
101) 1,1,2,2-tetrachloroethane	16.292	83	485	0.19	ug/L		90
104) n-propylbenzene	16.443	91	2041	0.22	ug/L		81
106) 4-chlorotoluene	16.731	91	969	0.21	ug/L		88
107) 1,3,5-trimethylbenzene	16.621	105	1273	0.17	ug/L		80
109) 1,2,4-trimethylbenzene	17.055	105	1444	0.20	ug/L		81
111) 1,3-dichlorobenzene	17.448	146	833	0.23	ug/L		83
112) p-isopropyltoluene	17.390	119	1507	0.18	ug/L		87
114) 1,2-dichlorobenzene	17.976	146	957	0.25	ug/L		99
115) n-butylbenzene	17.850	92	763	0.20	ug/L	#	77
117) 1,3,5-trichlorobenzene	19.032	180	868	0.24	ug/L		86
119) 1,2,4-trichlorobenzene	19.775	180	706	0.21	ug/L	#	65
121) naphthalene	20.120	128	2426	0.24	ug/L		68

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249731.D
Acq On : 11 May 2019 3:31 pm
Operator : PrashanS
Sample : IC9645-0.2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 14:03:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 05/14/19 19:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.164	65	260411	500.00	ug/L		0.00
5) pentafluorobenzene	10.544	168	186658	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	265769	50.00	ug/L		0.00
74) chlorobenzene-d5	14.900	117	208332	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.521	152	132792	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.586	113	92857	50.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%				
53) 1,2-dichloroethane-d4 (s)	11.020	65	96739	51.95	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.90%				
75) toluene-d8 (s)	13.232	98	285534	52.37	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.74%				
99) 4-bromofluorobenzene (s)	16.203	95	98894	46.56	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.12%				
Target Compounds							Qvalue
7) dichlorodifluoromethane	4.545	85	1804	0.39	ug/L	#	49
8) chloromethane	5.005	50	2265	0.51	ug/L		91
9) vinyl chloride	5.261	62	1831m	0.44	ug/L		
11) bromomethane	5.936	94	1460	0.52	ug/L		89
12) chloroethane	6.119	64	957	0.45	ug/L	#	46
13) vinyl bromide	6.501	106	1026	0.37	ug/L	#	81
21) iodomethane	7.751	142	1522	0.42	ug/L	#	46
22) carbon disulfide	7.918	76	3722	0.59	ug/L		85
23) methylene chloride	8.227	84	846	0.40	ug/L	#	54
25) methyl tert butyl ether	8.609	73	2591	0.43	ug/L	#	53
26) trans-1,2-dichloroethene	8.640	96	773	0.43	ug/L		88
27) hexane	9.006	57	1113	0.44	ug/L	#	86
28) di-isopropyl ether	9.226	45	2944	0.48	ug/L		88
29) ethyl tert-butyl ether	9.712	59	2594	0.44	ug/L		88
31) 1,1-dichloroethane	9.252	63	1370	0.44	ug/L		89
32) chloroprene	9.372	53	1212	0.46	ug/L		69
36) 2,2-dichloropropane	10.036	77	1253	0.41	ug/L	#	48
37) cis-1,2-dichloroethene	10.000	96	858	0.42	ug/L		91
39) propionitrile	10.005	54	1543	3.49	ug/L	#	68
40) bromochloromethane	10.293	128	379	0.36	ug/L	#	42
42) chloroform	10.382	83	1761	0.57	ug/L		77
46) cyclohexane	10.784	84	1533	0.44	ug/L		90
47) 1,1,1-trichloroethane	10.675	97	1522	0.46	ug/L		87
49) 1,1-dichloropropene	10.831	75	1066	0.44	ug/L	#	63
50) carbon tetrachloride	10.868	117	1219	0.42	ug/L	#	76
54) benzene	11.098	78	3410	0.52	ug/L		91
55) iso-octane	11.187	57	2771	0.41	ug/L		89
56) tert-amyl methyl ether	11.161	73	2762	0.48	ug/L	#	71
57) heptane	11.349	71	488	0.38	ug/L	#	85
59) 1,2-dichloroethane	11.109	62	1505	0.67	ug/L		90
62) trichloroethene	11.830	95	821	0.50	ug/L		85
64) methylcyclohexane	12.149	83	1699	0.48	ug/L		92
67) 1,2-dichloropropane	12.144	63	716	0.44	ug/L		64
69) bromodichloromethane	12.411	83	1082	0.48	ug/L		73
71) cis-1,3-dichloropropene	12.892	75	995	0.39	ug/L		94
72) 4-methyl-2-pentanone	13.007	58	1643	1.57	ug/L		90
76) toluene	13.310	92	2007	0.56	ug/L	#	72
77) trans-1,3-dichloropropene	13.514	75	882	0.44	ug/L	#	66
78) ethyl methacrylate	13.499	69	803	0.41	ug/L		76
79) 1,1,2-trichloroethane	13.755	83	456	0.42	ug/L	#	73
80) 2-hexanone	13.933	58	1454	1.88	ug/L	#	81

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

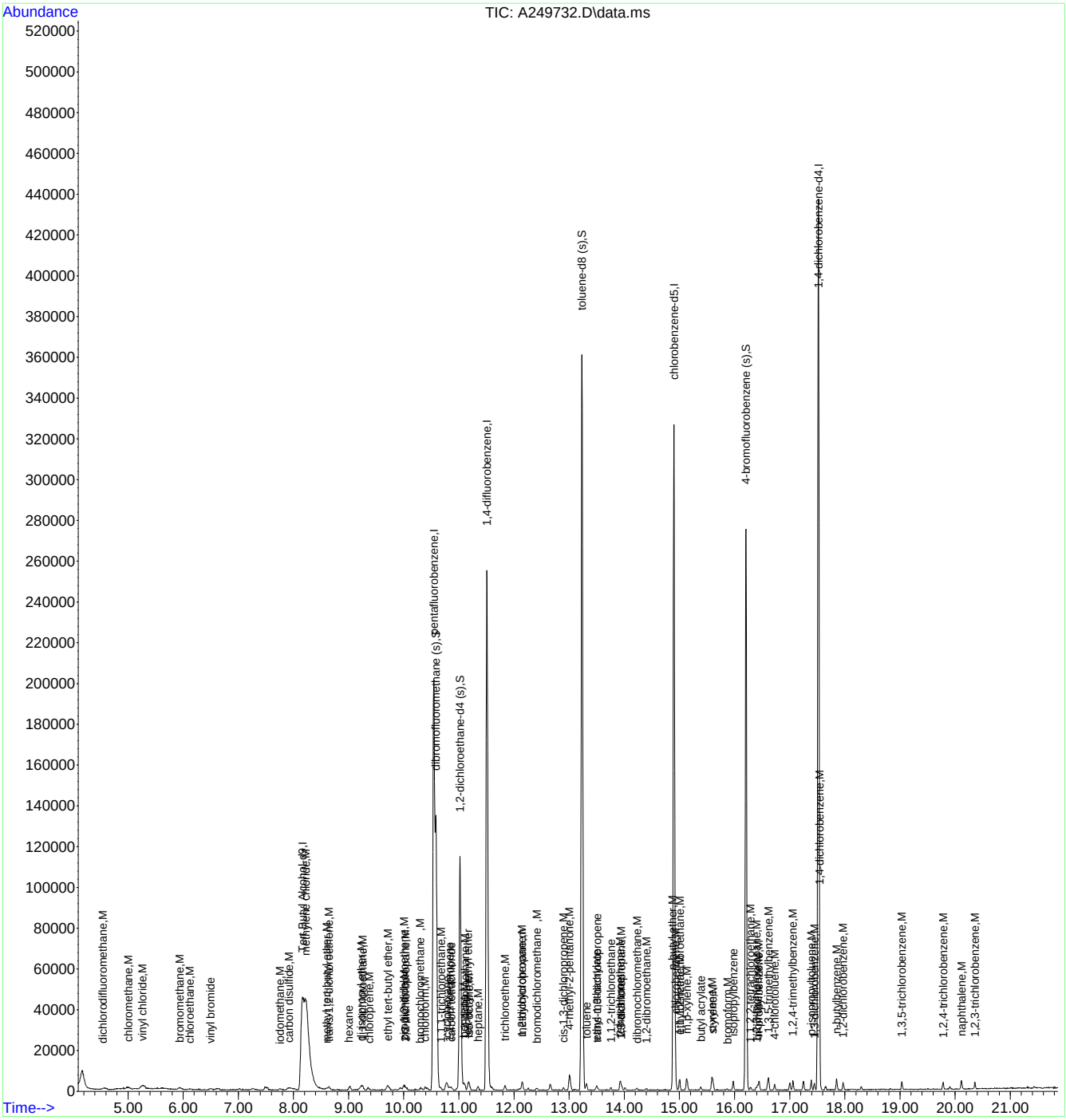
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
81) tetrachloroethene	13.917	166	927	0.53	ug/L		78
82) 1,3-dichloropropane	13.949	76	947	0.46	ug/L		88
84) dibromochloromethane	14.226	129	824	0.52	ug/L		74
85) 1,2-dibromoethane	14.398	107	536	0.36	ug/L		97
86) n-butyl ether	14.869	57	3042	0.52	ug/L	#	65
87) chlorobenzene	14.937	112	1877	0.49	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.010	131	905	0.49	ug/L		86
89) ethylbenzene	15.005	91	3569	0.54	ug/L		94
90) m,p-xylene	15.131	106	2589	0.99	ug/L		87
91) o-xylene	15.586	106	1442	0.50	ug/L	#	76
92) styrene	15.601	104	2145	0.53	ug/L		96
93) butyl acrylate	15.382	55	1311	0.45	ug/L		81
95) bromoform	15.873	173	461	0.42	ug/L		86
96) isopropylbenzene	15.978	105	3927	0.50	ug/L		96
100) bromobenzene	16.417	156	888	0.45	ug/L		86
101) 1,1,2,2-tetrachloroethane	16.286	83	1132	0.43	ug/L		86
103) 1,2,3-trichloropropane	16.391	110	349	0.47	ug/L	#	22
104) n-propylbenzene	16.443	91	4164	0.43	ug/L		98
106) 4-chlorotoluene	16.731	91	2347	0.48	ug/L		80
107) 1,3,5-trimethylbenzene	16.616	105	3257	0.41	ug/L		88
109) 1,2,4-trimethylbenzene	17.055	105	3324	0.44	ug/L		89
111) 1,3-dichlorobenzene	17.448	146	1819	0.48	ug/L		98
112) p-isopropyltoluene	17.390	119	3730	0.42	ug/L		91
113) 1,4-dichlorobenzene	17.547	146	2066	0.55	ug/L		81
114) 1,2-dichlorobenzene	17.965	146	1879	0.46	ug/L		92
115) n-butylbenzene	17.850	92	1924	0.47	ug/L		96
117) 1,3,5-trichlorobenzene	19.038	180	1905	0.50	ug/L		88
119) 1,2,4-trichlorobenzene	19.785	180	1671	0.47	ug/L		94
121) naphthalene	20.115	128	4580	0.44	ug/L		95
122) 1,2,3-trichlorobenzene	20.361	180	1617	0.45	ug/L		80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration



Manual Integration Approval Summary

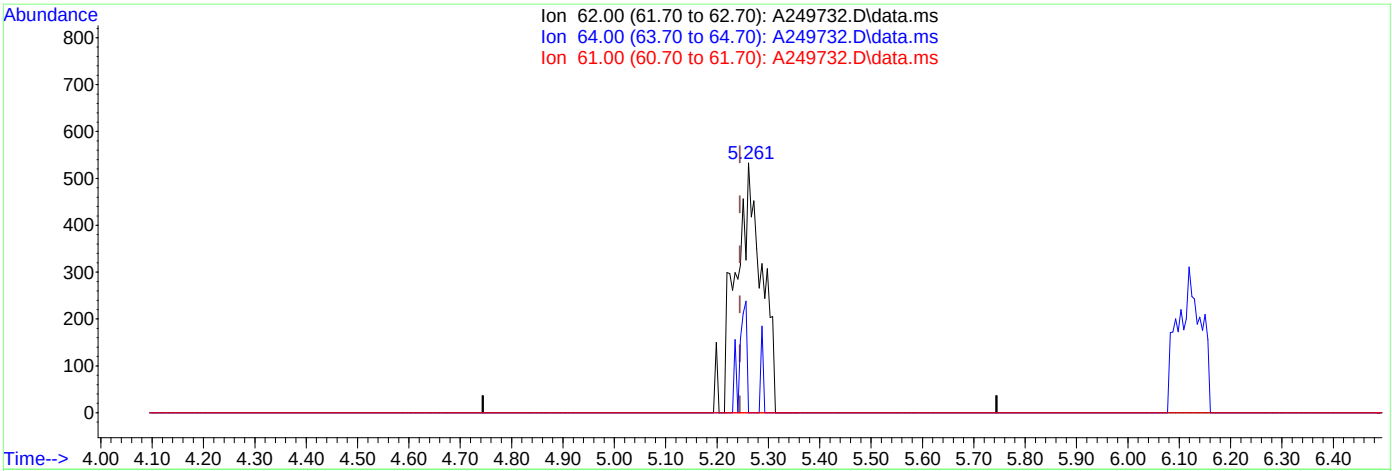
Sample Number:	VA9645-IC9645	**Method:**	SW846 8260C
Lab FileID:	A249732.D	**Analyst approved:**	05/14/19 14:16 Bridget Kelly
Injection Time:	05/11/19 16:00	**Supervisor approved:**	05/14/19 19:25 Kanya Veerawat

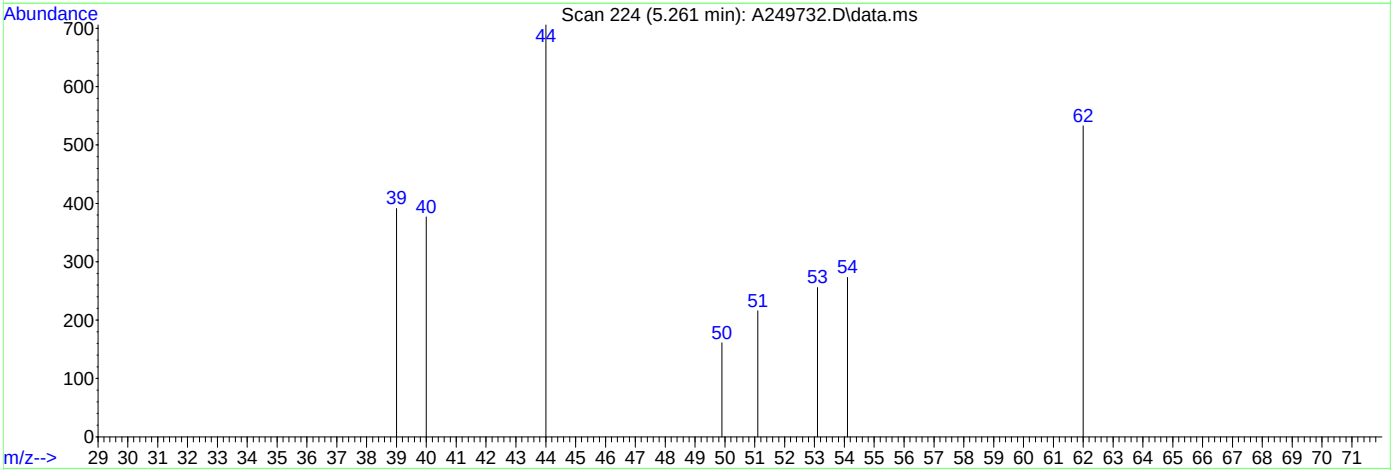
Parameter	CAS	Sig#	R.T. (min.)	Reason
Vinyl chloride	75-01-4		5.26	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 15:54:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration





TIC: A249732.D\data.ms

(9) vinyl chloride (M)

5.261min (+0.017) 0.44ug/L m

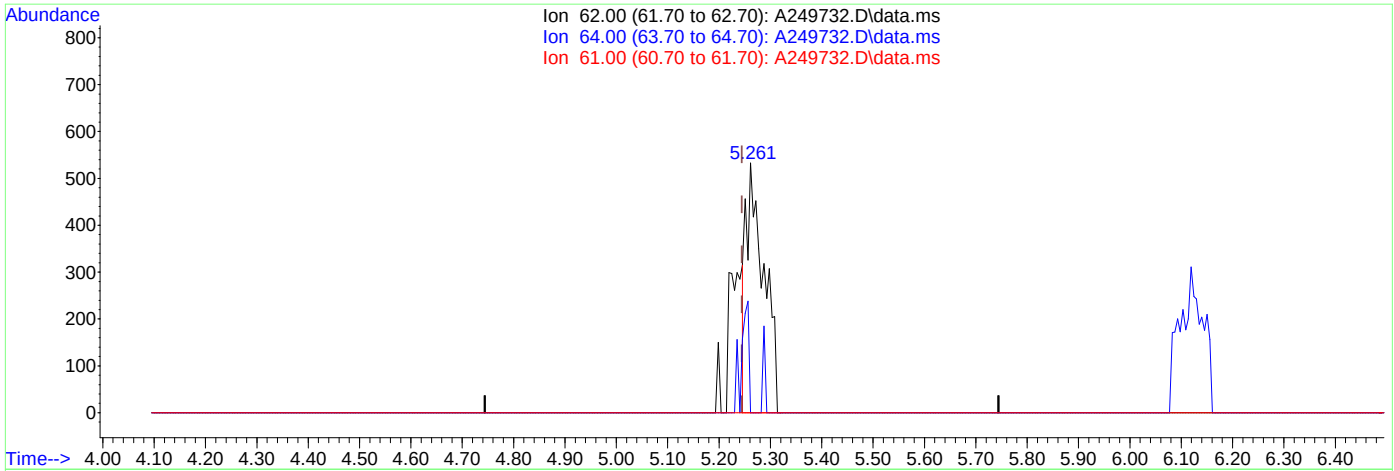
response 1831

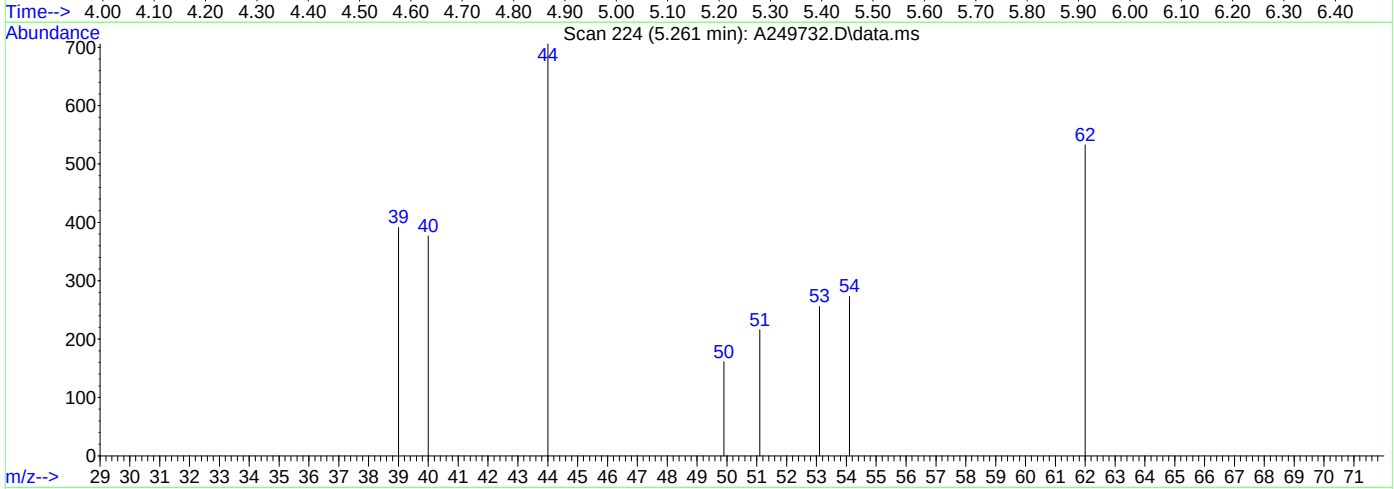
Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
61.00	7.60	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:41:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration





TIC: A249732.D\data.ms

(9) vinyl chloride (M)

5.261min (+0.017) 0.32ug/L

response 1280

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
61.00	7.60	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.158	65	254718	500.00	ug/L	-0.01
5) pentafluorobenzene	10.543	168	177591	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	252192	50.00	ug/L	0.00
74) chlorobenzene-d5	14.899	117	201715	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.520	152	126829	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.585	113	87984	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.44%			
53) 1,2-dichloroethane-d4 (s)	11.019	65	93065	52.66	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.32%			
75) toluene-d8 (s)	13.231	98	275679	52.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.44%			
99) 4-bromofluorobenzene (s)	16.207	95	95526	47.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.18%			
Target Compounds						Qvalue
6) chlorodifluoromethane	4.586	51	3254	0.95	ug/L	70
7) dichlorodifluoromethane	4.533	85	3822	0.88	ug/L	89
8) chloromethane	4.988	50	4042	0.96	ug/L	85
9) vinyl chloride	5.250	62	3832	0.96	ug/L	95
10) 1,3-butadiene	5.266	54	3814	1.11	ug/L #	85
11) bromomethane	5.919	94	2771	1.03	ug/L	77
12) chloroethane	6.087	64	1682	0.83	ug/L #	46
13) vinyl bromide	6.479	106	2466	0.92	ug/L #	81
14) trichlorofluoromethane	6.615	101	3743	0.93	ug/L	96
15) ethyl ether	7.028	74	721	0.77	ug/L	86
17) freon 113	7.499	151	1783	0.91	ug/L #	92
18) 1,1-dichloroethene	7.478	96	1658	0.88	ug/L	92
20) acetonitrile	7.949	41	3805	9.16	ug/L	78
21) iodomethane	7.755	142	3369	0.99	ug/L	81
22) carbon disulfide	7.907	76	6483	1.08	ug/L	87
23) methylene chloride	8.226	84	1912	0.96	ug/L	81
25) methyl tert butyl ether	8.602	73	5367	0.94	ug/L	75
26) trans-1,2-dichloroethene	8.639	96	1527	0.89	ug/L #	70
27) hexane	9.010	57	2466	1.02	ug/L #	92
28) di-isopropyl ether	9.235	45	5771	0.99	ug/L	79
29) ethyl tert-butyl ether	9.711	59	5569	0.98	ug/L	96
30) 2-butanone	9.920	72	862	2.70	ug/L #	14
31) 1,1-dichloroethane	9.246	63	3162	1.07	ug/L	88
32) chloroprene	9.350	53	2153	0.87	ug/L	86
36) 2,2-dichloropropane	10.020	77	3063	1.06	ug/L	80
37) cis-1,2-dichloroethene	9.988	96	1806	0.93	ug/L	85
39) propionitrile	10.004	54	3467	8.23	ug/L	81
40) bromochloromethane	10.297	128	914	0.90	ug/L	88
41) tetrahydrofuran	10.328	42	853	1.01	ug/L #	33
42) chloroform	10.391	83	2928	1.00	ug/L	74
43) tert-butyl formate	10.433	59	1200	0.73	ug/L	88
46) cyclohexane	10.783	84	2922	0.89	ug/L	96
47) 1,1,1-trichloroethane	10.668	97	3009	0.96	ug/L	98
48) iso-butyl alcohol	10.789	43	2472	8.06	ug/L #	59
49) 1,1-dichloropropene	10.830	75	2115	0.93	ug/L #	73
50) carbon tetrachloride	10.862	117	2514	0.92	ug/L	89
54) benzene	11.097	78	6672	1.06	ug/L	94
55) iso-octane	11.181	57	5346	0.84	ug/L	93
56) tert-amyl methyl ether	11.160	73	5522	1.01	ug/L	87
57) heptane	11.343	71	1182	0.98	ug/L	92
59) 1,2-dichloroethane	11.113	62	2491	1.17	ug/L	74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

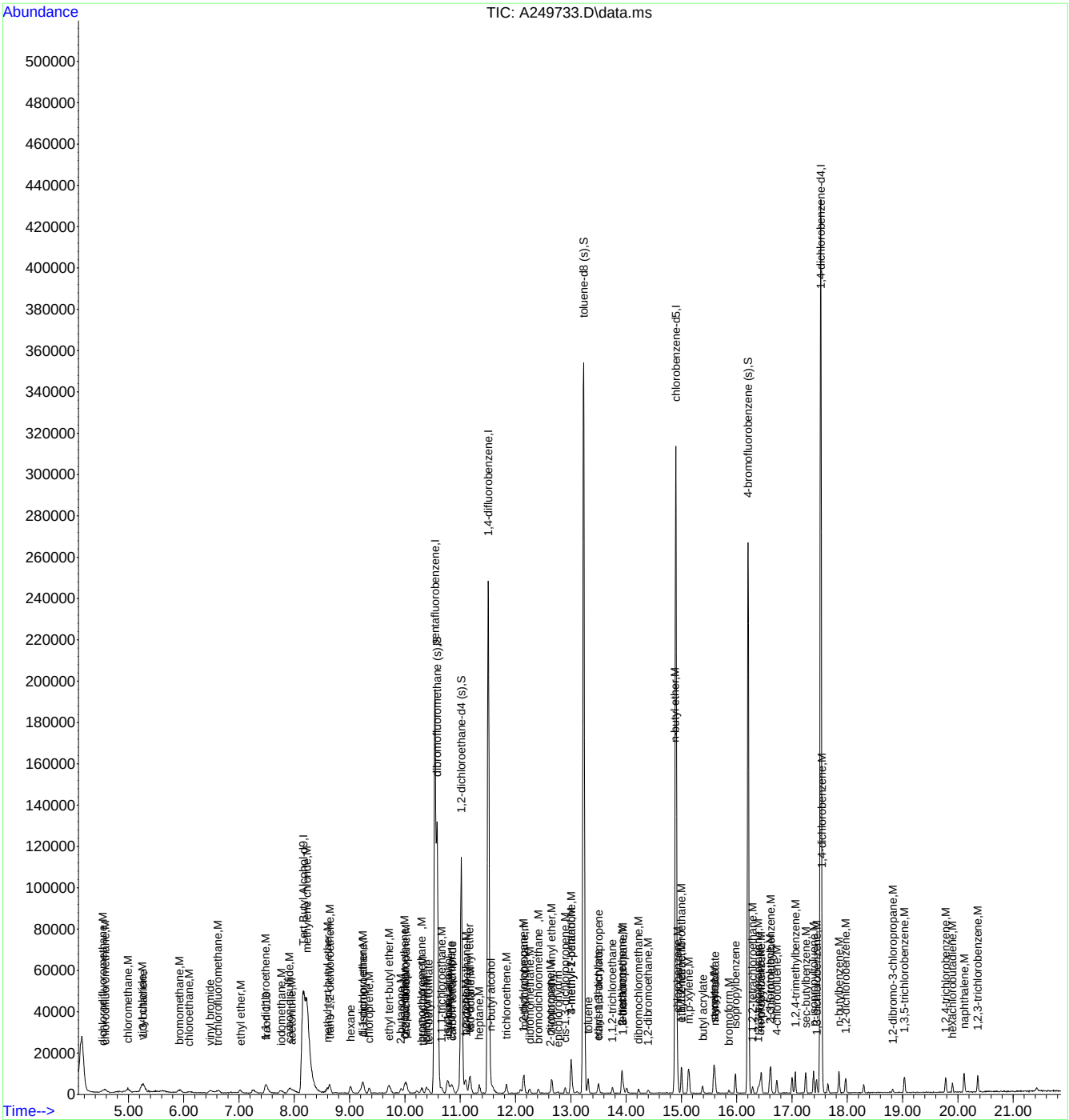
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
60) n-butyl alcohol	11.557	56	4631	38.95 ug/L #	62
62) trichloroethene	11.835	95	1668	1.07 ug/L	86
63) 2-nitropropane	12.624	41	547	0.74 ug/L #	59
64) methylcyclohexane	12.154	83	3248	0.96 ug/L	97
65) 2-chloroethyl vinyl ether	12.656	63	3586	3.84 ug/L	87
67) 1,2-dichloropropane	12.138	63	1460	0.94 ug/L	94
68) dibromomethane	12.258	93	844	0.81 ug/L	91
69) bromodichloromethane	12.410	83	1965	0.92 ug/L	86
70) epichlorohydrin	12.771	57	850	3.37 ug/L #	56
71) cis-1,3-dichloropropene	12.902	75	2161	0.89 ug/L	95
72) 4-methyl-2-pentanone	13.001	58	3438	3.46 ug/L	94
73) 3-methyl-1-butanol	13.006	55	2922	15.24 ug/L	98
76) toluene	13.309	92	3469	0.99 ug/L #	83
77) trans-1,3-dichloropropene	13.508	75	1719	0.89 ug/L	83
78) ethyl methacrylate	13.487	69	1790	0.94 ug/L	78
79) 1,1,2-trichloroethane	13.749	83	910	0.87 ug/L	87
80) 2-hexanone	13.927	58	2783	3.72 ug/L	92
81) tetrachloroethene	13.921	166	1738	1.03 ug/L	91
82) 1,3-dichloropropane	13.948	76	2039	1.01 ug/L	86
84) dibromochloromethane	14.225	129	1417	0.93 ug/L	82
85) 1,2-dibromoethane	14.397	107	1306	0.91 ug/L	98
86) n-butyl ether	14.879	57	5881	1.04 ug/L	66
87) chlorobenzene	14.936	112	3621	0.97 ug/L	92
88) 1,1,1,2-tetrachloroethane	15.004	131	1895	1.06 ug/L	76
89) ethylbenzene	14.999	91	6507	1.01 ug/L	98
90) m,p-xylene	15.130	106	5022	1.98 ug/L	85
91) o-xylene	15.585	106	2745	0.98 ug/L #	79
92) styrene	15.600	104	3952	1.00 ug/L	94
93) butyl acrylate	15.381	55	2895	1.03 ug/L	92
94) n-amyl acetate	15.611	70	1288	1.05 ug/L #	72
95) bromoform	15.857	173	961	0.90 ug/L	92
96) isopropylbenzene	15.977	105	7520	0.98 ug/L	99
100) bromobenzene	16.421	156	1717	0.90 ug/L	93
101) 1,1,2,2-tetrachloroethane	16.285	83	2295	0.92 ug/L	98
103) 1,2,3-trichloropropane	16.385	110	632	0.89 ug/L	91
104) n-propylbenzene	16.442	91	8552	0.93 ug/L	93
105) 2-chlorotoluene	16.599	126	1764	0.85 ug/L	88
106) 4-chlorotoluene	16.725	91	4496	0.95 ug/L	96
107) 1,3,5-trimethylbenzene	16.615	105	6363	0.84 ug/L	92
109) 1,2,4-trimethylbenzene	17.059	105	5909	0.83 ug/L	98
110) sec-butylbenzene	17.248	105	8259	0.81 ug/L	96
111) 1,3-dichlorobenzene	17.447	146	3640	1.01 ug/L	95
112) p-isopropyltoluene	17.389	119	6931	0.82 ug/L	98
113) 1,4-dichlorobenzene	17.546	146	3925	1.10 ug/L	96
114) 1,2-dichlorobenzene	17.970	146	3858	1.00 ug/L	96
115) n-butylbenzene	17.849	92	3621	0.93 ug/L #	81
116) 1,2-dibromo-3-chloropr...	18.822	157	755	0.86 ug/L	73
117) 1,3,5-trichlorobenzene	19.031	180	3760	1.04 ug/L	91
119) 1,2,4-trichlorobenzene	19.774	180	3303	0.97 ug/L	90
120) hexachlorobutadiene	19.905	225	1309	0.98 ug/L	92
121) naphthalene	20.119	128	9095	0.90 ug/L	90
122) 1,2,3-trichlorobenzene	20.354	180	3317	0.96 ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	263274	500.00	ug/L		0.00
5) pentafluorobenzene	10.545	168	178613	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.508	114	253312	50.00	ug/L		0.00
74) chlorobenzene-d5	14.902	117	204829	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.522	152	129955	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.587	113	88656	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
53) 1,2-dichloroethane-d4 (s)	11.021	65	93088	52.44	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.88%				
75) toluene-d8 (s)	13.234	98	279012	52.05	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.10%				
99) 4-bromofluorobenzene (s)	16.204	95	96249	46.30	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.60%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.354	59	5287	9.88	ug/L		84
4) 1,4-dioxane	12.172	88	1437	38.25	ug/L	#	65
6) chlorodifluoromethane	4.588	51	7286	2.11	ug/L		90
7) dichlorodifluoromethane	4.573	85	8956	2.04	ug/L		91
8) chloromethane	5.002	50	8925	2.11	ug/L		90
9) vinyl chloride	5.263	62	7903	1.97	ug/L		82
10) 1,3-butadiene	5.253	54	8326	2.41	ug/L	#	79
11) bromomethane	5.938	94	5585	2.07	ug/L		82
12) chloroethane	6.121	64	3942	1.94	ug/L		75
13) vinyl bromide	6.476	106	5500	2.05	ug/L	#	91
14) trichlorofluoromethane	6.623	101	8171	2.02	ug/L		73
15) ethyl ether	7.026	74	1692	1.79	ug/L	#	68
17) freon 113	7.491	151	3899	1.98	ug/L	#	91
18) 1,1-dichloroethene	7.486	96	3961	2.10	ug/L		89
19) acetone	7.486	58	1984	7.29	ug/L		89
20) acetonitrile	7.962	41	8577	20.52	ug/L		88
21) iodomethane	7.753	142	6780	1.97	ug/L		90
22) carbon disulfide	7.904	76	13281	2.21	ug/L		93
23) methylene chloride	8.229	84	4129	2.05	ug/L		85
24) methyl acetate	7.977	43	3331	1.76	ug/L	#	60
25) methyl tert butyl ether	8.605	73	11769	2.05	ug/L		92
26) trans-1,2-dichloroethene	8.647	96	3339	1.94	ug/L		90
27) hexane	9.018	57	5260	2.17	ug/L		97
28) di-isopropyl ether	9.227	45	12247	2.09	ug/L		89
29) ethyl tert-butyl ether	9.703	59	11504	2.02	ug/L		99
30) 2-butanone	9.918	72	2243	6.99	ug/L	#	40
31) 1,1-dichloroethane	9.254	63	6217	2.09	ug/L		90
32) chloroprene	9.358	53	5027	2.01	ug/L		86
36) 2,2-dichloropropane	10.033	77	6264	2.15	ug/L		94
37) cis-1,2-dichloroethene	9.991	96	3913	2.00	ug/L		78
39) propionitrile	10.012	54	7799	18.41	ug/L		80
40) bromochloromethane	10.300	128	1994	1.96	ug/L		88
41) tetrahydrofuran	10.326	42	1846	2.17	ug/L		80
42) chloroform	10.389	83	6550	2.23	ug/L		98
43) tert-butyl formate	10.425	59	3330	2.02	ug/L		88
45) methacrylonitrile	10.211	67	1434	1.62	ug/L	#	67
46) cyclohexane	10.781	84	6780	2.05	ug/L		97
47) 1,1,1-trichloroethane	10.655	97	6435	2.05	ug/L		98
48) iso-butyl alcohol	10.776	43	5695	18.46	ug/L		94
49) 1,1-dichloropropene	10.838	75	4648	2.02	ug/L		95
50) carbon tetrachloride	10.859	117	5976	2.16	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
54) benzene	11.095	78	13725	2.18	ug/L		93
55) iso-octane	11.184	57	11607	1.82	ug/L		95
56) tert-amyl methyl ether	11.168	73	11276	2.06	ug/L		95
57) heptane	11.351	71	2389	1.97	ug/L		91
58) isopropyl acetate	10.990	87	895	1.86	ug/L	#	58
59) 1,2-dichloroethane	11.116	62	4631	2.17	ug/L		91
60) n-butyl alcohol	11.555	56	10881	91.10	ug/L		97
61) ethyl acrylate	11.816	55	3558	1.61	ug/L		78
62) trichloroethene	11.837	95	3546	2.26	ug/L		93
63) 2-nitropropane	12.627	41	1436	1.93	ug/L		94
64) methylcyclohexane	12.151	83	7441	2.19	ug/L		98
65) 2-chloroethyl vinyl ether	12.653	63	7885	8.41	ug/L		95
66) methyl methacrylate	12.078	100	788	1.56	ug/L	#	29
67) 1,2-dichloropropane	12.141	63	3129	2.01	ug/L		92
68) dibromomethane	12.256	93	2210	2.12	ug/L		95
69) bromodichloromethane	12.407	83	4411	2.06	ug/L		84
70) epichlorohydrin	12.763	57	2352	9.28	ug/L	#	56
71) cis-1,3-dichloropropene	12.899	75	4790	1.96	ug/L		96
72) 4-methyl-2-pentanone	13.004	58	7889	7.90	ug/L		98
73) 3-methyl-1-butanol	13.009	55	7207	37.43	ug/L		98
76) toluene	13.317	92	7848	2.21	ug/L		94
77) trans-1,3-dichloropropene	13.511	75	3473	1.77	ug/L		90
78) ethyl methacrylate	13.490	69	3894	2.02	ug/L		96
79) 1,1,2-trichloroethane	13.752	83	2224	2.10	ug/L		91
80) 2-hexanone	13.929	58	6377	8.38	ug/L		93
81) tetrachloroethene	13.924	166	3744	2.19	ug/L		87
82) 1,3-dichloropropane	13.950	76	3941	1.93	ug/L		96
83) butyl acetate	14.018	56	2320	2.08	ug/L	#	71
84) dibromochloromethane	14.227	129	3032	1.96	ug/L		96
85) 1,2-dibromoethane	14.405	107	2964	2.04	ug/L		77
86) n-butyl ether	14.871	57	12462	2.16	ug/L		84
87) chlorobenzene	14.934	112	7571	2.00	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.007	131	4079	2.26	ug/L		87
89) ethylbenzene	14.996	91	14013	2.14	ug/L		98
90) m,p-xylene	15.132	106	10485	4.07	ug/L		86
91) o-xylene	15.587	106	6045	2.13	ug/L		99
92) styrene	15.598	104	8134	2.03	ug/L		94
93) butyl acrylate	15.378	55	6600	2.32	ug/L		97
94) n-amyl acetate	15.613	70	2963	2.38	ug/L		95
95) bromoform	15.859	173	2304	2.13	ug/L		92
96) isopropylbenzene	15.980	105	16596	2.14	ug/L		97
100) bromobenzene	16.424	156	3489	1.79	ug/L	#	79
101) 1,1,2,2-tetrachloroethane	16.288	83	4862	1.90	ug/L		97
103) 1,2,3-trichloropropane	16.393	110	1297	1.79	ug/L		90
104) n-propylbenzene	16.445	91	17799	1.89	ug/L		100
105) 2-chlorotoluene	16.602	126	3809	1.79	ug/L		93
106) 4-chlorotoluene	16.722	91	9516	1.97	ug/L		92
107) 1,3,5-trimethylbenzene	16.618	105	13458	1.74	ug/L		94
108) tert-butylbenzene	16.999	134	2680	1.54	ug/L	#	81
109) 1,2,4-trimethylbenzene	17.057	105	13657	1.87	ug/L		97
110) sec-butylbenzene	17.245	105	18033	1.73	ug/L		98
111) 1,3-dichlorobenzene	17.449	146	7401	2.01	ug/L		89
112) p-isopropyltoluene	17.392	119	15472	1.79	ug/L		95
113) 1,4-dichlorobenzene	17.554	146	7650	2.09	ug/L		94
114) 1,2-dichlorobenzene	17.967	146	8133	2.05	ug/L		88
115) n-butylbenzene	17.852	92	8232	2.07	ug/L		95
116) 1,2-dibromo-3-chloropr...	18.814	157	1683	1.87	ug/L		89
117) 1,3,5-trichlorobenzene	19.029	180	7521	2.03	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

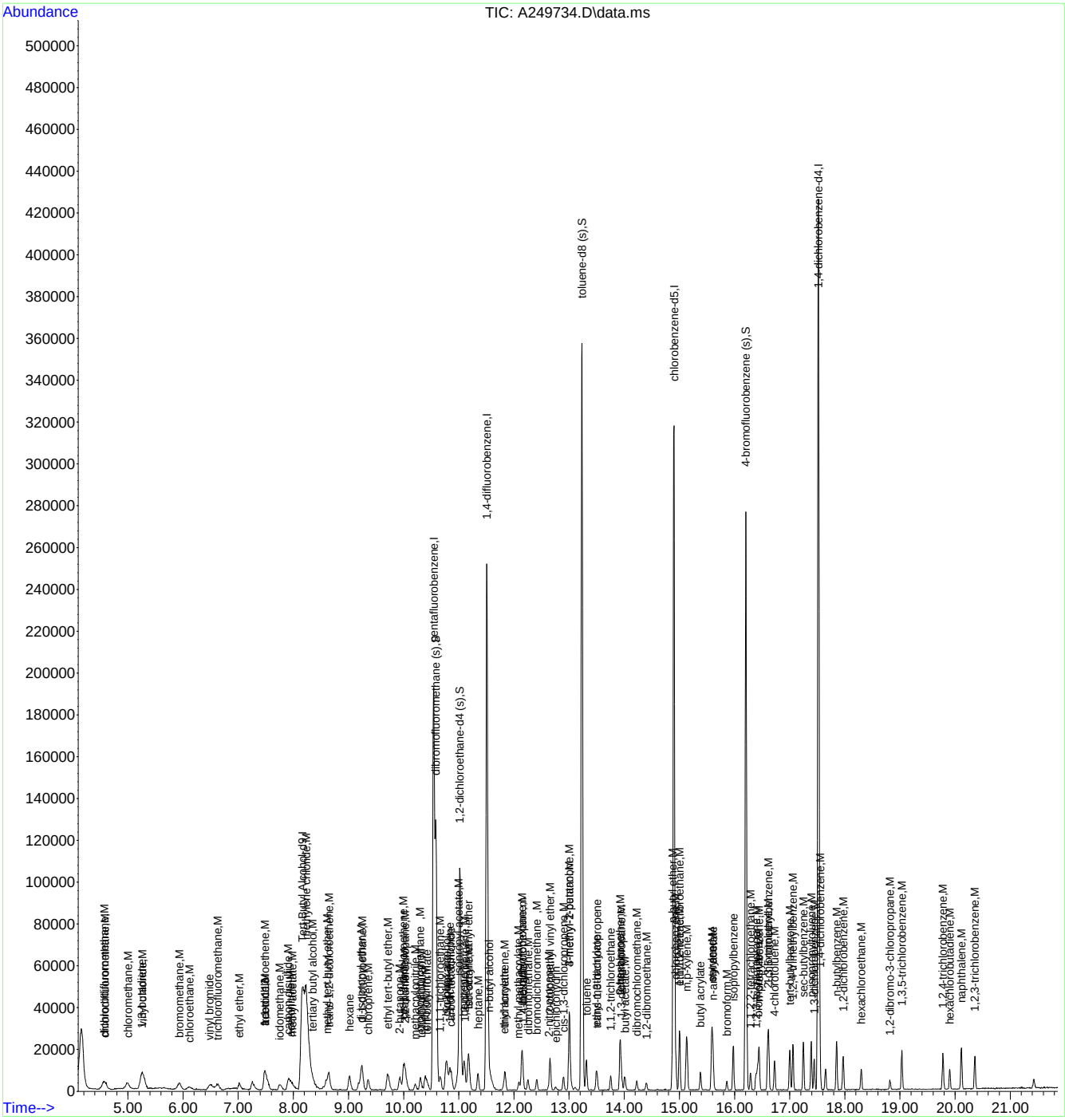
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
119) 1,2,4-trichlorobenzene	19.782	180	6756	1.94	ug/L	97
120) hexachlorobutadiene	19.907	225	2487	1.82	ug/L	97
121) naphthalene	20.117	128	18951	1.84	ug/L	98
122) 1,2,3-trichlorobenzene	20.357	180	6366	1.79	ug/L	89
123) hexachloroethane	18.297	201	2002	1.47	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.162	65	262607	500.00	ug/L		0.00
5) pentafluorobenzene	10.547	168	179352	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.510	114	255002	50.00	ug/L		0.00
74) chlorobenzene-d5	14.899	117	207144	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	127381	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.584	113	88881	50.23	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.46%				
53) 1,2-dichloroethane-d4 (s)	11.023	65	93774	52.48	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.96%				
75) toluene-d8 (s)	13.230	98	282363	52.09	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.18%				
99) 4-bromofluorobenzene (s)	16.206	95	93999	46.14	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.28%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.314	59	11581	21.69	ug/L		93
4) 1,4-dioxane	12.184	88	3536	94.35	ug/L		77
6) chlorodifluoromethane	4.574	51	14920	4.31	ug/L		98
7) dichlorodifluoromethane	4.553	85	16860	3.83	ug/L		98
8) chloromethane	4.998	50	16045	3.77	ug/L		98
9) vinyl chloride	5.265	62	14568	3.61	ug/L		90
10) 1,3-butadiene	5.280	54	17120	4.94	ug/L		95
11) bromomethane	5.934	94	10642	3.92	ug/L		97
12) chloroethane	6.112	64	8071	3.95	ug/L		95
13) vinyl bromide	6.483	106	10169	3.77	ug/L	#	11
14) trichlorofluoromethane	6.640	101	15668	3.86	ug/L		94
15) ethyl ether	7.017	74	3919	4.12	ug/L	#	82
17) freon 113	7.503	151	8224	4.17	ug/L	#	92
18) 1,1-dichloroethene	7.482	96	8473	4.47	ug/L		84
19) acetone	7.493	58	4107	15.02	ug/L	#	78
20) acetonitrile	7.927	41	17304	41.23	ug/L		97
21) iodomethane	7.754	142	14557	4.22	ug/L		95
22) carbon disulfide	7.906	76	27998	4.63	ug/L		95
23) methylene chloride	8.230	84	9039	4.48	ug/L		95
24) methyl acetate	7.969	43	8359	4.41	ug/L	#	85
25) methyl tert butyl ether	8.602	73	24603	4.27	ug/L		100
26) trans-1,2-dichloroethene	8.638	96	7426	4.29	ug/L		92
27) hexane	9.025	57	10235	4.20	ug/L		98
28) di-isopropyl ether	9.234	45	25512	4.33	ug/L		91
29) ethyl tert-butyl ether	9.710	59	24166	4.23	ug/L		97
30) 2-butanone	9.925	72	5063	15.71	ug/L	#	87
31) 1,1-dichloroethane	9.245	63	13422	4.48	ug/L		92
32) chloroprene	9.350	53	10540	4.20	ug/L		95
33) acrylonitrile	8.539	53	4158	4.46	ug/L		87
34) vinyl acetate	9.187	86	1579	4.12	ug/L	#	32
35) ethyl acetate	9.930	45	1243	3.41	ug/L	#	2
36) 2,2-dichloropropane	10.029	77	13071	4.46	ug/L		98
37) cis-1,2-dichloroethene	9.998	96	8632	4.38	ug/L		88
38) methyl acrylate	10.024	85	1136	3.21	ug/L	#	25
39) propionitrile	10.009	54	17736	41.70	ug/L		88
40) bromochloromethane	10.301	128	4460	4.37	ug/L		96
41) tetrahydrofuran	10.328	42	3717	4.36	ug/L		93
42) chloroform	10.385	83	13570	4.59	ug/L		99
43) tert-butyl formate	10.427	59	6899	4.16	ug/L		94
45) methacrylonitrile	10.202	67	3513	3.95	ug/L	#	75
46) cyclohexane	10.777	84	13089	3.93	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) 1,1,1-trichloroethane	10.668	97	13445	4.26	ug/L		96
48) iso-butyl alcohol	10.777	43	12726	41.07	ug/L		99
49) 1,1-dichloropropene	10.840	75	10518	4.56	ug/L		91
50) carbon tetrachloride	10.866	117	12087	4.36	ug/L		99
51) tert-amyl alcohol	10.971	73	5732	20.11	ug/L		90
54) benzene	11.091	78	28322	4.46	ug/L		97
55) iso-octane	11.180	57	26062	4.05	ug/L		93
56) tert-amyl methyl ether	11.164	73	24597	4.46	ug/L		99
57) heptane	11.342	71	5592	4.59	ug/L		96
58) isopropyl acetate	10.987	87	1967	4.07	ug/L	#	71
59) 1,2-dichloroethane	11.112	62	9786	4.55	ug/L		96
60) n-butyl alcohol	11.557	56	23844	198.31	ug/L		97
61) ethyl acrylate	11.813	55	8455	3.81	ug/L		96
62) trichloroethene	11.834	95	7151	4.53	ug/L		83
63) 2-nitropropane	12.629	41	3029	4.04	ug/L		86
64) methylcyclohexane	12.158	83	14625	4.28	ug/L		95
65) 2-chloroethyl vinyl ether	12.655	63	17243	18.27	ug/L		96
66) methyl methacrylate	12.085	100	1802	3.54	ug/L	#	83
67) 1,2-dichloropropane	12.137	63	6831	4.35	ug/L		94
68) dibromomethane	12.257	93	4623	4.40	ug/L		92
69) bromodichloromethane	12.414	83	9376	4.35	ug/L		93
70) epichlorohydrin	12.754	57	4898	19.19	ug/L	#	92
71) cis-1,3-dichloropropene	12.901	75	9792	3.99	ug/L		93
72) 4-methyl-2-pentanone	13.005	58	17967	17.88	ug/L		92
73) 3-methyl-1-butanol	13.000	55	15638	80.67	ug/L		100
76) toluene	13.314	92	16213	4.52	ug/L		93
77) trans-1,3-dichloropropene	13.507	75	8252	4.17	ug/L		100
78) ethyl methacrylate	13.492	69	8358	4.28	ug/L		95
79) 1,1,2-trichloroethane	13.748	83	4620	4.31	ug/L		92
80) 2-hexanone	13.921	58	14021	18.23	ug/L		92
81) tetrachloroethene	13.921	166	8074	4.67	ug/L		92
82) 1,3-dichloropropane	13.952	76	8767	4.25	ug/L		93
83) butyl acetate	14.004	56	5124	4.55	ug/L		82
84) dibromochloromethane	14.224	129	6734	4.30	ug/L		97
85) 1,2-dibromoethane	14.402	107	6246	4.26	ug/L		99
86) n-butyl ether	14.873	57	26897	4.61	ug/L		93
87) chlorobenzene	14.935	112	17077	4.46	ug/L		92
88) 1,1,1,2-tetrachloroethane	15.009	131	8640	4.73	ug/L		97
89) ethylbenzene	14.998	91	29448	4.45	ug/L		97
90) m,p-xylene	15.134	106	22802	8.76	ug/L		91
91) o-xylene	15.589	106	12891	4.48	ug/L		98
92) styrene	15.600	104	18911	4.67	ug/L		89
93) butyl acrylate	15.380	55	13688	4.76	ug/L		95
94) n-amyl acetate	15.615	70	6310	5.01	ug/L		91
95) bromoform	15.856	173	5079	4.65	ug/L		96
96) isopropylbenzene	15.976	105	35397	4.51	ug/L		97
97) cis-1,4-dichloro-2-butene	16.013	75	460	1.73	ug/L		89
100) bromobenzene	16.415	156	7876	4.12	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.290	83	10043	4.00	ug/L		99
102) trans-1,4-dichloro-2-b...	16.332	53	260	1.12	ug/L		82
103) 1,2,3-trichloropropane	16.389	110	2833	3.99	ug/L		91
104) n-propylbenzene	16.447	91	37539	4.06	ug/L		97
105) 2-chlorotoluene	16.598	126	8244	3.96	ug/L		98
106) 4-chlorotoluene	16.724	91	19623	4.15	ug/L		99
107) 1,3,5-trimethylbenzene	16.619	105	28604	3.77	ug/L		99
108) tert-butylbenzene	17.006	134	6119	3.60	ug/L		92
109) 1,2,4-trimethylbenzene	17.059	105	29062	4.05	ug/L		94
110) sec-butylbenzene	17.247	105	37122	3.63	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

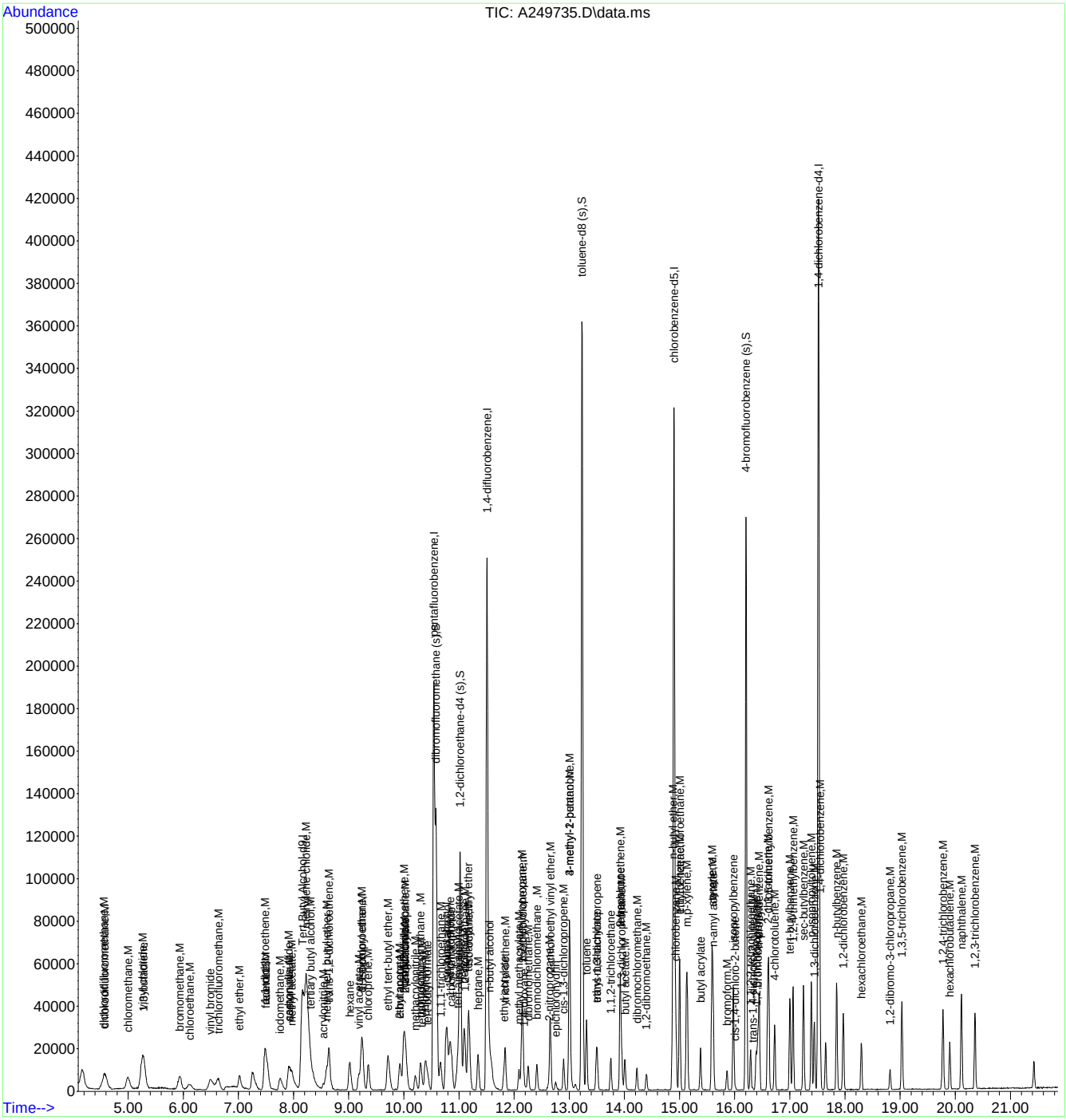
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	17.446	146	16264	4.51	ug/L	96
112) p-isopropyltoluene	17.393	119	33232	3.93	ug/L	99
113) 1,4-dichlorobenzene	17.550	146	16140	4.49	ug/L	97
114) 1,2-dichlorobenzene	17.969	146	17160	4.41	ug/L	96
115) n-butylbenzene	17.848	92	16779	4.30	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.821	157	3306	3.75	ug/L	92
117) 1,3,5-trichlorobenzene	19.031	180	16266	4.48	ug/L	98
119) 1,2,4-trichlorobenzene	19.778	180	14363	4.20	ug/L	92
120) hexachlorobutadiene	19.899	225	5578	4.17	ug/L	96
121) naphthalene	20.113	128	40791	4.04	ug/L	98
122) 1,2,3-trichlorobenzene	20.359	180	14531	4.18	ug/L	93
123) hexachloroethane	18.298	201	4494	3.38	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.163	65	253775	500.00	ug/L		0.00
5) pentafluorobenzene	10.548	168	176294	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	251469	50.00	ug/L		0.00
74) chlorobenzene-d5	14.900	117	202169	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.520	152	120535	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.585	113	87033	50.04	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%				
53) 1,2-dichloroethane-d4 (s)	11.019	65	92853	52.69	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.38%				
75) toluene-d8 (s)	13.231	98	276784	52.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.62%				
99) 4-bromofluorobenzene (s)	16.207	95	91098	47.25	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.50%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.278	59	20122	39.01	ug/L		93
4) 1,4-dioxane	12.185	88	6626	182.95	ug/L		98
6) chlorodifluoromethane	4.581	51	27077	7.96	ug/L		95
7) dichlorodifluoromethane	4.555	85	34296	7.92	ug/L		97
8) chloromethane	4.994	50	33254	7.95	ug/L		93
9) vinyl chloride	5.250	62	30748	7.76	ug/L		95
10) 1,3-butadiene	5.271	54	29441	8.64	ug/L		94
11) bromomethane	5.935	94	21267	7.97	ug/L		94
12) chloroethane	6.124	64	16491	8.21	ug/L		97
13) vinyl bromide	6.495	106	21603	8.16	ug/L		98
14) trichlorofluoromethane	6.626	101	32253	8.08	ug/L		93
15) ethyl ether	7.018	74	7092	7.59	ug/L		87
16) acrolein	7.274	56	2784	6.70	ug/L		95
17) freon 113	7.504	151	15187	7.82	ug/L		98
18) 1,1-dichloroethene	7.483	96	14820	7.95	ug/L		87
19) acetone	7.483	58	7764	28.89	ug/L		97
20) acetonitrile	7.928	41	31747	76.95	ug/L		91
21) iodomethane	7.750	142	27384	8.07	ug/L		93
22) carbon disulfide	7.907	76	47587	8.01	ug/L		98
23) methylene chloride	8.237	84	16161	8.14	ug/L		95
24) methyl acetate	7.970	43	13499	7.24	ug/L		98
25) methyl tert butyl ether	8.613	73	43853	7.75	ug/L		98
26) trans-1,2-dichloroethene	8.639	96	12962	7.61	ug/L		98
27) hexane	9.016	57	18717	7.82	ug/L		99
28) di-isopropyl ether	9.230	45	45415	7.84	ug/L		96
29) ethyl tert-butyl ether	9.717	59	43480	7.74	ug/L		92
30) 2-butanone	9.926	72	8725	27.54	ug/L		96
31) 1,1-dichloroethane	9.251	63	23108	7.85	ug/L		92
32) chloroprene	9.356	53	19302	7.83	ug/L		98
33) acrylonitrile	8.540	53	6389	6.97	ug/L		94
34) vinyl acetate	9.188	86	2795	7.42	ug/L	#	38
35) ethyl acetate	9.931	45	2243	6.26	ug/L	#	60
36) 2,2-dichloropropane	10.030	77	23064	8.01	ug/L		95
37) cis-1,2-dichloroethene	9.994	96	15265	7.89	ug/L		93
38) methyl acrylate	10.025	85	2396	6.89	ug/L	#	71
39) propionitrile	10.010	54	31047	74.26	ug/L		86
40) bromochloromethane	10.297	128	7883	7.85	ug/L		96
41) tetrahydrofuran	10.323	42	6146	7.33	ug/L		97
42) chloroform	10.391	83	23863	8.22	ug/L		96
43) tert-butyl formate	10.428	59	11854	7.27	ug/L		95
45) methacrylonitrile	10.208	67	6357	7.28	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.778	84	25835	7.90	ug/L		97
47) 1,1,1-trichloroethane	10.663	97	23760	7.65	ug/L		99
48) iso-butyl alcohol	10.784	43	22312	73.26	ug/L		98
49) 1,1-dichloropropene	10.836	75	17759	7.83	ug/L		98
50) carbon tetrachloride	10.867	117	21090	7.74	ug/L		98
51) tert-amyl alcohol	10.951	73	9985	35.65	ug/L	#	86
54) benzene	11.092	78	50233	8.03	ug/L		98
55) iso-octane	11.186	57	46702	7.37	ug/L		96
56) tert-amyl methyl ether	11.165	73	44004	8.08	ug/L		97
57) heptane	11.348	71	9705	8.08	ug/L		91
58) isopropyl acetate	10.982	87	3413	7.15	ug/L	#	80
59) 1,2-dichloroethane	11.118	62	17408	8.20	ug/L		98
60) n-butyl alcohol	11.558	56	41583	350.71	ug/L		98
61) ethyl acrylate	11.809	55	15733	7.19	ug/L		99
62) trichloroethene	11.840	95	12646	8.13	ug/L		92
63) 2-nitropropane	12.619	41	5212	7.05	ug/L	#	66
64) methylcyclohexane	12.154	83	26342	7.82	ug/L		99
65) 2-chloroethyl vinyl ether	12.656	63	32026	34.42	ug/L		95
66) methyl methacrylate	12.091	100	3228	6.43	ug/L	#	87
67) 1,2-dichloropropane	12.143	63	12280	7.93	ug/L		98
68) dibromomethane	12.253	93	8280	7.99	ug/L		87
69) bromodichloromethane	12.415	83	16614	7.82	ug/L		93
70) epichlorohydrin	12.750	57	8836	35.11	ug/L		99
71) cis-1,3-dichloropropene	12.902	75	18072	7.46	ug/L		96
72) 4-methyl-2-pentanone	13.006	58	29525	29.79	ug/L		98
73) 3-methyl-1-butanol	13.001	55	27218	142.38	ug/L		99
76) toluene	13.315	92	27510	7.86	ug/L		96
77) trans-1,3-dichloropropene	13.508	75	14984	7.75	ug/L		95
78) ethyl methacrylate	13.493	69	14729	7.73	ug/L		95
79) 1,1,2-trichloroethane	13.749	83	8077	7.73	ug/L		95
80) 2-hexanone	13.922	58	24000	31.97	ug/L		99
81) tetrachloroethene	13.922	166	13425	7.96	ug/L		96
82) 1,3-dichloropropane	13.953	76	15735	7.81	ug/L		98
83) butyl acetate	14.011	56	8719	7.93	ug/L		89
84) dibromochloromethane	14.230	129	11584	7.58	ug/L		93
85) 1,2-dibromoethane	14.403	107	11466	8.01	ug/L		94
86) n-butyl ether	14.874	57	44948	7.90	ug/L		95
87) chlorobenzene	14.931	112	28905	7.74	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.010	131	14820	8.31	ug/L		97
89) ethylbenzene	14.999	91	50408	7.80	ug/L		97
90) m,p-xylene	15.130	106	40452	15.92	ug/L		96
91) o-xylene	15.585	106	21694	7.73	ug/L		98
92) styrene	15.595	104	31119	7.88	ug/L		97
93) butyl acrylate	15.381	55	24416	8.69	ug/L		97
94) n-amyl acetate	15.611	70	10693	8.70	ug/L		88
95) bromoform	15.857	173	8444	7.92	ug/L		98
96) isopropylbenzene	15.977	105	60966	7.95	ug/L		97
97) cis-1,4-dichloro-2-butene	16.014	75	952	3.67	ug/L	#	83
100) bromobenzene	16.416	156	13438	7.43	ug/L		97
101) 1,1,2,2-tetrachloroethane	16.291	83	17066	7.18	ug/L		95
102) trans-1,4-dichloro-2-b...	16.317	53	778	3.54	ug/L		92
103) 1,2,3-trichloropropane	16.390	110	5171	7.70	ug/L		88
104) n-propylbenzene	16.443	91	64088	7.33	ug/L		99
105) 2-chlorotoluene	16.599	126	13911	7.07	ug/L		96
106) 4-chlorotoluene	16.725	91	33793	7.55	ug/L		95
107) 1,3,5-trimethylbenzene	16.615	105	49455	6.88	ug/L		98
108) tert-butylbenzene	17.002	134	10986	6.82	ug/L		97
109) 1,2,4-trimethylbenzene	17.060	105	48932	7.21	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

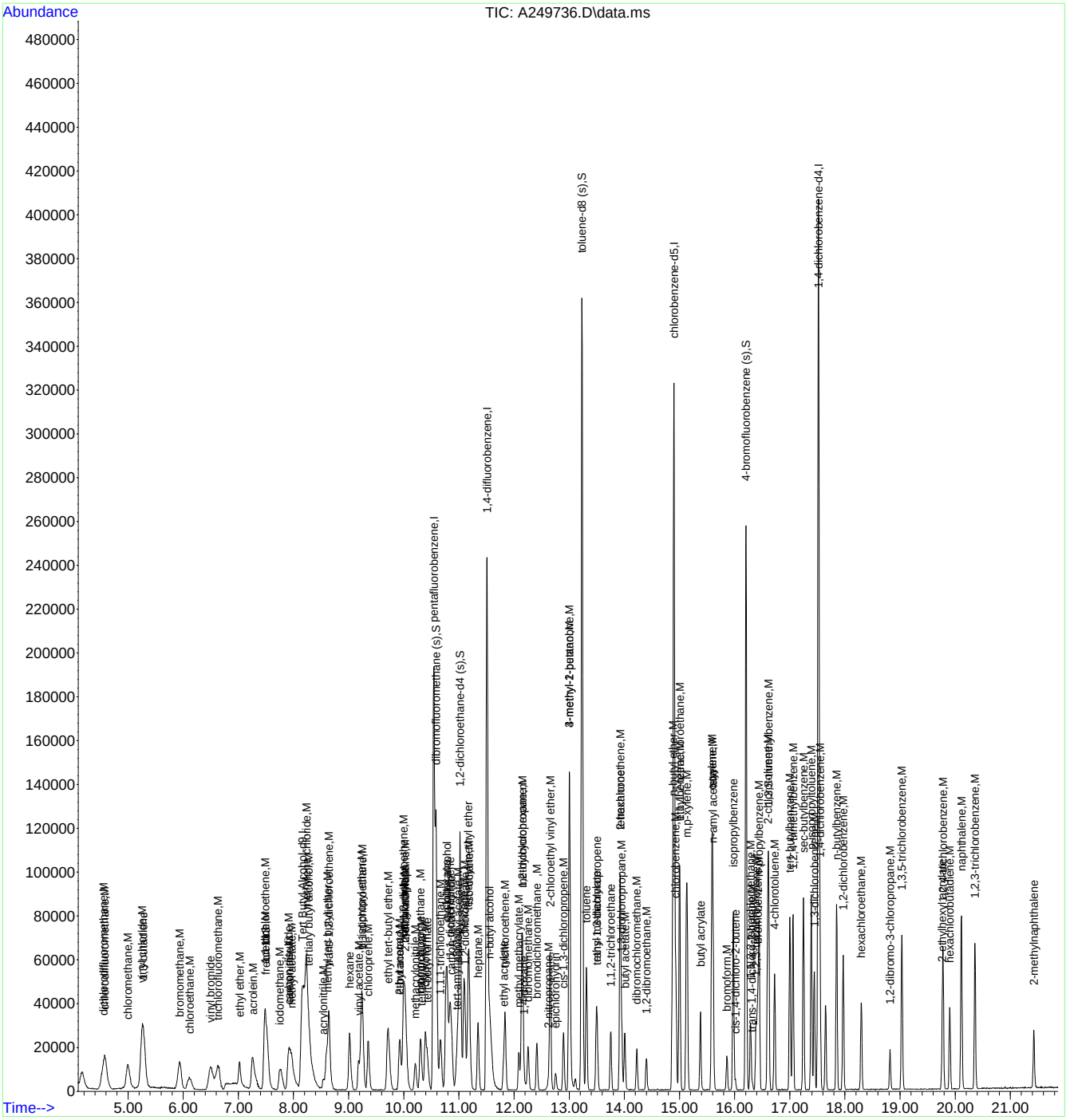
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.248	105	66872	6.92	ug/L	99
111) 1,3-dichlorobenzene	17.447	146	25845	7.57	ug/L	99
112) p-isopropyltoluene	17.389	119	56453	7.05	ug/L	99
113) 1,4-dichlorobenzene	17.551	146	26505	7.80	ug/L	98
114) 1,2-dichlorobenzene	17.970	146	28094	7.63	ug/L	96
115) n-butylbenzene	17.849	92	27811	7.54	ug/L	94
116) 1,2-dibromo-3-chloropr...	18.817	157	6539	7.84	ug/L	95
117) 1,3,5-trichlorobenzene	19.037	180	26724	7.78	ug/L	94
118) 2-ethylhexyl acrylate	19.758	70	2085	1.17	ug/L	92
119) 1,2,4-trichlorobenzene	19.779	180	24795	7.67	ug/L	97
120) hexachlorobutadiene	19.905	225	9689	7.66	ug/L	96
121) naphthalene	20.114	128	72877	7.63	ug/L	99
122) 1,2,3-trichlorobenzene	20.355	180	25408	7.72	ug/L	89
123) hexachloroethane	18.294	201	7933	6.30	ug/L	98
124) 2-methylnaphthalene	21.427	142	15451	2.99	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.165	65	261175	500.00	ug/L	0.00
5) pentafluorobenzene	10.544	168	179570	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.507	114	258618	50.00	ug/L	0.00
74) chlorobenzene-d5	14.901	117	218814	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.521	152	124956	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.586	113	89318	50.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
53) 1,2-dichloroethane-d4 (s)	11.020	65	92568	51.08	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.16%			
75) toluene-d8 (s)	13.233	98	295711	51.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.28%			
99) 4-bromofluorobenzene (s)	16.203	95	95886	47.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.96%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.290	59	54540	102.73	ug/L	93
4) 1,4-dioxane	12.181	88	18238	489.31	ug/L	97
6) chlorodifluoromethane	4.582	51	69080	19.94	ug/L	94
7) dichlorodifluoromethane	4.540	85	86905	19.69	ug/L	92
8) chloromethane	4.985	50	81843	19.21	ug/L	97
9) vinyl chloride	5.251	62	78233	19.39	ug/L	96
10) 1,3-butadiene	5.278	54	72739	20.97	ug/L	96
11) bromomethane	5.926	94	53027	19.52	ug/L	97
12) chloroethane	6.104	64	39155	19.13	ug/L	97
13) vinyl bromide	6.496	106	53133	19.70	ug/L	99
14) trichlorofluoromethane	6.622	101	79625	19.57	ug/L	93
15) ethyl ether	7.024	74	19029	20.00	ug/L	93
16) acrolein	7.265	56	7836	18.50	ug/L	94
17) freon 113	7.511	151	39212	19.83	ug/L	99
18) 1,1-dichloroethene	7.474	96	38010	20.02	ug/L	96
19) acetone	7.479	58	21108	77.10	ug/L	91
20) acetonitrile	7.924	41	84342	200.71	ug/L	97
21) iodomethane	7.762	142	68179	19.73	ug/L	98
22) carbon disulfide	7.903	76	120774	19.95	ug/L	98
23) methylene chloride	8.227	84	39875	19.73	ug/L	95
24) methyl acetate	7.966	43	35941	18.92	ug/L	99
25) methyl tert butyl ether	8.604	73	115022	19.96	ug/L	99
26) trans-1,2-dichloroethene	8.640	96	34867	20.10	ug/L	98
27) hexane	9.012	57	47953	19.66	ug/L	98
28) di-isopropyl ether	9.237	45	118138	20.01	ug/L	100
29) ethyl tert-butyl ether	9.713	59	114572	20.01	ug/L	94
30) 2-butanone	9.922	72	24919	77.21	ug/L	98
31) 1,1-dichloroethane	9.247	63	61286	20.45	ug/L	99
32) chloroprene	9.352	53	49943	19.90	ug/L	97
33) acrylonitrile	8.536	53	18423	19.74	ug/L	94
34) vinyl acetate	9.179	86	7602	19.82	ug/L	98
35) ethyl acetate	9.938	45	6366	17.43	ug/L #	40
36) 2,2-dichloropropane	10.037	77	58867	20.06	ug/L	93
37) cis-1,2-dichloroethene	9.995	96	40005	20.29	ug/L	95
38) methyl acrylate	10.021	85	6432	18.16	ug/L	96
39) propionitrile	10.006	54	83191	195.36	ug/L	92
40) bromochloromethane	10.298	128	20739	20.28	ug/L	98
41) tetrahydrofuran	10.319	42	16949	19.85	ug/L	99
42) chloroform	10.387	83	60191	20.35	ug/L	93
43) tert-butyl formate	10.429	59	32831	19.76	ug/L	97
45) methacrylonitrile	10.204	67	17345	19.50	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.780	84	63628	19.09	ug/L		97
47) 1,1,1-trichloroethane	10.665	97	62736	19.84	ug/L		98
48) iso-butyl alcohol	10.790	43	60001	193.42	ug/L		84
49) 1,1-dichloropropene	10.837	75	45407	19.66	ug/L		99
50) carbon tetrachloride	10.863	117	55438	19.97	ug/L		99
51) tert-amyl alcohol	10.957	73	28305	99.20	ug/L		94
54) benzene	11.093	78	132749	20.63	ug/L		100
55) iso-octane	11.188	57	127685	19.58	ug/L		97
56) tert-amyl methyl ether	11.167	73	116532	20.82	ug/L		98
57) heptane	11.344	71	25479	20.63	ug/L		98
58) isopropyl acetate	10.984	87	10103	20.59	ug/L		98
59) 1,2-dichloroethane	11.114	62	45414	20.81	ug/L		99
60) n-butyl alcohol	11.554	56	120066	984.64	ug/L		99
61) ethyl acrylate	11.810	55	44173	19.62	ug/L		98
62) trichloroethene	11.836	95	32601	20.38	ug/L		98
63) 2-nitropropane	12.626	41	14211	18.69	ug/L		97
64) methylcyclohexane	12.150	83	71060	20.51	ug/L		99
65) 2-chloroethyl vinyl ether	12.652	63	90162	94.21	ug/L		97
66) methyl methacrylate	12.092	100	9602	18.60	ug/L		93
67) 1,2-dichloropropane	12.139	63	32696	20.53	ug/L		98
68) dibromomethane	12.255	93	21421	20.09	ug/L		95
69) bromodichloromethane	12.411	83	44309	20.29	ug/L		95
70) epichlorohydrin	12.757	57	24951	96.40	ug/L		97
71) cis-1,3-dichloropropene	12.903	75	48750	19.58	ug/L		99
72) 4-methyl-2-pentanone	13.002	58	82617	81.05	ug/L		100
73) 3-methyl-1-butanol	13.002	55	79596	404.87	ug/L		98
76) toluene	13.311	92	77020	20.34	ug/L		98
77) trans-1,3-dichloropropene	13.510	75	41606	19.89	ug/L		96
78) ethyl methacrylate	13.489	69	41755	20.25	ug/L		96
79) 1,1,2-trichloroethane	13.750	83	22906	20.25	ug/L		96
80) 2-hexanone	13.923	58	67258	82.77	ug/L		97
81) tetrachloroethene	13.923	166	37699	20.66	ug/L		99
82) 1,3-dichloropropane	13.954	76	43784	20.08	ug/L		94
83) butyl acetate	14.007	56	24577	20.66	ug/L		96
84) dibromochloromethane	14.226	129	33288	20.11	ug/L		99
85) 1,2-dibromoethane	14.399	107	31063	20.05	ug/L		97
86) n-butyl ether	14.870	57	127932	20.77	ug/L		98
87) chlorobenzene	14.938	112	80339	19.87	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.006	131	40337	20.90	ug/L		97
89) ethylbenzene	15.000	91	141457	20.23	ug/L		98
90) m,p-xylene	15.136	106	113198	41.17	ug/L		99
91) o-xylene	15.586	106	63318	20.84	ug/L		97
92) styrene	15.597	104	86845	20.31	ug/L		99
93) butyl acrylate	15.377	55	67118	22.08	ug/L		97
94) n-amyl acetate	15.612	70	29735	22.36	ug/L		93
95) bromoform	15.858	173	23848	20.66	ug/L		99
96) isopropylbenzene	15.978	105	174418	21.02	ug/L		98
97) cis-1,4-dichloro-2-butene	16.020	75	3971	14.15	ug/L	#	83
100) bromobenzene	16.418	156	36006	19.20	ug/L		98
101) 1,1,2,2-tetrachloroethane	16.287	83	47993	19.49	ug/L		96
102) trans-1,4-dichloro-2-b...	16.324	53	3116	13.68	ug/L		92
103) 1,2,3-trichloropropane	16.392	110	14068	20.21	ug/L		98
104) n-propylbenzene	16.444	91	178458	19.68	ug/L		99
105) 2-chlorotoluene	16.596	126	39663	19.44	ug/L		94
106) 4-chlorotoluene	16.726	91	91682	19.76	ug/L		98
107) 1,3,5-trimethylbenzene	16.616	105	141795	19.03	ug/L		97
108) tert-butylbenzene	17.003	134	32032	19.19	ug/L		98
109) 1,2,4-trimethylbenzene	17.056	105	137638	19.55	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

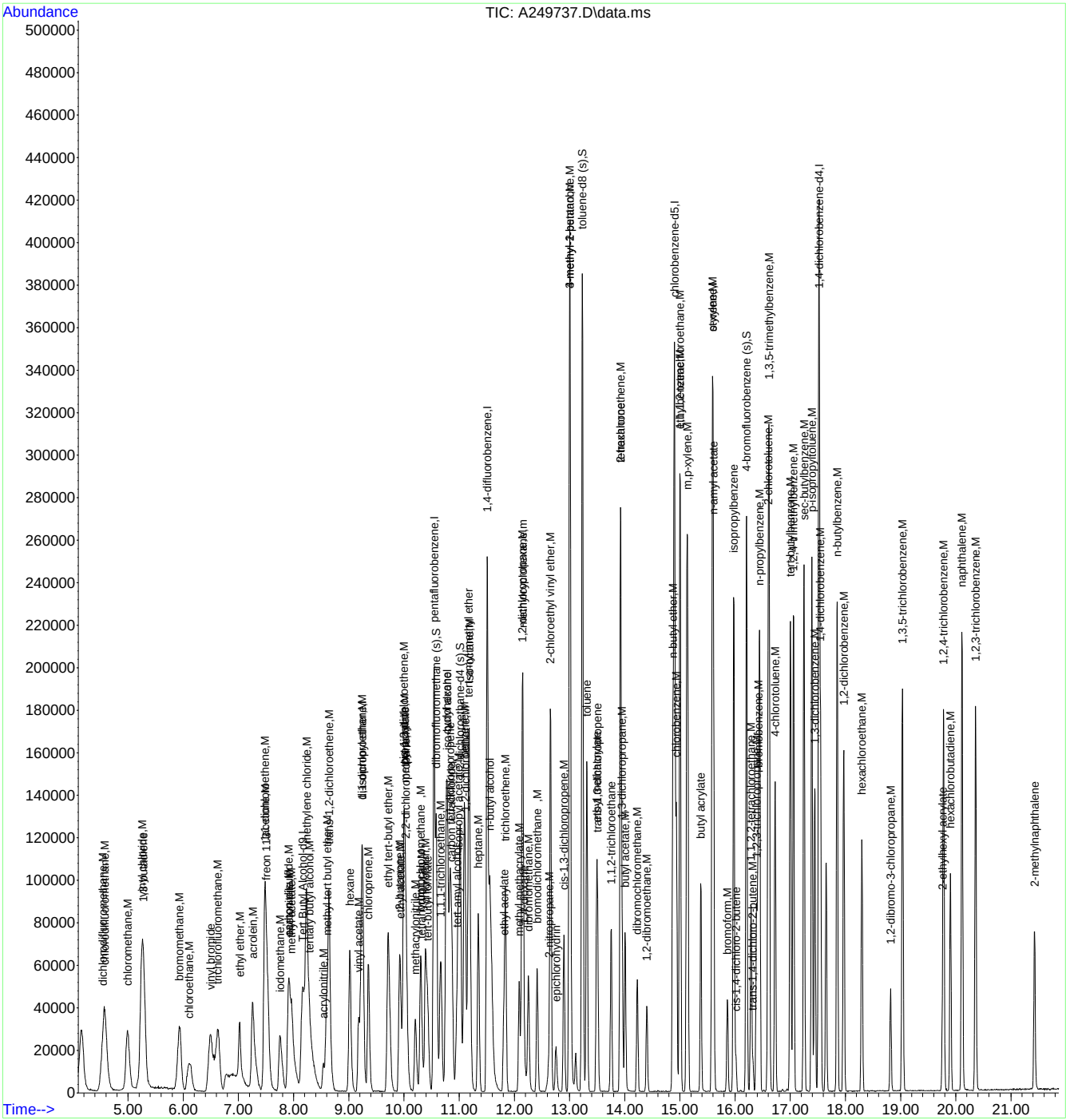
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
110) sec-butylbenzene	17.249	105	191349	19.09 ug/L	99
111) 1,3-dichlorobenzene	17.443	146	70836	20.03 ug/L	98
112) p-isopropyltoluene	17.391	119	162010	19.51 ug/L	99
113) 1,4-dichlorobenzene	17.547	146	70967	20.14 ug/L	99
114) 1,2-dichlorobenzene	17.971	146	76100	19.93 ug/L	99
115) n-butylbenzene	17.851	92	77776	20.34 ug/L	95
116) 1,2-dibromo-3-chloropr...	18.818	157	16903	19.56 ug/L	98
117) 1,3,5-trichlorobenzene	19.033	180	71235	20.02 ug/L	97
118) 2-ethylhexyl acrylate	19.755	70	5742	3.11 ug/L	85
119) 1,2,4-trichlorobenzene	19.775	180	67071	20.00 ug/L	99
120) hexachlorobutadiene	19.901	225	25494	19.44 ug/L	96
121) naphthalene	20.110	128	196661	19.86 ug/L	99
122) 1,2,3-trichlorobenzene	20.356	180	68363	20.05 ug/L	96
123) hexachloroethane	18.301	201	23961	18.35 ug/L	99
124) 2-methylnaphthalene	21.423	142	47795	8.93 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.168	65	265515	500.00	ug/L	0.00
5) pentafluorobenzene	10.542	168	180291	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	268324	50.00	ug/L	0.00
74) chlorobenzene-d5	14.899	117	234769	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.519	152	124467	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.584	113	88935	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
53) 1,2-dichloroethane-d4 (s)	11.018	65	94010	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
75) toluene-d8 (s)	13.231	98	307195	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
99) 4-bromofluorobenzene (s)	16.201	95	99542	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.288	59	135198	250.49	ug/L	100
4) 1,4-dioxane	12.185	88	47365	1250.00	ug/L	100
6) chlorodifluoromethane	4.575	51	173885	50.00	ug/L	100
7) dichlorodifluoromethane	4.538	85	221531	50.00	ug/L	100
8) chloromethane	4.983	50	271106	63.39	ug/L	100
9) vinyl chloride	5.244	62	202575	50.00	ug/L	100
10) 1,3-butadiene	5.265	54	174152	50.00	ug/L	100
11) bromomethane	5.924	94	136363	50.00	ug/L	100
12) chloroethane	6.102	64	102771	50.00	ug/L	100
13) vinyl bromide	6.479	106	135407	50.00	ug/L	100
14) trichlorofluoromethane	6.625	101	204235	50.00	ug/L	100
15) ethyl ether	7.012	74	47757	50.00	ug/L	100
16) acrolein	7.263	56	21263	50.00	ug/L	100
17) freon 113	7.504	151	99243	50.00	ug/L	100
18) 1,1-dichloroethene	7.472	96	95332	50.00	ug/L	100
19) acetone	7.478	58	54972	200.00	ug/L	100
20) acetonitrile	7.927	41	210071	497.92	ug/L	100
21) iodomethane	7.755	142	173503	50.00	ug/L	100
22) carbon disulfide	7.906	76	303955	50.00	ug/L	100
23) methylene chloride	8.225	84	101460	50.00	ug/L	100
24) methyl acetate	7.964	43	95367	50.00	ug/L	100
25) methyl tert butyl ether	8.602	73	289278	50.00	ug/L	100
26) trans-1,2-dichloroethene	8.639	96	87063	50.00	ug/L	100
27) hexane	9.015	57	122450	50.00	ug/L	100
28) di-isopropyl ether	9.230	45	296328	50.00	ug/L	100
29) ethyl tert-butyl ether	9.716	59	287428	50.00	ug/L	100
30) 2-butanone	9.915	72	64807	200.00	ug/L	100
31) 1,1-dichloroethane	9.245	63	150460	50.00	ug/L	100
32) chloroprene	9.350	53	126005	50.00	ug/L	100
33) acrylonitrile	8.529	53	46843	50.00	ug/L	100
34) vinyl acetate	9.172	86	19253	50.00	ug/L	100
35) ethyl acetate	9.925	45	18332	50.00	ug/L	100
36) 2,2-dichloropropane	10.030	77	147291	50.00	ug/L	100
37) cis-1,2-dichloroethene	9.993	96	98957	50.00	ug/L	100
38) methyl acrylate	10.025	85	17781	50.00	ug/L	100
39) propionitrile	9.998	54	213771	500.00	ug/L	100
40) bromochloromethane	10.297	128	51335	50.00	ug/L	100
41) tetrahydrofuran	10.318	42	42873	50.00	ug/L	100
42) chloroform	10.386	83	148452	50.00	ug/L	100
43) tert-butyl formate	10.427	59	83397	50.00	ug/L	100
45) methacrylonitrile	10.202	67	44661	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.783	84	167308	50.00	ug/L	100
47) 1,1,1-trichloroethane	10.663	97	158732	50.00	ug/L	100
48) iso-butyl alcohol	10.778	43	155729	500.00	ug/L	100
49) 1,1-dichloropropene	10.830	75	115916	50.00	ug/L	100
50) carbon tetrachloride	10.867	117	139352	50.00	ug/L	100
51) tert-amyl alcohol	10.961	73	71616	250.00	ug/L	100
54) benzene	11.092	78	333746	50.00	ug/L	100
55) iso-octane	11.191	57	338231	50.00	ug/L	100
56) tert-amyl methyl ether	11.165	73	290423	50.00	ug/L	100
57) heptane	11.343	71	64085	50.00	ug/L	100
58) isopropyl acetate	10.982	87	25458	50.00	ug/L	100
59) 1,2-dichloroethane	11.113	62	113202	50.00	ug/L	100
60) n-butyl alcohol	11.557	56	316287	2500.00	ug/L	100
61) ethyl acrylate	11.808	55	116817	50.00	ug/L	100
62) trichloroethene	11.834	95	82972	50.00	ug/L	100
63) 2-nitropropane	12.624	41	39451	50.00	ug/L	100
64) methylcyclohexane	12.153	83	179728	50.00	ug/L	100
65) 2-chloroethyl vinyl ether	12.655	63	248228	250.00	ug/L	100
66) methyl methacrylate	12.085	100	26784	50.00	ug/L	100
67) 1,2-dichloropropane	12.138	63	82624	50.00	ug/L	100
68) dibromomethane	12.253	93	55306	50.00	ug/L	100
69) bromodichloromethane	12.415	83	113298	50.00	ug/L	100
70) epichlorohydrin	12.750	57	67136	250.00	ug/L	100
71) cis-1,3-dichloropropene	12.896	75	129193	50.00	ug/L	100
72) 4-methyl-2-pentanone	13.006	58	211513	200.00	ug/L	100
73) 3-methyl-1-butanol	13.001	55	203975	1000.00	ug/L	100
76) toluene	13.314	92	203166	50.00	ug/L	100
77) trans-1,3-dichloropropene	13.508	75	112228	50.00	ug/L	100
78) ethyl methacrylate	13.487	69	110593	50.00	ug/L	100
79) 1,1,2-trichloroethane	13.754	83	60685	50.00	ug/L	100
80) 2-hexanone	13.926	58	174374	200.00	ug/L	100
81) tetrachloroethene	13.921	166	97882	50.00	ug/L	100
82) 1,3-dichloropropane	13.952	76	116985	50.00	ug/L	100
83) butyl acetate	14.005	56	63825	50.00	ug/L	100
84) dibromochloromethane	14.224	129	88791	50.00	ug/L	100
85) 1,2-dibromoethane	14.397	107	83114	50.00	ug/L	100
86) n-butyl ether	14.873	57	330359	50.00	ug/L	100
87) chlorobenzene	14.936	112	216853	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	15.004	131	103547	50.00	ug/L	100
89) ethylbenzene	14.999	91	375116	50.00	ug/L	100
90) m,p-xylene	15.134	106	295033	100.00	ug/L	100
91) o-xylene	15.584	106	163011	50.00	ug/L	100
92) styrene	15.595	104	229388	50.00	ug/L	100
93) butyl acrylate	15.375	55	163103	50.00	ug/L	100
94) n-amyl acetate	15.610	70	71331	50.00	ug/L	100
95) bromoform	15.861	173	61911	50.00	ug/L	100
96) isopropylbenzene	15.977	105	445077	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	16.013	75	15057	50.00	ug/L	100
100) bromobenzene	16.416	156	93377	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	16.290	83	122654	50.00	ug/L	100
102) trans-1,4-dichloro-2-b...	16.322	53	11343	50.00	ug/L	100
103) 1,2,3-trichloropropane	16.390	110	34676	50.00	ug/L	100
104) n-propylbenzene	16.442	91	451714	50.00	ug/L	100
105) 2-chlorotoluene	16.599	126	101639	50.00	ug/L	100
106) 4-chlorotoluene	16.724	91	231027	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	16.615	105	371131	50.00	ug/L	100
108) tert-butylbenzene	17.002	134	83150	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	17.059	105	350556	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

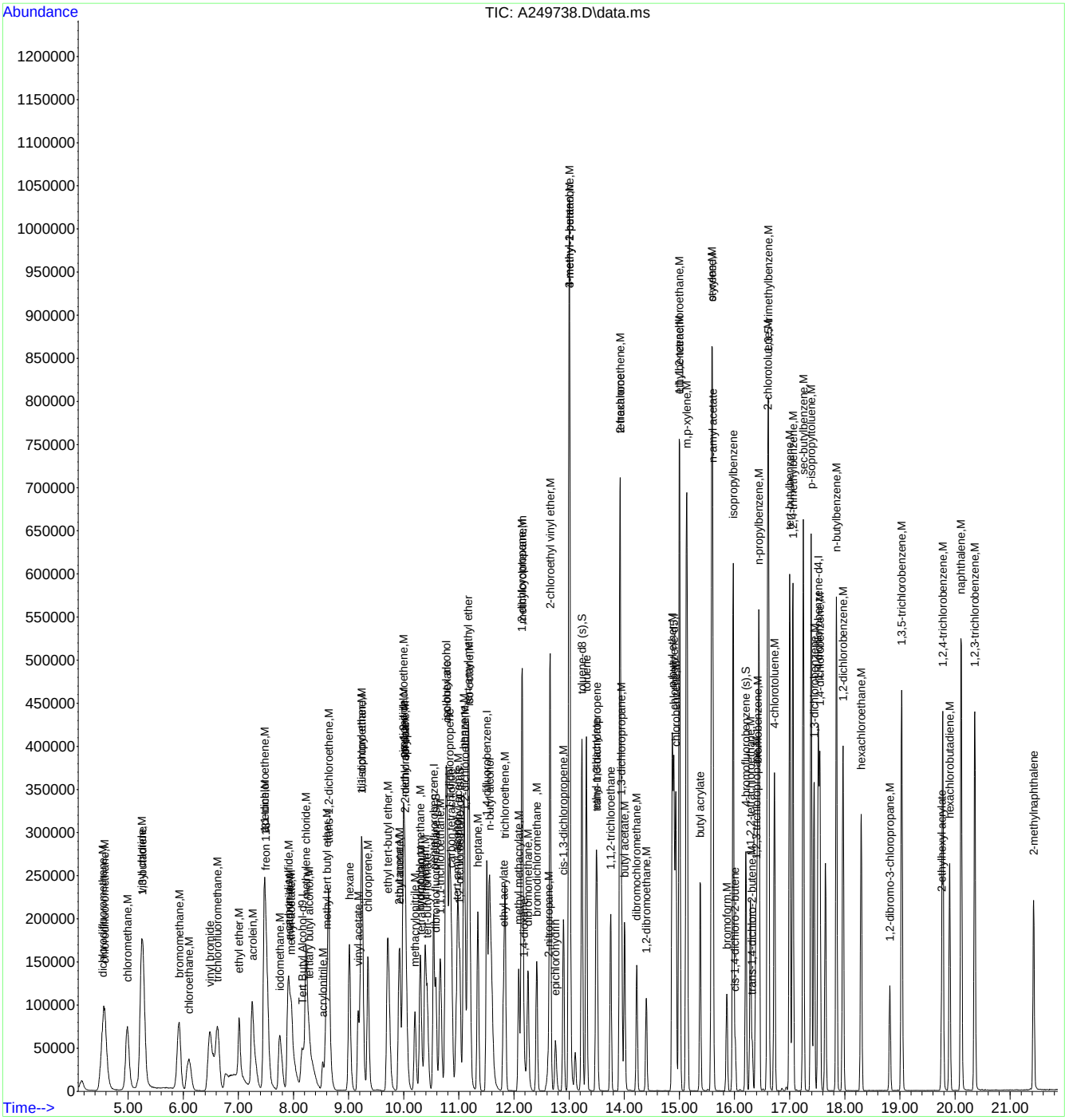
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	499103	50.00	ug/L	100
111) 1,3-dichlorobenzene	17.446	146	176170	50.00	ug/L	100
112) p-isopropyltoluene	17.389	119	413493	50.00	ug/L	100
113) 1,4-dichlorobenzene	17.551	146	175529	50.00	ug/L	100
114) 1,2-dichlorobenzene	17.969	146	190207	50.00	ug/L	100
115) n-butylbenzene	17.849	92	190429	50.00	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.817	157	43041	50.00	ug/L	100
117) 1,3,5-trichlorobenzene	19.031	180	177255	50.00	ug/L	100
118) 2-ethylhexyl acrylate	19.753	70	18405	10.00	ug/L	100
119) 1,2,4-trichlorobenzene	19.779	180	166997	50.00	ug/L	100
120) hexachlorobutadiene	19.904	225	65310	50.00	ug/L	100
121) naphthalene	20.114	128	493153	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	20.359	180	169845	50.00	ug/L	100
123) hexachloroethane	18.299	201	65036	50.00	ug/L	100
124) 2-methylnaphthalene	21.426	142	133281	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.172	65	266712	500.00	ug/L	0.00
5) pentafluorobenzene	10.542	168	185896	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.509	114	282488	50.00	ug/L	0.00
74) chlorobenzene-d5	14.898	117	259855	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.519	152	125619	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.589	113	91982	50.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.30%			
53) 1,2-dichloroethane-d4 (s)	11.023	65	97445	49.23	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.46%			
75) toluene-d8 (s)	13.230	98	325098	47.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.62%			
99) 4-bromofluorobenzene (s)	16.206	95	107484	53.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.98%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.293	59	282948	521.89	ug/L	96
4) 1,4-dioxane	12.179	88	100368	2636.90	ug/L	100
6) chlorodifluoromethane	4.584	51	364779	101.73	ug/L	97
7) dichlorodifluoromethane	4.548	85	489915	107.24	ug/L	98
8) chloromethane	4.987	50	583507	132.31	ug/L	96
9) vinyl chloride	5.243	62	446566	106.90	ug/L	99
10) 1,3-butadiene	5.275	54	354023	98.58	ug/L	99
11) bromomethane	5.923	94	299424	106.48	ug/L	99
12) chloroethane	6.112	64	228079	107.62	ug/L	98
13) vinyl bromide	6.478	106	305350	109.35	ug/L	100
14) trichlorofluoromethane	6.619	101	450874	107.05	ug/L	99
15) ethyl ether	7.022	74	97917	99.42	ug/L	97
16) acrolein	7.268	56	46438	105.91	ug/L	96
17) freon 113	7.508	151	212777	103.97	ug/L	99
18) 1,1-dichloroethene	7.477	96	210328	106.99	ug/L	100
19) acetone	7.477	58	114928	405.53	ug/L	97
20) acetonitrile	7.927	41	442507	1017.22	ug/L	99
21) iodomethane	7.759	142	380358	106.31	ug/L	99
22) carbon disulfide	7.911	76	656775	104.78	ug/L	99
23) methylene chloride	8.230	84	219461	104.89	ug/L	99
24) methyl acetate	7.963	43	191835	97.54	ug/L	99
25) methyl tert butyl ether	8.606	73	625971	104.93	ug/L	99
26) trans-1,2-dichloroethene	8.638	96	182109	101.43	ug/L	96
27) hexane	9.014	57	258839	102.50	ug/L	100
28) di-isopropyl ether	9.234	45	629934	103.09	ug/L	99
29) ethyl tert-butyl ether	9.720	59	620417	104.67	ug/L	98
30) 2-butanone	9.919	72	141373	423.13	ug/L	95
31) 1,1-dichloroethane	9.245	63	314904	101.49	ug/L	97
32) chloroprene	9.354	53	263935	101.57	ug/L	99
33) acrylonitrile	8.533	53	99080	102.57	ug/L	92
34) vinyl acetate	9.177	86	41857	105.43	ug/L	98
35) ethyl acetate	9.935	45	39797	105.27	ug/L #	64
36) 2,2-dichloropropane	10.034	77	309707	101.96	ug/L	97
37) cis-1,2-dichloroethene	9.992	96	208610	102.23	ug/L	97
38) methyl acrylate	10.019	85	38723	105.61	ug/L #	79
39) propionitrile	10.003	54	453565	1028.88	ug/L	90
40) bromochloromethane	10.301	128	110378	104.27	ug/L	98
41) tetrahydrofuran	10.317	42	90086	101.89	ug/L	100
42) chloroform	10.390	83	313179	102.30	ug/L	97
43) tert-butyl formate	10.427	59	178804	103.97	ug/L	98
45) methacrylonitrile	10.207	67	97104	105.43	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.782	84	378542	109.72	ug/L		96
47) 1,1,1-trichloroethane	10.662	97	338960	103.55	ug/L		99
48) iso-butyl alcohol	10.782	43	337885	1052.14	ug/L		94
49) 1,1-dichloropropene	10.834	75	251340	105.15	ug/L		97
50) carbon tetrachloride	10.866	117	299581	104.25	ug/L		99
51) tert-amyl alcohol	10.960	73	147878	500.65	ug/L		99
54) benzene	11.091	78	726284	103.35	ug/L		100
55) iso-octane	11.190	57	760095	106.73	ug/L		97
56) tert-amyl methyl ether	11.169	73	625081	102.22	ug/L		99
57) heptane	11.342	71	141528	104.89	ug/L		97
58) isopropyl acetate	10.981	87	56615	105.62	ug/L	#	91
59) 1,2-dichloroethane	11.112	62	242192	101.61	ug/L		98
60) n-butyl alcohol	11.556	56	668277	5017.35	ug/L		100
61) ethyl acrylate	11.807	55	258017	104.90	ug/L		99
62) trichloroethene	11.839	95	186784	106.91	ug/L		98
63) 2-nitropropane	12.623	41	83834	100.92	ug/L		90
64) methylcyclohexane	12.152	83	392005	103.59	ug/L		99
65) 2-chloroethyl vinyl ether	12.655	63	566372	541.81	ug/L		99
66) methyl methacrylate	12.090	100	58535	103.79	ug/L		92
67) 1,2-dichloropropane	12.137	63	183737	105.61	ug/L		100
68) dibromomethane	12.252	93	122911	105.55	ug/L		98
69) bromodichloromethane	12.414	83	249825	104.72	ug/L		99
70) epichlorohydrin	12.754	57	143515	507.62	ug/L		99
71) cis-1,3-dichloropropene	12.900	75	289565	106.45	ug/L		97
72) 4-methyl-2-pentanone	13.005	58	456174	409.72	ug/L		96
73) 3-methyl-1-butanol	13.005	55	430217	2003.41	ug/L		98
76) toluene	13.314	92	448283	99.67	ug/L		99
77) trans-1,3-dichloropropene	13.507	75	255043	102.66	ug/L		98
78) ethyl methacrylate	13.491	69	247587	101.13	ug/L		98
79) 1,1,2-trichloroethane	13.753	83	135915	101.17	ug/L		97
80) 2-hexanone	13.926	58	387541	401.58	ug/L		97
81) tetrachloroethene	13.920	166	217425	100.34	ug/L		98
82) 1,3-dichloropropane	13.952	76	263008	101.56	ug/L		97
83) butyl acetate	14.004	56	140998	99.79	ug/L		99
84) dibromochloromethane	14.229	129	202551	103.05	ug/L		97
85) 1,2-dibromoethane	14.401	107	192775	104.77	ug/L		100
86) n-butyl ether	14.872	57	736189	100.67	ug/L		99
87) chlorobenzene	14.935	112	497877	103.71	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.008	131	230579	100.59	ug/L		99
89) ethylbenzene	14.998	91	841371	101.32	ug/L		98
90) m,p-xylene	15.134	106	675538	206.87	ug/L		99
91) o-xylene	15.589	106	370543	102.68	ug/L		97
92) styrene	15.594	104	523372	103.07	ug/L		98
93) butyl acrylate	15.379	55	353807	97.99	ug/L		99
94) n-amyl acetate	15.610	70	151408	95.88	ug/L		98
95) bromoform	15.861	173	138280	100.90	ug/L		99
96) isopropylbenzene	15.976	105	987071	100.18	ug/L		100
97) cis-1,4-dichloro-2-butene	16.012	75	39593	118.78	ug/L		93
100) bromobenzene	16.420	156	209539	111.17	ug/L		94
101) 1,1,2,2-tetrachloroethane	16.290	83	268271	108.36	ug/L		99
102) trans-1,4-dichloro-2-b...	16.321	53	27906	121.88	ug/L		97
103) 1,2,3-trichloropropane	16.389	110	76242	108.93	ug/L		99
104) n-propylbenzene	16.441	91	998292	109.49	ug/L		98
105) 2-chlorotoluene	16.598	126	231248	112.72	ug/L		95
106) 4-chlorotoluene	16.724	91	512969	110.00	ug/L		99
107) 1,3,5-trimethylbenzene	16.619	105	829816	110.77	ug/L		98
108) tert-butylbenzene	17.001	134	189604	112.97	ug/L		99
109) 1,2,4-trimethylbenzene	17.058	105	787781	111.33	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

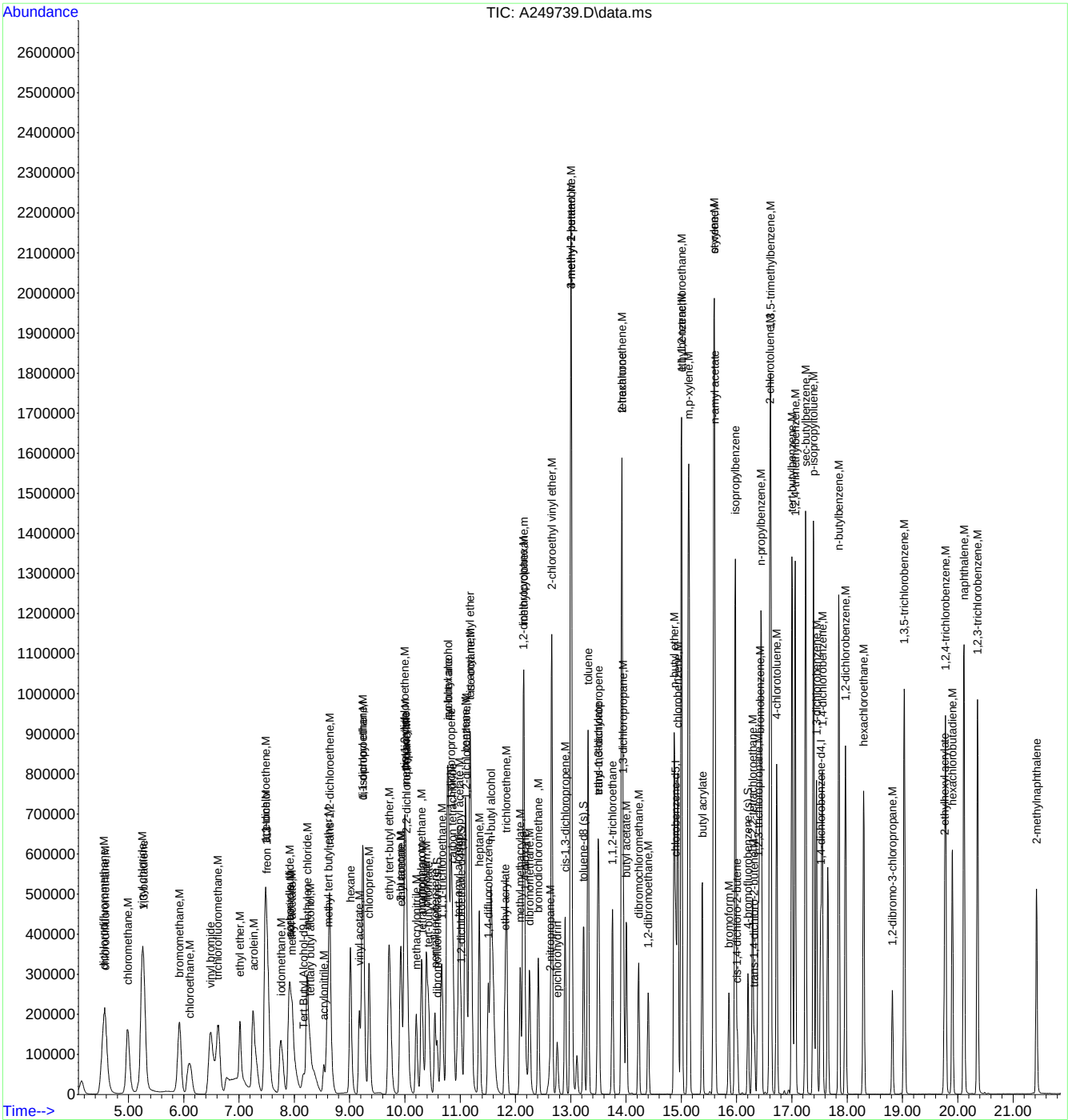
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	1113971	110.57	ug/L	99
111) 1,3-dichlorobenzene	17.445	146	377615	106.19	ug/L	99
112) p-isopropyltoluene	17.388	119	940249	112.65	ug/L	99
113) 1,4-dichlorobenzene	17.550	146	374743	105.77	ug/L	99
114) 1,2-dichlorobenzene	17.968	146	412603	107.47	ug/L	99
115) n-butylbenzene	17.848	92	416580	108.38	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.816	157	90790	104.50	ug/L	96
117) 1,3,5-trichlorobenzene	19.035	180	384365	107.43	ug/L	97
118) 2-ethylhexyl acrylate	19.757	70	45578	24.54	ug/L	96
119) 1,2,4-trichlorobenzene	19.778	180	358670	106.40	ug/L	98
120) hexachlorobutadiene	19.904	225	151592	114.99	ug/L	99
121) naphthalene	20.113	128	1052500	105.73	ug/L	99
122) 1,2,3-trichlorobenzene	20.359	180	373638	108.99	ug/L	97
123) hexachloroethane	18.298	201	154937	118.02	ug/L	98
124) 2-methylnaphthalene	21.426	142	309744	57.57	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.173	65	263697	500.00	ug/L		0.00
5) pentafluorobenzene	10.542	168	191958	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.509	114	301221	50.00	ug/L		0.00
74) chlorobenzene-d5	14.904	117	283024	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	136920	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.589	113	93593	49.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%				
53) 1,2-dichloroethane-d4 (s)	11.018	65	101031	47.87	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 95.74%				
75) toluene-d8 (s)	13.235	98	345375	46.63	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.26%				
99) 4-bromofluorobenzene (s)	16.206	95	119187	54.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.84%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.293	59	531294	991.15	ug/L		90
4) 1,4-dioxane	12.184	88	170220	4523.21	ug/L		99
6) chlorodifluoromethane	4.580	51	710498	191.88	ug/L		97
7) dichlorodifluoromethane	4.543	85	911081	193.13	ug/L		99
8) chloromethane	4.982	50	1102514	242.10	ug/L		97
9) vinyl chloride	5.244	62	842561	195.32	ug/L		98
10) 1,3-butadiene	5.265	54	675662	182.20	ug/L		97
11) bromomethane	5.924	94	561489	193.37	ug/L		97
12) chloroethane	6.107	64	428874	195.97	ug/L		98
13) vinyl bromide	6.494	106	579303	200.91	ug/L		100
14) trichlorofluoromethane	6.619	101	852468	196.01	ug/L		99
15) ethyl ether	7.017	74	195988	192.72	ug/L		95
16) acrolein	7.268	56	93306	206.07	ug/L		95
17) freon 113	7.508	151	417880	197.74	ug/L		99
18) 1,1-dichloroethene	7.482	96	433010	213.30	ug/L		96
19) acetone	7.477	58	221447	756.70	ug/L		100
20) acetonitrile	7.927	41	824825	1836.21	ug/L		98
21) iodomethane	7.754	142	775886	210.00	ug/L		99
22) carbon disulfide	7.911	76	1333356	206.00	ug/L		98
23) methylene chloride	8.230	84	450761	208.64	ug/L		96
24) methyl acetate	7.963	43	377629	185.95	ug/L		98
25) methyl tert butyl ether	8.607	73	1255601	203.83	ug/L		97
26) trans-1,2-dichloroethene	8.638	96	368074	198.54	ug/L		98
27) hexane	9.015	57	510753	195.88	ug/L		99
28) di-isopropyl ether	9.234	45	1245940	197.45	ug/L		100
29) ethyl tert-butyl ether	9.716	59	1229912	200.95	ug/L		96
30) 2-butanone	9.925	72	290773	842.81	ug/L		98
31) 1,1-dichloroethane	9.245	63	624569	194.94	ug/L		98
32) chloroprene	9.355	53	518510	193.24	ug/L		97
33) acrylonitrile	8.534	53	197731	198.23	ug/L		93
34) vinyl acetate	9.177	86	86447	210.86	ug/L		99
35) ethyl acetate	9.935	45	75986	194.65	ug/L	#	73
36) 2,2-dichloropropane	10.035	77	611474	194.96	ug/L		99
37) cis-1,2-dichloroethene	9.993	96	418743	198.72	ug/L		97
38) methyl acrylate	10.024	85	80350	212.21	ug/L	#	83
39) propionitrile	10.003	54	905278	1988.71	ug/L		90
40) bromochloromethane	10.301	128	218861	200.21	ug/L		98
41) tetrahydrofuran	10.322	42	179160	196.24	ug/L		98
42) chloroform	10.390	83	618767	195.74	ug/L		97
43) tert-butyl formate	10.427	59	353413	199.01	ug/L		97
45) methacrylonitrile	10.207	67	197815	208.00	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.788	84	733174	205.79	ug/L		96
47) 1,1,1-trichloroethane	10.667	97	677875	200.55	ug/L		98
48) iso-butyl alcohol	10.788	43	649845	1959.65	ug/L		89
49) 1,1-dichloropropene	10.835	75	499367	202.31	ug/L		96
50) carbon tetrachloride	10.866	117	597791	201.45	ug/L		99
51) tert-amyl alcohol	10.960	73	281874	924.17	ug/L		96
54) benzene	11.091	78	1461544	195.05	ug/L		99
55) iso-octane	11.196	57	1511231	199.00	ug/L		98
56) tert-amyl methyl ether	11.170	73	1252842	192.14	ug/L		99
57) heptane	11.347	71	278811	193.78	ug/L		97
58) isopropyl acetate	10.986	87	112349	196.56	ug/L	#	92
59) 1,2-dichloroethane	11.112	62	485931	191.19	ug/L		99
60) n-butyl alcohol	11.557	56	1278121	8999.22	ug/L		98
61) ethyl acrylate	11.808	55	528115	201.36	ug/L		100
62) trichloroethene	11.839	95	380915	204.48	ug/L		97
63) 2-nitropropane	12.629	41	171466	193.58	ug/L		90
64) methylcyclohexane	12.153	83	792062	196.29	ug/L		99
65) 2-chloroethyl vinyl ether	12.660	63	1178174	1057.00	ug/L		99
66) methyl methacrylate	12.090	100	122261	203.31	ug/L		94
67) 1,2-dichloropropane	12.142	63	379705	204.68	ug/L		100
68) dibromomethane	12.252	93	253088	203.82	ug/L		98
69) bromodichloromethane	12.414	83	521464	205.00	ug/L		99
70) epichlorohydrin	12.759	57	294720	977.62	ug/L		100
71) cis-1,3-dichloropropene	12.901	75	600947	207.18	ug/L		97
72) 4-methyl-2-pentanone	13.005	58	921420	776.11	ug/L		90
73) 3-methyl-1-butanol	13.005	55	832326	3634.89	ug/L		97
76) toluene	13.314	92	924949	188.82	ug/L		98
77) trans-1,3-dichloropropene	13.507	75	523775	193.57	ug/L		99
78) ethyl methacrylate	13.492	69	509973	191.25	ug/L		97
79) 1,1,2-trichloroethane	13.753	83	278615	190.42	ug/L		98
80) 2-hexanone	13.926	58	800607	761.70	ug/L		96
81) tetrachloroethene	13.926	166	444070	188.16	ug/L		99
82) 1,3-dichloropropane	13.952	76	548088	194.32	ug/L		97
83) butyl acetate	14.004	56	291702	189.56	ug/L		97
84) dibromochloromethane	14.229	129	423368	197.76	ug/L		98
85) 1,2-dibromoethane	14.402	107	404905	202.05	ug/L		99
86) n-butyl ether	14.872	57	1495434	187.75	ug/L		100
87) chlorobenzene	14.935	112	1051588	201.13	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.008	131	477888	191.42	ug/L		99
89) ethylbenzene	14.998	91	1735733	191.91	ug/L		97
90) m,p-xylene	15.134	106	1408230	395.93	ug/L		96
91) o-xylene	15.589	106	775864	197.40	ug/L		95
92) styrene	15.599	104	1137035	205.58	ug/L		98
93) butyl acrylate	15.380	55	721095	183.37	ug/L		97
94) n-amyl acetate	15.610	70	311942	181.38	ug/L		95
95) bromoform	15.861	173	293535	196.64	ug/L		100
96) isopropylbenzene	15.976	105	1992241	185.65	ug/L		98
97) cis-1,4-dichloro-2-butene	16.013	75	110938	305.58	ug/L		97
100) bromobenzene	16.421	156	452616	220.32	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.290	83	559173	207.22	ug/L		99
102) trans-1,4-dichloro-2-b...	16.326	53	62387	249.99	ug/L		90
103) 1,2,3-trichloropropane	16.389	110	158963	208.36	ug/L		97
104) n-propylbenzene	16.447	91	2056679	206.95	ug/L		96
105) 2-chlorotoluene	16.604	126	494853	221.30	ug/L		95
106) 4-chlorotoluene	16.724	91	1089773	214.40	ug/L		100
107) 1,3,5-trimethylbenzene	16.619	105	1708628	209.26	ug/L		97
108) tert-butylbenzene	17.001	134	403354	220.49	ug/L		96
109) 1,2,4-trimethylbenzene	17.059	105	1632372	211.65	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

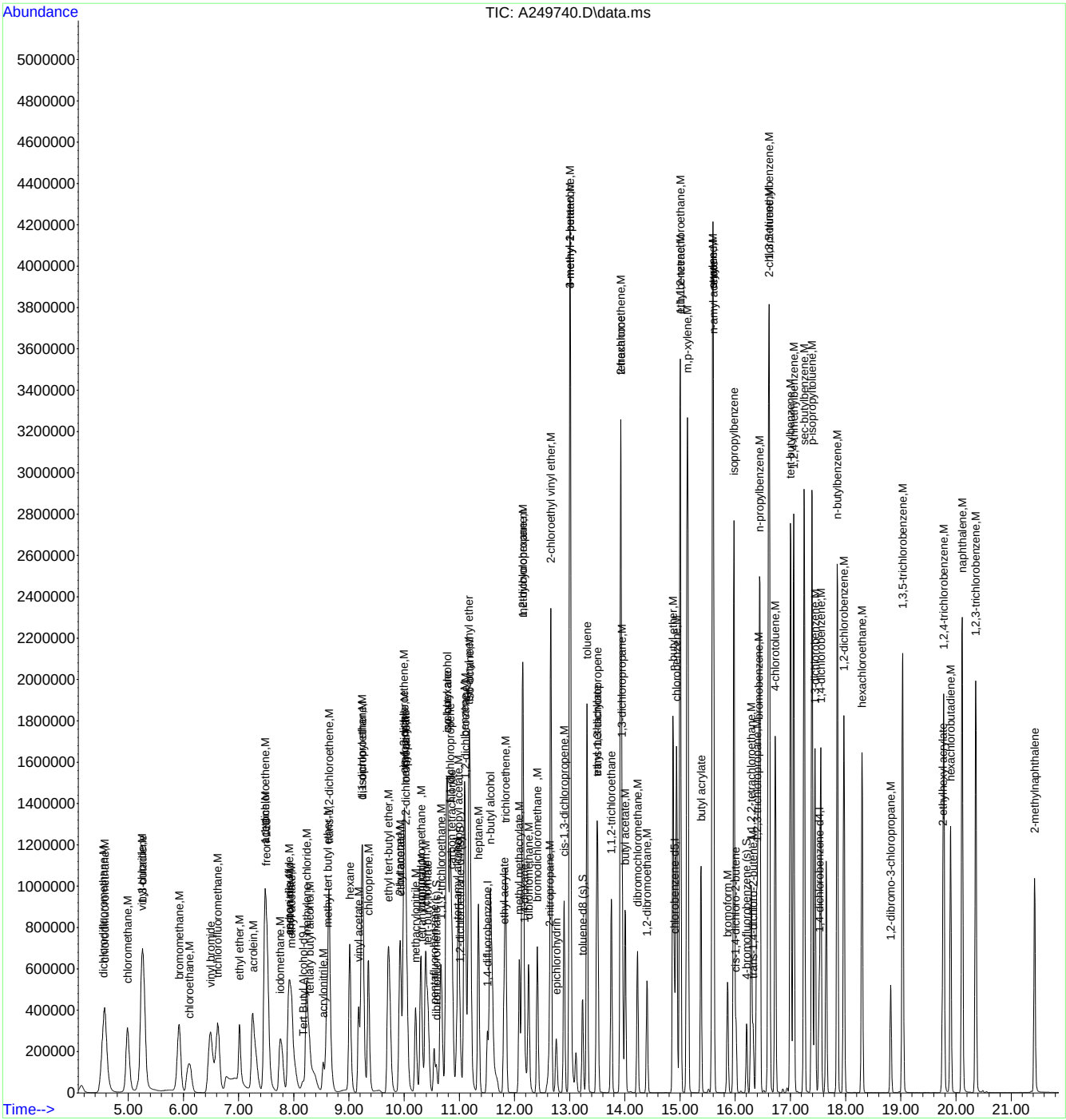
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	2248694	204.78	ug/L	98
111) 1,3-dichlorobenzene	17.446	146	788132	203.34	ug/L	98
112) p-isopropyltoluene	17.393	119	1917115	210.74	ug/L	97
113) 1,4-dichlorobenzene	17.550	146	779510	201.85	ug/L	99
114) 1,2-dichlorobenzene	17.969	146	865684	206.87	ug/L	99
115) n-butylbenzene	17.848	92	873916	208.59	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.821	157	185176	195.55	ug/L	95
117) 1,3,5-trichlorobenzene	19.036	180	800123	205.17	ug/L	98
118) 2-ethylhexyl acrylate	19.757	70	97946	48.38	ug/L	95
119) 1,2,4-trichlorobenzene	19.778	180	735266	200.12	ug/L	98
120) hexachlorobutadiene	19.904	225	318355	221.56	ug/L	99
121) naphthalene	20.113	128	2109560	194.43	ug/L	98
122) 1,2,3-trichlorobenzene	20.359	180	760347	203.48	ug/L	98
123) hexachloroethane	18.298	201	334325	233.65	ug/L	98
124) 2-methylnaphthalene	21.426	142	635435	108.35	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.171	65	278791	500.00	ug/L		0.00
5) pentafluorobenzene	10.545	168	190481	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.508	114	276478	50.00	ug/L		0.00
74) chlorobenzene-d5	14.902	117	241043	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.517	152	126057	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.587	113	92745	49.40	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%				
53) 1,2-dichloroethane-d4 (s)	11.021	65	96906	48.79	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.58%				
75) toluene-d8 (s)	13.234	98	317279	49.49	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.98%				
99) 4-bromofluorobenzene (s)	16.204	95	99698	50.77	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.54%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.286	59	145195	252.17	ug/L		98
4) 1,4-dioxane	12.182	88	51091	1369.99	ug/L		98
6) chlorodifluoromethane	4.578	51	209275	56.57	ug/L		96
7) dichlorodifluoromethane	4.552	85	229431	50.99	ug/L		97
8) chloromethane	4.986	50	278388	56.96	ug/L		96
9) vinyl chloride	5.252	62	201394	48.64	ug/L		98
10) 1,3-butadiene	5.268	54	221038	56.01	ug/L		97
11) bromomethane	5.922	94	136591	46.96	ug/L		96
12) chloroethane	6.110	64	103425	49.14	ug/L		96
13) vinyl bromide	6.492	106	140950	50.80	ug/L		100
14) trichlorofluoromethane	6.628	101	206096	48.10	ug/L		100
15) ethyl ether	7.015	74	49963	52.13	ug/L		96
16) acrolein	7.266	56	22951	52.65	ug/L		98
17) freon 113	7.507	151	119419	57.36	ug/L		98
18) 1,1-dichloroethene	7.475	96	99339	48.24	ug/L		99
19) acetone	7.475	58	57108	206.21	ug/L		87
20) acetonitrile	7.925	41	156922	357.91	ug/L		97
21) iodomethane	7.747	142	216694	59.23	ug/L		98
22) carbon disulfide	7.904	76	362128	52.85	ug/L		99
23) methylene chloride	8.228	84	109225	50.92	ug/L		97
24) methyl acetate	7.967	43	98042	50.54	ug/L		99
25) methyl tert butyl ether	8.605	73	627854	103.43	ug/L		88
26) trans-1,2-dichloroethene	8.642	96	91110	50.93	ug/L		94
27) hexane	9.013	57	135078	52.21	ug/L		99
28) di-isopropyl ether	9.227	45	301081	48.43	ug/L		96
29) ethyl tert-butyl ether	9.714	59	299303	50.32	ug/L		99
30) 2-butanone	9.918	72	69110	216.27	ug/L		97
31) 1,1-dichloroethane	9.248	63	161624	50.26	ug/L		98
32) chloroprene	9.353	53	138984	53.32	ug/L		97
33) acrylonitrile	8.532	53	54501	55.14	ug/L		96
34) vinyl acetate	9.180	86	19196	46.73	ug/L		94
35) ethyl acetate	9.928	45	17665	49.46	ug/L		96
36) 2,2-dichloropropane	10.033	77	151859	48.45	ug/L		99
37) cis-1,2-dichloroethene	9.991	96	101579	49.27	ug/L		97
38) methyl acrylate	10.022	85	18989	53.30	ug/L	#	87
39) propionitrile	10.001	54	231885	549.24	ug/L		87
40) bromochloromethane	10.300	128	56364	53.58	ug/L		96
41) tetrahydrofuran	10.315	42	46505	50.73	ug/L		99
42) chloroform	10.388	83	159958	47.86	ug/L		97
43) tert-butyl formate	10.430	59	80795	47.58	ug/L		99
45) methacrylonitrile	10.200	67	48162	52.71	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.781	84	182903	52.64	ug/L		99
47) 1,1,1-trichloroethane	10.660	97	167826	51.24	ug/L		98
48) iso-butyl alcohol	10.781	43	166270	527.01	ug/L		91
49) 1,1-dichloropropene	10.833	75	123493	50.46	ug/L		96
50) carbon tetrachloride	10.864	117	151125	51.62	ug/L		99
51) tert-amyl alcohol	10.959	73	78985	269.30	ug/L		95
54) benzene	11.089	78	356262	50.48	ug/L		99
55) iso-octane	11.189	57	361996	54.65	ug/L		97
56) tert-amyl methyl ether	11.168	73	301671	50.19	ug/L		100
57) heptane	11.346	71	78545	59.85	ug/L		97
58) isopropyl acetate	10.979	87	25540	49.32	ug/L		96
59) 1,2-dichloroethane	11.110	62	117856	46.53	ug/L		100
60) n-butyl alcohol	11.555	56	336110	2770.04	ug/L		99
61) ethyl acrylate	11.806	55	125478	54.51	ug/L		99
62) trichloroethene	11.837	95	90919	50.58	ug/L		98
63) 2-nitropropane	12.627	41	43598	57.17	ug/L		85
64) methylcyclohexane	12.151	83	191579	51.65	ug/L		98
65) 2-chloroethyl vinyl ether	12.653	63	275734	288.77	ug/L		98
66) methyl methacrylate	12.088	100	28657	56.33	ug/L	#	79
67) 1,2-dichloropropane	12.135	63	89190	52.37	ug/L		96
68) dibromomethane	12.256	93	59227	51.66	ug/L		96
69) bromodichloromethane	12.413	83	117147	49.78	ug/L		98
70) epichlorohydrin	12.752	57	72425	283.14	ug/L		99
71) cis-1,3-dichloropropene	12.899	75	136850	54.42	ug/L		99
72) 4-methyl-2-pentanone	13.004	58	223650	212.50	ug/L		100
73) 3-methyl-1-butanol	13.004	55	223762	1132.82	ug/L		98
76) toluene	13.312	92	213443	50.10	ug/L		99
77) trans-1,3-dichloropropene	13.511	75	122253	55.79	ug/L		99
78) ethyl methacrylate	13.490	69	119191	53.76	ug/L		97
79) 1,1,2-trichloroethane	13.751	83	64357	52.88	ug/L		98
80) 2-hexanone	13.924	58	182459	202.81	ug/L		99
81) tetrachloroethene	13.924	166	110934	53.19	ug/L		98
82) 1,3-dichloropropane	13.950	76	125801	53.70	ug/L		95
83) butyl acetate	14.002	56	66879	49.97	ug/L		96
84) dibromochloromethane	14.227	129	97488	53.47	ug/L		94
85) 1,2-dibromoethane	14.400	107	88205	52.92	ug/L		99
86) n-butyl ether	14.871	57	360955	51.61	ug/L		100
87) chlorobenzene	14.933	112	231421	52.25	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.007	131	110887	49.96	ug/L		97
89) ethylbenzene	15.001	91	391290	49.45	ug/L		100
90) m,p-xylene	15.132	106	309651	100.64	ug/L		97
91) o-xylene	15.587	106	173058	50.84	ug/L		98
92) styrene	15.598	104	239009	48.84	ug/L		98
93) butyl acrylate	15.378	55	166333	47.68	ug/L		96
94) n-amyl acetate	15.608	70	68678	43.79	ug/L		94
95) bromoform	15.859	173	69347	54.63	ug/L		98
96) isopropylbenzene	15.974	105	473054	51.38	ug/L		98
97) cis-1,4-dichloro-2-butene	16.016	75	14580	53.23	ug/L		94
100) bromobenzene	16.419	156	98274	53.01	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.288	83	127755	53.06	ug/L		99
102) trans-1,4-dichloro-2-b...	16.319	53	12481	66.85	ug/L		92
103) 1,2,3-trichloropropane	16.387	110	35816	51.95	ug/L		96
104) n-propylbenzene	16.445	91	473850	52.39	ug/L		99
105) 2-chlorotoluene	16.597	126	105193	52.22	ug/L		99
106) 4-chlorotoluene	16.722	91	244789	51.99	ug/L		99
107) 1,3,5-trimethylbenzene	16.618	105	389512	55.85	ug/L		100
108) tert-butylbenzene	17.005	134	89380	55.32	ug/L		98
109) 1,2,4-trimethylbenzene	17.057	105	376465	54.55	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

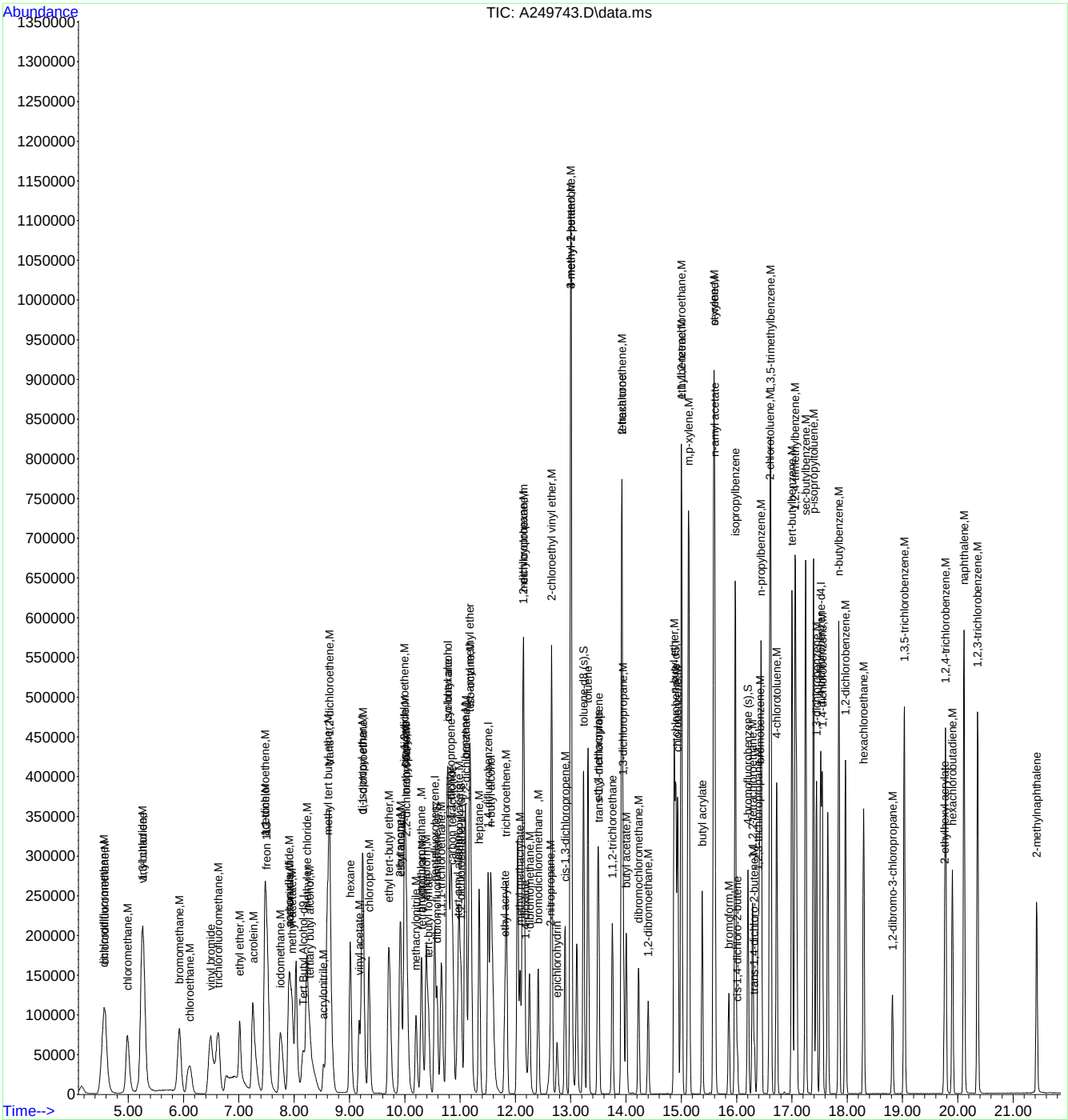
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.245	105	528954	55.55	ug/L	99
111) 1,3-dichlorobenzene	17.444	146	186510	50.75	ug/L	99
112) p-isopropyltoluene	17.392	119	447060	56.34	ug/L	100
113) 1,4-dichlorobenzene	17.549	146	185211	49.79	ug/L	98
114) 1,2-dichlorobenzene	17.967	146	200439	50.33	ug/L	98
115) n-butylbenzene	17.847	92	196700	50.70	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.819	157	43427	51.64	ug/L	96
117) 1,3,5-trichlorobenzene	19.034	180	184013	49.01	ug/L	99
118) 2-ethylhexyl acrylate	19.756	70	21343	10.25	ug/L	98
119) 1,2,4-trichlorobenzene	19.777	180	171800	50.87	ug/L	96
120) hexachlorobutadiene	19.902	225	67354	50.13	ug/L	96
121) naphthalene	20.111	128	529233	53.60	ug/L	100
122) 1,2,3-trichlorobenzene	20.357	180	179369	52.91	ug/L	99
123) hexachloroethane	18.302	201	73164	58.60	ug/L	99
124) 2-methylnaphthalene	21.424	142	143472	27.25	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249744.D
Acq On : 11 May 2019 9:46 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 14 14:00:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

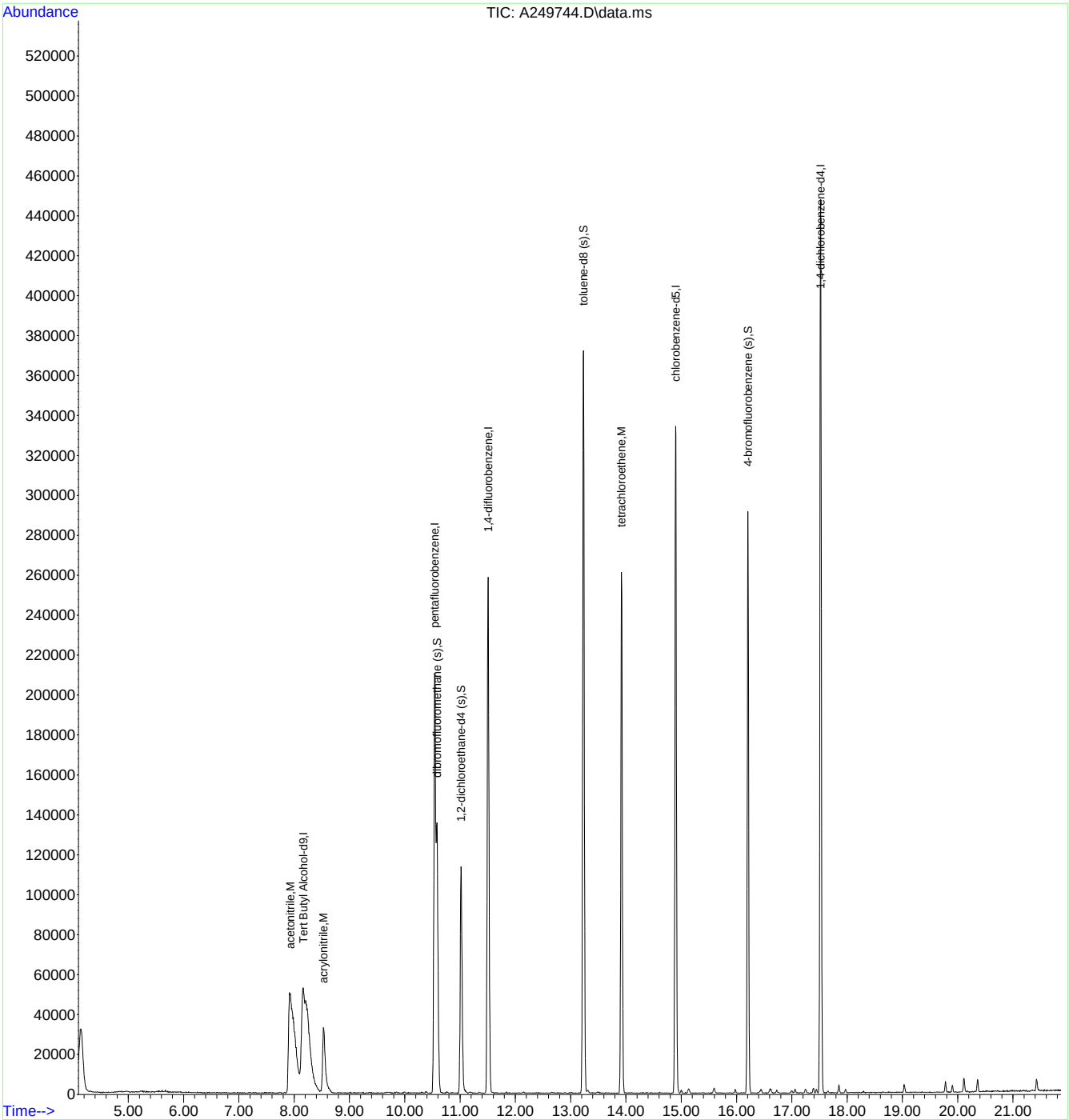
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	274172	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	192266	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.508	114	267622	50.00	ug/L	0.00
74) chlorobenzene-d5	14.897	117	214926	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.522	152	136580	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.582	113	92465	48.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.58%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	96913	50.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.82%			
75) toluene-d8 (s)	13.234	98	293064	51.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.54%			
99) 4-bromofluorobenzene (s)	16.204	95	103621	48.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.42%			
Target Compounds						Qvalue
20) acetonitrile	7.930	41	219958	497.02	ug/L	99
33) acrylonitrile	8.532	53	45221	45.33	ug/L	96
81) tetrachloroethene	13.919	166	90735	48.80	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249744.D
Acq On : 11 May 2019 9:46 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 14 14:00:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251078.d
Acq On : 25 Jun 2019 7:20 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 52 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 25 19:49:10 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.157	65	270975	500.00	ug/L	-0.01
5) pentafluorobenzene	10.537	168	194568	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	287121	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	243838	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	129599	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	97566	50.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.76%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	102942	49.91	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.82%			
75) toluene-d8 (s)	13.225	98	324496	50.04	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%			
99) 4-bromofluorobenzene (s)	16.201	95	107394	53.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.40%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.293	59	145098	259.27	ug/L	99
4) 1,4-dioxane	12.174	88	51464	1419.80	ug/L	100
6) chlorodifluoromethane	4.580	51	164824	43.62	ug/L	97
7) dichlorodifluoromethane	4.554	85	184620	40.17	ug/L	99
8) chloromethane	4.988	50	201952	40.45	ug/L	96
9) vinyl chloride	5.250	62	185777	43.92	ug/L	97
10) 1,3-butadiene	5.270	54	112363	27.88	ug/L	97
11) bromomethane	5.935	94	127267	42.84	ug/L	98
12) chloroethane	6.097	64	96369	44.82	ug/L	99
13) vinyl bromide	6.484	106	127532	45.00	ug/L	99
14) trichlorofluoromethane	6.625	101	199544	45.60	ug/L	96
15) ethyl ether	7.012	74	49799	50.86	ug/L	97
16) acrolein	7.258	56	23283	52.29	ug/L	97
17) freon 113	7.504	151	93817	44.11	ug/L	98
18) 1,1-dichloroethene	7.483	96	105431	50.12	ug/L	96
19) acetone	7.467	58	56174	198.57	ug/L	90
20) acetonitrile	7.917	41	237780	530.93	ug/L	93
21) iodomethane	7.755	142	193892	51.88	ug/L	99
22) carbon disulfide	7.917	76	309564	44.23	ug/L	98
23) methylene chloride	8.225	84	117525	53.64	ug/L	95
24) methyl acetate	7.959	43	97573	49.24	ug/L	98
25) methyl tert butyl ether	8.597	73	322958	52.09	ug/L	100
26) trans-1,2-dichloroethene	8.633	96	88230	48.29	ug/L	92
27) hexane	9.010	57	108094	40.90	ug/L	99
28) di-isopropyl ether	9.224	45	320727	50.50	ug/L	98
29) ethyl tert-butyl ether	9.706	59	316672	52.13	ug/L	95
30) 2-butanone	9.915	72	69004	211.41	ug/L	94
31) 1,1-dichloroethane	9.240	63	156362	47.60	ug/L	99
32) chloroprene	9.345	53	121700	45.71	ug/L	99
33) acrylonitrile	8.518	53	52341	51.85	ug/L	93
34) vinyl acetate	9.172	86	22978	54.77	ug/L #	87
35) ethyl acetate	9.925	45	19466	53.36	ug/L #	82
36) 2,2-dichloropropane	10.019	77	160155	50.02	ug/L	99
37) cis-1,2-dichloroethene	9.983	96	100651	47.79	ug/L	95
38) methyl acrylate	10.009	85	18742	51.50	ug/L #	87
39) propionitrile	9.993	54	230404	534.27	ug/L	94
40) bromochloromethane	10.291	128	53829	50.10	ug/L	95
41) tetrahydrofuran	10.312	42	44361	47.38	ug/L	99
42) chloroform	10.380	83	162474	47.59	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251078.d
Acq On : 25 Jun 2019 7:20 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 52 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 25 19:49:10 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.422	59	98217	56.63	ug/L		99
45) methacrylonitrile	10.197	67	48736	52.22	ug/L		86
46) cyclohexane	10.778	84	158265	44.60	ug/L		95
47) 1,1,1-trichloroethane	10.658	97	167551	50.08	ug/L		94
48) iso-butyl alcohol	10.778	43	161453	500.99	ug/L	#	84
49) 1,1-dichloropropene	10.830	75	113113	45.25	ug/L		96
50) carbon tetrachloride	10.861	117	144750	48.40	ug/L		99
51) tert-amyl alcohol	10.956	73	77243	257.83	ug/L		94
54) benzene	11.086	78	345211	47.10	ug/L		99
55) iso-octane	11.186	57	330844	48.10	ug/L		99
56) tert-amyl methyl ether	11.165	73	325008	52.07	ug/L		97
57) heptane	11.343	71	59814	43.89	ug/L		95
58) isopropyl acetate	10.977	87	27365	50.88	ug/L		97
59) 1,2-dichloroethane	11.102	62	122173	46.45	ug/L		95
60) n-butyl alcohol	11.547	56	340731	2704.04	ug/L		96
61) ethyl acrylate	11.803	55	128090	53.58	ug/L		99
62) trichloroethene	11.834	95	88559	47.44	ug/L		96
63) 2-nitropropane	12.614	41	40796	51.51	ug/L	#	76
64) methylcyclohexane	12.148	83	167886	43.58	ug/L		99
65) 2-chloroethyl vinyl ether	12.650	63	290592	293.05	ug/L		98
66) methyl methacrylate	12.080	100	30234	57.22	ug/L		97
67) 1,2-dichloropropane	12.132	63	91890	51.95	ug/L		99
68) dibromomethane	12.247	93	63842	53.62	ug/L		95
69) bromodichloromethane	12.410	83	130251	53.30	ug/L		99
70) epichlorohydrin	12.744	57	74687	281.16	ug/L		99
71) cis-1,3-dichloropropene	12.891	75	144253	55.24	ug/L		99
72) 4-methyl-2-pentanone	13.001	58	222899	203.94	ug/L		97
73) 3-methyl-1-butanol	12.995	55	211462	1030.86	ug/L		98
76) toluene	13.309	92	207866	48.24	ug/L		100
77) trans-1,3-dichloropropene	13.503	75	124573	56.19	ug/L		98
78) ethyl methacrylate	13.482	69	117722	52.49	ug/L		96
79) 1,1,2-trichloroethane	13.749	83	67710	54.99	ug/L		98
80) 2-hexanone	13.921	58	186613	205.05	ug/L		97
81) tetrachloroethene	13.916	166	95832	45.43	ug/L		98
82) 1,3-dichloropropane	13.947	76	127909	53.98	ug/L		97
83) butyl acetate	14.000	56	70430	52.02	ug/L		99
84) dibromochloromethane	14.219	129	100010	54.23	ug/L		96
85) 1,2-dibromoethane	14.392	107	94319	55.94	ug/L		98
86) n-butyl ether	14.868	57	338494	47.84	ug/L		99
87) chlorobenzene	14.931	112	221988	49.54	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.004	131	113475	50.54	ug/L		96
89) ethylbenzene	14.993	91	381948	47.71	ug/L		99
90) m,p-xylene	15.129	106	299164	96.12	ug/L		97
91) o-xylene	15.579	106	165688	48.11	ug/L		96
92) styrene	15.590	104	238610	48.20	ug/L		98
93) butyl acrylate	15.370	55	181869	51.54	ug/L		97
94) n-amyl acetate	15.605	70	77366	48.76	ug/L		99
95) bromoform	15.856	173	72066	56.12	ug/L		98
96) isopropylbenzene	15.971	105	452513	48.59	ug/L		98
97) cis-1,4-dichloro-2-butene	16.008	75	46194	166.73	ug/L		96
100) bromobenzene	16.411	156	102689	53.88	ug/L		98
101) 1,1,2,2-tetrachloroethane	16.285	83	139903	56.52	ug/L		100
102) trans-1,4-dichloro-2-b...	16.317	53	26914	140.22	ug/L		85
103) 1,2,3-trichloropropane	16.379	110	37925	53.50	ug/L		99
104) n-propylbenzene	16.437	91	457097	49.16	ug/L		100
105) 2-chlorotoluene	16.594	126	106108	51.23	ug/L		94
106) 4-chlorotoluene	16.719	91	246584	50.94	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251078.d
Acq On : 25 Jun 2019 7:20 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 52 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 25 19:49:10 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

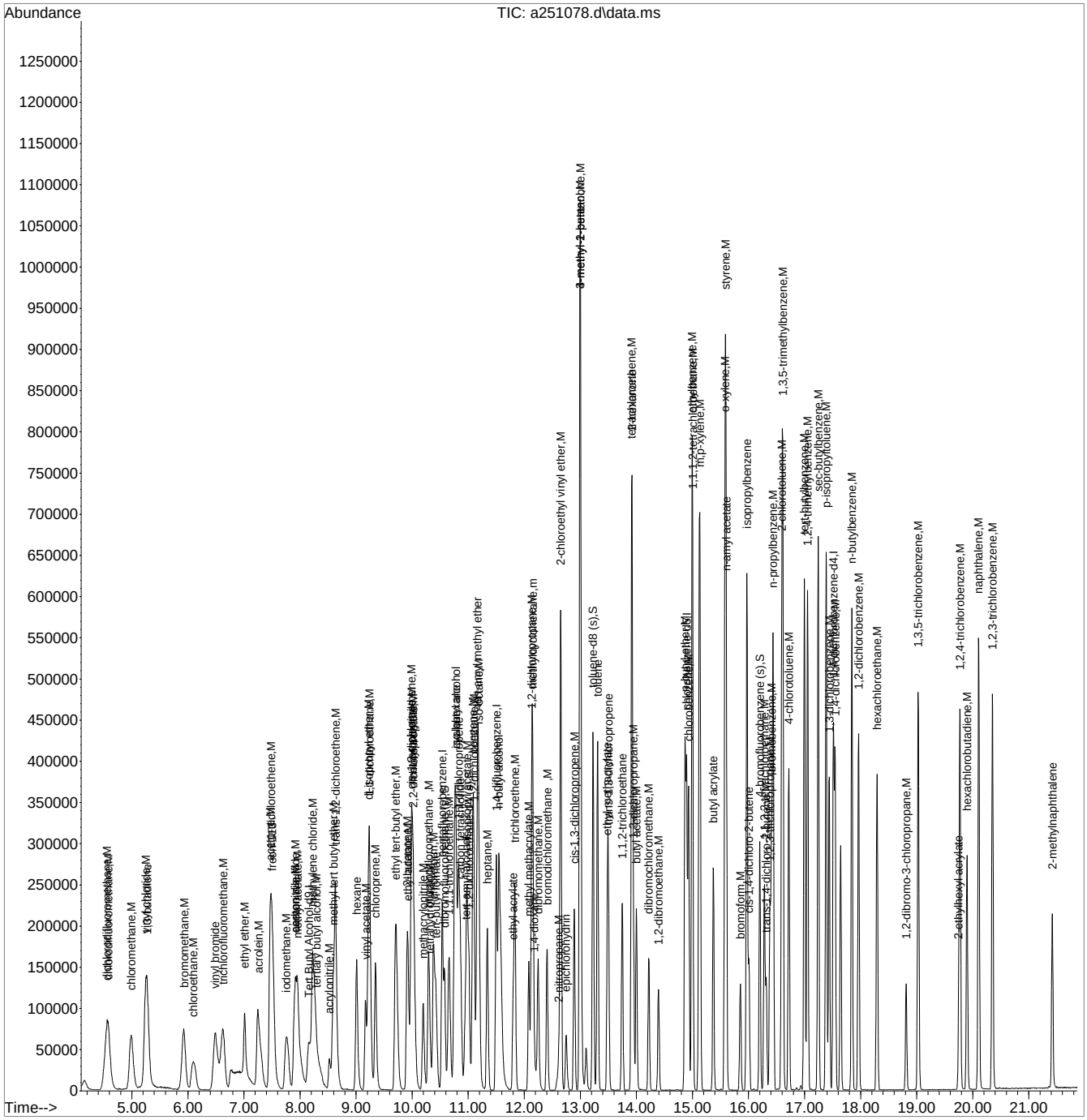
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.609	105	378004	52.72	ug/L	97
108) tert-butylbenzene	16.996	134	87687	52.79	ug/L	97
109) 1,2,4-trimethylbenzene	17.054	105	359245	50.63	ug/L	99
110) sec-butylbenzene	17.242	105	510735	52.17	ug/L	99
111) 1,3-dichlorobenzene	17.441	146	186852	49.46	ug/L	99
112) p-isopropyltoluene	17.383	119	425481	52.16	ug/L	99
113) 1,4-dichlorobenzene	17.546	146	184802	48.33	ug/L	97
114) 1,2-dichlorobenzene	17.964	146	203558	49.72	ug/L	98
115) n-butylbenzene	17.844	92	193002	48.39	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.811	157	46756	54.08	ug/L	97
117) 1,3,5-trichlorobenzene	19.026	180	184531	47.81	ug/L	96
118) 2-ethylhexyl acrylate	19.747	70	22783	10.60	ug/L	93
119) 1,2,4-trichlorobenzene	19.774	180	175525	50.55	ug/L	98
120) hexachlorobutadiene	19.899	225	72205	52.27	ug/L	95
121) naphthalene	20.103	128	510497	50.29	ug/L	99
122) 1,2,3-trichlorobenzene	20.349	180	187471	53.79	ug/L	95
123) hexachloroethane	18.293	201	81156	63.23	ug/L	98
124) 2-methylnaphthalene	21.421	142	131333	24.26	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251078.d
Acq On : 25 Jun 2019 7:20 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9710,5,,,,1
ALS Vial : 52 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 25 19:49:10 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251099.d
Acq On : 26 Jun 2019 5:33 am
Operator : brittank
Sample : ECC9645-50 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 73 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 06:10:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.164	65	278686	500.00	ug/L	0.00
5) pentafluorobenzene	10.538	168	206408	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	304299	50.00	ug/L	0.00
74) chlorobenzene-d5	14.895	117	261968	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.515	152	143296	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.575	113	103328	50.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.58%			
53) 1,2-dichloroethane-d4 (s)	11.014	65	111187	50.86	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.72%			
75) toluene-d8 (s)	13.227	98	347174	49.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.66%			
99) 4-bromofluorobenzene (s)	16.197	95	115665	51.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.64%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.289	59	147579	256.41	ug/L	99
4) 1,4-dioxane	12.181	88	50884	1364.96	ug/L	99
6) chlorodifluoromethane	4.581	51	161860	40.38	ug/L	94
7) dichlorodifluoromethane	4.550	85	183830	37.70	ug/L	94
8) chloromethane	4.989	50	203031	38.34	ug/L	98
9) vinyl chloride	5.245	62	189390	42.21	ug/L	99
10) 1,3-butadiene	5.277	54	162933	38.10	ug/L	98
11) bromomethane	5.925	94	132152	41.93	ug/L	98
12) chloroethane	6.103	64	99348	43.56	ug/L	97
13) vinyl bromide	6.485	106	131084	43.60	ug/L	99
14) trichlorofluoromethane	6.616	101	197599	42.56	ug/L	99
15) ethyl ether	7.013	74	50688	48.80	ug/L	94
16) acrolein	7.259	56	23107	48.92	ug/L	94
17) freon 113	7.500	151	95612	42.38	ug/L	98
18) 1,1-dichloroethene	7.468	96	96317	43.16	ug/L	98
19) acetone	7.473	58	61434	204.71	ug/L	97
20) acetonitrile	7.913	41	237981	500.90	ug/L	99
21) iodomethane	7.740	142	184894	46.64	ug/L	98
22) carbon disulfide	7.897	76	296480	39.93	ug/L	99
23) methylene chloride	8.221	84	109498	47.11	ug/L	96
24) methyl acetate	7.960	43	102586	48.80	ug/L	99
25) methyl tert butyl ether	8.598	73	330863	50.30	ug/L	100
26) trans-1,2-dichloroethene	8.635	96	92116	47.52	ug/L	99
27) hexane	9.011	57	105335	37.57	ug/L	99
28) di-isopropyl ether	9.226	45	330609	49.07	ug/L	98
29) ethyl tert-butyl ether	9.707	59	323902	50.26	ug/L	94
30) 2-butanone	9.911	72	72545	209.50	ug/L	97
31) 1,1-dichloroethane	9.241	63	162790	46.72	ug/L	98
32) chloroprene	9.346	53	126690	44.86	ug/L	98
33) acrylonitrile	8.525	53	54999	51.35	ug/L	94
34) vinyl acetate	9.168	86	22662	50.91	ug/L #	84
35) ethyl acetate	9.926	45	20466	52.89	ug/L #	61
36) 2,2-dichloropropane	10.026	77	148470	43.71	ug/L	99
37) cis-1,2-dichloroethene	9.984	96	107948	48.32	ug/L	97
38) methyl acrylate	10.021	85	19352	50.13	ug/L #	93
39) propionitrile	9.989	54	234362	512.27	ug/L	85
40) bromochloromethane	10.293	128	57346	50.31	ug/L	99
41) tetrahydrofuran	10.313	42	45530	45.84	ug/L	96
42) chloroform	10.381	83	169088	46.68	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251099.d
Acq On : 26 Jun 2019 5:33 am
Operator : brittank
Sample : ECC9645-50 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 73 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 06:10:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.423	59	101183	54.99	ug/L		98
45) methacrylonitrile	10.198	67	51503	52.02	ug/L		85
46) cyclohexane	10.774	84	164861	43.79	ug/L		96
47) 1,1,1-trichloroethane	10.664	97	174235	49.09	ug/L		97
48) iso-butyl alcohol	10.774	43	166147	485.98	ug/L		94
49) 1,1-dichloropropene	10.826	75	119597	45.10	ug/L		97
50) carbon tetrachloride	10.863	117	154781	48.79	ug/L		99
51) tert-amyl alcohol	10.957	73	77413	243.58	ug/L		98
54) benzene	11.082	78	366931	47.24	ug/L		100
55) iso-octane	11.182	57	308923	42.38	ug/L		98
56) tert-amyl methyl ether	11.161	73	333803	50.46	ug/L		97
57) heptane	11.344	71	56039	38.80	ug/L		95
58) isopropyl acetate	10.978	87	30299	53.16	ug/L	#	93
59) 1,2-dichloroethane	11.103	62	128032	45.93	ug/L		99
60) n-butyl alcohol	11.548	56	339631	2543.15	ug/L		97
61) ethyl acrylate	11.804	55	130638	51.56	ug/L		99
62) trichloroethene	11.830	95	91179	46.09	ug/L		97
63) 2-nitropropane	12.620	41	42735	50.92	ug/L		94
64) methylcyclohexane	12.149	83	170998	41.88	ug/L		99
65) 2-chloroethyl vinyl ether	12.646	63	288952	274.94	ug/L		97
66) methyl methacrylate	12.076	100	29718	53.07	ug/L		90
67) 1,2-dichloropropane	12.134	63	96598	51.53	ug/L		95
68) dibromomethane	12.249	93	65767	52.12	ug/L		92
69) bromodichloromethane	12.406	83	135612	52.36	ug/L		98
70) epichlorohydrin	12.745	57	72152	256.28	ug/L		100
71) cis-1,3-dichloropropene	12.892	75	144451	52.19	ug/L		97
72) 4-methyl-2-pentanone	12.997	58	243764	210.44	ug/L		95
73) 3-methyl-1-butanol	12.997	55	217412	1000.04	ug/L		98
76) toluene	13.305	92	223383	48.25	ug/L		99
77) trans-1,3-dichloropropene	13.504	75	122044	51.24	ug/L		98
78) ethyl methacrylate	13.483	69	127619	52.96	ug/L		95
79) 1,1,2-trichloroethane	13.744	83	71169	53.80	ug/L		96
80) 2-hexanone	13.917	58	197251	201.74	ug/L		99
81) tetrachloroethene	13.917	166	100262	44.24	ug/L		96
82) 1,3-dichloropropane	13.948	76	130729	51.35	ug/L		97
83) butyl acetate	14.001	56	75678	52.02	ug/L		98
84) dibromochloromethane	14.220	129	103769	52.37	ug/L		97
85) 1,2-dibromoethane	14.393	107	98760	54.52	ug/L		100
86) n-butyl ether	14.869	57	375479	49.39	ug/L		99
87) chlorobenzene	14.932	112	234408	48.70	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.000	131	121478	50.36	ug/L		98
89) ethylbenzene	14.994	91	409577	47.62	ug/L		99
90) m,p-xylene	15.125	106	325515	97.35	ug/L		99
91) o-xylene	15.580	106	186100	50.30	ug/L		100
92) styrene	15.591	104	257614	48.43	ug/L		99
93) butyl acrylate	15.371	55	196964	51.95	ug/L		99
94) n-amyl acetate	15.606	70	86302	50.63	ug/L		95
95) bromoform	15.857	173	76904	55.75	ug/L		95
96) isopropylbenzene	15.972	105	495599	49.53	ug/L		99
97) cis-1,4-dichloro-2-butene	16.009	75	17246	57.94	ug/L		94
100) bromobenzene	16.412	156	110318	52.35	ug/L		98
101) 1,1,2,2-tetrachloroethane	16.281	83	154820	56.57	ug/L		100
102) trans-1,4-dichloro-2-b...	16.312	53	13386	63.07	ug/L		88
103) 1,2,3-trichloropropane	16.380	110	42089	53.70	ug/L		98
104) n-propylbenzene	16.438	91	512001	49.80	ug/L		99
105) 2-chlorotoluene	16.595	126	117490	51.30	ug/L		98
106) 4-chlorotoluene	16.720	91	267721	50.02	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251099.d
Acq On : 26 Jun 2019 5:33 am
Operator : brittank
Sample : ECC9645-50 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 73 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 06:10:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

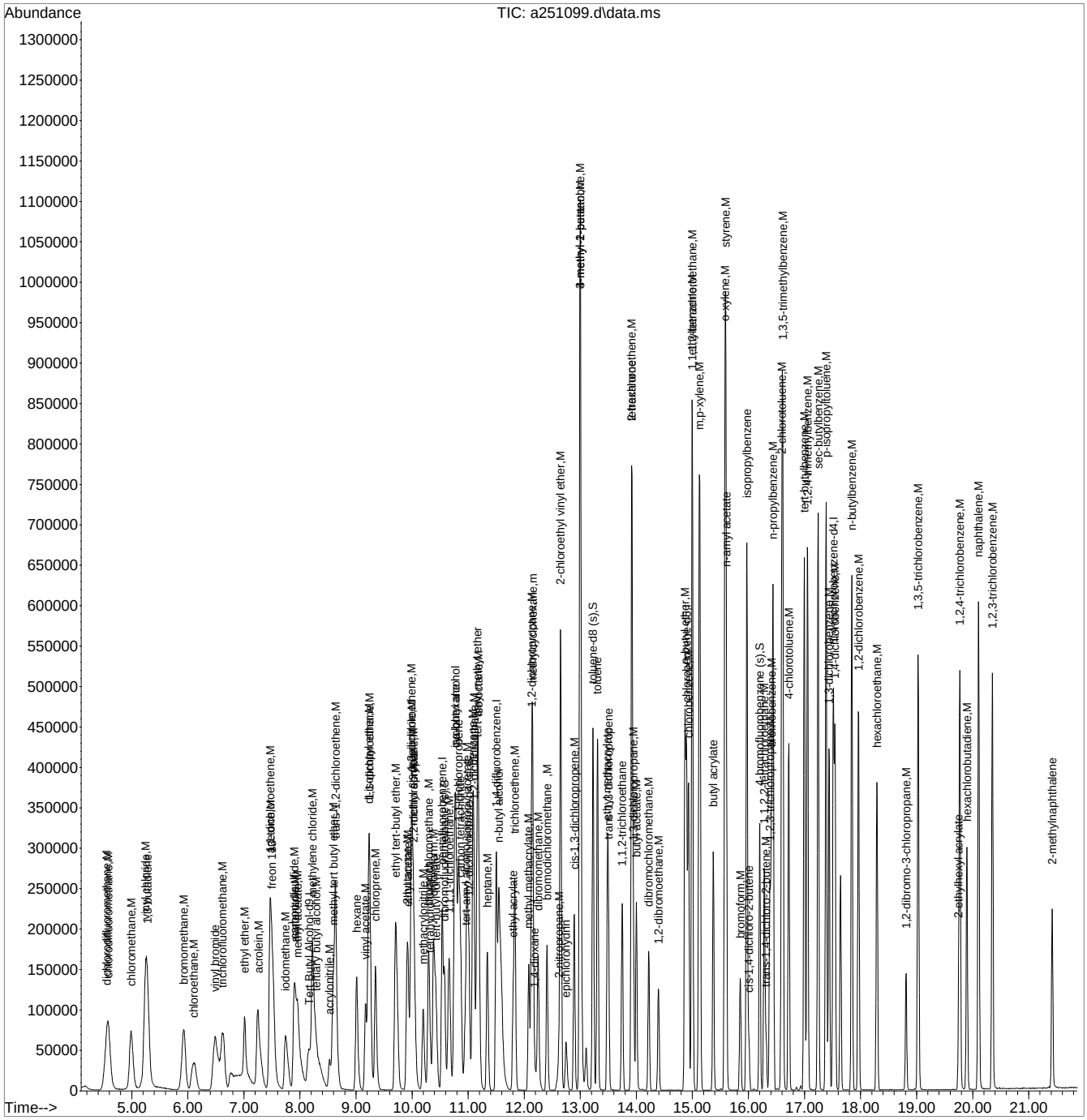
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.611	105	415306	52.38	ug/L	99
108) tert-butylbenzene	16.998	134	90395	49.22	ug/L	93
109) 1,2,4-trimethylbenzene	17.055	105	406656	51.84	ug/L	99
110) sec-butylbenzene	17.243	105	543640	50.23	ug/L	99
111) 1,3-dichlorobenzene	17.437	146	205502	49.19	ug/L	98
112) p-isopropyltoluene	17.385	119	463094	51.34	ug/L	99
113) 1,4-dichlorobenzene	17.542	146	202928	47.99	ug/L	100
114) 1,2-dichlorobenzene	17.965	146	228142	50.40	ug/L	99
115) n-butylbenzene	17.845	92	215514	48.87	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.812	157	51099	53.46	ug/L	99
117) 1,3,5-trichlorobenzene	19.027	180	209260	49.03	ug/L	100
118) 2-ethylhexyl acrylate	19.749	70	23582	9.99	ug/L	96
119) 1,2,4-trichlorobenzene	19.770	180	196743	51.25	ug/L	99
120) hexachlorobutadiene	19.900	225	72729	47.62	ug/L	98
121) naphthalene	20.104	128	560345	49.92	ug/L	99
122) 1,2,3-trichlorobenzene	20.350	180	198754	51.58	ug/L	100
123) hexachloroethane	18.295	201	80242	56.54	ug/L	97
124) 2-methylnaphthalene	21.417	142	134065	22.40	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9710\
Data File : a251099.d
Acq On : 26 Jun 2019 5:33 am
Operator : brittank
Sample : ECC9645-50 Inst : MSA
Misc : MS35699,VA9710,5,,,,1
ALS Vial : 73 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 26 06:10:41 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181280.D
Acq On : 2 May 2019 5:02 pm
Operator : juntaep
Sample : ic7749-0.2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 14:45:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	176670	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	236470	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	310824	50.00	ug/L		0.00
74) chlorobenzene-d5	15.61	117	298750	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	193893	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	97731	51.44	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.88%				
54) 1,2-dichloroethane-d4 (s)	10.76	65	106663	53.60	ug/L		0.01
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.20%				
75) toluene-d8 (s)	13.58	98	363790	51.39	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.78%				
98) 4-bromofluorobenzene (s)	17.12	95	149482	44.02	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.04%				
Target Compounds							Qvalue
9) vinyl chloride	4.51	62	1774	0.24	ug/L	#	50
11) chloroethane	5.30	64	475	0.18	ug/L	#	45
14) 1,3-butadiene	4.52	54	579	0.18	ug/L	#	75
17) 1,1-dichloroethene	6.67	96	342	0.21	ug/L		88
21) iodomethane	6.94	142	710	0.22	ug/L		90
22) carbon disulfide	7.11	76	1391	0.23	ug/L		86
25) methyl tert butyl ether	7.90	73	1747	0.24	ug/L		78
26) trans-1,2-dichloroethene	7.94	96	377	0.21	ug/L	#	43
28) di-isopropyl ether	8.63	45	2043	0.25	ug/L		55
30) 1,1-dichloroethane	8.61	63	704	0.20	ug/L	#	49
31) chloroprene	8.74	53	488	0.18	ug/L	#	36
34) ethyl tert-butyl ether	9.18	59	1629	0.20	ug/L		94
46) 1,1,1-trichloroethane	10.31	97	628	0.17	ug/L	#	64
47) cyclohexane	10.46	84	804	0.19	ug/L	#	65
51) carbon tetrachloride	10.55	117	583	0.19	ug/L	#	53
55) iso-octane	10.99	57	1218	0.22	ug/L		79
59) tert-amyl methyl ether	10.97	73	1594	0.23	ug/L		71
62) trichloroethene	11.81	130	374	0.19	ug/L		92
65) 2-chloroethyl vinyl ether	12.90	63	1370	0.98	ug/L		77
70) bromodichloromethane	12.53	83	616	0.23	ug/L	#	26
71) cis-1,3-dichloropropene	13.17	75	757	0.23	ug/L		85
72) 4-methyl-2-pentanone	13.32	58	593	0.68	ug/L	#	32
76) toluene	13.68	92	1029	0.24	ug/L		94
77) trans-1,3-dichloropropene	13.95	75	634	0.22	ug/L	#	36
79) 1,1,2-trichloroethane	14.24	83	304	0.20	ug/L	#	52
81) 1,3-dichloropropane	14.48	76	620	0.23	ug/L	#	27
84) dibromochloromethane	14.81	129	409	0.19	ug/L		73
85) 1,2-dibromoethane	15.00	107	395	0.19	ug/L		81
87) chlorobenzene	15.65	112	1171	0.24	ug/L		89
92) styrene	16.46	104	1214	0.23	ug/L		96
93) butyl acrylate	16.30	55	1092	0.25	ug/L	#	70
94) bromoform	16.72	173	260	0.17	ug/L		67
99) bromobenzene	17.32	156	628	0.22	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181280.D
Acq On : 2 May 2019 5:02 pm
Operator : juntaep
Sample : ic7749-0.2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 14:45:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

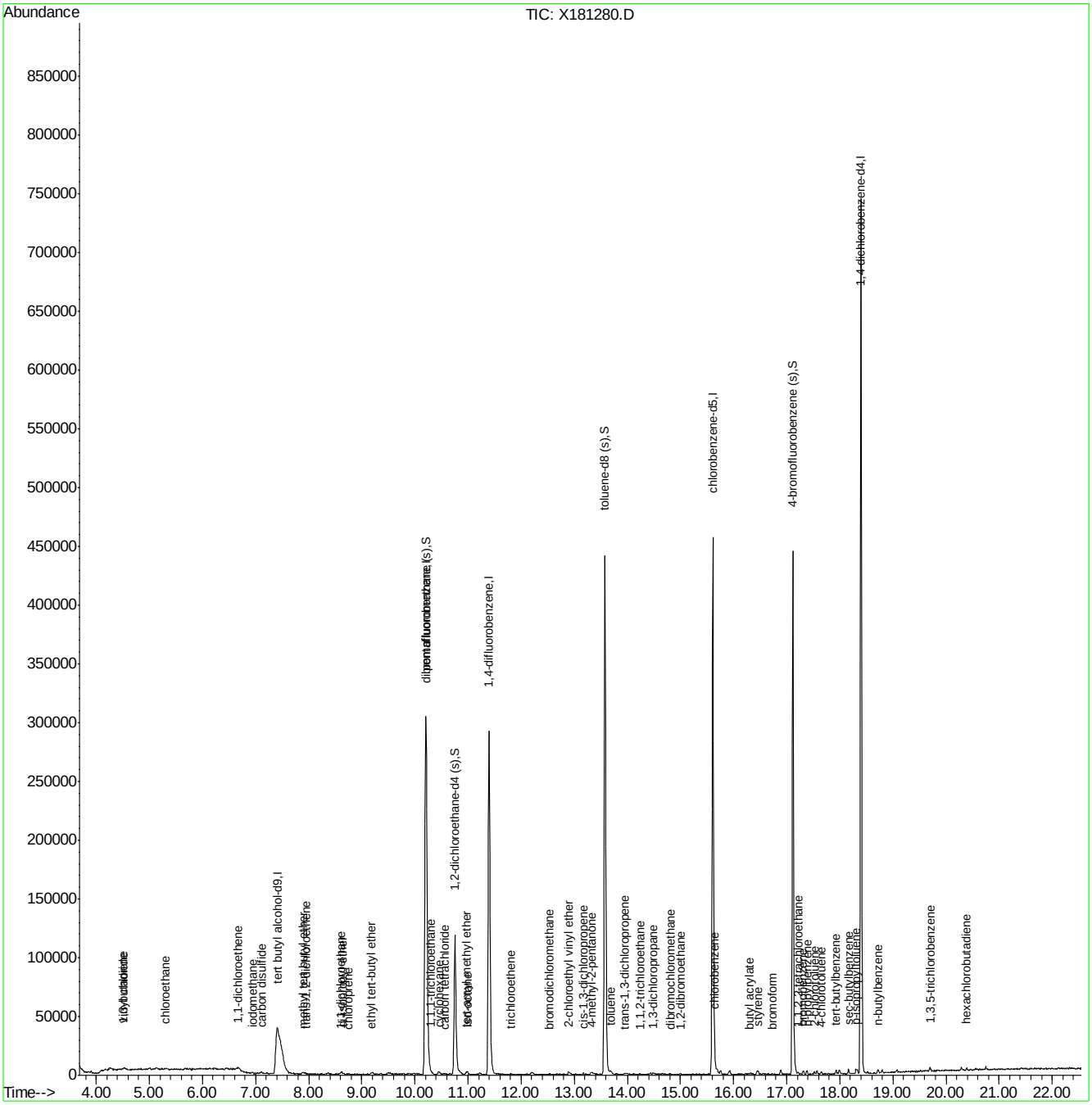
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) 1,1,2,2-tetrachloroethane	17.22	83	692	0.21	ug/L		89
103) n-propylbenzene	17.38	91	2807	0.23	ug/L		96
104) 2-chlorotoluene	17.51	126	601	0.21	ug/L	#	68
105) 4-chlorotoluene	17.65	91	1740	0.25	ug/L		93
107) tert-butylbenzene	17.93	119	1690	0.19	ug/L		90
109) sec-butylbenzene	18.17	105	2858	0.22	ug/L		95
111) p-isopropyltoluene	18.31	119	2555	0.23	ug/L		96
115) n-butylbenzene	18.72	92	1120	0.20	ug/L		94
117) 1,3,5-trichlorobenzene	19.69	180	1224	0.19	ug/L		87
118) hexachlorobutadiene	20.39	225	496	0.23	ug/L		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181280.D
Acq On : 2 May 2019 5:02 pm
Operator : juntaep
Sample : ic7749-0.2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 14:45:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181281.D
Acq On : 2 May 2019 5:31 pm
Operator : juntaep
Sample : ic7749-0.5
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 14:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.41	65	161729	500.00	ug/L		0.01
5) pentafluorobenzene	10.20	168	233433	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	308156	50.00	ug/L		0.00
74) chlorobenzene-d5	15.61	117	294648	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	195360	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	94356	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	105639	53.54	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.08%				
75) toluene-d8 (s)	13.58	98	360262	51.61	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.22%				
98) 4-bromofluorobenzene (s)	17.12	95	149058	43.57	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.14%				
Target Compounds							Qvalue
6) chlorodifluoromethane	3.90	51	3655	0.51	ug/L		72
7) dichlorodifluoromethane	3.88	85	2753	0.36	ug/L		83
9) vinyl chloride	4.52	62	3801	0.52	ug/L		91
11) chloroethane	5.31	64	1321	0.51	ug/L	#	46
12) vinyl bromide	5.66	106	1318	0.44	ug/L		74
13) trichlorofluoromethane	5.80	101	1993	0.42	ug/L		87
14) 1,3-butadiene	4.54	54	1660	0.53	ug/L		80
17) 1,1-dichloroethene	6.67	96	849	0.52	ug/L	#	72
21) iodomethane	6.94	142	1574	0.49	ug/L		82
22) carbon disulfide	7.11	76	3007	0.51	ug/L		89
23) methylene chloride	7.47	84	1276	0.63	ug/L	#	60
25) methyl tert butyl ether	7.89	73	3719	0.52	ug/L		96
26) trans-1,2-dichloroethene	7.93	96	941	0.54	ug/L		77
28) di-isopropyl ether	8.62	45	4614	0.58	ug/L		81
30) 1,1-dichloroethane	8.60	63	1907	0.56	ug/L		87
31) chloroprene	8.74	53	1159	0.44	ug/L		63
34) ethyl tert-butyl ether	9.19	59	4038	0.51	ug/L		88
37) cis-1,2-dichloroethene	9.50	96	980	0.49	ug/L	#	85
40) tert-butyl formate	10.03	59	881	0.44	ug/L	#	59
41) bromochloromethane	9.87	128	527	0.48	ug/L	#	64
43) chloroform	9.98	83	1959	0.60	ug/L		99
46) 1,1,1-trichloroethane	10.32	97	1832	0.51	ug/L		84
47) cyclohexane	10.46	84	1793	0.43	ug/L	#	66
49) 1,1-dichloropropene	10.53	75	1051	0.47	ug/L		74
51) carbon tetrachloride	10.56	117	1313	0.44	ug/L	#	56
55) iso-octane	10.98	57	2257	0.41	ug/L		80
58) benzene	10.83	78	4064	0.59	ug/L		99
59) tert-amyl methyl ether	10.97	73	3579	0.53	ug/L		99
60) heptane	11.23	57	496	0.44	ug/L	#	67
62) trichloroethene	11.80	130	887	0.47	ug/L		90
65) 2-chloroethyl vinyl ether	12.90	63	3073	2.23	ug/L		91
68) dibromomethane	12.31	93	601	0.50	ug/L		89
70) bromodichloromethane	12.54	83	1375	0.53	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181281.D
Acq On : 2 May 2019 5:31 pm
Operator : juntaep
Sample : ic7749-0.5
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 14:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

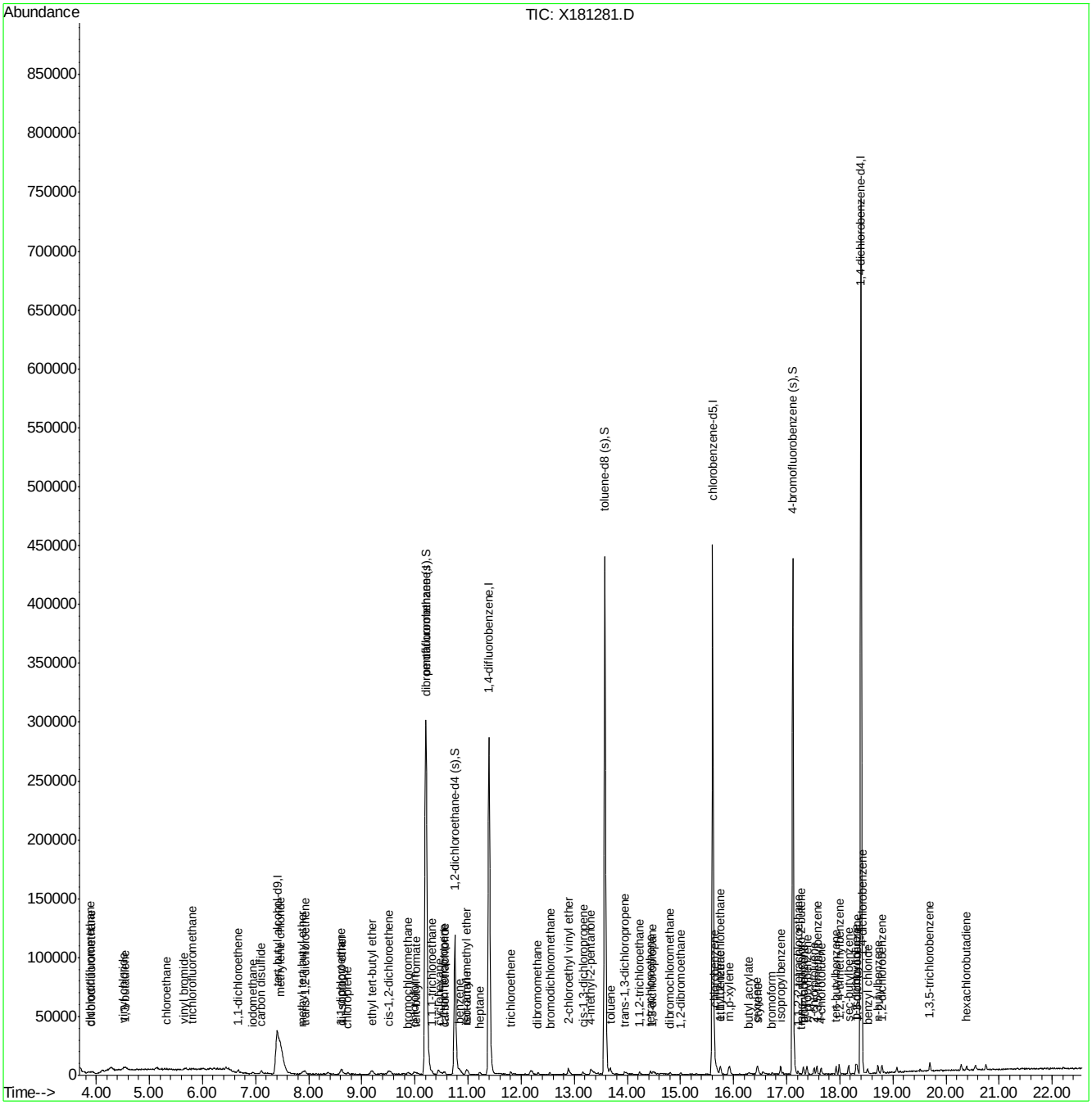
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
71) cis-1,3-dichloropropene	13.17	75	1457	0.45	ug/L		72
72) 4-methyl-2-pentanone	13.32	58	1285	1.48	ug/L	#	63
76) toluene	13.67	92	2179	0.51	ug/L		98
77) trans-1,3-dichloropropene	13.95	75	1271	0.45	ug/L	#	78
79) 1,1,2-trichloroethane	14.23	83	785	0.53	ug/L	#	70
80) tetrachloroethene	14.43	164	709	0.44	ug/L		85
81) 1,3-dichloropropane	14.47	76	1343	0.51	ug/L		75
84) dibromochloromethane	14.80	129	1046	0.50	ug/L		87
85) 1,2-dibromoethane	14.99	107	871	0.42	ug/L		92
87) chlorobenzene	15.65	112	2455	0.51	ug/L		90
88) 1,1,1,2-tetrachloroethane	15.75	131	1139	0.52	ug/L		94
89) ethylbenzene	15.75	91	4461	0.58	ug/L		95
90) m,p-xylene	15.92	106	3544	1.14	ug/L		87
91) o-xylene	16.44	91	4226	0.58	ug/L		92
92) styrene	16.46	104	2662	0.51	ug/L		91
93) butyl acrylate	16.29	55	2221	0.51	ug/L		91
94) bromoform	16.72	173	688	0.47	ug/L		74
95) isopropylbenzene	16.89	105	5241	0.54	ug/L		93
99) bromobenzene	17.32	156	1377	0.47	ug/L		91
100) 1,1,2,2-tetrachloroethane	17.22	83	1391	0.42	ug/L		90
101) trans-1,4-dichloro-2-buten	17.27	53	310	0.42	ug/L	#	70
103) n-propylbenzene	17.38	91	5692	0.47	ug/L		93
104) 2-chlorotoluene	17.52	126	1219	0.42	ug/L		88
105) 4-chlorotoluene	17.65	91	3649	0.51	ug/L		97
106) 1,3,5-trimethylbenzene	17.57	105	4198	0.44	ug/L		97
107) tert-butylbenzene	17.93	119	3784	0.41	ug/L		86
108) 1,2,4-trimethylbenzene	17.99	105	4867	0.50	ug/L		98
109) sec-butylbenzene	18.17	105	5485	0.41	ug/L		93
110) 1,3-dichlorobenzene	18.33	146	2932	0.56	ug/L		95
111) p-isopropyltoluene	18.30	119	5178	0.46	ug/L		96
112) 1,4-dichlorobenzene	18.43	146	2737	0.52	ug/L		93
113) 1,2-dichlorobenzene	18.80	146	3128	0.51	ug/L		92
114) benzyl chloride	18.52	91	3193	0.52	ug/L		95
115) n-butylbenzene	18.72	92	2409	0.44	ug/L		94
117) 1,3,5-trichlorobenzene	19.70	180	2836	0.44	ug/L		87
118) hexachlorobutadiene	20.39	225	891	0.41	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181281.D
Acq On : 2 May 2019 5:31 pm
Operator : juntaep
Sample : ic7749-0.5
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 14:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	163083	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	233883	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	307668	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	292122	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	190756	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	94094	50.08	ug/L		0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	104858	53.23	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.46%				
75) toluene-d8 (s)	13.58	98	360740	52.12	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.24%				
98) 4-bromofluorobenzene (s)	17.11	95	147976	44.29	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.58%				
Target Compounds							Qvalue
6) chlorodifluoromethane	3.92	51	7744	1.07	ug/L		93
7) dichlorodifluoromethane	3.88	85	6835	0.89	ug/L		79
8) chloromethane	4.28	50	10050	1.12	ug/L		94
9) vinyl chloride	4.52	62	7778	1.07	ug/L		93
10) bromomethane	5.13	96	4204	1.10	ug/L		86
11) chloroethane	5.32	64	2830	1.10	ug/L		91
12) vinyl bromide	5.68	106	2731	0.91	ug/L		78
13) trichlorofluoromethane	5.81	101	4561	0.97	ug/L		81
14) 1,3-butadiene	4.55	54	3599	1.15	ug/L		84
15) ethyl ether	6.23	74	948	0.92	ug/L	#	84
17) 1,1-dichloroethene	6.67	96	1744	1.06	ug/L	#	72
18) freon 113	6.71	101	2530	0.91	ug/L	#	81
21) iodomethane	6.94	142	3428	1.06	ug/L		85
22) carbon disulfide	7.11	76	6341	1.07	ug/L		97
23) methylene chloride	7.47	84	2204	1.09	ug/L	#	72
25) methyl tert butyl ether	7.89	73	7749	1.08	ug/L		89
26) trans-1,2-dichloroethene	7.93	96	2044	1.17	ug/L		95
27) hexane	8.36	57	2682	1.01	ug/L		85
28) di-isopropyl ether	8.62	45	8956	1.12	ug/L		87
30) 1,1-dichloroethane	8.61	63	3829	1.13	ug/L		92
31) chloroprene	8.74	53	2965	1.13	ug/L		93
34) ethyl tert-butyl ether	9.20	59	7807	0.98	ug/L		89
36) 2,2-dichloropropane	9.54	77	4342	1.27	ug/L		92
37) cis-1,2-dichloroethene	9.50	96	2462	1.23	ug/L		90
39) propionitrile	9.51	54	3061	9.85	ug/L		72
40) tert-butyl formate	10.03	59	2083	1.04	ug/L		90
41) bromochloromethane	9.87	128	1036	0.95	ug/L	#	78
43) chloroform	9.98	83	3767	1.16	ug/L		95
46) 1,1,1-trichloroethane	10.31	97	3822	1.06	ug/L		90
47) cyclohexane	10.46	84	4078	0.98	ug/L		97
49) 1,1-dichloropropene	10.53	75	2402	1.07	ug/L		85
51) carbon tetrachloride	10.56	117	3341	1.12	ug/L	#	82
55) iso-octane	10.99	57	5347	0.97	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
56) epichlorohydrin	12.98	57	1059	4.89	ug/L		55
57) n-butyl alcohol	11.54	56	3217	43.30	ug/L		90
58) benzene	10.83	78	7971	1.16	ug/L		90
59) tert-amyl methyl ether	10.98	73	7257	1.08	ug/L		94
60) heptane	11.21	57	1101	0.98	ug/L	#	81
61) 1,2-dichloroethane	10.88	62	2898	1.28	ug/L		91
62) trichloroethene	11.80	130	1865	0.98	ug/L		79
63) ethyl acrylate	11.85	55	1989	0.80	ug/L		59
65) 2-chloroethyl vinyl ether	12.89	63	6410	4.65	ug/L		97
67) 1,2-dichloropropane	12.18	76	769	0.96	ug/L		95
68) dibromomethane	12.32	93	1166	0.97	ug/L		87
69) methylcyclohexane	12.21	83	3397	1.04	ug/L		93
70) bromodichloromethane	12.55	83	2662	1.02	ug/L		90
71) cis-1,3-dichloropropene	13.17	75	3191	0.99	ug/L		92
72) 4-methyl-2-pentanone	13.32	58	3072	3.55	ug/L		88
73) 3-methyl-1-butanol	13.35	70	1007	14.11	ug/L	#	75
76) toluene	13.68	92	4730	1.11	ug/L		98
77) trans-1,3-dichloropropene	13.95	75	2984	1.07	ug/L		84
78) ethyl methacrylate	13.98	69	2057	0.83	ug/L		79
79) 1,1,2-trichloroethane	14.25	83	1493	1.02	ug/L	#	80
80) tetrachloroethene	14.43	164	1731	1.09	ug/L		92
81) 1,3-dichloropropane	14.48	76	3089	1.17	ug/L		87
82) 2-hexanone	14.49	58	2615	3.69	ug/L	#	65
83) butyl acetate	14.64	56	1401	0.99	ug/L	#	48
84) dibromochloromethane	14.80	129	2190	1.06	ug/L		95
85) 1,2-dibromoethane	14.99	107	1979	0.97	ug/L		81
86) n-butyl ether	15.67	57	9042	1.16	ug/L		97
87) chlorobenzene	15.65	112	5350	1.11	ug/L		93
88) 1,1,1,2-tetrachloroethane	15.75	131	2440	1.11	ug/L		97
89) ethylbenzene	15.75	91	9499	1.24	ug/L		97
90) m,p-xylene	15.92	106	7145	2.32	ug/L		99
91) o-xylene	16.44	91	8167	1.13	ug/L		87
92) styrene	16.46	104	5880	1.14	ug/L		94
93) butyl acrylate	16.28	55	5041	1.17	ug/L		91
94) bromoform	16.72	173	1659	1.14	ug/L		81
95) isopropylbenzene	16.88	105	10772	1.13	ug/L		98
96) cis-1,4-dichloro-2-butene	16.92	88	874	1.15	ug/L		92
99) bromobenzene	17.32	156	2694	0.94	ug/L		83
100) 1,1,2,2-tetrachloroethane	17.22	83	2882	0.90	ug/L		89
101) trans-1,4-dichloro-2-buten	17.26	53	723	1.01	ug/L	#	79
102) 1,2,3-trichloropropane	17.30	110	676	0.86	ug/L	#	43
103) n-propylbenzene	17.38	91	11486	0.96	ug/L		99
104) 2-chlorotoluene	17.51	126	2504	0.89	ug/L		95
105) 4-chlorotoluene	17.64	91	7343	1.06	ug/L		98
106) 1,3,5-trimethylbenzene	17.57	105	8590	0.91	ug/L		94
107) tert-butylbenzene	17.93	119	7374	0.83	ug/L		93
108) 1,2,4-trimethylbenzene	17.98	105	9261	0.97	ug/L		99
109) sec-butylbenzene	18.16	105	11536	0.88	ug/L		95
110) 1,3-dichlorobenzene	18.33	146	6009	1.17	ug/L		86
111) p-isopropyltoluene	18.31	119	10122	0.92	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

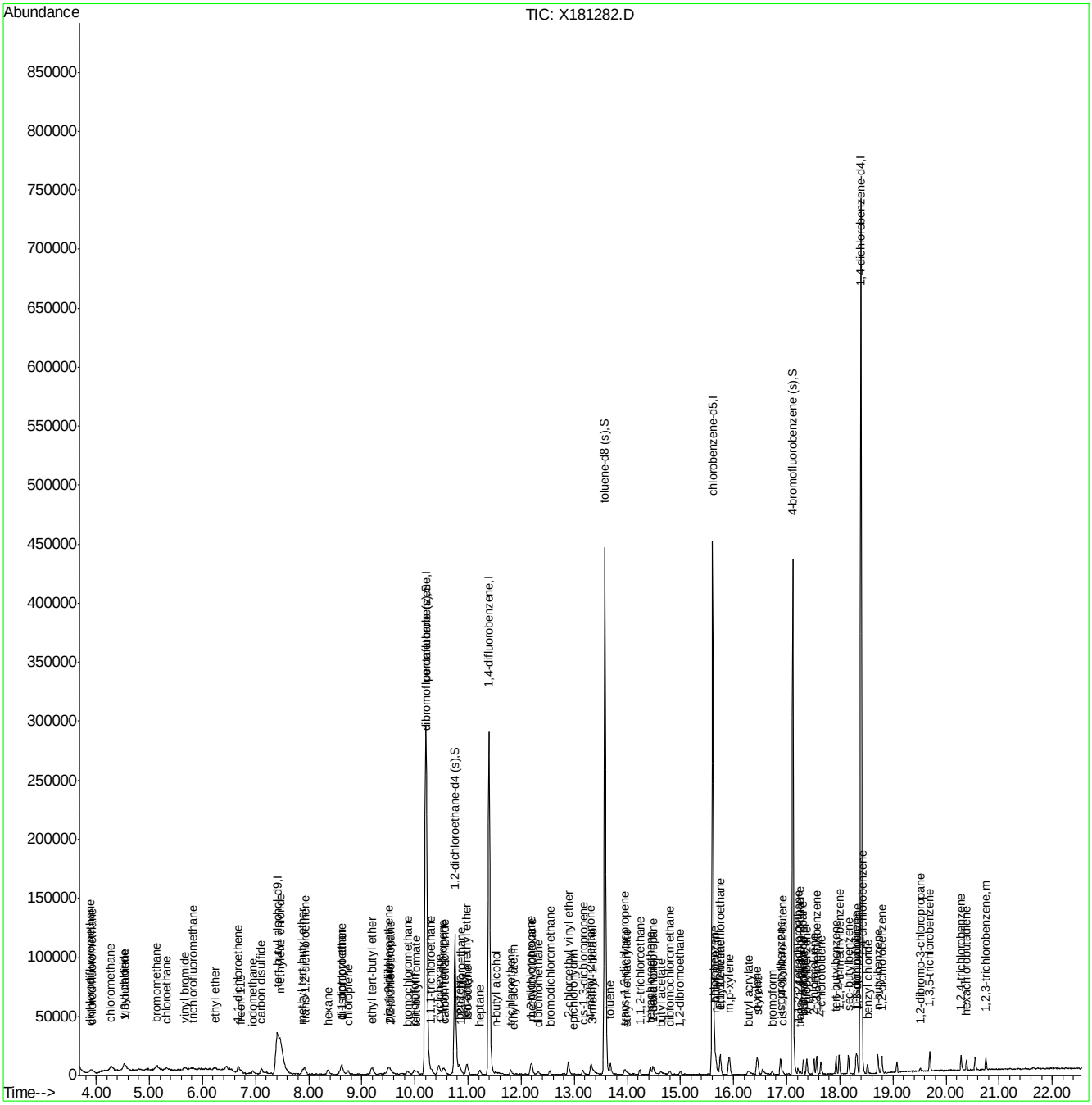
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
112) 1,4-dichlorobenzene	18.43	146	5590	1.09	ug/L	93
113) 1,2-dichlorobenzene	18.79	146	6099	1.03	ug/L	94
114) benzyl chloride	18.52	91	6338	1.06	ug/L	95
115) n-butylbenzene	18.72	92	5063	0.94	ug/L	88
116) 1,2-dibromo-3-chloropropan	19.52	157	846	0.78	ug/L	90
117) 1,3,5-trichlorobenzene	19.69	180	5929	0.95	ug/L	95
118) hexachlorobutadiene	20.39	225	1932	0.92	ug/L	93
121) 1,2,4-trichlorobenzene	20.28	180	4557	0.70	ug/L	100
122) 1,2,3-trichlorobenzene	20.75	180	4462	0.67	ug/L	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.41	65	164004	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	231037	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	305595	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	290219	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	185321	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	92565	49.24	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.48%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	103538	51.36	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.72%				
75) toluene-d8 (s)	13.58	98	357282	51.35	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.70%				
98) 4-bromofluorobenzene (s)	17.12	95	142961	47.09	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.18%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.54	59	3694	10.34	ug/L		48
6) chlorodifluoromethane	3.91	51	15013	2.13	ug/L		93
7) dichlorodifluoromethane	3.88	85	14818	2.11	ug/L		95
8) chloromethane	4.27	50	19355	2.11	ug/L		91
9) vinyl chloride	4.51	62	15344	2.09	ug/L		90
10) bromomethane	5.14	96	7826	1.98	ug/L		96
11) chloroethane	5.32	64	4975	2.02	ug/L		97
12) vinyl bromide	5.67	106	5876	2.14	ug/L		85
13) trichlorofluoromethane	5.80	101	9611	2.15	ug/L		85
14) 1,3-butadiene	4.52	54	7307	2.33	ug/L		92
15) ethyl ether	6.22	74	1998	2.01	ug/L	#	83
17) 1,1-dichloroethene	6.67	96	3625	2.18	ug/L		86
18) freon 113	6.70	101	6076	2.27	ug/L	#	79
19) acetone	6.67	43	5491	7.39	ug/L		81
21) iodomethane	6.94	142	6541	2.04	ug/L		99
22) carbon disulfide	7.10	76	12180	2.06	ug/L		97
23) methylene chloride	7.46	84	4387	1.98	ug/L		84
24) methyl acetate	7.19	43	3625	2.26	ug/L		89
25) methyl tert butyl ether	7.90	73	14927	2.06	ug/L		96
26) trans-1,2-dichloroethene	7.93	96	3819	2.12	ug/L		92
27) hexane	8.36	57	5972	2.34	ug/L		95
28) di-isopropyl ether	8.62	45	17597	2.11	ug/L		98
29) 2-butanone	9.42	72	1309	6.29	ug/L	#	35
30) 1,1-dichloroethane	8.61	63	7040	2.04	ug/L		96
31) chloroprene	8.74	53	5241	2.04	ug/L		97
34) ethyl tert-butyl ether	9.18	59	15498	2.01	ug/L		93
36) 2,2-dichloropropane	9.53	77	7801	2.09	ug/L		95
37) cis-1,2-dichloroethene	9.50	96	4672	2.30	ug/L		97
39) propionitrile	9.49	54	6065	20.46	ug/L		83
40) tert-butyl formate	10.03	59	4059	2.10	ug/L		94
41) bromochloromethane	9.86	128	2148	2.03	ug/L		86
43) chloroform	9.99	83	7008	2.00	ug/L		93
45) methacrylonitrile	9.76	67	1473	1.93	ug/L		83

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) 1,1,1-trichloroethane	10.31	97	6897	1.99	ug/L		95
47) cyclohexane	10.45	84	7410	1.94	ug/L		89
48) tert amyl alcohol	10.71	55	1389	11.55	ug/L	#	20
49) 1,1-dichloropropene	10.53	75	4833	2.18	ug/L		97
51) carbon tetrachloride	10.56	117	6343	2.18	ug/L		96
52) isopropyl acetate	10.76	87	687	1.72	ug/L	#	1
55) iso-octane	10.99	57	11644	2.15	ug/L		91
56) epichlorohydrin	12.98	57	2174	10.07	ug/L		93
57) n-butyl alcohol	11.51	56	6711	96.28	ug/L		95
58) benzene	10.84	78	14904	2.04	ug/L		97
59) tert-amyl methyl ether	10.97	73	14652	2.13	ug/L		95
60) heptane	11.22	57	2429	2.25	ug/L		93
61) 1,2-dichloroethane	10.87	62	5391	2.25	ug/L		90
62) trichloroethene	11.80	130	3959	2.13	ug/L		91
63) ethyl acrylate	11.82	55	4758	2.04	ug/L		86
65) 2-chloroethyl vinyl ether	12.89	63	14033	10.61	ug/L		96
67) 1,2-dichloropropane	12.18	76	1654	2.12	ug/L	#	74
68) dibromomethane	12.32	93	2459	2.08	ug/L		93
69) methylcyclohexane	12.20	83	7320	2.33	ug/L		90
70) bromodichloromethane	12.54	83	5254	1.99	ug/L		99
71) cis-1,3-dichloropropene	13.17	75	6378	2.01	ug/L		86
72) 4-methyl-2-pentanone	13.31	58	7149	8.92	ug/L		91
73) 3-methyl-1-butanol	13.34	70	2571	5.38	ug/L	#	62
76) toluene	13.68	92	8904	2.06	ug/L		99
77) trans-1,3-dichloropropene	13.94	75	6039	2.16	ug/L		95
78) ethyl methacrylate	13.96	69	4668	2.10	ug/L		86
79) 1,1,2-trichloroethane	14.24	83	3178	2.17	ug/L		93
80) tetrachloroethene	14.43	164	3485	2.21	ug/L		89
81) 1,3-dichloropropane	14.47	76	6161	2.24	ug/L		90
82) 2-hexanone	14.49	58	5927	8.92	ug/L		99
83) butyl acetate	14.62	56	2950	2.09	ug/L	#	71
84) dibromochloromethane	14.79	129	4482	2.19	ug/L		88
85) 1,2-dibromoethane	15.00	107	4267	2.18	ug/L		95
86) n-butyl ether	15.67	57	16715	2.06	ug/L		99
87) chlorobenzene	15.65	112	10504	2.13	ug/L		95
88) 1,1,1,2-tetrachloroethane	15.75	131	4613	2.06	ug/L		90
89) ethylbenzene	15.75	91	17806	2.13	ug/L		99
90) m,p-xylene	15.91	106	14109	4.26	ug/L		98
91) o-xylene	16.44	91	15809	2.06	ug/L		100
92) styrene	16.46	104	11652	2.18	ug/L		94
93) butyl acrylate	16.27	55	9431	2.10	ug/L		96
94) bromoform	16.72	173	3226	2.24	ug/L		92
95) isopropylbenzene	16.89	105	20000	2.04	ug/L		97
96) cis-1,4-dichloro-2-butene	16.92	88	1827	2.45	ug/L		93
99) bromobenzene	17.32	156	5453	2.03	ug/L	#	82
100) 1,1,2,2-tetrachloroethane	17.22	83	5632	1.94	ug/L		96
101) trans-1,4-dichloro-2-buten	17.26	53	1237	1.88	ug/L		90
102) 1,2,3-trichloropropane	17.30	110	1438	2.04	ug/L	#	78
103) n-propylbenzene	17.38	91	22490	2.01	ug/L		98
104) 2-chlorotoluene	17.51	126	5039	1.99	ug/L		87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

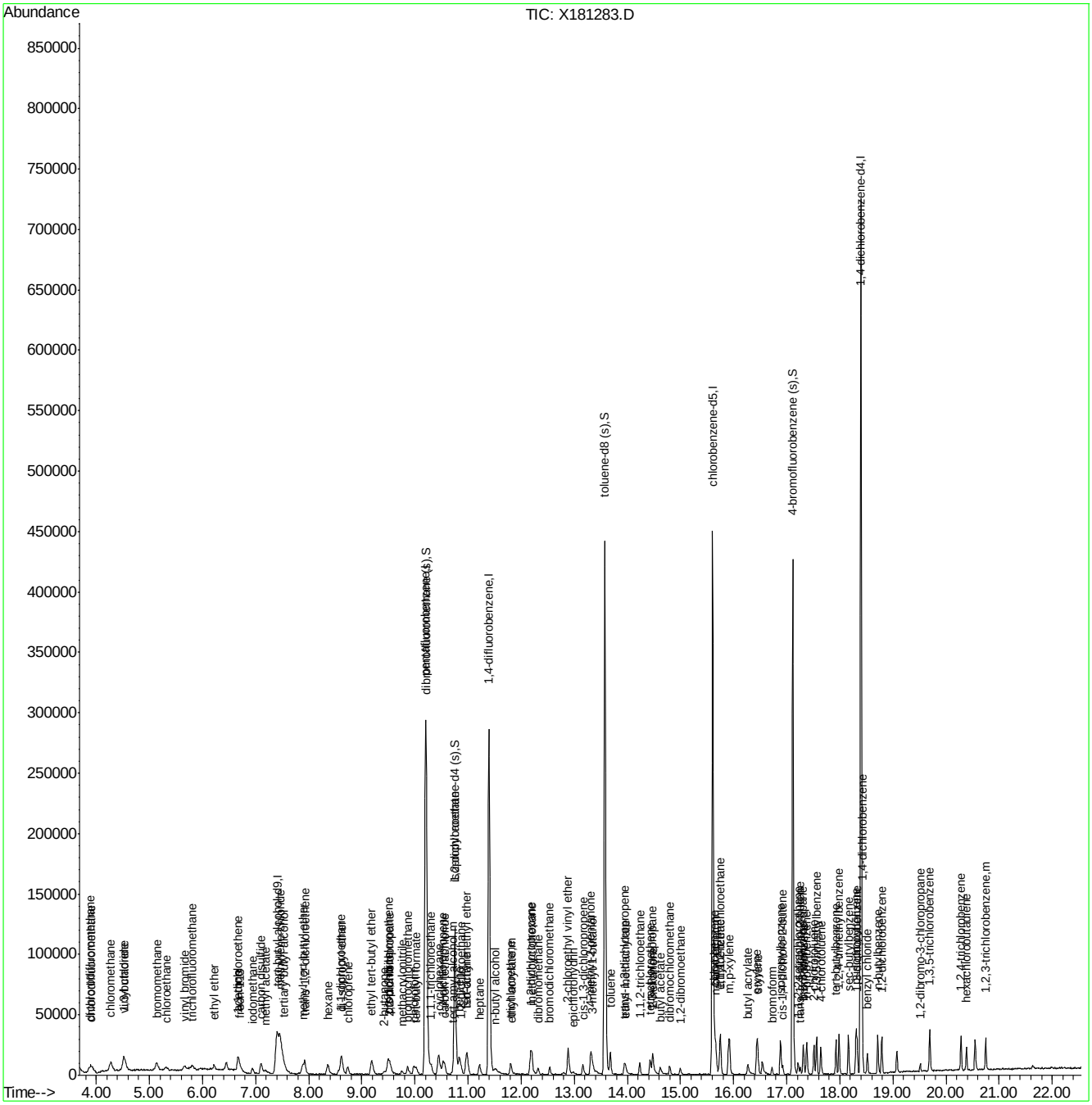
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 4-chlorotoluene	17.64	91	13424	1.97	ug/L	91
106) 1,3,5-trimethylbenzene	17.56	105	17338	1.99	ug/L	97
107) tert-butylbenzene	17.93	119	14677	1.90	ug/L	96
108) 1,2,4-trimethylbenzene	17.99	105	18028	1.96	ug/L	94
109) sec-butylbenzene	18.16	105	22689	1.94	ug/L	99
110) 1,3-dichlorobenzene	18.32	146	11412	2.20	ug/L	96
111) p-isopropyltoluene	18.30	119	19944	1.96	ug/L	96
112) 1,4-dichlorobenzene	18.42	146	10321	2.00	ug/L	91
113) 1,2-dichlorobenzene	18.79	146	12123	2.06	ug/L	98
114) benzyl chloride	18.52	91	12124	2.03	ug/L	90
115) n-butylbenzene	18.72	92	9667	1.99	ug/L	96
116) 1,2-dibromo-3-chloropropan	19.51	157	1798	1.96	ug/L	88
117) 1,3,5-trichlorobenzene	19.69	180	11252	1.96	ug/L	98
118) hexachlorobutadiene	20.39	225	3895	2.00	ug/L	92
121) 1,2,4-trichlorobenzene	20.29	180	9492	1.80	ug/L	90
122) 1,2,3-trichlorobenzene	20.75	180	9274	1.73	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	158441	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	231866	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	308785	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	292169	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	180377	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	92953	49.27	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.54%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	103008	50.57	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.14%				
75) toluene-d8 (s)	13.58	98	357402	51.03	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%				
98) 4-bromofluorobenzene (s)	17.11	95	141365	47.84	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.68%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.55	59	6656	19.29	ug/L		82
4) 1,4-dioxane	12.26	88	2361	92.03	ug/L	#	83
6) chlorodifluoromethane	3.90	51	27201	3.84	ug/L		97
7) dichlorodifluoromethane	3.91	85	28482	4.05	ug/L		91
8) chloromethane	4.27	50	35984	3.91	ug/L		98
9) vinyl chloride	4.50	62	28691	3.90	ug/L		92
10) bromomethane	5.13	96	14500	3.65	ug/L		96
11) chloroethane	5.31	64	9560	3.87	ug/L		94
12) vinyl bromide	5.67	106	10233	3.71	ug/L		94
13) trichlorofluoromethane	5.81	101	17726	3.95	ug/L		97
14) 1,3-butadiene	4.54	54	12364	3.93	ug/L		91
15) ethyl ether	6.22	74	4067	4.07	ug/L	#	72
17) 1,1-dichloroethene	6.67	96	6708	4.01	ug/L		97
18) freon 113	6.70	101	10108	3.76	ug/L		94
19) acetone	6.66	43	9173	12.30	ug/L		99
20) acetonitrile	7.11	41	17728	41.04	ug/L		89
21) iodomethane	6.94	142	11954	3.72	ug/L		94
22) carbon disulfide	7.10	76	22571	3.80	ug/L		95
23) methylene chloride	7.46	84	8194	3.69	ug/L		97
24) methyl acetate	7.19	43	7748	4.81	ug/L		95
25) methyl tert butyl ether	7.90	73	27819	3.82	ug/L		91
26) trans-1,2-dichloroethene	7.93	96	7015	3.88	ug/L		96
27) hexane	8.36	57	10111	3.94	ug/L		94
28) di-isopropyl ether	8.62	45	32396	3.88	ug/L		99
29) 2-butanone	9.42	72	3154	15.10	ug/L	#	83
30) 1,1-dichloroethane	8.61	63	13378	3.86	ug/L		96
31) chloroprene	8.73	53	10686	4.14	ug/L		96
32) acrylonitrile	7.79	53	2388	3.30	ug/L		98
34) ethyl tert-butyl ether	9.18	59	29379	3.80	ug/L		95
35) ethyl acetate	9.46	45	1107	3.90	ug/L		85
36) 2,2-dichloropropane	9.52	77	14143	3.78	ug/L		94
37) cis-1,2-dichloroethene	9.49	96	8223	4.04	ug/L		99
38) methyl acrylate	9.57	85	632	2.57	ug/L	#	22

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
39) propionitrile	9.50	54	11601	39.00	ug/L		95
40) tert-butyl formate	10.02	59	8188	4.22	ug/L		91
41) bromochloromethane	9.86	128	4322	4.08	ug/L		94
42) tetrahydrofuran	9.90	72	891	3.67	ug/L	#	79
43) chloroform	9.98	83	13320	3.79	ug/L		98
45) methacrylonitrile	9.74	67	2764	3.61	ug/L		85
46) 1,1,1-trichloroethane	10.30	97	13143	3.78	ug/L		94
47) cyclohexane	10.46	84	14089	3.67	ug/L		97
48) tert amyl alcohol	10.71	55	2350	19.47	ug/L	#	55
49) 1,1-dichloropropene	10.52	75	8614	3.87	ug/L		94
51) carbon tetrachloride	10.56	117	11581	3.97	ug/L		98
52) isopropyl acetate	10.77	87	1468	3.66	ug/L	#	30
55) iso-octane	10.99	57	19948	3.64	ug/L		97
56) epichlorohydrin	12.97	57	4594	21.07	ug/L		97
57) n-butyl alcohol	11.49	56	13385	190.05	ug/L		97
58) benzene	10.83	78	28342	3.84	ug/L		97
59) tert-amyl methyl ether	10.97	73	26686	3.83	ug/L		97
60) heptane	11.21	57	4129	3.78	ug/L		93
61) 1,2-dichloroethane	10.87	62	9927	4.11	ug/L		96
62) trichloroethene	11.80	130	7475	3.98	ug/L		86
63) ethyl acrylate	11.81	55	9009	3.82	ug/L		88
64) 2-nitropropane	12.79	41	2597	4.47	ug/L		81
65) 2-chloroethyl vinyl ether	12.89	63	27117	20.29	ug/L		98
66) methyl methacrylate	12.16	100	1791	3.76	ug/L		94
67) 1,2-dichloropropane	12.18	76	3262	4.13	ug/L		91
68) dibromomethane	12.32	93	5017	4.20	ug/L		98
69) methylcyclohexane	12.20	83	12887	4.07	ug/L		97
70) bromodichloromethane	12.54	83	10433	3.91	ug/L		95
71) cis-1,3-dichloropropene	13.16	75	12892	4.01	ug/L		93
72) 4-methyl-2-pentanone	13.31	58	13621	16.82	ug/L		94
73) 3-methyl-1-butanol	13.35	70	5192	10.76	ug/L	#	72
76) toluene	13.68	92	17157	3.95	ug/L		97
77) trans-1,3-dichloropropene	13.94	75	11229	3.98	ug/L		95
78) ethyl methacrylate	13.97	69	9385	4.20	ug/L		86
79) 1,1,2-trichloroethane	14.23	83	6048	4.10	ug/L		93
80) tetrachloroethene	14.43	164	6700	4.23	ug/L		91
81) 1,3-dichloropropane	14.48	76	11657	4.21	ug/L		94
82) 2-hexanone	14.48	58	11620	17.37	ug/L		97
83) butyl acetate	14.62	56	5954	4.20	ug/L		87
84) dibromochloromethane	14.80	129	8321	4.05	ug/L		98
85) 1,2-dibromoethane	14.99	107	8312	4.22	ug/L		97
86) n-butyl ether	15.67	57	32022	3.92	ug/L		100
87) chlorobenzene	15.65	112	19240	3.88	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.75	131	8977	3.98	ug/L		95
89) ethylbenzene	15.75	91	33460	3.98	ug/L		100
90) m,p-xylene	15.92	106	26666	8.00	ug/L		95
91) o-xylene	16.44	91	30354	3.93	ug/L		95
92) styrene	16.45	104	22243	4.14	ug/L		98
93) butyl acrylate	16.26	55	17898	3.95	ug/L		97
94) bromoform	16.72	173	6081	4.19	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

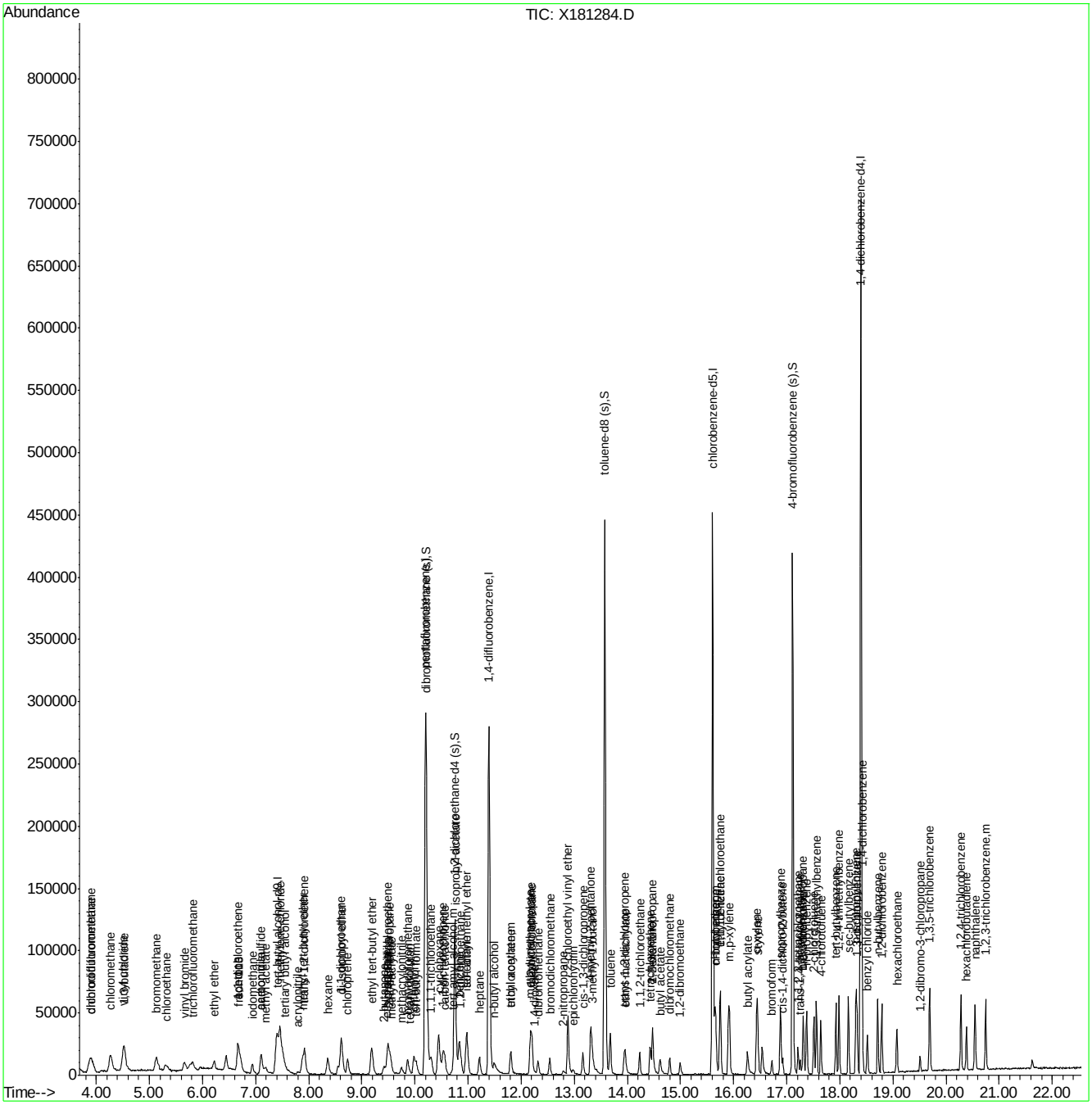
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
95) isopropylbenzene	16.88	105	38312	3.88	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	3024	4.02	ug/L		87
99) bromobenzene	17.32	156	10049	3.84	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.22	83	10631	3.76	ug/L		97
101) trans-1,4-dichloro-2-buten	17.26	53	2534	3.95	ug/L		90
102) 1,2,3-trichloropropane	17.30	110	2919	4.26	ug/L	#	67
103) n-propylbenzene	17.38	91	41611	3.82	ug/L		99
104) 2-chlorotoluene	17.51	126	9584	3.88	ug/L		90
105) 4-chlorotoluene	17.64	91	25320	3.81	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	32410	3.82	ug/L		97
107) tert-butylbenzene	17.93	119	27183	3.61	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	33451	3.74	ug/L		99
109) sec-butylbenzene	18.16	105	42285	3.71	ug/L		97
110) 1,3-dichlorobenzene	18.32	146	20297	4.03	ug/L		99
111) p-isopropyltoluene	18.30	119	36754	3.70	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	19234	3.82	ug/L		100
113) 1,2-dichlorobenzene	18.79	146	22234	3.89	ug/L		99
114) benzyl chloride	18.52	91	22022	3.80	ug/L		96
115) n-butylbenzene	18.72	92	17543	3.71	ug/L		97
116) 1,2-dibromo-3-chloropropan	19.51	157	3339	3.75	ug/L		94
117) 1,3,5-trichlorobenzene	19.69	180	21756	3.90	ug/L		97
118) hexachlorobutadiene	20.39	225	7174	3.78	ug/L		98
119) naphthalene	20.55	128	42667	3.64	ug/L		98
121) 1,2,4-trichlorobenzene	20.28	180	19326	3.77	ug/L		98
122) 1,2,3-trichlorobenzene	20.75	180	19156	3.68	ug/L		99
123) hexachloroethane	19.08	201	5806	3.50	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	149671	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	216474	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	291131	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	279242	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	167114	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	89476	50.80	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.60%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	99684	51.91	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.82%				
75) toluene-d8 (s)	13.58	98	334375	49.95	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.90%				
98) 4-bromofluorobenzene (s)	17.11	95	135055	49.33	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.66%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.55	59	13791	42.31	ug/L		81
4) 1,4-dioxane	12.25	88	5362	221.26	ug/L		94
6) chlorodifluoromethane	3.89	51	53111	8.03	ug/L		97
7) dichlorodifluoromethane	3.87	85	55644	8.47	ug/L		94
8) chloromethane	4.27	50	68867	8.02	ug/L		98
9) vinyl chloride	4.51	62	55846	8.12	ug/L		99
10) bromomethane	5.13	96	28138	7.59	ug/L		97
11) chloroethane	5.31	64	19135	8.30	ug/L		93
12) vinyl bromide	5.66	106	20701	8.04	ug/L		96
13) trichlorofluoromethane	5.81	101	35041	8.36	ug/L		99
14) 1,3-butadiene	4.53	54	24884	8.47	ug/L		98
15) ethyl ether	6.22	74	7665	8.22	ug/L	#	82
16) acrolein	6.45	56	4614	9.20	ug/L		73
17) 1,1-dichloroethene	6.66	96	13160	8.43	ug/L		92
18) freon 113	6.71	101	21540	8.58	ug/L		91
19) acetone	6.66	43	20411	29.32	ug/L		97
20) acetonitrile	7.11	41	34261	84.95	ug/L		94
21) iodomethane	6.94	142	24256	8.07	ug/L		98
22) carbon disulfide	7.10	76	44733	8.06	ug/L		99
23) methylene chloride	7.46	84	16045	7.74	ug/L		99
24) methyl acetate	7.19	43	12339	8.20	ug/L		95
25) methyl tert butyl ether	7.88	73	53499	7.87	ug/L		99
26) trans-1,2-dichloroethene	7.92	96	14071	8.34	ug/L		93
27) hexane	8.36	57	20033	8.36	ug/L		94
28) di-isopropyl ether	8.62	45	61310	7.86	ug/L		99
29) 2-butanone	9.41	72	6228	31.94	ug/L		88
30) 1,1-dichloroethane	8.61	63	27164	8.40	ug/L		99
31) chloroprene	8.73	53	19952	8.28	ug/L		99
32) acrylonitrile	7.79	53	5812	8.61	ug/L		95
33) vinyl acetate	8.54	86	2417	7.73	ug/L	#	63
34) ethyl tert-butyl ether	9.18	59	58017	8.04	ug/L		98
35) ethyl acetate	9.45	45	2314	8.73	ug/L		88
36) 2,2-dichloropropane	9.53	77	26858	7.68	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	16211	8.52	ug/L		99
38) methyl acrylate	9.56	85	1714	7.47	ug/L	#	37
39) propionitrile	9.49	54	22942	82.60	ug/L		89
40) tert-butyl formate	10.02	59	15301	8.44	ug/L		90
41) bromochloromethane	9.86	128	8021	8.11	ug/L		95
42) tetrahydrofuran	9.89	72	1825	8.06	ug/L	#	82
43) chloroform	9.97	83	25254	7.71	ug/L		99
45) methacrylonitrile	9.75	67	5819	8.15	ug/L		96
46) 1,1,1-trichloroethane	10.31	97	25174	7.76	ug/L		98
47) cyclohexane	10.45	84	26974	7.53	ug/L		98
48) tert amyl alcohol	10.70	55	4629	41.08	ug/L		87
49) 1,1-dichloropropene	10.53	75	17229	8.28	ug/L		95
51) carbon tetrachloride	10.55	117	21617	7.94	ug/L		97
52) isopropyl acetate	10.76	87	2923	7.81	ug/L	#	63
55) iso-octane	10.99	57	40079	7.75	ug/L		99
56) epichlorohydrin	12.97	57	8787	42.74	ug/L		94
57) n-butyl alcohol	11.48	56	25706	387.13	ug/L		95
58) benzene	10.83	78	53643	7.72	ug/L		98
59) tert-amyl methyl ether	10.97	73	51969	7.92	ug/L		98
60) heptane	11.22	57	8063	7.83	ug/L		97
61) 1,2-dichloroethane	10.87	62	18526	8.13	ug/L		94
62) trichloroethene	11.80	130	14698	8.29	ug/L		95
63) ethyl acrylate	11.81	55	18475	8.31	ug/L		96
64) 2-nitropropane	12.79	41	4221	7.70	ug/L		98
65) 2-chloroethyl vinyl ether	12.88	63	52415	41.60	ug/L		99
66) methyl methacrylate	12.17	100	3498	7.79	ug/L	#	75
67) 1,2-dichloropropane	12.18	76	6224	8.35	ug/L		91
68) dibromomethane	12.32	93	9345	8.30	ug/L		93
69) methylcyclohexane	12.19	83	24155	8.09	ug/L		98
70) bromodichloromethane	12.53	83	19774	7.86	ug/L		99
71) cis-1,3-dichloropropene	13.16	75	24026	7.93	ug/L		97
72) 4-methyl-2-pentanone	13.31	58	25693	33.66	ug/L		99
73) 3-methyl-1-butanol	13.33	70	10850	23.84	ug/L		93
76) toluene	13.67	92	32778	7.90	ug/L		93
77) trans-1,3-dichloropropene	13.94	75	22134	8.22	ug/L		93
78) ethyl methacrylate	13.96	69	18520	8.67	ug/L		95
79) 1,1,2-trichloroethane	14.23	83	11420	8.10	ug/L		94
80) tetrachloroethene	14.43	164	12485	8.24	ug/L		98
81) 1,3-dichloropropane	14.47	76	22111	8.36	ug/L		99
82) 2-hexanone	14.47	58	23898	37.39	ug/L		99
83) butyl acetate	14.61	56	11508	8.49	ug/L		95
84) dibromochloromethane	14.80	129	15267	7.77	ug/L		93
85) 1,2-dibromoethane	14.99	107	15469	8.21	ug/L		98
86) n-butyl ether	15.66	57	60295	7.72	ug/L		99
87) chlorobenzene	15.65	112	37956	8.01	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.74	131	17074	7.92	ug/L		95
89) ethylbenzene	15.75	91	62748	7.81	ug/L		97
90) m,p-xylene	15.91	106	50787	15.94	ug/L		98
91) o-xylene	16.44	91	57810	7.83	ug/L		96
92) styrene	16.45	104	42953	8.36	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

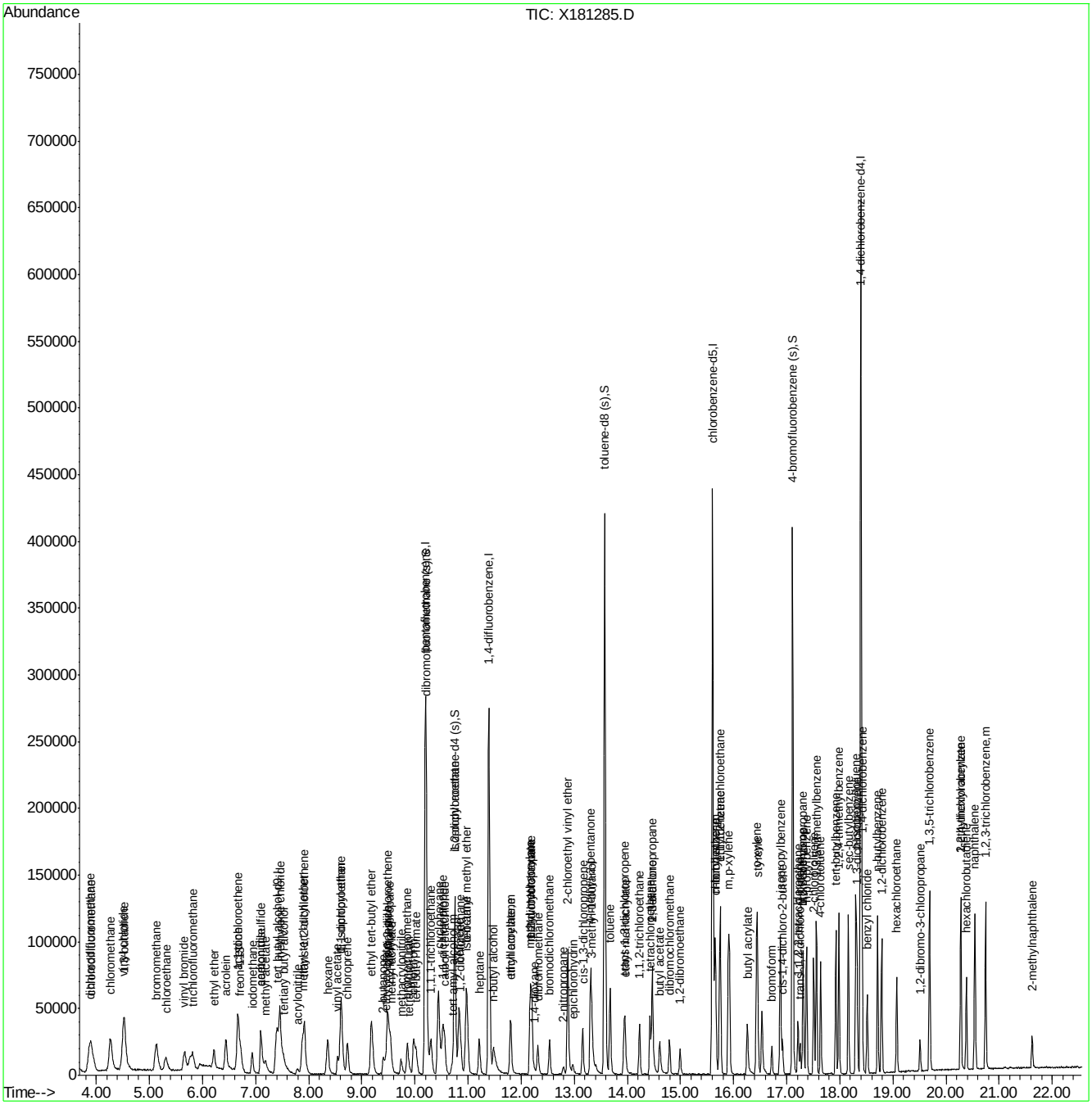
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.26	55	33740	7.79	ug/L		98
94) bromoform	16.72	173	10847	7.82	ug/L		95
95) isopropylbenzene	16.88	105	71703	7.60	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	6274	8.73	ug/L		96
99) bromobenzene	17.32	156	19384	8.00	ug/L		94
100) 1,1,2,2-tetrachloroethane	17.22	83	19828	7.57	ug/L		96
101) trans-1,4-dichloro-2-buten	17.25	53	4828	8.12	ug/L		88
102) 1,2,3-trichloropropane	17.30	110	5235	8.25	ug/L	#	75
103) n-propylbenzene	17.37	91	77509	7.67	ug/L		100
104) 2-chlorotoluene	17.51	126	16984	7.42	ug/L		89
105) 4-chlorotoluene	17.64	91	47467	7.72	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	59504	7.58	ug/L		99
107) tert-butylbenzene	17.93	119	51877	7.44	ug/L		97
108) 1,2,4-trimethylbenzene	17.98	105	62960	7.61	ug/L		98
109) sec-butylbenzene	18.16	105	78856	7.46	ug/L		98
110) 1,3-dichlorobenzene	18.32	146	37003	7.93	ug/L		100
111) p-isopropyltoluene	18.30	119	69618	7.57	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	35679	7.65	ug/L		97
113) 1,2-dichlorobenzene	18.79	146	41561	7.84	ug/L		99
114) benzyl chloride	18.52	91	41014	7.63	ug/L		100
115) n-butylbenzene	18.71	92	33288	7.59	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	6620	8.02	ug/L		96
117) 1,3,5-trichlorobenzene	19.69	180	41600	8.04	ug/L		98
118) hexachlorobutadiene	20.39	225	13649	7.75	ug/L		95
119) naphthalene	20.54	128	92691	8.53	ug/L		99
120) 2-ethylhexyl acrylate	20.29	70	1201	0.64	ug/L		84
121) 1,2,4-trichlorobenzene	20.28	180	40371	8.49	ug/L		98
122) 1,2,3-trichlorobenzene	20.75	180	40622	8.42	ug/L		97
123) hexachloroethane	19.07	201	11384	7.40	ug/L		95
124) 2-methylnaphthalene	21.62	142	13193	2.39	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	152100	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	216897	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	290117	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	281247	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	155830	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.21	113	86852	49.21	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.42%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	97657	51.03	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.06%				
75) toluene-d8 (s)	13.58	98	334406	49.60	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.20%				
98) 4-bromofluorobenzene (s)	17.11	95	131100	51.35	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.70%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.53	59	34135	103.04	ug/L		91
4) 1,4-dioxane	12.25	88	14671	595.74	ug/L		95
6) chlorodifluoromethane	3.89	51	131883	19.90	ug/L		96
7) dichlorodifluoromethane	3.86	85	135884	20.64	ug/L		98
8) chloromethane	4.26	50	165293	19.22	ug/L		98
9) vinyl chloride	4.50	62	134510	19.52	ug/L		99
10) bromomethane	5.13	96	66288	17.84	ug/L		98
11) chloroethane	5.31	64	43633	18.90	ug/L		97
12) vinyl bromide	5.65	106	49415	19.15	ug/L		97
13) trichlorofluoromethane	5.81	101	82688	19.69	ug/L		95
14) 1,3-butadiene	4.53	54	55743	18.94	ug/L		95
15) ethyl ether	6.22	74	18853	20.18	ug/L		94
16) acrolein	6.45	56	8940	17.78	ug/L		97
17) 1,1-dichloroethene	6.67	96	30704	19.63	ug/L		99
18) freon 113	6.70	101	49440	19.65	ug/L		97
19) acetone	6.66	43	47590	68.22	ug/L		97
20) acetonitrile	7.11	41	77275	191.23	ug/L		98
21) iodomethane	6.94	142	59277	19.69	ug/L		99
22) carbon disulfide	7.10	76	106687	19.18	ug/L		100
23) methylene chloride	7.46	84	37538	18.07	ug/L		99
24) methyl acetate	7.19	43	29411	19.51	ug/L		91
25) methyl tert butyl ether	7.89	73	130277	19.13	ug/L		99
26) trans-1,2-dichloroethene	7.92	96	33274	19.69	ug/L		96
27) hexane	8.36	57	48415	20.17	ug/L		99
28) di-isopropyl ether	8.61	45	147390	18.87	ug/L		100
29) 2-butanone	9.40	72	16644	85.20	ug/L		100
30) 1,1-dichloroethane	8.60	63	64371	19.87	ug/L		97
31) chloroprene	8.73	53	49613	20.55	ug/L		96
32) acrylonitrile	7.79	53	14731	21.78	ug/L		97
33) vinyl acetate	8.54	86	6730	21.48	ug/L	#	88
34) ethyl tert-butyl ether	9.18	59	141784	19.60	ug/L		97
35) ethyl acetate	9.44	45	6846	25.79	ug/L		80
36) 2,2-dichloropropane	9.52	77	62599	17.87	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	38434	20.17	ug/L		97
38) methyl acrylate	9.55	85	5184	22.56	ug/L	#	68
39) propionitrile	9.48	54	58250	209.32	ug/L		99
40) tert-butyl formate	10.02	59	36256	19.95	ug/L		98
41) bromochloromethane	9.85	128	20131	20.31	ug/L		93
42) tetrahydrofuran	9.89	72	5315	23.43	ug/L		94
43) chloroform	9.98	83	60671	18.48	ug/L		98
45) methacrylonitrile	9.74	67	14704	20.55	ug/L		98
46) 1,1,1-trichloroethane	10.30	97	62783	19.33	ug/L		97
47) cyclohexane	10.45	84	73501	20.48	ug/L		86
48) tert amyl alcohol	10.70	55	11184	99.06	ug/L		91
49) 1,1-dichloropropene	10.52	75	43086	20.67	ug/L		99
51) carbon tetrachloride	10.56	117	53274	19.53	ug/L		93
52) isopropyl acetate	10.75	87	7963	21.23	ug/L		95
55) iso-octane	10.98	57	96701	18.76	ug/L		96
56) epichlorohydrin	12.97	57	20419	99.66	ug/L		95
57) n-butyl alcohol	11.47	56	66679	1007.70	ug/L		98
58) benzene	10.83	78	131803	19.02	ug/L		98
59) tert-amyl methyl ether	10.97	73	126433	19.34	ug/L		98
60) heptane	11.21	57	20840	20.30	ug/L		94
61) 1,2-dichloroethane	10.87	62	43979	19.37	ug/L		99
62) trichloroethene	11.80	130	36084	20.43	ug/L		98
63) ethyl acrylate	11.80	55	47908	21.61	ug/L		95
64) 2-nitropropane	12.80	41	10134	18.54	ug/L		93
65) 2-chloroethyl vinyl ether	12.87	63	132938	105.87	ug/L		99
66) methyl methacrylate	12.16	100	9650	21.57	ug/L	#	80
67) 1,2-dichloropropane	12.17	76	15506	20.89	ug/L		98
68) dibromomethane	12.32	93	22797	20.32	ug/L		94
69) methylcyclohexane	12.20	83	59311	19.92	ug/L		100
70) bromodichloromethane	12.53	83	49460	19.74	ug/L		98
71) cis-1,3-dichloropropene	13.16	75	60106	19.91	ug/L		99
72) 4-methyl-2-pentanone	13.30	58	65089	85.57	ug/L		95
73) 3-methyl-1-butanol	13.33	70	27187	59.95	ug/L		97
76) toluene	13.67	92	82426	19.72	ug/L		99
77) trans-1,3-dichloropropene	13.94	75	55183	20.34	ug/L		96
78) ethyl methacrylate	13.96	69	47558	22.10	ug/L		96
79) 1,1,2-trichloroethane	14.22	83	28535	20.10	ug/L		93
80) tetrachloroethene	14.43	164	30917	20.27	ug/L		94
81) 1,3-dichloropropane	14.47	76	54274	20.38	ug/L		97
82) 2-hexanone	14.46	58	57434	89.21	ug/L		98
83) butyl acetate	14.61	56	27442	20.10	ug/L		90
84) dibromochloromethane	14.79	129	38840	19.63	ug/L		98
85) 1,2-dibromoethane	14.99	107	39545	20.85	ug/L		95
86) n-butyl ether	15.66	57	150518	19.14	ug/L		99
87) chlorobenzene	15.65	112	93850	19.66	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	42025	19.34	ug/L		99
89) ethylbenzene	15.75	91	154754	19.12	ug/L		100
90) m,p-xylene	15.91	106	123160	38.38	ug/L		96
91) o-xylene	16.43	91	140636	18.91	ug/L		98
92) styrene	16.45	104	103147	19.94	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

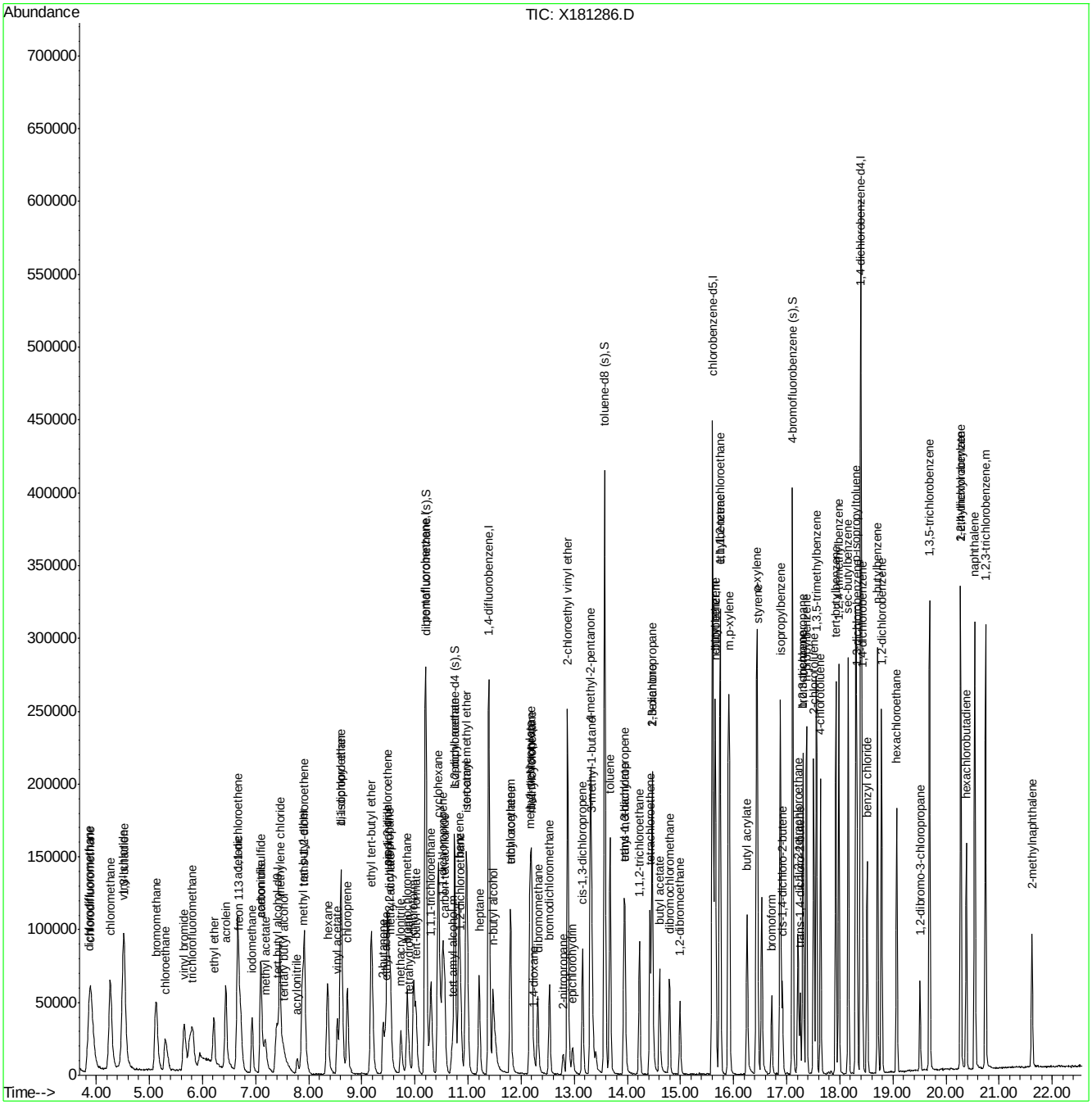
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	84855	19.46	ug/L		97
94) bromoform	16.72	173	27501	19.70	ug/L		98
95) isopropylbenzene	16.88	105	179084	18.84	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	15267	21.10	ug/L		97
99) bromobenzene	17.32	156	45538	20.17	ug/L		95
100) 1,1,2,2-tetrachloroethane	17.22	83	48735	19.95	ug/L		95
101) trans-1,4-dichloro-2-buten	17.25	53	11504	20.74	ug/L		90
102) 1,2,3-trichloropropane	17.30	110	12954	21.89	ug/L	#	78
103) n-propylbenzene	17.37	91	185284	19.67	ug/L		98
104) 2-chlorotoluene	17.51	126	42762	20.04	ug/L		99
105) 4-chlorotoluene	17.64	91	111510	19.45	ug/L		100
106) 1,3,5-trimethylbenzene	17.56	105	145074	19.81	ug/L		100
107) tert-butylbenzene	17.93	119	131279	20.19	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	148751	19.28	ug/L		99
109) sec-butylbenzene	18.16	105	193001	19.59	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	85670	19.68	ug/L		98
111) p-isopropyltoluene	18.30	119	166302	19.39	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	82911	19.06	ug/L		98
113) 1,2-dichlorobenzene	18.78	146	96223	19.48	ug/L		98
114) benzyl chloride	18.51	91	95969	19.15	ug/L		99
115) n-butylbenzene	18.71	92	81465	19.93	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	16657	21.63	ug/L		94
117) 1,3,5-trichlorobenzene	19.69	180	99249	20.58	ug/L		99
118) hexachlorobutadiene	20.39	225	31982	19.48	ug/L		98
119) naphthalene	20.54	128	238493	23.54	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	4968	2.82	ug/L		96
121) 1,2,4-trichlorobenzene	20.28	180	101465	22.89	ug/L		98
122) 1,2,3-trichlorobenzene	20.75	180	102731	22.85	ug/L		98
123) hexachloroethane	19.07	201	29579	20.62	ug/L		94
124) 2-methylnaphthalene	21.62	142	48993	9.51	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	145338	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	208943	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	284098	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	281371	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	146102	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	83930	49.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.74%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	90949	48.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.06%			
75) toluene-d8 (s)	13.58	98	333328	49.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%			
98) 4-bromofluorobenzene (s)	17.11	95	127939	53.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.90%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.55	59	84484	266.89	ug/L	100
4) 1,4-dioxane	12.24	88	36555	1553.43	ug/L	100
6) chlorodifluoromethane	3.90	51	322939	50.59	ug/L	100
7) dichlorodifluoromethane	3.88	85	342295	53.96	ug/L	100
8) chloromethane	4.27	50	401685	48.49	ug/L	100
9) vinyl chloride	4.51	62	325523	49.05	ug/L	100
10) bromomethane	5.13	96	170625	47.68	ug/L	100
11) chloroethane	5.31	64	115151	51.76	ug/L	100
12) vinyl bromide	5.66	106	134744	54.21	ug/L	100
13) trichlorofluoromethane	5.81	101	211086	52.19	ug/L	100
14) 1,3-butadiene	4.53	54	139870	49.34	ug/L	100
15) ethyl ether	6.22	74	46034	51.16	ug/L	100
16) acrolein	6.44	56	19411	40.08	ug/L	100
17) 1,1-dichloroethene	6.67	96	73482	48.77	ug/L	100
18) freon 113	6.70	101	123725	51.04	ug/L	100
19) acetone	6.65	43	104860	156.05	ug/L	99
20) acetonitrile	7.11	41	174586	448.48	ug/L	100
21) iodomethane	6.93	142	145135	50.05	ug/L	100
22) carbon disulfide	7.10	76	264625	49.39	ug/L	100
23) methylene chloride	7.46	84	89971	44.95	ug/L	100
24) methyl acetate	7.18	43	67760	46.66	ug/L	100
25) methyl tert butyl ether	7.89	73	320792	48.91	ug/L	100
26) trans-1,2-dichloroethene	7.92	96	78298	48.10	ug/L	100
27) hexane	8.36	57	118622	51.31	ug/L	100
28) di-isopropyl ether	8.61	45	355783	47.27	ug/L	100
29) 2-butanone	9.40	72	40992	217.81	ug/L	100
30) 1,1-dichloroethane	8.60	63	151937	48.68	ug/L	100
31) chloroprene	8.73	53	117437	50.50	ug/L	100
32) acrylonitrile	7.78	53	35901	55.10	ug/L	100
33) vinyl acetate	8.53	86	16321	54.07	ug/L	100
34) ethyl tert-butyl ether	9.18	59	356179	51.12	ug/L	100
35) ethyl acetate	9.43	45	15562	60.85	ug/L	100
36) 2,2-dichloropropane	9.53	77	152682	45.25	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	89745	48.88	ug/L	100
38) methyl acrylate	9.54	85	12651	57.14	ug/L	100
39) propionitrile	9.48	54	138742	517.55	ug/L	100
40) tert-butyl formate	10.02	59	89118	50.92	ug/L	100
41) bromochloromethane	9.86	128	48719	51.02	ug/L	100
42) tetrahydrofuran	9.89	72	12188	55.78	ug/L	100
43) chloroform	9.97	83	145147	45.89	ug/L	100
45) methacrylonitrile	9.73	67	36008	52.25	ug/L	100
46) 1,1,1-trichloroethane	10.30	97	161653	51.66	ug/L	100
47) cyclohexane	10.45	84	185862	53.75	ug/L	100
48) tert amyl alcohol	10.70	55	26431	243.03	ug/L	100
49) 1,1-dichloropropene	10.52	75	100608	50.10	ug/L	100
51) carbon tetrachloride	10.56	117	133037	50.62	ug/L	100
52) isopropyl acetate	10.75	87	19575	54.17	ug/L	100
55) iso-octane	10.99	57	254028	50.34	ug/L	100
56) epichlorohydrin	12.97	57	49960	249.01	ug/L	100
57) n-butyl alcohol	11.47	56	171520	2647.05	ug/L	100
58) benzene	10.83	78	317096	46.74	ug/L	100
59) tert-amyl methyl ether	10.97	73	310360	48.47	ug/L	100
60) heptane	11.21	57	51617	51.34	ug/L	100
61) 1,2-dichloroethane	10.87	62	104191	46.86	ug/L	100
62) trichloroethene	11.80	130	87744	50.72	ug/L	100
63) ethyl acrylate	11.80	55	114701	52.84	ug/L	100
64) 2-nitropropane	12.79	41	24514	45.81	ug/L	100
65) 2-chloroethyl vinyl ether	12.87	63	318055	258.66	ug/L	100
66) methyl methacrylate	12.15	100	24130	55.07	ug/L	100
67) 1,2-dichloropropane	12.17	76	36833	50.67	ug/L	100
68) dibromomethane	12.31	93	55365	50.40	ug/L	100
69) methylcyclohexane	12.20	83	150445	51.60	ug/L	100
70) bromodichloromethane	12.53	83	120661	49.17	ug/L	100
71) cis-1,3-dichloropropene	13.16	75	148426	50.20	ug/L	100
72) 4-methyl-2-pentanone	13.30	58	159680	214.36	ug/L	100
73) 3-methyl-1-butanol	13.33	70	65895	148.38	ug/L	100
76) toluene	13.67	92	204440	48.89	ug/L	100
77) trans-1,3-dichloropropene	13.94	75	134822	49.66	ug/L	100
78) ethyl methacrylate	13.95	69	118709	55.14	ug/L	100
79) 1,1,2-trichloroethane	14.23	83	70774	49.82	ug/L	100
80) tetrachloroethene	14.42	164	76269	49.98	ug/L	100
81) 1,3-dichloropropane	14.46	76	126617	47.52	ug/L	100
82) 2-hexanone	14.46	58	136351	211.70	ug/L	100
83) butyl acetate	14.60	56	68357	50.05	ug/L	100
84) dibromochloromethane	14.79	129	99183	50.10	ug/L	100
85) 1,2-dibromoethane	14.99	107	98642	51.99	ug/L	100
86) n-butyl ether	15.66	57	375030	47.68	ug/L	100
87) chlorobenzene	15.65	112	231474	48.46	ug/L	100
88) 1,1,1,2-tetrachloroethane	15.74	131	105455	48.52	ug/L	100
89) ethylbenzene	15.74	91	370373	45.74	ug/L	100
90) m,p-xylene	15.91	106	297252	92.60	ug/L	100
91) o-xylene	16.43	91	348814	46.89	ug/L	100
92) styrene	16.45	104	248617	48.05	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

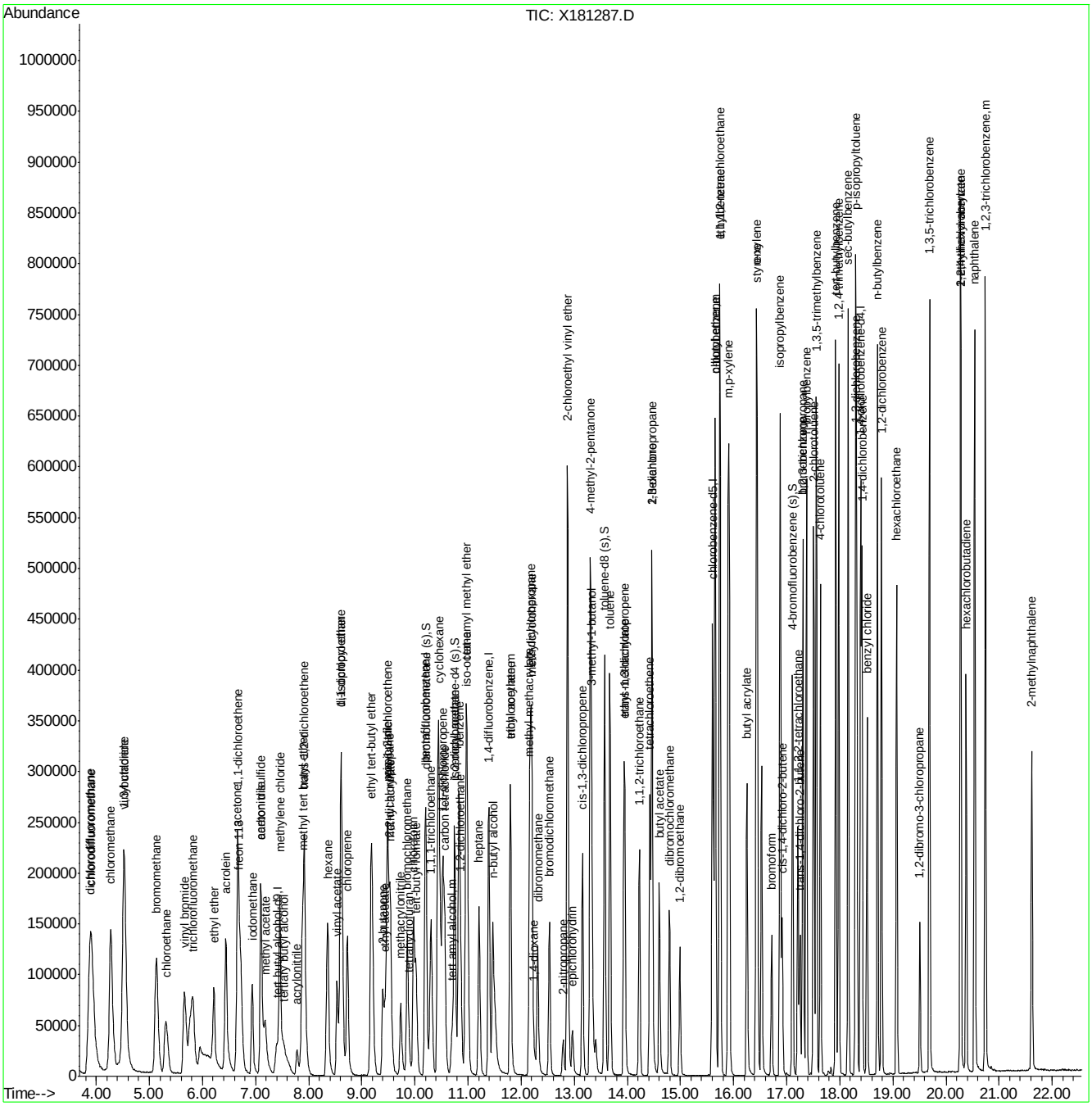
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) butyl acrylate	16.25	55	207991	47.69	ug/L	100
94) bromoform	16.72	173	70219	50.27	ug/L	100
95) isopropylbenzene	16.88	105	459654	48.34	ug/L	100
96) cis-1,4-dichloro-2-butene	16.92	88	36670	50.65	ug/L	100
99) bromobenzene	17.31	156	109689	51.81	ug/L	100
100) 1,1,2,2-tetrachloroethane	17.21	83	122507	53.49	ug/L	100
101) trans-1,4-dichloro-2-buten	17.25	53	27294	52.48	ug/L	100
102) 1,2,3-trichloropropane	17.30	110	30265	54.55	ug/L	100
103) n-propylbenzene	17.37	91	456470	51.69	ug/L	100
104) 2-chlorotoluene	17.51	126	107346	53.64	ug/L	100
105) 4-chlorotoluene	17.63	91	265371	49.36	ug/L	100
106) 1,3,5-trimethylbenzene	17.56	105	360771	52.55	ug/L	100
107) tert-butylbenzene	17.92	119	341343	55.98	ug/L	100
108) 1,2,4-trimethylbenzene	17.98	105	365961	50.58	ug/L	100
109) sec-butylbenzene	18.16	105	499786	54.12	ug/L	100
110) 1,3-dichlorobenzene	18.32	146	196651	48.19	ug/L	100
111) p-isopropyltoluene	18.30	119	422297	52.51	ug/L	100
112) 1,4-dichlorobenzene	18.42	146	197283	48.38	ug/L	100
113) 1,2-dichlorobenzene	18.78	146	227388	49.09	ug/L	100
114) benzyl chloride	18.51	91	229226	48.80	ug/L	100
115) n-butylbenzene	18.71	92	205949	53.73	ug/L	100
116) 1,2-dibromo-3-chloropropan	19.51	157	41289	57.19	ug/L	100
117) 1,3,5-trichlorobenzene	19.69	180	239887	53.06	ug/L	100
118) hexachlorobutadiene	20.38	225	80586	52.36	ug/L	100
119) naphthalene	20.54	128	586488	61.74	ug/L	100
120) 2-ethylhexyl acrylate	20.28	70	21439	12.97	ug/L	100
121) 1,2,4-trichlorobenzene	20.28	180	248362	59.76	ug/L	100
122) 1,2,3-trichlorobenzene	20.74	180	254569	60.39	ug/L	100
123) hexachloroethane	19.07	201	81327	60.46	ug/L	100
124) 2-methylnaphthalene	21.61	142	165754	34.32	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	136709	500.00	ug/L	0.00
5) pentafluorobenzene	10.19	168	195312	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	268801	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	274931	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	137319	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	81987	51.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.18%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	83104	46.87	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 93.74%			
75) toluene-d8 (s)	13.57	98	313590	47.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.16%			
98) 4-bromofluorobenzene (s)	17.11	95	123655	54.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.94%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.54	59	156671	526.18	ug/L	98
4) 1,4-dioxane	12.24	88	67566	3052.49	ug/L	96
6) chlorodifluoromethane	3.89	51	590274	98.92	ug/L	99
7) dichlorodifluoromethane	3.86	85	621630	104.84	ug/L	99
8) chloromethane	4.26	50	717941	92.72	ug/L	100
9) vinyl chloride	4.50	62	580982	93.65	ug/L	99
10) bromomethane	5.12	96	298438	89.21	ug/L	99
11) chloroethane	5.30	64	204730	98.46	ug/L	99
12) vinyl bromide	5.65	106	245149	105.51	ug/L	98
13) trichlorofluoromethane	5.81	101	385496	101.96	ug/L	100
14) 1,3-butadiene	4.53	54	244666	92.33	ug/L	98
15) ethyl ether	6.21	74	86556	102.91	ug/L	96
16) acrolein	6.44	56	35300	77.97	ug/L	95
17) 1,1-dichloroethene	6.66	96	137257	97.46	ug/L	99
18) freon 113	6.69	101	218136	96.27	ug/L	97
19) acetone	6.65	43	194510	309.66	ug/L	97
20) acetonitrile	7.10	41	313853	862.50	ug/L	97
21) iodomethane	6.93	142	274020	101.10	ug/L	99
22) carbon disulfide	7.10	76	485653	96.98	ug/L	99
23) methylene chloride	7.45	84	170666	91.21	ug/L	99
24) methyl acetate	7.18	43	121043	89.18	ug/L	99
25) methyl tert butyl ether	7.88	73	586357	95.63	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	145279	95.47	ug/L	99
27) hexane	8.35	57	210253	97.29	ug/L	99
28) di-isopropyl ether	8.61	45	631714	89.79	ug/L	97
29) 2-butanone	9.40	72	74828	425.35	ug/L	98
30) 1,1-dichloroethane	8.60	63	278015	95.29	ug/L	98
31) chloroprene	8.73	53	216516	99.60	ug/L	96
32) acrylonitrile	7.78	53	67555	110.91	ug/L	97
33) vinyl acetate	8.53	86	31011	109.90	ug/L	98
34) ethyl tert-butyl ether	9.18	59	656499	100.79	ug/L	99
35) ethyl acetate	9.44	45	27201	113.78	ug/L	88
36) 2,2-dichloropropane	9.52	77	272367	86.35	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.48	96	164293	95.74	ug/L		98
38) methyl acrylate	9.54	85	22640	109.40	ug/L	#	87
39) propionitrile	9.47	54	238764	952.82	ug/L		99
40) tert-butyl formate	10.02	59	157236	96.10	ug/L		98
41) bromochloromethane	9.85	128	90239	101.09	ug/L		97
42) tetrahydrofuran	9.88	72	21195	103.77	ug/L		88
43) chloroform	9.97	83	268717	90.89	ug/L		97
45) methacrylonitrile	9.73	67	66228	102.81	ug/L		95
46) 1,1,1-trichloroethane	10.30	97	302136	103.29	ug/L		99
47) cyclohexane	10.45	84	333188	103.08	ug/L		95
48) tert amyl alcohol	10.70	55	47704	469.24	ug/L		94
49) 1,1-dichloropropene	10.52	75	182898	97.43	ug/L		98
51) carbon tetrachloride	10.55	117	238524	97.10	ug/L		98
52) isopropyl acetate	10.75	87	35507	105.12	ug/L		96
55) iso-octane	10.99	57	499343	104.58	ug/L		99
56) epichlorohydrin	12.97	57	91234	480.60	ug/L		97
57) n-butyl alcohol	11.47	56	322086	5253.60	ug/L		100
58) benzene	10.83	78	571552	89.04	ug/L		99
59) tert-amyl methyl ether	10.97	73	570742	94.22	ug/L		99
60) heptane	11.21	57	91791	96.50	ug/L		97
61) 1,2-dichloroethane	10.86	62	188732	89.72	ug/L		100
62) trichloroethene	11.79	130	164434	100.47	ug/L		99
63) ethyl acrylate	11.80	55	209279	101.90	ug/L		99
64) 2-nitropropane	12.79	41	44732	88.35	ug/L		96
65) 2-chloroethyl vinyl ether	12.87	63	567489	487.77	ug/L		99
66) methyl methacrylate	12.15	100	45574	109.92	ug/L		95
67) 1,2-dichloropropane	12.17	76	65579	95.34	ug/L		98
68) dibromomethane	12.31	93	99544	95.78	ug/L		95
69) methylcyclohexane	12.19	83	270321	98.00	ug/L		99
70) bromodichloromethane	12.53	83	223803	96.39	ug/L		99
71) cis-1,3-dichloropropene	13.16	75	276013	98.67	ug/L		99
72) 4-methyl-2-pentanone	13.30	58	278419	395.03	ug/L		99
73) 3-methyl-1-butanol	13.32	70	117595	279.86	ug/L		97
76) toluene	13.67	92	373408	91.39	ug/L		99
77) trans-1,3-dichloropropene	13.93	75	253457	95.55	ug/L		98
78) ethyl methacrylate	13.95	69	214733	102.08	ug/L		97
79) 1,1,2-trichloroethane	14.22	83	128574	92.63	ug/L		97
80) tetrachloroethene	14.42	164	139033	93.24	ug/L		99
81) 1,3-dichloropropane	14.46	76	224536	86.25	ug/L		100
82) 2-hexanone	14.46	58	241141	383.17	ug/L		97
83) butyl acetate	14.60	56	124788	93.50	ug/L		99
84) dibromochloromethane	14.79	129	186907	96.62	ug/L		99
85) 1,2-dibromoethane	14.99	107	180980	97.62	ug/L		98
86) n-butyl ether	15.66	57	666346	86.69	ug/L		99
87) chlorobenzene	15.64	112	432461	92.66	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	182841	86.10	ug/L		99
89) ethylbenzene	15.74	91	659914	83.41	ug/L		99
90) m,p-xylene	15.91	106	540549	172.33	ug/L		98
91) o-xylene	16.43	91	616312	84.79	ug/L		99
92) styrene	16.45	104	445657	88.14	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

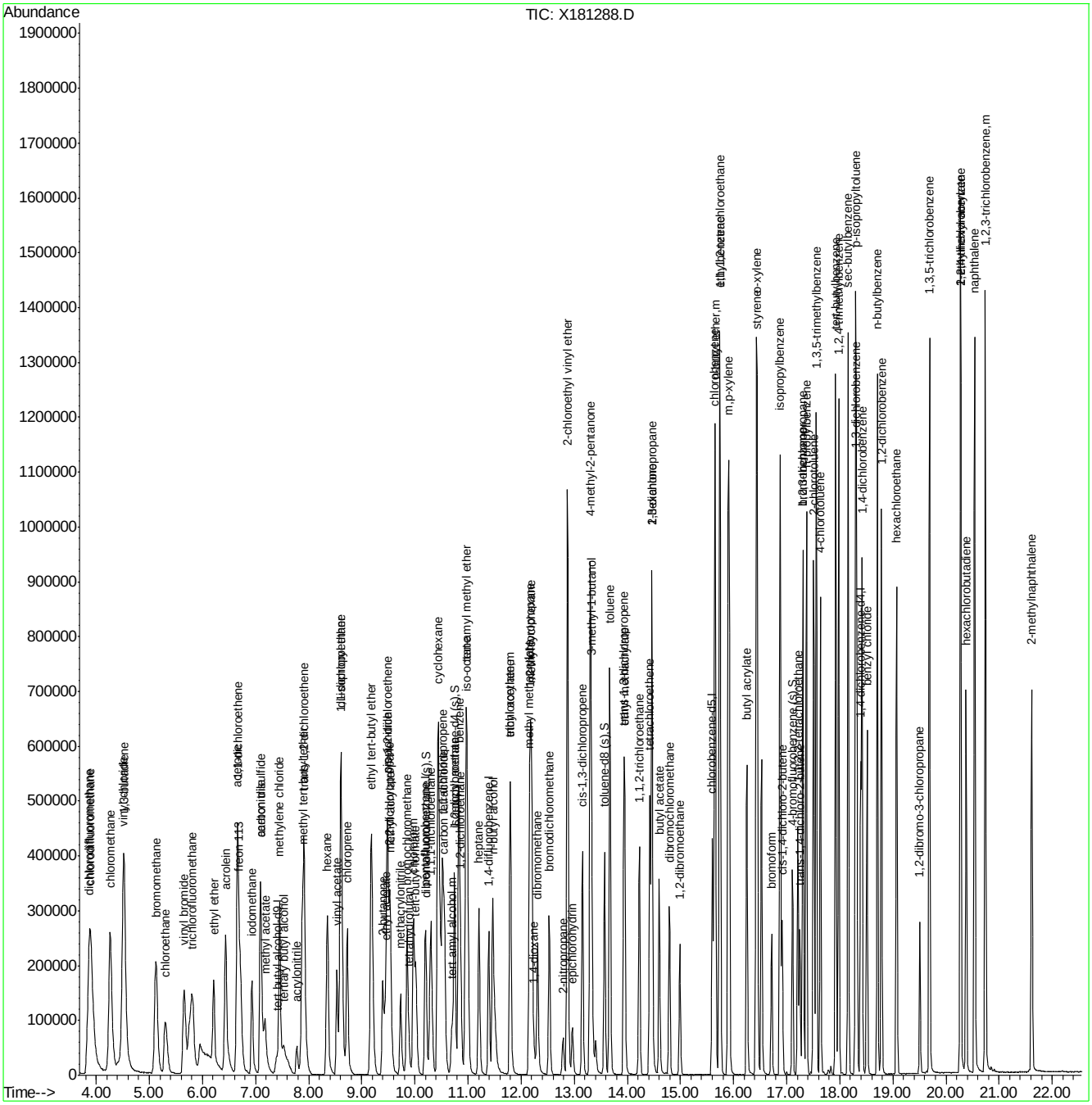
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	390335	91.59	ug/L		99
94) bromoform	16.72	173	132298	96.93	ug/L		97
95) isopropylbenzene	16.88	105	802704	86.39	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	67459	95.35	ug/L		97
99) bromobenzene	17.31	156	197171	99.08	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.21	83	224380	104.23	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	51371	105.09	ug/L		99
102) 1,2,3-trichloropropane	17.30	110	54697	104.89	ug/L	#	76
103) n-propylbenzene	17.37	91	805070	97.00	ug/L		100
104) 2-chlorotoluene	17.51	126	191754	101.96	ug/L		96
105) 4-chlorotoluene	17.63	91	481252	95.24	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	634067	98.26	ug/L		99
107) tert-butylbenzene	17.92	119	627540	109.51	ug/L		99
108) 1,2,4-trimethylbenzene	17.98	105	640979	94.26	ug/L		98
109) sec-butylbenzene	18.16	105	900858	103.78	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	348072	90.74	ug/L		99
111) p-isopropyltoluene	18.30	119	753610	99.70	ug/L		100
112) 1,4-dichlorobenzene	18.42	146	362886	94.69	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	400055	91.89	ug/L		99
114) benzyl chloride	18.51	91	412790	93.50	ug/L		100
115) n-butylbenzene	18.71	92	363436	100.87	ug/L		96
116) 1,2-dibromo-3-chloropropan	19.51	157	75771	111.67	ug/L		97
117) 1,3,5-trichlorobenzene	19.69	180	423390	99.64	ug/L		99
118) hexachlorobutadiene	20.38	225	145862	100.84	ug/L		98
119) naphthalene	20.54	128	1067113	119.53	ug/L		100
120) 2-ethylhexyl acrylate	20.28	70	49872	32.10	ug/L		94
121) 1,2,4-trichlorobenzene	20.28	180	445443	114.03	ug/L		99
122) 1,2,3-trichlorobenzene	20.74	180	470276	118.70	ug/L		99
123) hexachloroethane	19.07	201	154811	122.46	ug/L		99
124) 2-methylnaphthalene	21.61	142	378317	83.35	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.41	65	138754	500.00	ug/L	0.01
5) pentafluorobenzene	10.20	168	202245	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	280314	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	294390	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	142923	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.22	113	83278	50.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.22%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	81494	44.07	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 88.14%			
75) toluene-d8 (s)	13.58	98	337045	47.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.52%			
98) 4-bromofluorobenzene (s)	17.11	95	128739	54.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.96%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.55	59	326388	1080.02	ug/L	98
4) 1,4-dioxane	12.25	88	139889	6226.75	ug/L	97
6) chlorodifluoromethane	3.89	51	1072416	173.56	ug/L	99
7) dichlorodifluoromethane	3.87	85	1196685	194.91	ug/L	99
8) chloromethane	4.27	50	1272189	158.67	ug/L	99
9) vinyl chloride	4.51	62	1052113	163.77	ug/L	98
10) bromomethane	5.12	96	517131	149.29	ug/L	99
11) chloroethane	5.31	64	376826	175.01	ug/L	98
12) vinyl bromide	5.66	106	467337	194.24	ug/L	96
13) trichlorofluoromethane	5.81	101	747873	191.03	ug/L	99
14) 1,3-butadiene	4.53	54	467095	170.22	ug/L	98
15) ethyl ether	6.22	74	165005	189.45	ug/L	100
16) acrolein	6.44	56	65849	140.47	ug/L	97
17) 1,1-dichloroethene	6.66	96	255954	175.51	ug/L	98
18) freon 113	6.70	101	448740	191.26	ug/L	98
19) acetone	6.66	43	368384	566.36	ug/L	97
20) acetonitrile	7.11	41	609284	1616.98	ug/L	99
21) iodomethane	6.93	142	525182	187.12	ug/L	98
22) carbon disulfide	7.10	76	922457	177.88	ug/L	99
23) methylene chloride	7.46	84	327740	169.16	ug/L	94
24) methyl acetate	7.18	43	237044	168.65	ug/L	98
25) methyl tert butyl ether	7.89	73	1134114	178.63	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	266133	168.90	ug/L	100
27) hexane	8.36	57	453193	202.53	ug/L	98
28) di-isopropyl ether	8.62	45	1229084	168.72	ug/L	97
29) 2-butanone	9.40	72	153638	843.40	ug/L	99
30) 1,1-dichloroethane	8.60	63	518341	171.58	ug/L	99
31) chloroprene	8.73	53	413531	183.71	ug/L	96
32) acrylonitrile	7.78	53	133360	211.44	ug/L	98
33) vinyl acetate	8.53	86	61950	212.03	ug/L #	91
34) ethyl tert-butyl ether	9.18	59	1292322	191.61	ug/L	99
35) ethyl acetate	9.44	45	54801	221.38	ug/L	89
36) 2,2-dichloropropane	9.53	77	542154	165.98	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	308098	173.38	ug/L		98
38) methyl acrylate	9.54	85	45350	211.62	ug/L	#	88
39) propionitrile	9.48	54	474798	1829.79	ug/L		98
40) tert-butyl formate	10.02	59	305421	180.28	ug/L		99
41) bromochloromethane	9.85	128	174882	189.20	ug/L		95
42) tetrahydrofuran	9.88	72	42972	203.19	ug/L	#	81
43) chloroform	9.98	83	512504	167.40	ug/L		97
45) methacrylonitrile	9.73	67	134811	202.10	ug/L		94
46) 1,1,1-trichloroethane	10.30	97	623067	205.70	ug/L		98
47) cyclohexane	10.45	84	691924	206.72	ug/L		93
48) tert amyl alcohol	10.70	55	99282	943.11	ug/L		92
49) 1,1-dichloropropene	10.52	75	348020	179.04	ug/L		98
51) carbon tetrachloride	10.56	117	484841	190.61	ug/L		98
52) isopropyl acetate	10.75	87	73665	210.61	ug/L		99
55) iso-octane	10.99	57	1147878	230.53	ug/L		98
56) epichlorohydrin	12.96	57	186542	942.30	ug/L		99
57) n-butyl alcohol	11.47	56	693628	10849.20	ug/L		97
58) benzene	10.83	78	1115293	166.61	ug/L		99
59) tert-amyl methyl ether	10.97	73	1129159	178.74	ug/L		99
60) heptane	11.21	57	203524	205.18	ug/L		97
61) 1,2-dichloroethane	10.87	62	361185	164.64	ug/L		98
62) trichloroethene	11.79	130	319537	187.22	ug/L		99
63) ethyl acrylate	11.80	55	422354	197.19	ug/L		100
64) 2-nitropropane	12.79	41	92509	175.21	ug/L		96
65) 2-chloroethyl vinyl ether	12.87	63	1107932	913.18	ug/L		98
66) methyl methacrylate	12.15	100	94451	218.46	ug/L	#	87
67) 1,2-dichloropropane	12.17	76	125960	175.61	ug/L		96
68) dibromomethane	12.31	93	195185	180.08	ug/L		97
69) methylcyclohexane	12.20	83	589738	205.02	ug/L		96
70) bromodichloromethane	12.53	83	449468	185.63	ug/L		96
71) cis-1,3-dichloropropene	13.16	75	549293	188.30	ug/L		98
72) 4-methyl-2-pentanone	13.30	58	585498	796.61	ug/L		95
73) 3-methyl-1-butanol	13.33	70	249344	569.03	ug/L		96
76) toluene	13.67	92	762292	174.24	ug/L		96
77) trans-1,3-dichloropropene	13.93	75	500078	176.07	ug/L		98
78) ethyl methacrylate	13.95	69	440882	195.73	ug/L		97
79) 1,1,2-trichloroethane	14.22	83	260084	174.99	ug/L		96
80) tetrachloroethene	14.42	164	281069	176.04	ug/L		98
81) 1,3-dichloropropane	14.46	76	431024	154.62	ug/L		99
82) 2-hexanone	14.46	58	497604	738.42	ug/L		93
83) butyl acetate	14.60	56	261087	182.70	ug/L		100
84) dibromochloromethane	14.79	129	382004	184.43	ug/L		99
85) 1,2-dibromoethane	14.99	107	360612	181.65	ug/L		98
86) n-butyl ether	15.66	57	1337269	162.48	ug/L		99
87) chlorobenzene	15.64	112	869149	173.92	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	382478	168.20	ug/L		98
89) ethylbenzene	15.74	91	1306504	154.22	ug/L		99
90) m,p-xylene	15.91	106	1096220	326.38	ug/L		95
91) o-xylene	16.43	91	1260665	161.98	ug/L		96
92) styrene	16.45	104	873628	161.36	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

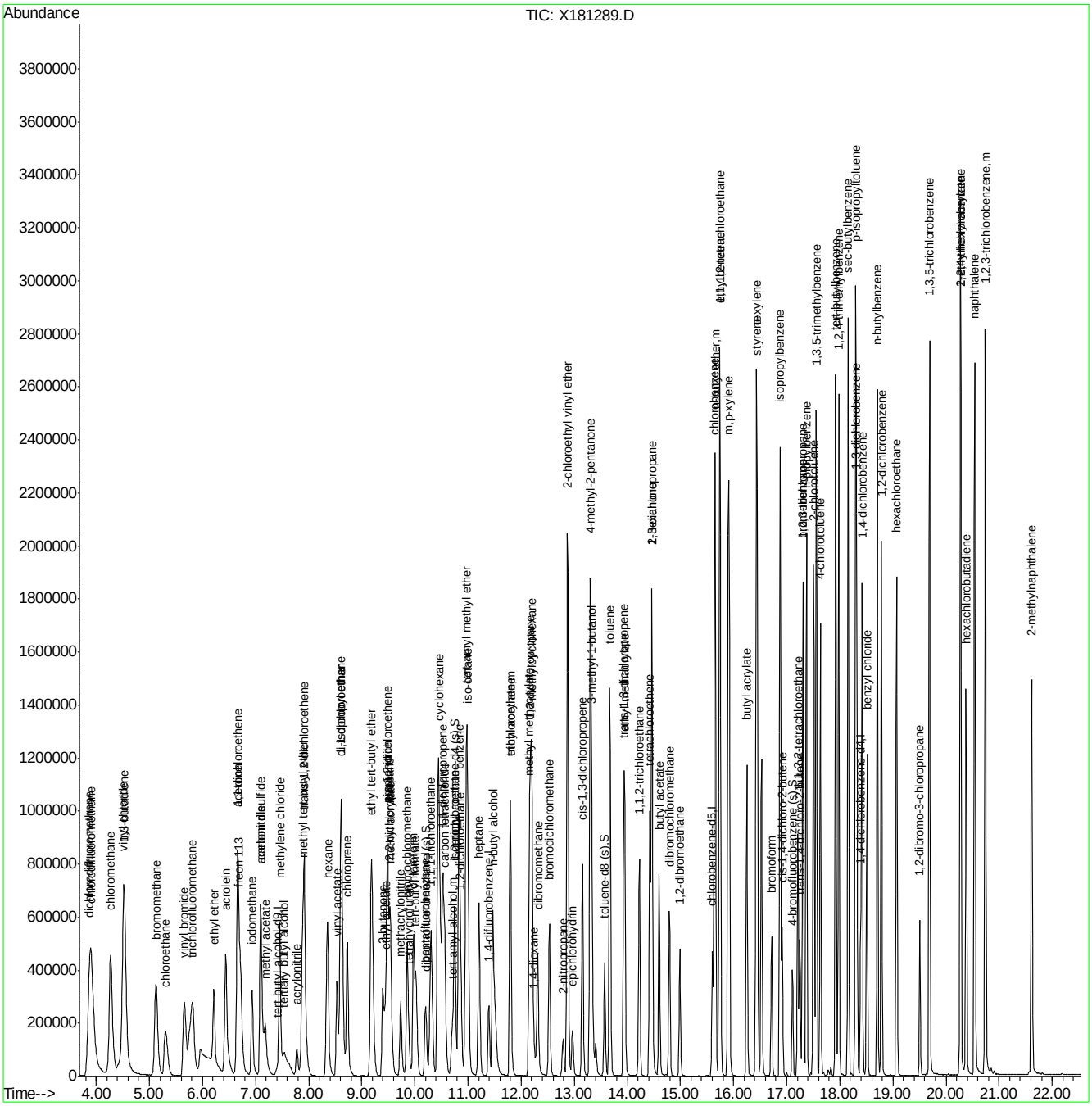
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	804692	176.34	ug/L		99
94) bromoform	16.72	173	272906	186.73	ug/L		97
95) isopropylbenzene	16.88	105	1679531	168.82	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	134299	177.29	ug/L		96
99) bromobenzene	17.31	156	382293	184.58	ug/L		99
100) 1,1,2,2-tetrachloroethane	17.21	83	459187	204.94	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	98489	193.58	ug/L		93
102) 1,2,3-trichloropropane	17.30	110	108803	200.47	ug/L	#	73
103) n-propylbenzene	17.37	91	1618820	187.40	ug/L		99
104) 2-chlorotoluene	17.51	126	397202	202.91	ug/L		95
105) 4-chlorotoluene	17.63	91	951516	180.92	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	1345377	200.32	ug/L		98
107) tert-butylbenzene	17.92	119	1306810	219.10	ug/L		97
108) 1,2,4-trimethylbenzene	17.98	105	1322793	186.89	ug/L		96
109) sec-butylbenzene	18.16	105	1916287	212.11	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	672448	168.44	ug/L		99
111) p-isopropyltoluene	18.30	119	1589623	202.06	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	724070	181.53	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	796942	175.87	ug/L		99
114) benzyl chloride	18.51	91	812691	176.86	ug/L		99
115) n-butylbenzene	18.71	92	748730	199.67	ug/L		96
116) 1,2-dibromo-3-chloropropan	19.51	157	162718	230.41	ug/L		97
117) 1,3,5-trichlorobenzene	19.69	180	875431	197.94	ug/L		100
118) hexachlorobutadiene	20.38	225	306392	203.52	ug/L		98
119) naphthalene	20.54	128	2170954	233.63	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	121485	75.12	ug/L		88
121) 1,2,4-trichlorobenzene	20.28	180	910624	223.98	ug/L		98
122) 1,2,3-trichlorobenzene	20.74	180	946779	229.60	ug/L		100
123) hexachloroethane	19.07	201	334125	253.93	ug/L		96
124) 2-methylnaphthalene	21.61	142	818033	173.16	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	138261	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	210810	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	287197	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	284940	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	145478	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	86219	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.52%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	91451	48.27	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.54%			
75) toluene-d8 (s)	13.57	98	333168	48.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.54%			
98) 4-bromofluorobenzene (s)	17.11	95	128905	54.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.18%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.54	59	86527	276.04	ug/L	97
4) 1,4-dioxane	12.24	88	35824	1386.08	ug/L #	1
6) chlorodifluoromethane	3.89	51	370674	57.55	ug/L	98
7) dichlorodifluoromethane	3.88	85	353426	55.22	ug/L	99
8) chloromethane	4.27	50	415232	51.13	ug/L	99
9) vinyl chloride	4.50	62	327103	48.85	ug/L	99
10) bromomethane	5.12	96	170834	51.26	ug/L	99
11) chloroethane	5.30	64	115486	51.46	ug/L	99
12) vinyl bromide	5.66	106	127929	51.01	ug/L	95
13) trichlorofluoromethane	5.80	101	209095	51.24	ug/L	99
14) 1,3-butadiene	4.52	54	166406	58.18	ug/L	97
15) ethyl ether	6.21	74	49109	54.09	ug/L	92
16) acrolein	6.44	56	20377	48.24	ug/L	96
17) 1,1-dichloroethene	6.66	96	73026	48.04	ug/L	98
18) freon 113	6.70	101	141867	58.01	ug/L	96
19) acetone	6.66	43	117335	211.65	ug/L	99
20) acetonitrile	7.10	41	161402	439.36	ug/L	98
21) iodomethane	6.93	142	166998	57.08	ug/L	99
22) carbon disulfide	7.10	76	294464	54.48	ug/L	99
23) methylene chloride	7.46	84	91450	47.58	ug/L	97
24) methyl acetate	7.18	43	69941	47.74	ug/L	96
25) methyl tert butyl ether	7.88	73	631590	95.44	ug/L	98
26) trans-1,2-dichloroethene	7.92	96	76762	46.74	ug/L	99
27) hexane	8.36	57	129109	53.64	ug/L	97
28) di-isopropyl ether	8.61	45	345733	45.53	ug/L	99
29) 2-butanone	9.39	72	41949	220.92	ug/L	97
30) 1,1-dichloroethane	8.60	63	159711	50.72	ug/L	98
31) chloroprene	8.73	53	127278	54.25	ug/L	99
32) acrylonitrile	7.78	53	42096	61.38	ug/L	94
33) vinyl acetate	8.53	86	16731	52.02	ug/L	95
34) ethyl tert-butyl ether	9.18	59	351684	50.03	ug/L	98
35) ethyl acetate	9.43	45	15969	54.46	ug/L	89
36) 2,2-dichloropropane	9.52	77	143742	44.49	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.48	96	90091	47.64	ug/L		97
38) methyl acrylate	9.54	85	13006	58.23	ug/L	#	84
39) propionitrile	9.47	54	147269	544.49	ug/L		99
40) tert-butyl formate	10.02	59	82299	46.60	ug/L		99
41) bromochloromethane	9.85	128	51876	53.84	ug/L		94
42) tetrahydrofuran	9.88	72	12926	56.13	ug/L		89
43) chloroform	9.97	83	151391	49.22	ug/L		99
45) methacrylonitrile	9.73	67	38418	55.25	ug/L		95
46) 1,1,1-trichloroethane	10.30	97	163625	51.82	ug/L		99
47) cyclohexane	10.45	84	187097	53.63	ug/L		95
48) tert amyl alcohol	10.69	55	28265	257.59	ug/L		95
49) 1,1-dichloropropene	10.52	75	104236	51.45	ug/L		98
51) carbon tetrachloride	10.56	117	136974	51.66	ug/L		99
52) isopropyl acetate	10.75	87	20016	54.90	ug/L	#	92
55) iso-octane	10.98	57	263999	51.75	ug/L		98
56) epichlorohydrin	12.96	57	53513	263.84	ug/L		99
57) n-butyl alcohol	11.47	56	174805	2668.64	ug/L		98
58) benzene	10.83	78	332170	49.84	ug/L		99
59) tert-amyl methyl ether	10.97	73	305838	47.25	ug/L		99
60) heptane	11.21	57	65218	64.17	ug/L		98
61) 1,2-dichloroethane	10.86	62	107006	47.61	ug/L		99
62) trichloroethene	11.79	130	93354	53.39	ug/L		97
63) ethyl acrylate	11.80	55	124827	56.88	ug/L		99
64) 2-nitropropane	12.79	41	27009	52.73	ug/L		96
65) 2-chloroethyl vinyl ether	12.87	63	349043	280.79	ug/L		99
66) methyl methacrylate	12.15	100	24191	52.13	ug/L	#	82
67) 1,2-dichloropropane	12.17	76	35720	48.61	ug/L		96
68) dibromomethane	12.31	93	54491	49.07	ug/L		92
69) methylcyclohexane	12.19	83	154383	50.47	ug/L		96
70) bromodichloromethane	12.53	83	122004	49.18	ug/L		97
71) cis-1,3-dichloropropene	13.16	75	154248	51.61	ug/L		99
72) 4-methyl-2-pentanone	13.30	58	168034	223.14	ug/L		100
73) 3-methyl-1-butanol	13.32	70	68470	1106.03	ug/L		97
76) toluene	13.67	92	213135	50.33	ug/L		97
77) trans-1,3-dichloropropene	13.93	75	143011	52.02	ug/L		98
78) ethyl methacrylate	13.95	69	126465	55.83	ug/L		99
79) 1,1,2-trichloroethane	14.22	83	74318	51.66	ug/L		98
80) tetrachloroethene	14.42	164	81985	53.05	ug/L		97
81) 1,3-dichloropropane	14.46	76	132578	49.14	ug/L		99
82) 2-hexanone	14.46	58	140377	204.93	ug/L		98
83) butyl acetate	14.60	56	69936	50.56	ug/L		97
84) dibromochloromethane	14.79	129	107287	53.51	ug/L		99
85) 1,2-dibromoethane	14.99	107	101932	53.05	ug/L		99
86) n-butyl ether	15.66	57	408043	53.41	ug/L		100
87) chlorobenzene	15.64	112	246318	50.92	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.74	131	108121	50.62	ug/L		97
89) ethylbenzene	15.74	91	385958	48.72	ug/L		99
90) m,p-xylene	15.91	106	312083	98.73	ug/L		99
91) o-xylene	16.43	91	360686	49.67	ug/L		99
92) styrene	16.45	104	258530	49.34	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

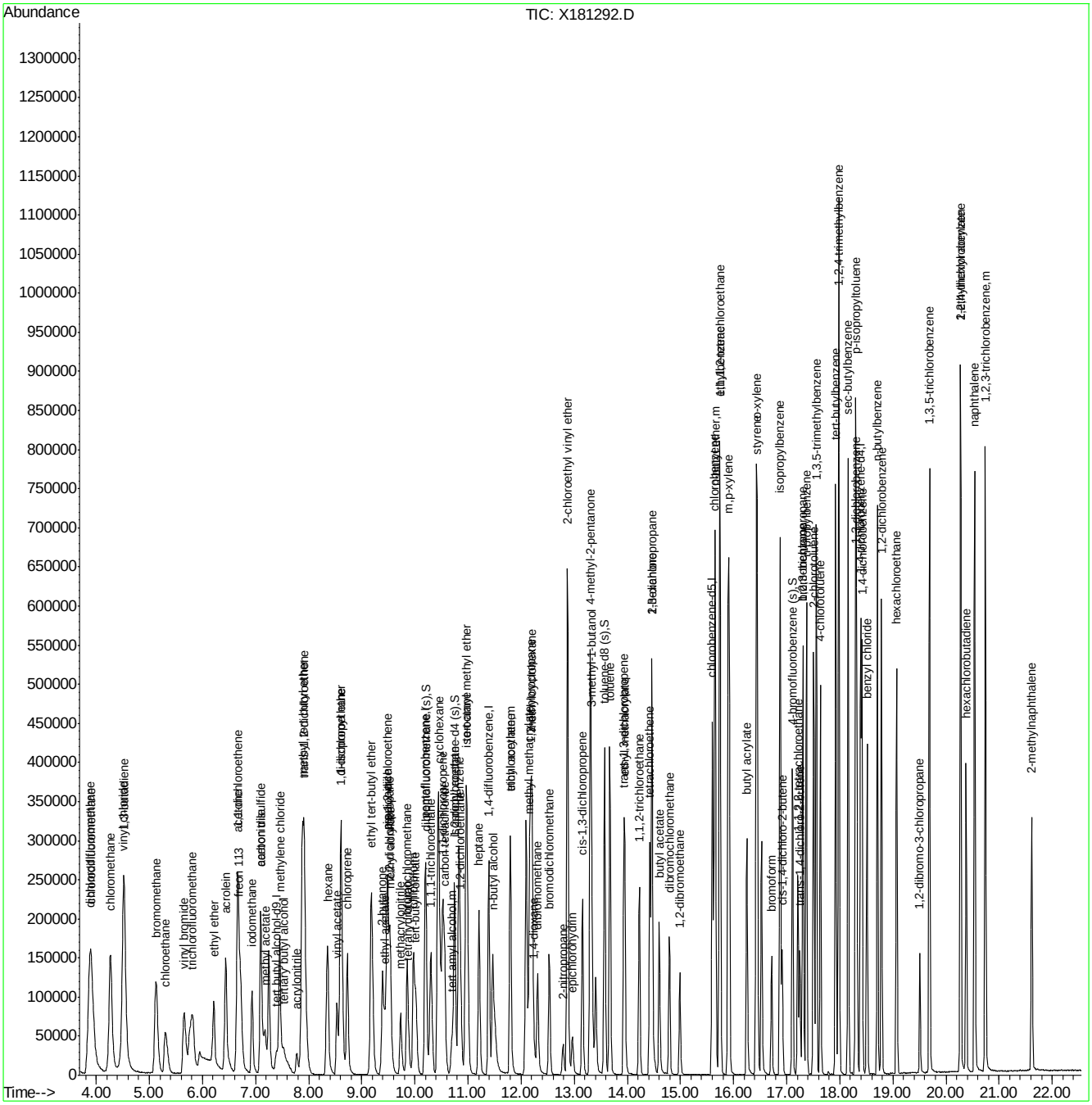
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	215202	48.72	ug/L		99
94) bromoform	16.72	173	77450	54.75	ug/L		98
95) isopropylbenzene	16.88	105	474596	50.98	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	38155	49.62	ug/L		99
99) bromobenzene	17.31	156	110872	52.59	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.21	83	127139	55.75	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	31532	60.89	ug/L		97
102) 1,2,3-trichloropropane	17.30	110	31149	54.42	ug/L	#	77
103) n-propylbenzene	17.37	91	473683	53.87	ug/L		99
104) 2-chlorotoluene	17.51	126	108082	54.24	ug/L		96
105) 4-chlorotoluene	17.63	91	280924	52.48	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	373269	55.86	ug/L		100
107) tert-butylbenzene	17.92	119	357114	58.82	ug/L		99
108) 1,2,4-trimethylbenzene	17.98	105	371713	53.32	ug/L		99
109) sec-butylbenzene	18.16	105	516529	56.17	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	203401	50.05	ug/L		99
111) p-isopropyltoluene	18.30	119	441256	55.10	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	205310	52.08	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	235841	52.55	ug/L		99
114) benzyl chloride	18.51	91	278978	61.53	ug/L		99
115) n-butylbenzene	18.71	92	210164	55.06	ug/L		97
116) 1,2-dibromo-3-chloropropan	19.51	157	41471	55.52	ug/L		98
117) 1,3,5-trichlorobenzene	19.69	180	245884	54.62	ug/L		98
118) hexachlorobutadiene	20.38	225	80620	52.61	ug/L		99
119) naphthalene	20.54	128	609521	57.27	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	23238	12.00	ug/L		95
121) 1,2,4-trichlorobenzene	20.28	180	254332	58.93	ug/L		100
122) 1,2,3-trichlorobenzene	20.74	180	261474	59.78	ug/L		98
123) hexachloroethane	19.07	201	85864	60.61	ug/L		99
124) 2-methylnaphthalene	21.61	142	169781	23.44	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181293.D
Acq On : 2 May 2019 11:14 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 09 14:52:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

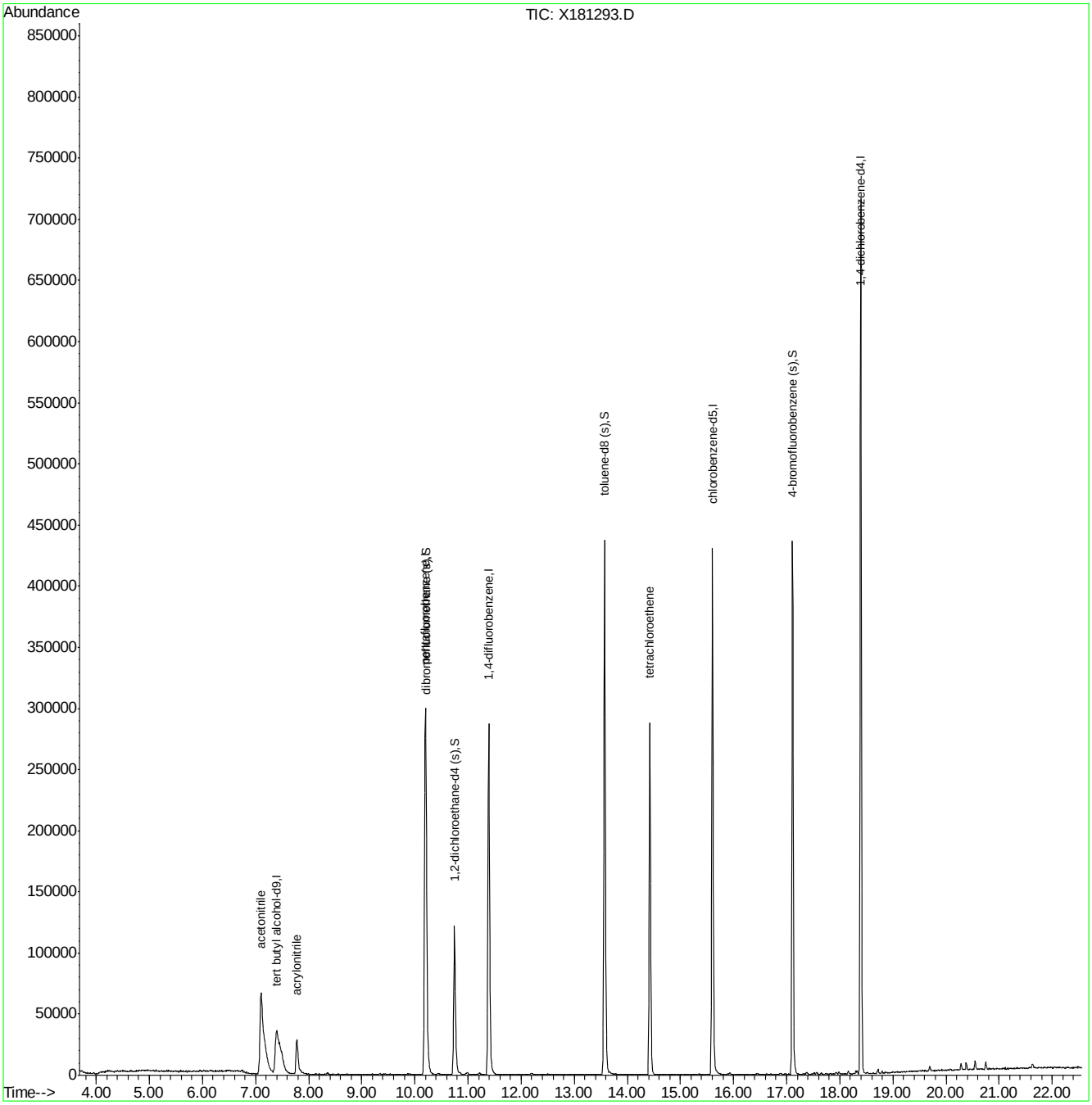
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.39	65	155140	500.00	ug/L	-0.01
5) pentafluorobenzene	10.20	168	222936	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	299119	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	283770	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	188775	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	92472	50.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.96%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	102538	51.97	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.94%			
75) toluene-d8 (s)	13.57	98	350104	51.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.94%			
98) 4-bromofluorobenzene (s)	17.11	95	145205	46.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.90%			
Target Compounds						Qvalue
20) acetonitrile	7.10	41	204930	527.51	ug/L	98
32) acrylonitrile	7.78	53	36860	50.82	ug/L	94
80) tetrachloroethene	14.42	164	80720	52.45	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181293.D
Acq On : 2 May 2019 11:14 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 09 14:52:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration



MX7749.M Fri May 10 08:36:52 2019 GCMSX Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	131265	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	192685	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	260927	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	262071	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	147792	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.20	168	192685	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	85259	54.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.76%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	84938	49.35	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.70%			
75) toluene-d8 (s)	13.57	98	315275	50.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.36%			
98) 4-bromofluorobenzene (s)	17.11	95	125284	51.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.53	59	28039	94.22	ug/L	90
4) 1,4-dioxane	12.24	88	13749	560.32	ug/L	91
6) chlorodifluoromethane	3.90	51	116964	19.87	ug/L	99
7) dichlorodifluoromethane	3.88	85	131467	22.47	ug/L	99
8) chloromethane	4.28	50	149473	20.14	ug/L	100
9) vinyl chloride	4.52	62	130589	21.34	ug/L	97
10) bromomethane	5.13	96	69661	22.87	ug/L	99
11) chloroethane	5.31	64	44818	21.85	ug/L	94
12) vinyl bromide	5.66	106	45994	20.07	ug/L	92
13) trichlorofluoromethane	5.81	101	84970	22.78	ug/L	97
14) 1,3-butadiene	4.54	54	52343	20.02	ug/L	99
15) ethyl ether	6.22	74	17130	20.64	ug/L	86
16) acrolein	6.44	56	5759	14.92	ug/L	99
17) 1,1-dichloroethene	6.67	96	32510	23.40	ug/L	87
18) freon 113	6.71	101	53031	23.72	ug/L	95
19) acetone	6.66	43	40644	80.21	ug/L	91
20) acetonitrile	7.10	41	63636	189.52	ug/L	92
21) iodomethane	6.94	142	57690	21.57	ug/L	97
22) carbon disulfide	7.10	76	111307	22.53	ug/L	96
23) methylene chloride	7.46	84	38414	21.87	ug/L	89
24) methyl acetate	7.19	43	23566	17.60	ug/L	93
25) methyl tert butyl ether	7.89	73	114234	18.89	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	33500	22.32	ug/L	94
27) hexane	8.36	57	42881	19.49	ug/L	94
28) di-isopropyl ether	8.62	45	126567	18.24	ug/L	97
29) 2-butanone	9.40	72	15846	91.30	ug/L #	74
30) 1,1-dichloroethane	8.60	63	62931	21.86	ug/L	98
31) chloroprene	8.73	53	41921	19.55	ug/L	90
32) acrylonitrile	7.79	53	13001	20.74	ug/L	91
33) vinyl acetate	8.53	86	5563	18.92	ug/L #	50
34) ethyl tert-butyl ether	9.19	59	121930	18.98	ug/L	98
35) ethyl acetate	9.44	45	4471	16.68	ug/L	80

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.52	77	66649	22.57	ug/L		95
37) cis-1,2-dichloroethene	9.49	96	37709	21.81	ug/L		96
38) methyl acrylate	9.54	85	4188	20.51	ug/L	#	70
39) propionitrile	9.47	54	52167	211.02	ug/L		99
40) tert-butyl formate	10.02	59	29009	17.97	ug/L		95
41) bromochloromethane	9.85	128	19489	22.13	ug/L		97
42) tetrahydrofuran	9.89	72	3871	18.39	ug/L		88
43) chloroform	9.97	83	58950	20.97	ug/L		98
45) methacrylonitrile	9.73	67	12484	19.64	ug/L		93
46) 1,1,1-trichloroethane	10.30	97	62501	21.66	ug/L		97
47) cyclohexane	10.45	84	60282	18.90	ug/L		95
48) tert amyl alcohol	10.70	55	9913	98.84	ug/L	#	65
49) 1,1-dichloropropene	10.52	75	40459	21.85	ug/L		96
51) carbon tetrachloride	10.56	117	53499	22.08	ug/L		97
52) isopropyl acetate	10.75	87	6615	19.85	ug/L	#	64
55) iso-octane	10.99	57	93410	20.15	ug/L		98
56) epichlorohydrin	12.96	57	17551	95.24	ug/L		100
57) n-butyl alcohol	11.47	56	60875	1022.91	ug/L		97
58) benzene	10.83	78	128725	21.26	ug/L		99
59) tert-amyl methyl ether	10.97	73	110750	18.83	ug/L		96
60) heptane	11.21	57	18584	20.13	ug/L		93
61) 1,2-dichloroethane	10.87	62	39491	19.34	ug/L		97
62) trichloroethene	11.80	130	34009	21.41	ug/L		97
63) ethyl acrylate	11.80	55	38171	19.15	ug/L		97
64) 2-nitropropane	12.79	41	6662	14.32	ug/L		94
65) 2-chloroethyl vinyl ether	12.87	63	118989	105.36	ug/L		99
66) methyl methacrylate	12.16	100	7451	17.67	ug/L		93
67) 1,2-dichloropropane	12.17	76	13576	20.33	ug/L		94
68) dibromomethane	12.31	93	21555	21.36	ug/L		96
69) methylcyclohexane	12.20	83	59692	21.48	ug/L		96
70) bromodichloromethane	12.53	83	45201	20.05	ug/L		97
71) cis-1,3-dichloropropene	13.16	75	54852	20.20	ug/L		93
72) 4-methyl-2-pentanone	13.30	58	57462	83.99	ug/L		91
73) 3-methyl-1-butanol	13.33	70	23873	424.46	ug/L		91
76) toluene	13.67	92	77337	19.86	ug/L		98
77) trans-1,3-dichloropropene	13.94	75	49030	19.39	ug/L		98
78) ethyl methacrylate	13.95	69	41028	19.69	ug/L		91
79) 1,1,2-trichloroethane	14.22	83	27770	20.99	ug/L		97
80) tetrachloroethene	14.43	164	29572	20.81	ug/L		94
81) 1,3-dichloropropane	14.46	76	51060	20.58	ug/L		90
82) 2-hexanone	14.46	58	52353	83.10	ug/L		89
83) butyl acetate	14.61	56	24100	18.94	ug/L		87
84) dibromochloromethane	14.79	129	37102	20.12	ug/L		99
85) 1,2-dibromoethane	14.99	107	36867	20.86	ug/L		100
86) n-butyl ether	15.66	57	136239	19.39	ug/L		98
87) chlorobenzene	15.65	112	91706	20.61	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	39680	20.20	ug/L		95
89) ethylbenzene	15.75	91	146261	20.07	ug/L		99
90) m,p-xylene	15.91	106	116265	39.99	ug/L		99
91) o-xylene	16.43	91	131645	19.71	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

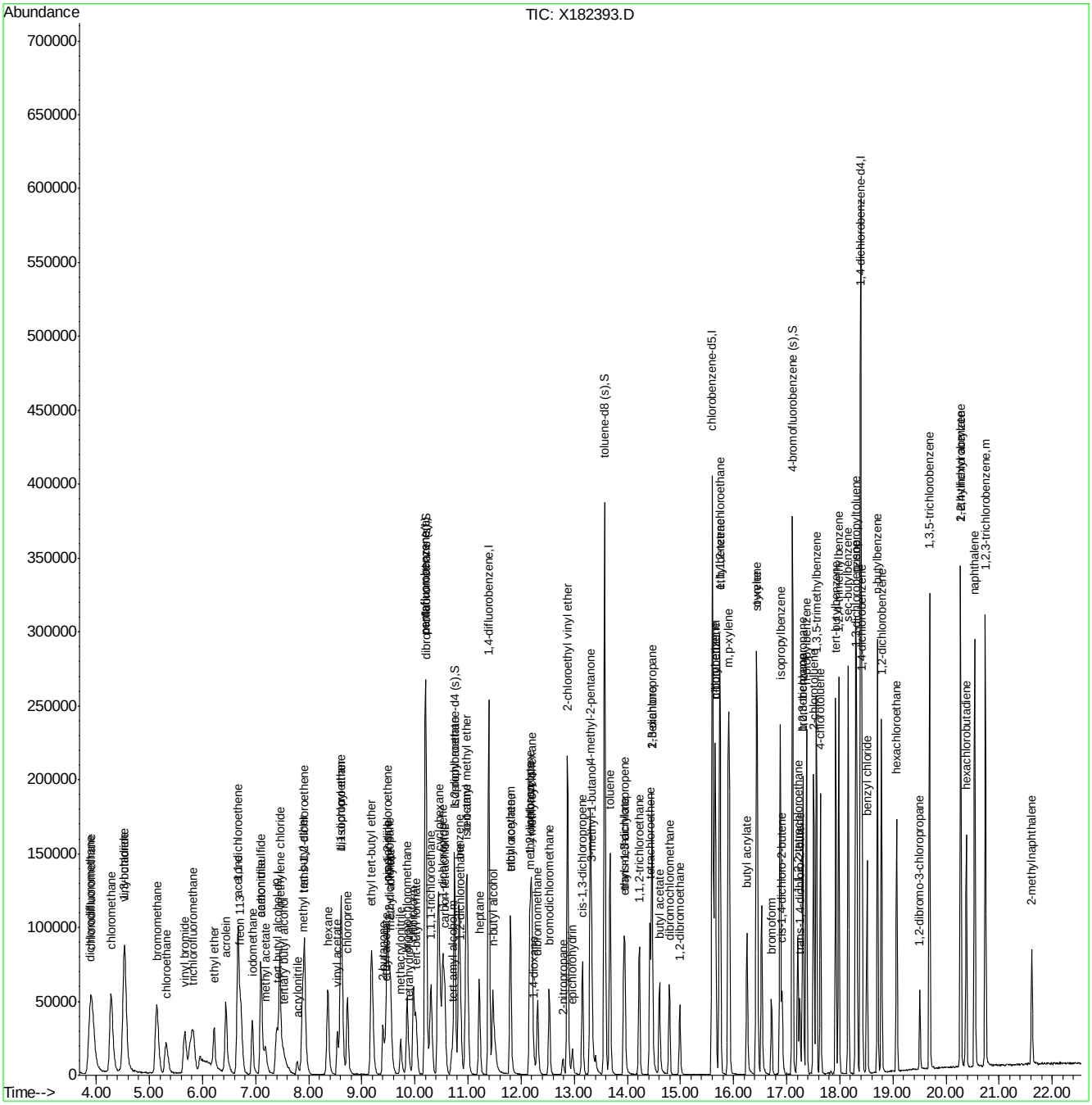
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) styrene	16.45	104	98078	20.35	ug/L		100
93) butyl acrylate	16.25	55	70209	17.28	ug/L		99
94) bromoform	16.71	173	26704	20.53	ug/L		95
95) isopropylbenzene	16.88	105	163299	19.07	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	13582	19.20	ug/L		91
99) bromobenzene	17.31	156	44126	20.60	ug/L		95
100) 1,1,2,2-tetrachloroethane	17.21	83	47489	20.50	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	9981	18.97	ug/L		85
102) 1,2,3-trichloropropane	17.30	110	11841	20.36	ug/L	#	74
103) n-propylbenzene	17.37	91	180687	20.23	ug/L		99
104) 2-chlorotoluene	17.51	126	41195	20.35	ug/L		98
105) 4-chlorotoluene	17.63	91	108949	20.03	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	137987	20.33	ug/L		99
107) tert-butylbenzene	17.92	119	120442	19.53	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	143606	20.28	ug/L		99
109) sec-butylbenzene	18.16	105	186696	19.98	ug/L		98
110) 1,3-dichlorobenzene	18.32	146	84684	20.51	ug/L		98
111) p-isopropyltoluene	18.30	119	160090	19.68	ug/L		98
112) 1,4-dichlorobenzene	18.42	146	82765	20.67	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	94149	20.65	ug/L		99
114) benzyl chloride	18.51	91	96354	20.92	ug/L		98
115) n-butylbenzene	18.71	92	82114	21.18	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	15317	20.19	ug/L		95
117) 1,3,5-trichlorobenzene	19.69	180	98278	21.49	ug/L		100
118) hexachlorobutadiene	20.39	225	33138	21.29	ug/L		99
119) naphthalene	20.54	128	227318	21.02	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	5499	2.80	ug/L		97
121) 1,2,4-trichlorobenzene	20.28	180	101913	23.24	ug/L		97
122) 1,2,3-trichlorobenzene	20.74	180	101087	22.75	ug/L		99
123) hexachloroethane	19.07	201	28627	19.89	ug/L		98
124) 2-methylnaphthalene	21.62	142	40491	8.06	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.414	65	121845	500.00	ug/L	0.01
5) pentafluorobenzene	10.196	168	190706	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.394	114	259159	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	264567	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	142972	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	190706	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	83222	53.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.26%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	80415	47.04	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 94.08%			
75) toluene-d8 (s)	13.575	98	310482	48.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.90%			
98) 4-bromofluorobenzene (s)	17.111	95	123186	52.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.18%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.539	59	66816	241.87	ug/L	93
4) 1,4-dioxane	12.247	88	32468	1425.49	ug/L	94
6) chlorodifluoromethane	3.915	51	263766	45.27	ug/L	97
7) dichlorodifluoromethane	3.899	85	298467	51.55	ug/L	97
8) chloromethane	4.286	50	333271	45.36	ug/L	98
9) vinyl chloride	4.527	62	284541	46.97	ug/L	100
10) bromomethane	5.149	96	160899	53.37	ug/L	96
11) chloroethane	5.322	64	103746	51.10	ug/L	96
12) vinyl bromide	5.672	106	113963	50.23	ug/L	95
13) trichlorofluoromethane	5.829	101	198999	53.91	ug/L	99
14) 1,3-butadiene	4.548	54	147474	56.99	ug/L	96
15) ethyl ether	6.227	74	41392	50.40	ug/L	84
16) acrolein	6.446	56	12868	33.68	ug/L	97
17) 1,1-dichloroethene	6.671	96	72712	52.88	ug/L	95
18) freon 113	6.708	101	120655	54.54	ug/L	96
19) acetone	6.661	43	84522	168.53	ug/L	93
20) acetonitrile	7.105	41	146011	439.37	ug/L	95
21) iodomethane	6.943	142	138379	52.29	ug/L	96
22) carbon disulfide	7.105	76	258771	52.92	ug/L	96
23) methylene chloride	7.461	84	90586	52.10	ug/L	92
24) methyl acetate	7.189	43	54442	41.08	ug/L	95
25) methyl tert butyl ether	7.895	73	287239	47.98	ug/L	99
26) trans-1,2-dichloroethene	7.926	96	77059	51.86	ug/L	94
27) hexane	8.366	57	99237	45.57	ug/L	95
28) di-isopropyl ether	8.622	45	308466	44.91	ug/L	96
29) 2-butanone	9.401	72	36222	210.87	ug/L #	87
30) 1,1-dichloroethane	8.601	63	144588	50.76	ug/L	98
31) chloroprene	8.732	53	100300	47.26	ug/L	93
32) acrylonitrile	7.775	53	30957	49.90	ug/L	98
33) vinyl acetate	8.538	86	15075	51.81	ug/L #	66
34) ethyl tert-butyl ether	9.187	59	312243	49.10	ug/L	99
35) ethyl acetate	9.448	45	11648	43.91	ug/L	82
36) 2,2-dichloropropane	9.532	77	149616	51.19	ug/L	96
37) cis-1,2-dichloroethene	9.485	96	87437	51.11	ug/L	96
38) methyl acrylate	9.543	85	11130	55.08	ug/L #	76
39) propionitrile	9.475	54	121745	497.57	ug/L	99
40) tert-butyl formate	10.019	59	75320	47.15	ug/L	96
41) bromochloromethane	9.856	128	46464	53.31	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.888	72	10429	50.06	ug/L		91
43) chloroform	9.977	83	137925	49.57	ug/L		99
45) methacrylonitrile	9.731	67	31173	49.56	ug/L		98
46) 1,1,1-trichloroethane	10.306	97	148723	52.07	ug/L		99
47) cyclohexane	10.458	84	157884	50.02	ug/L		88
48) tert amyl alcohol	10.704	55	23574	237.49	ug/L	#	80
49) 1,1-dichloropropene	10.526	75	92392	50.41	ug/L		98
51) carbon tetrachloride	10.563	117	120712	50.33	ug/L		97
52) isopropyl acetate	10.751	87	17092	51.82	ug/L	#	71
55) iso-octane	10.991	57	221316	48.08	ug/L		98
56) epichlorohydrin	12.963	57	40989	223.95	ug/L		97
57) n-butyl alcohol	11.467	56	151522	2563.45	ug/L		94
58) benzene	10.835	78	297245	49.43	ug/L		100
59) tert-amyl methyl ether	10.965	73	279106	47.79	ug/L		98
60) heptane	11.211	57	43556	47.50	ug/L		96
61) 1,2-dichloroethane	10.866	62	90834	44.79	ug/L		99
62) trichloroethene	11.797	130	81304	51.52	ug/L		100
63) ethyl acrylate	11.802	55	94699	47.82	ug/L		98
64) 2-nitropropane	12.785	41	16641	36.00	ug/L		89
65) 2-chloroethyl vinyl ether	12.874	63	260995	232.68	ug/L		100
66) methyl methacrylate	12.158	100	20777	49.62	ug/L	#	82
67) 1,2-dichloropropane	12.173	76	32745	49.38	ug/L		90
68) dibromomethane	12.309	93	50015	49.91	ug/L		95
69) methylcyclohexane	12.205	83	144638	52.40	ug/L		98
70) bromodichloromethane	12.534	83	109230	48.79	ug/L		98
71) cis-1,3-dichloropropene	13.157	75	131530	48.77	ug/L		92
72) 4-methyl-2-pentanone	13.303	58	140053	206.11	ug/L		93
73) 3-methyl-1-butanol	13.324	70	57061	1021.45	ug/L		95
76) toluene	13.675	92	186173	47.35	ug/L		99
77) trans-1,3-dichloropropene	13.936	75	116313	45.57	ug/L		98
78) ethyl methacrylate	13.952	69	102865	48.91	ug/L		93
79) 1,1,2-trichloroethane	14.224	83	66068	49.46	ug/L		97
80) tetrachloroethene	14.428	164	69576	48.49	ug/L		95
81) 1,3-dichloropropane	14.464	76	117729	46.99	ug/L		89
82) 2-hexanone	14.464	58	121458	190.96	ug/L	#	86
83) butyl acetate	14.600	56	60008	46.72	ug/L		95
84) dibromochloromethane	14.794	129	89569	48.12	ug/L		98
85) 1,2-dibromoethane	14.987	107	90907	50.95	ug/L		97
86) n-butyl ether	15.662	57	332684	46.90	ug/L		99
87) chlorobenzene	15.646	112	219958	48.98	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.740	131	95238	48.02	ug/L		99
89) ethylbenzene	15.746	91	342151	46.52	ug/L		98
90) m,p-xylene	15.908	106	273457	93.17	ug/L		98
91) o-xylene	16.431	91	313035	46.43	ug/L		99
92) styrene	16.447	104	232854	47.86	ug/L		98
93) butyl acrylate	16.248	55	178489	43.52	ug/L		99
94) bromoform	16.719	173	62808	47.82	ug/L		94
95) isopropylbenzene	16.881	105	404381	46.79	ug/L		100
96) cis-1,4-dichloro-2-butene	16.917	88	16040	22.46	ug/L		89
99) bromobenzene	17.310	156	104228	50.31	ug/L		99
100) 1,1,2,2-tetrachloroethane	17.210	83	116087	51.79	ug/L		100
101) trans-1,4-dichloro-2-b...	17.247	53	13329	26.19	ug/L		95
102) 1,2,3-trichloropropane	17.299	110	28207	50.15	ug/L	#	76
103) n-propylbenzene	17.372	91	423678	49.03	ug/L		98
104) 2-chlorotoluene	17.508	126	98211	50.15	ug/L		96
105) 4-chlorotoluene	17.639	91	251123	47.73	ug/L		98
106) 1,3,5-trimethylbenzene	17.561	105	329490	50.17	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

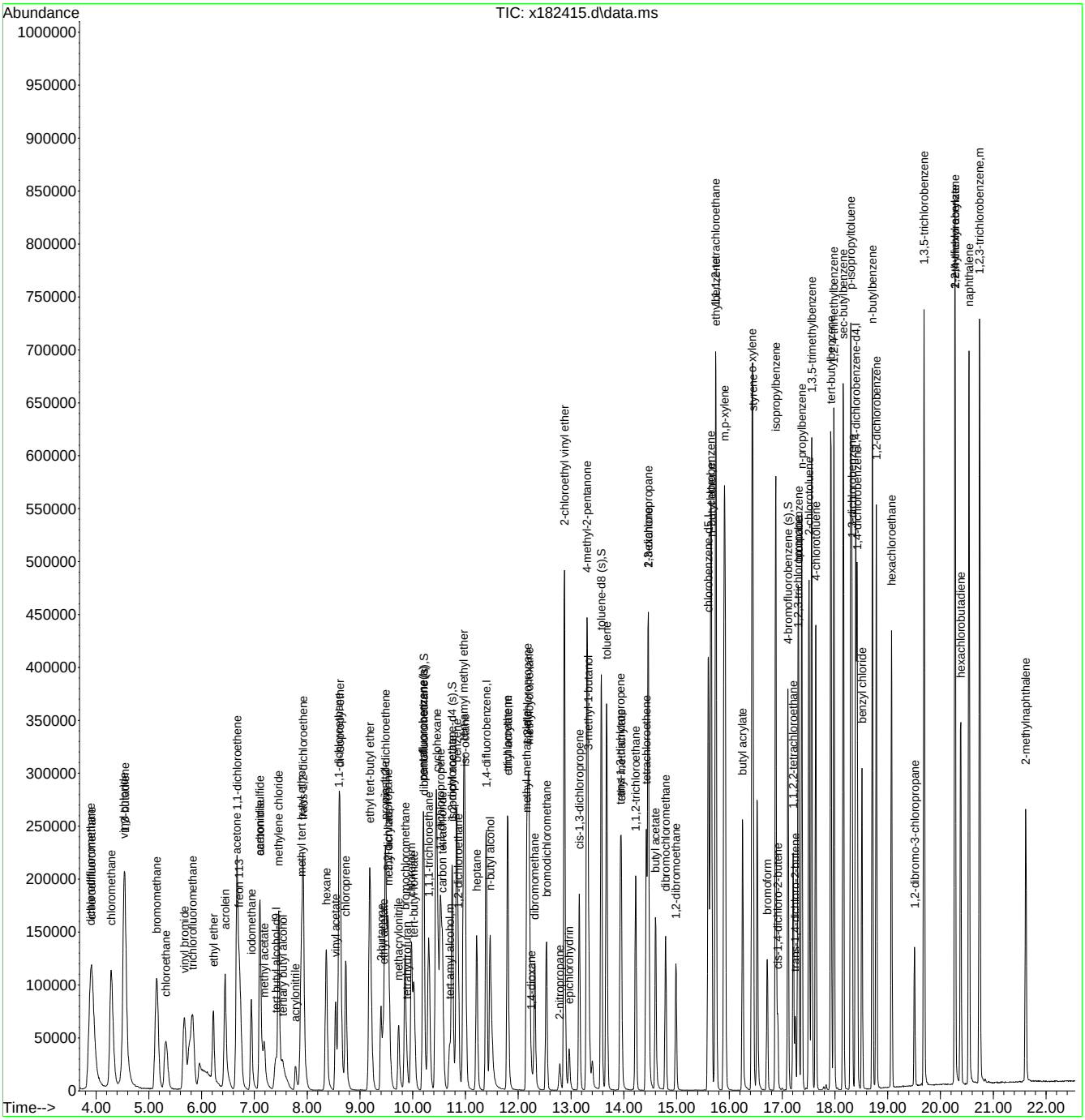
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	17.927	119	310845	52.10	ug/L	95
108) 1,2,4-trimethylbenzene	17.979	105	337414	49.25	ug/L	99
109) sec-butylbenzene	18.157	105	457490	50.62	ug/L	98
110) 1,3-dichlorobenzene	18.324	146	189858	47.54	ug/L	99
111) p-isopropyltoluene	18.298	119	382992	48.67	ug/L	99
112) 1,4-dichlorobenzene	18.424	146	192769	49.76	ug/L	97
113) 1,2-dichlorobenzene	18.784	146	216756	49.15	ug/L	98
114) benzyl chloride	18.513	91	202329	45.41	ug/L	99
115) n-butylbenzene	18.711	92	191384	51.02	ug/L	98
116) 1,2-dibromo-3-chloropr...	19.512	157	37639	51.28	ug/L	98
117) 1,3,5-trichlorobenzene	19.689	180	227729	51.47	ug/L	98
118) hexachlorobutadiene	20.385	225	74031	49.16	ug/L	98
119) naphthalene	20.542	128	549427	52.53	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	21687	11.40	ug/L	93
121) 1,2,4-trichlorobenzene	20.275	180	240032	56.59	ug/L	98
122) 1,2,3-trichlorobenzene	20.741	180	244249	56.82	ug/L	97
123) hexachloroethane	19.072	201	72988	52.42	ug/L	99
124) 2-methylnaphthalene	21.614	142	135578	19.67	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	ZB624(60mx0.25mmx1.4um)
STANDARDS	ABK v0192648-40.47	EC v0192648-58.9	Acrolein v0192648-54.11		Method	V8260C
Standard Concentrations	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	4/6/2019
STANDARDS	EXT ABK v0192648-52.6	EXT EC v019-2648-60.5	EXT Acro v019-2648-42.	EXT PA v019-2648-2		
Standard Concentrations	100ppm-10,000ppm	100ppm	100ppm	100ppm		
INTERNAL/SURROGATE	v0182648-30		Ace 3rd Source		Analysis Date	4/6/2019
Int/Surr Concentration	250/2500pm		v019-2648-12.3		Sequence loaded by	Prashant S
			400ppm		Data processed by	Bridget Kelly
					Batch ID	V4B3793
					Matrix	AQ
					Approved By:	KANYAV
pH Paper Lot#	217518		Initial Calibration Method	M4B3793	Approved Date:	4/10/2019 1:37:37 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4b	89751	BFB		NA			5			1	ok	5:47 pm
4b	89752	IC3793-0.2		NA			5			2	ok	1 uL ABK EC Acro / 500 mL
4b	89753	IC3793-0.5		NA			5			3	ok	1 uL ABK EC Acro / 200 mL
4b	89754	IC3793-1		NA			5			4	ok	1 uL ABK EC Acro / 100 mL
4b	89755	IC3793-2		NA			5			5	ok	2 uL ABK EC Acro / 100 mL
4b	89756	IC3793-4		NA			5			6	ok	4 uL ABK EC Acro / 100 mL
4b	89757	IC3793-8		NA			5			7	ok	8 uL ABK EC Acro / 100 mL
4b	89758	IC3793-20		NA			5			8	ok	20 uL ABK EC Acro / 100 mL
4b	89759	ICC3793-50		NA			5			9	ok	50 uL ABK EC Acro / 100 mL
4b	89760	IC3793-100		NA			5			10	ok	100 uL ABK EC Acro / 100 mL
4b	89761	IC3793-200		NA			5			11	ok	200 uL ABK EC Acro / 100 mL

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4b	89762	IB		NA			5			12	ok	
4b	89763	IB		NA			5			13	ok	
4b	89764	ICV3793-50		NA			5			14	ok	50 uL EXT ABK EC Acro / 100 mL
4b	89765	ICV3793-50		NA			5			15	Not used	50 uL EXT PA Ace 3rd Source / 100 mL 3rd source ace expired

GCMS Volatile Run Log

Standard / Reagents	Lot #					
STANDARDS	ABK v0192648-143.29	EC v0192659-18.5	Acrolein v0192659-15.2		Column	ZB624(60mx0.25mmx1.4um)
Standard Concentrations	100ppm-10,000ppm	100ppm	100ppm		Method	v8260c
					Init Calib Date	4/6/2019
INTERNAL/SURROGATE	v019-2659-05					
Int/Surr Concentration	250/2500ppm				Analysis Date	6/24/2019
					Sequence loaded by	Edward Durner
					Data processed by	Lotusa
					Batch ID	V4B3896
					Matrix	AQ
Rough Reviewed By:					Approved By:	MEI
pH Paper Lot#	217518		Initial Calibration Method	M4B3793	Approved Date:	6/27/2019 11:55:07 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4B	91827	IB		NA			5			1	OK	
4B	91828	IB		NA			5			2	OK	
4B	91829	IB		NA			5			3	OK	
4B	91830	BFB/CC3793-20		NA			5			4	ok/OK	20ul abk,ec,acrolein/100ml, 7:01am
4B	91831	CC3793-1		NA			5			5	OK	1ul abk,ec,acrolein/100ml
4B	91832	BS		NA			5			6	OK	50ul abk,ec,acrolein/100ml
4B	91833	IB		NA			5			7	OK	
4B	91834	MB		NA			5			8	OK	
4B	91835	IB		NA			5			9	OK	
4B	91836	JC90121-16	1	NA	MS35698	V8260SL	5		1	10	OK	
4B	91837	JC90121-16MS	2	NA	MS35698	V8260SL	5		1	11	OK	20ul abk,ec,acrolein/40ml

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4B	91838	JC90121-16MSD	3	NA	MS35698	V8260SL	5		1	12	OK	20ul abk,ec,acrolein/40ml
4B	91839	IB		NA			5			13	OK	
4B	91840	JC90121-1	1	NA	MS35698	V8260SL	5		1	14	OK	
4B	91841	JC90121-3	2	NA	MS35698	V8260SL	5		1	15	OK	
4B	91842	JC90121-4	2	NA	MS35698	V8260SL	5		1	16	OK	
4B	91843	JC90121-5	2	NA	MS35698	V8260SL	5		1	17	OK	
4B	91844	JC90121-6	1	NA	MS35698	V8260SL	5		1	18	OK	
4B	91845	JC90121-7	1	NA	MS35698	V8260SL	5		1	19	OK	
4B	91846	JC90121-8	2	NA	MS35698	V8260SL	5		1	20	OK	
4B	91847	JC90121-9	1	NA	MS35698	V8260SL	5		1	21	OK	
4B	91848	JC90121-10	1	NA	MS35698	V8260SL	5		1	22	OK	
4B	91849	JC90121-11	1	NA	MS35698	V8260SL	5		1	23	OK	
4B	91850	JC90121-12	1	NA	MS35698	V8260SL	5		1	24	OK	
4B	91851	JC90121-13	2	NA	MS35698	V8260SL	5		1	25	OK	
4B	91852	JC90121-14	1	NA	MS35698	V8260SL	5		1	26	OK	
4B	91853	ECC3793-50		NA			5			27	OK	50ul abk,ec,acrolein/100ml 5:50pm

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-103.11	EC V019-2648-104.2	Acrolein V019-2648-88.5 1		Method	V8260C/V624.1
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	5/11/2018
Internal Surrogate	V019-2648-97					
Internal Surrogate Concentration	50/500ppm					
					Analysis Date	5/11/2019
Ext.Standards	Ext.ABK V019-2648-94.5	Ext.EC V019-2648-99.3	Ext.Acrolein V019-2648-9 0.2	Ext.PA V019-2648-79	Sequence loaded by	Prashant B. Shukla
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm	100ppm-1,000ppm	Data processed by	Bridget Kelly
					Batch ID	VA9645
					Matrix	AQ
					Approved By:	KANYAV
pH Paper Lot#	217518		Initial Calibration Method	MA9645	Approved Date:	5/14/2019 7:30:52 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	249730	BFB		NA			5			1	ok	2:52 PM
A	249731	IC9645-0.2		NA		initial cal.	5			2	ok	1uL Std.ABK,EC,Acrolein in 500mL DI H2O
A	249732	IC9645-0.5		NA		initial cal.	5			3	ok	1uL Std.ABK,EC,Acrolein in 200mL DI H2O
A	249733	IC9645-1		NA		initial cal.	5			4	ok	1uL Std.ABK,EC,Acrolein in 100mL DI H2O
A	249734	IC9645-2		NA		initial cal.	5			5	ok	1uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249735	IC9645-4		NA		initial cal.	5			6	ok	2uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249736	IC9645-8		NA		initial cal.	5			7	ok	4uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249737	IC9645-20		NA		initial cal.	5			8	ok	10uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249738	ICC9645-50		NA		initial cal.	5			9	ok	25uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249739	IC9645-100		NA		initial cal.	5			10	ok	50uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249740	IC9645-200		NA		initial cal.	5			11	ok	100uL Std.ABK,EC,Acrolein in 50mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	249741	IB		NA			5			12	OK	
A	249742	IB		NA			5			13	OK	
A	249743	ICV9645-50		NA		initial cal.	5			14	ok	25uL Ext.ABK,EC,Acrolein in 50mL DI H2O
A	249744	ICV9645-50		NA		initial cal.	5			15	ok	25uL Ext.PA in 50mL DI H2O
A	249745	IB		NA			5			16	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB-624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-143.64	EC V019-2659-27.10	Acrolein V019-2659-15.5 1		Method	V8260C
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	5/11/2018
Internal Surrogate	V019-2659-06					
Internal Surrogate Concentration	50/500ppm					
					Analysis Date	6/25/2019
					Sequence loaded by	Brittany Klimek
					Data processed by	JONKM
					Batch ID	VA9710
rough reviewed by	Bridget Kelly				Matrix	AQ
Initial Calibration Method	MA9645				Approved By:	MEI
pH Paper Lot#	217518				Approved Date:	6/26/2019 12:29:34 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
a	251077	IB		NA			5			1	OK	
a	251078	BFB/CC9645-50		NA			5			2	OK/OK	50uL ABK, EC, Acrolein/100mL DI H2O. 6/25/19; 7:20PM.
a	251079	BS		NA			5			3	OK	50uL ABK, EC, Acrolein/100mL DI H2O.
a	251080	IB		NA			5			4	OK	
a	251081	MB		NA			5			5	OK	
a	251082	JC90121-19	4	NA	MS35699	V8260SL	5		1	6	OK	DOD-QSM5.
a	251083	JC90121-17	2	NA	MS35699	V8260SL	5		1	7	OK	DOD-QSM5.
a	251084	JC90121-18	2	NA	MS35699	V8260SL	5		1	8	OK	DOD-QSM5.
a	251085	JC90121-20	2	NA	MS35699	V8260SL	5		1	9	OK	DOD-QSM5.
a	251086	JC90121-21	1	NA	MS35699	V8260SL	5		1	10	OK	DOD-QSM5.
a	251087	JC90121-22	1	NA	MS35699	V8260SL	5		1	11	OK	DOD-QSM5.

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
a	251088	JC90121-23	2	NA	MS35699	V8260SL	5		1	12	OK	DOD-QSM5.
a	251089	JC90121-24	2	NA	MS35699	V8260SL	5		1	13	OK	DOD-QSM5.
a	251090	JC90121-25	2	NA	MS35699	V8260SL	5		1	14	OK	DOD-QSM5.
a	251091	JC90121-26	1	NA	MS35699	V8260SL	5		1	15	OK	DOD-QSM5.
a	251092	JC90121-27	1	NA	MS35699	V8260SL	5		1	16	OK	DOD-QSM5.
a	251093	JC90121-28	2	NA	MS35699	V8260SL	5		1	17	OK	DOD-QSM5.
a	251094	JC90121-29	2	NA	MS35699	V8260SL	5		1	18	OK	DOD-QSM5.
a	251095	JC90121-30	2	NA	MS35699	V8260SL	5		1	19	OK	DOD-QSM5.
a	251096	JC90522-1	1	NA	MS35781	V8260PAUGTMB	5		1	20	OK	
a	251097	JC90121-19MS	3	NA	MS35699	V8260SL	5		1	21	OK	DOD-QSM5. 20uL ABK, EC, Acrolein/40mL sample.
a	251098	JC90121-19MSD	6	NA	MS35699	V8260SL	5		1	22	OK	DOD-QSM5. 20uL ABK, EC, Acrolein/40mL sample.
a	251099	ECC9645-50		NA			5			23	OK	50uL ABK, EC, Acrolein/100mL DI H2O. 5:33am

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standards	ABK: V019-2648-72.49	EC: V019-2648-92.2	Acrolein: V019-2648-88.2 4		Method	V8260C
Standard Concentration	100-10,000ppm	100ppm	100ppm		Init Calib Date	5/2/19
Internal Surrogate	V019-2648-63					
Internal Surrogate Concentration	250/2,500ppm				Prepared by	Robert Szot
Standards	Ext ABK v019-2648-94.3	Ext C v019-2648-90.4	Ext Acro v018-2648-86.6	EXT PA v019-2648-7 9.2	Analysis Date	5/2/2019
Standard Concentration	100-10,000ppm	100ppm	100ppm	100 ppm	Sequence loaded by	Bridget Kelly
					Data processed by	Bridget Kelly
					Batch ID	VX7749
					Matrix	AQ
Initial Calibration Method	MX7749				Approved By:	KANYAV
pH Paper Lot#	204518				Approved Date:	5/14/2019 5:35:34 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	181279	BFB		NA			5			1	ok	4:28 pm
X	181280	IC7749-0.2		NA		V8260 initial cal.	5			2	ok	1 uL ABK EC Acro / 500 mL
X	181281	IC7749-0.5		NA		V8260 initial cal.	5			3	ok	1 uL ABK EC Acro / 200 mL
X	181282	IC7749-1		NA		V8260 initial cal.	5			4	ok	1 uL ABK EC Acro / 100 mL
X	181283	IC7749-2		NA		V8260 initial cal.	5			6	ok	2 uL ABK EC Acro / 100 mL
X	181284	IC7749-4		NA		V8260 initial cal.	5			5	ok	4 uL ABK EC Acro / 100 mL
X	181285	IC7749-8		NA		V8260 initial cal.	5			8	ok	8 uL ABK EC Acro / 100 mL
X	181286	IC7749-20		NA		V8260 initial cal.	5			7	ok	20 uL ABK EC Acro / 100 mL
X	181287	ICC7749-50		NA		V8260 initial cal.	5			9	ok	50 uL ABK EC Acro / 100 mL
X	181288	IC7749-100		NA		V8260 initial cal.	5			10	ok	100 uL ABK EC Acro / 100 mL
X	181289	IC7749-200		NA		V8260 initial cal.	5			11	ok	200 uL ABK EC Acro / 100 mL

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	181290	IB		NA			5			12	ok	
X	181291	IB		NA			5			13	ok	
X	181292	ICV7749-50		NA		V8260 initial cal.	5			14	ok	50 uL EXT ABK EC Acro / 100 mL
X	181293	ICV7749-50		NA		V8260 initial cal.	5			15	ok	50 uL EXT PA / 100 mL

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standards	ABK: V019-2648-143.34	EC: V019-2659-36.1	Acrolein: V019-2659.15.6	CTFE + F123A: V019 2650.20	Method	V8260C
Standard Concentration	100-10,000ppm	100ppm	100ppm	100 ppm	Init Calib Date	5/2/2019
Internal Surrogate	V019-2648-125					
Internal Surrogate Concentration	250/2,500ppm					
					Analysis Date	6/26/2019
					Sequence loaded by	Jessica Potts
					Data processed by	Lotusa
					Batch ID	VX7807
					Matrix	AQ
Initial Calibration Method	MX7749				Approved By:	KANYAV
pH Paper Lot#	204518				Approved Date:	6/27/2019 2:51:55 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	182392	IB		NA			5			1	ok	
X	182393	BFB/CC7749-20		NA			5			2	ok/ok	20uL ABK, EC, Acrolein/100mL (6:55 AM) # 16 Low
X	182394	CC7749-2		NA			5			3	ok	2uL ABK, EC, Acrolein/100mL for # 16 not used
X	182395	BS		NA			5			4	ok	50uL ABK, EC, Acrolein/100mL
X	182396	IB		NA			5			5	ok	
X	182397	MB		NA			5			6	ok	
X	182398	JC90273-1	1	NA	MS35702	V8260SL	5		1	7	OK	DOD
X	182399	JC90273-2	1	NA	MS35702	V8260SL	5		1	8	OK	DOD
X	182400	JC90273-3	1	NA	MS35702	V8260SL	5		1	9	OK	DOD
X	182401	JC90273-4	2	NA	MS35702	V8260SL	5		1	10	OK	DOD

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	182402	JC90273-6	6	NA	MS35702	V8260SL	5		1	11	OK	DOD
X	182403	JC90121-2	2	NA	MS35698	V8260SL	5		1	12	ok	DOD
X	182404	JC90273-5	2	NA	MS35702	V8260SL	5		1	13	OK	DOD
X	182405	JC90273-7	1	NA	MS35702	V8260SL	5		1	14	OK	DOD
X	182406	JC90273-8	1	NA	MS35702	V8260SL	5		1	15	OK	DOD
X	182407	JC90273-6MS	1	NA	MS35702	V8260SL	5		1	16	OK	20uL ABK, EC, Acrolein/40mL
X	182408	JC90273-6MSD	3	NA	MS35702	V8260SL	5		1	17	OK	20uL ABK, EC, Acrolein/40mL
X	183409	IB		NA			5			18	OK	
X	183410	JC90273-9	2	NA	MS35702	V8260SL	5		1	19	OK	DOD
X	183411	JC90273-10	1	NA	MS35702	V8260SL	5		1	20	OK	DOD
X	183412	JC90273-11	2	NA	MS35702	V8260SL	5		1	21	OK	DOD
X	183413	JC90273-12	2	NA	MS35702	V8260SL	5		1	22	OK	DOD
X	183414	JC90273-13	2	NA	MS35702	V8260SL	5		1	23	OK	DOD
X	183415	ECC7749-50		NA			5			24	OK	50uL ABK, EC, Acrolein/100mL end check DOD 6:07pm

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

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

6265401

SGS Job Number: JC90273

Sampling Date: 06/19/19

Report to:

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Syracuse, NY 13202
lmairs@eaest.com; TLamond@EAEst.com;
EDimeo@EAEst.com
ATTN: Nate Kranes

Total number of pages in report: **406**

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.

Brian McGuire
General Manager

Client Service contact: Beth Wasserman 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: JC90273

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC90273-1	06/19/19	09:10	LM	06/20/19	AQ	Ground Water	MW13-5A-2019-06-19
JC90273-2	06/19/19	09:20	LM	06/20/19	AQ	Ground Water	PZ13-3D-2019-06-19
JC90273-3	06/19/19	09:50	LM	06/20/19	AQ	Ground Water	PW13-1-2019-06-19
JC90273-4	06/19/19	09:40	LM	06/20/19	AQ	Ground Water	MW13-3-2019-06-19
JC90273-5	06/19/19	09:30	LM	06/20/19	AQ	Ground Water	MW13-5D-2019-06-19
JC90273-6	06/19/19	09:00	LM	06/20/19	AQ	Ground Water	MW13-4-2019-06-19
JC90273-6D	06/19/19	09:00	LM	06/20/19	AQ	Water Dup/MSD	MW13-4-2019-06-19
JC90273-6S	06/19/19	09:00	LM	06/20/19	AQ	Water Matrix Spike	MW13-4-2019-06-19
JC90273-7	06/19/19	10:10	LM	06/20/19	AQ	Ground Water	MW13-4D-2019-06-19
JC90273-8	06/19/19	10:20	LM	06/20/19	AQ	Ground Water	PW13-4D-2019-06-19
JC90273-9	06/19/19	07:55	LM	06/20/19	AQ	Ground Water	RW5-1-2019-06-19
JC90273-10	06/19/19	07:45	LM	06/20/19	AQ	Ground Water	MW5-1DA-2019-06-19
JC90273-11	06/19/19	08:20	LM	06/20/19	AQ	Ground Water	RW5-4-2019-06-19

Sample Summary
(continued)

EA Engineering

Job No: JC90273

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC90273-12	06/19/19	08:40	LM	06/20/19	AQ	Ground Water	RW5-2-2019-06-19
JC90273-13	06/19/19	00:00	LM	06/20/19	AQ	Ground Water	MW-FD-2019-06-19
JC90273-14	06/19/19	08:30	LM	06/20/19	AQ	Ground Water	MW5-6-2019-06-19
JC90273-15	06/19/19	08:10	LM	06/20/19	AQ	Ground Water	MW5-5D-2019-06-19
JC90273-16	06/19/19	10:20	LM	06/20/19	AQ	Trip Blank Water	TRIP BLANK 2
JC90273-17	06/19/19	08:55	LM	06/20/19	AQ	Ground Water	MW5-P-2019-06-19

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EA Engineering	**Job No**	JC90273
Site:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY	**Report Date**	6/29/2019 12:22:38 P

On 06/20/2019, 16 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC90273 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VA9712

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC90525-1MS, JC90525-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Trichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Matrix Spike Duplicate Recovery(s) for Trichloroethene are outside control limits. Probable cause due to matrix interference.

Matrix: AQ **Batch ID:** VX7807

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC90273-6MS, JC90273-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** VX7809

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC90379-1MS, JC90379-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Duplicate for Acetone are outside control limits for sample JC90379-2DUP. Outside control limits due to vial differences.
- JC90379-2DUP for Isopropylbenzene: RPD acceptable due to low DUP and sample concentrations.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC90273-1	**MW13-5A-2019-06-19**					
Toluene		1.1	1.0	0.75	ug/l	SW846 8260C
JC90273-2	**PZ13-3D-2019-06-19**					
cis-1,2-Dichloroethene		2.5	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		1.3	1.0	0.80	ug/l	SW846 8260C
JC90273-3	**PW13-1-2019-06-19**					
cis-1,2-Dichloroethene		15.9	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		2.2	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		4.1	1.0	0.80	ug/l	SW846 8260C
JC90273-4	**MW13-3-2019-06-19**					
Acetone		6.3 J	10	7.5	ug/l	SW846 8260C
2-Butanone (MEK)		31.0	10	7.5	ug/l	SW846 8260C
cis-1,2-Dichloroethene		0.62 J	1.0	0.75	ug/l	SW846 8260C
2-Hexanone		29.6	5.0	2.5	ug/l	SW846 8260C
JC90273-5	**MW13-5D-2019-06-19**					
cis-1,2-Dichloroethene		63.7	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		0.56 J	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		4.4	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		4.5	1.0	0.80	ug/l	SW846 8260C
JC90273-6	**MW13-4-2019-06-19**					
2-Butanone (MEK)		13.8	10	7.5	ug/l	SW846 8260C
2-Hexanone		5.9	5.0	2.5	ug/l	SW846 8260C
JC90273-7	**MW13-4D-2019-06-19**					
cis-1,2-Dichloroethene		4.5	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		1.6	1.0	0.80	ug/l	SW846 8260C
JC90273-8	**PW13-4D-2019-06-19**					
cis-1,2-Dichloroethene		2.1	1.0	0.75	ug/l	SW846 8260C

Summary of Hits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC90273-9	**RW5-1-2019-06-19**					
Chloroethane		3.0	1.0	0.75	ug/l	SW846 8260C
cis-1,2-Dichloroethene		32.3	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		9.5	1.0	0.75	ug/l	SW846 8260C
Toluene		1.1	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		2.5	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		42.4	1.0	0.80	ug/l	SW846 8260C
JC90273-10	**MW5-1DA-2019-06-19**					
No hits reported in this sample.						
JC90273-11	**RW5-4-2019-06-19**					
Benzene		0.67	0.50	0.45	ug/l	SW846 8260C
cis-1,2-Dichloroethene		2.1	1.0	0.75	ug/l	SW846 8260C
Toluene		1.6	1.0	0.75	ug/l	SW846 8260C
JC90273-12	**RW5-2-2019-06-19**					
cis-1,2-Dichloroethene		59.7	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		71.5	1.0	0.80	ug/l	SW846 8260C
JC90273-13	**MW-FD-2019-06-19**					
cis-1,2-Dichloroethene		59.4	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		71.0	1.0	0.80	ug/l	SW846 8260C
JC90273-14	**MW5-6-2019-06-19**					
cis-1,2-Dichloroethene		2.3	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		1.0	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		2.0	1.0	0.80	ug/l	SW846 8260C
JC90273-15	**MW5-5D-2019-06-19**					
Acetone		6.7 J	10	7.5	ug/l	SW846 8260C
cis-1,2-Dichloroethene		90.3	1.0	0.75	ug/l	SW846 8260C
trans-1,2-Dichloroethene		19.6	1.0	0.75	ug/l	SW846 8260C
Trichloroethene		0.62 J	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		869	10	8.0	ug/l	SW846 8260C

Summary of Hits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC90273-16	**TRIP BLANK 2**					
No hits reported in this sample.						
JC90273-17	**MW5-P-2019-06-19**					
cis-1,2-Dichloroethene		27.0	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		11.7	1.0	0.80	ug/l	SW846 8260C

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID: MW13-5A-2019-06-19
Lab Sample ID: JC90273-1 **Date Sampled:** 06/19/19
Matrix: AQ - Ground Water **Date Received:** 06/20/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182398.D	1	06/26/19 09:57	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW13-5A-2019-06-19		
Lab Sample ID:	JC90273-1	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	1.1	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	104%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

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: PZ13-3D-2019-06-19
Lab Sample ID: JC90273-2 **Date Sampled:** 06/19/19
Matrix: AQ - Ground Water **Date Received:** 06/20/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182399.D	1	06/26/19 10:26	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.5	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PZ13-3D-2019-06-19		
Lab Sample ID:	JC90273-2	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	1.3	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

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:	PW13-1-2019-06-19		
Lab Sample ID:	JC90273-3	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182400.D	1	06/26/19 10:55	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	15.9	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.2	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PW13-1-2019-06-19		
Lab Sample ID:	JC90273-3	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	4.1	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	90%		80-120%

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:	MW13-3-2019-06-19		
Lab Sample ID:	JC90273-4	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182401.D	1	06/26/19 11:23	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.3	10	7.5	6.0	ug/l	J
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	31.0	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.62	1.0	0.75	0.51	ug/l	J
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW13-3-2019-06-19		
Lab Sample ID:	JC90273-4	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	29.6	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	106%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

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:	MW13-5D-2019-06-19		
Lab Sample ID:	JC90273-5	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182404.D	1	06/26/19 12:50	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	63.7	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.56	1.0	0.75	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW13-5D-2019-06-19		
Lab Sample ID:	JC90273-5	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	4.4	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	4.5	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	94%		80-120%

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:	MW13-4-2019-06-19		
Lab Sample ID:	JC90273-6	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182402.D	1	06/26/19 11:52	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	13.8	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW13-4-2019-06-19		
Lab Sample ID:	JC90273-6	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	5.9	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	102%		81-124%
2037-26-5	Toluene-D8	105%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

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:	MW13-4D-2019-06-19		
Lab Sample ID:	JC90273-7	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182405.D	1	06/26/19 13:18	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.5	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW13-4D-2019-06-19		
Lab Sample ID:	JC90273-7	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	1.6	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

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:	PW13-4D-2019-06-19		
Lab Sample ID:	JC90273-8	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182406.D	1	06/26/19 13:47	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.1	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	PW13-4D-2019-06-19		
Lab Sample ID:	JC90273-8	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

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:	RW5-1-2019-06-19		
Lab Sample ID:	JC90273-9	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182410.D	1	06/26/19 15:43	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	3.0	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	32.3	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	9.5	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	RW5-1-2019-06-19		
Lab Sample ID:	JC90273-9	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	1.1	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	2.5	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	42.4	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	100%		81-124%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	96%		80-120%

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:	MW5-1DA-2019-06-19		
Lab Sample ID:	JC90273-10	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182411.D	1	06/26/19 16:12	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW5-1DA-2019-06-19		
Lab Sample ID:	JC90273-10	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

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:	RW5-4-2019-06-19		
Lab Sample ID:	JC90273-11	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182412.D	1	06/26/19 16:40	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.67	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.1	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	RW5-4-2019-06-19		
Lab Sample ID:	JC90273-11	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	1.6	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

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:	RW5-2-2019-06-19		
Lab Sample ID:	JC90273-12	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182413.D	1	06/26/19 17:09	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	59.7	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	RW5-2-2019-06-19		
Lab Sample ID:	JC90273-12	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	71.5	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	101%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

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: MW-FD-2019-06-19
Lab Sample ID: JC90273-13 **Date Sampled:** 06/19/19
Matrix: AQ - Ground Water **Date Received:** 06/20/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182414.D	1	06/26/19 17:38	DG	n/a	n/a	VX7807
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	59.4	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW-FD-2019-06-19		
Lab Sample ID:	JC90273-13	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	71.0	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

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:	MW5-6-2019-06-19		
Lab Sample ID:	JC90273-14	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251136.D	1	06/27/19 00:07	ED	n/a	n/a	VA9712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.3	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW5-6-2019-06-19		
Lab Sample ID:	JC90273-14	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	1.0	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	2.0	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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:	MW5-5D-2019-06-19		
Lab Sample ID:	JC90273-15	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251137.D	1	06/27/19 00:36	ED	n/a	n/a	VA9712
Run #2	X182439.D	10	06/27/19 11:43	JP	n/a	n/a	VX7809

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

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	6.7	10	7.5	6.0	ug/l	J
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	90.3	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	19.6	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW5-5D-2019-06-19		
Lab Sample ID:	JC90273-15	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.62	1.0	0.75	0.53	ug/l	J
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	869 [a]	10	8.0	7.9	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	103%	81-124%
2037-26-5	Toluene-D8	101%	101%	80-120%
460-00-4	4-Bromofluorobenzene	97%	92%	80-120%

(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:	TRIP BLANK 2		
Lab Sample ID:	JC90273-16	**Date Sampled:**	06/19/19
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X182438.D	1	06/27/19 11:15	JP	n/a	n/a	VX7809
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	TRIP BLANK 2		
Lab Sample ID:	JC90273-16	**Date Sampled:**	06/19/19
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	102%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	94%		80-120%

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:	MW5-P-2019-06-19		
Lab Sample ID:	JC90273-17	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251139.D	1	06/27/19 01:34	ED	n/a	n/a	VA9712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	27.0	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW5-P-2019-06-19		
Lab Sample ID:	JC90273-17	**Date Sampled:**	06/19/19
Matrix:	AQ - Ground Water	**Date Received:**	06/20/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	11.7	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%

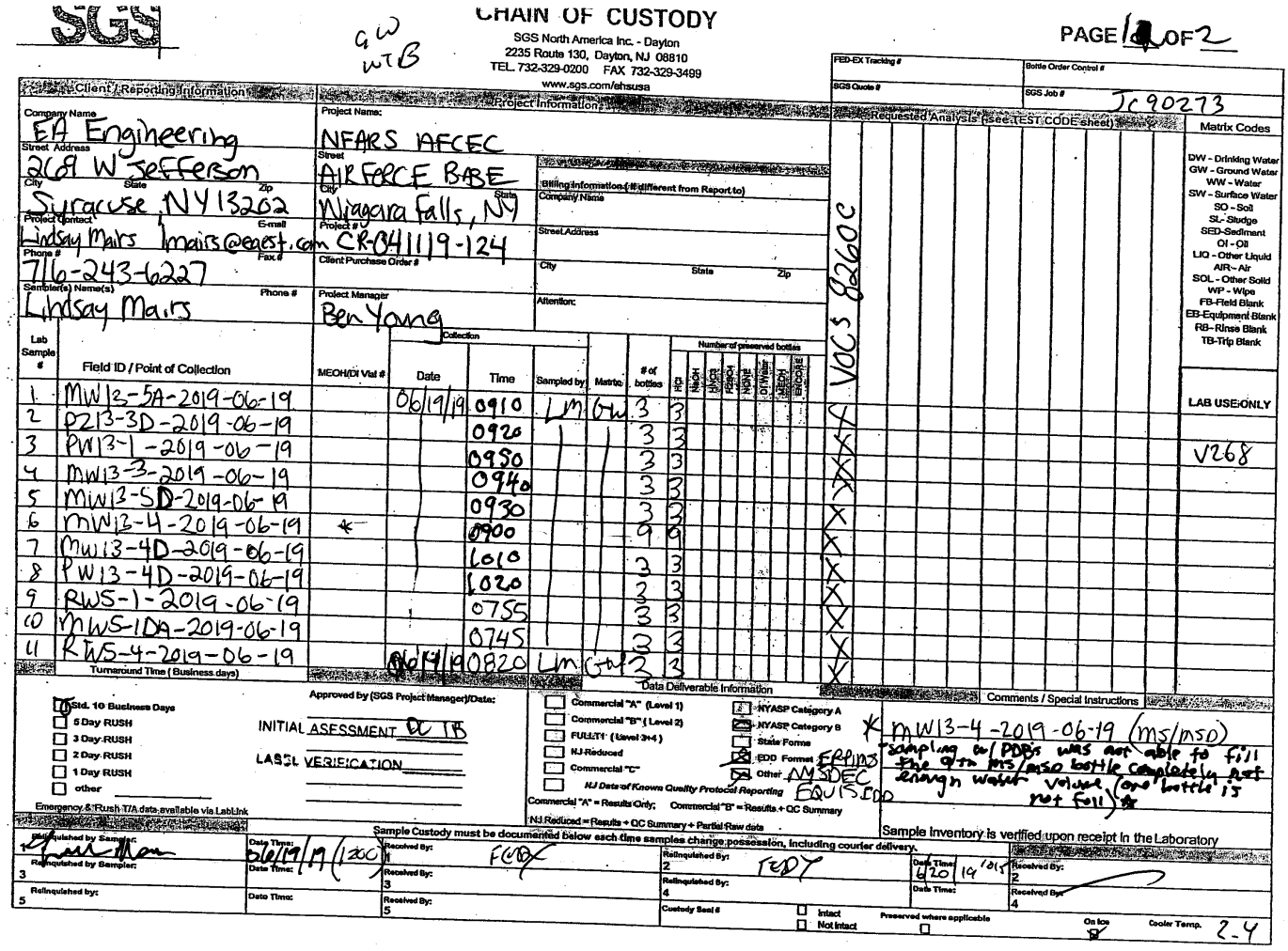
U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody
- QC Evaluation: DOD QSM5 Limits



SGS

GW WTB

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 1 OF 2

FED-EX Tracking #

Bottle Order Control #

SGS Quote #

SGS Job # JC90273

Client / Reporting Information

Company Name: EA Engineering
Street Address: 208 W Jefferson
City: Syracuse State: NY Zip: 13202
Project Contact: Lindsay Mairs E-mail: lmairs@eaest.com
Phone #: 716-243-6227 Fax #:
Sampler(s) Name(s): Lindsay Mairs Phone #:

Project Information

Project Name: NFARS AFCEC
Street: AIR FORCE BASE City: Niagara Falls State: NY
Project #: CR-041119-124
Client Purchase Order #:
Project Manager: Ben Young

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - 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

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VOCs 8260C	LAB USE ONLY
1	MW13-5A-2019-06-19		06/19/19	0910	LM	GW	3	3								X	
2	P213-3D-2019-06-19			0920			3	3								X	
3	PW13-1-2019-06-19			0950			3	3								X	V268
4	MW13-3-2019-06-19			0940			3	3								X	
5	MW13-5D-2019-06-19			0930			3	3								X	
6	MW13-4-2019-06-19	*		0900			9	9								X	
7	MW13-4D-2019-06-19			1010			3	3								X	
8	PW13-4D-2019-06-19			1020			3	3								X	
9	RWS-1-2019-06-19			0755			3	3								X	
10	MWS-1DA-2019-06-19			0745			3	3								X	
11	RWS-4-2019-06-19		06/19/19	0820	LM	GW	3	3								X	

Turnaround Time (Business days)

- Std. 10 Business Days
- 5 Day RUSH
- 3 Day RUSH
- 2 Day RUSH
- 1 Day RUSH
- other

Emergency & Rush T/A data available via LabLink

Approved By (SGS Project Manager)/Date:

INITIAL ASESSMENT DC 18

LABEL VERIFICATION

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT (Level 3+4)
- NJ Reduced
- Commercial "C"
- NJ Data of Known Quality Protocol Reporting

- NYASP Category A
- NYASP Category B
- State Forms
- EDD Format EFRMS
- Other NYSDEC EQUIS EDD

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

* MW13-4-2019-06-19 (MS/MSD) sampling QC (PDBs was not able to fill the QTY 1013/1050 bottle completely not enough water volume (one bottle is not full)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Sample Inventory is verified upon receipt in the Laboratory

	Relinquished by Sampler:	Date Time:	Received By:
1		06/19/19 1200	FEDX
2	Relinquished By: FEDX	Date Time: 6/20/19 1015	Received By:
3	Relinquished By:	Date Time:	Received By:
4	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:

Custody Seal # Intact Not Intact Preserved where applicable On Ice Cooler Temp. 2-4

Form:SM088-03C (revised 2/12/18)

5.1 5

JC90273: Chain of Custody
Page 1 of 3

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 2 OF 2

FED-EX Tracking #:
Bottle Order Control #:
SGS Quote #:
SGS Job #: JC90273

Client / Reporting Information

Company Name: EA Engineering
Street Address: 268 W Jefferson
City: Syracuse State: NY Zip: 13202
Project Contact: Lindsay Mairs E-mail: lmairs@eaest.com
Phone #: 716-243-6227 Fax #:
Sampler(s) Name(s): Lindsay Mairs Phone #:

Project Information

Project Name: NFARS AFCEC
Street: AIR FORCE BASE
City: Niagara Falls State: NY
Project #: CR-041119-124
Client Purchase Order #:
Project Manager: Ben Young

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - 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

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	Encore	VOCs 8260C	LAB USE ONLY
12	RW5-2-2019-06-19		06/19/19	0840	LM	GW	3	3								X	
13	MW-FB-2019-06-19				LM	GW	3	3								X	
14	MW5-6-2019-06-19			0830	LM	GW	3	3								X	
15	MW5-SD-2019-06-19		06/19/19	0810	LM	GW	3	3								X	
16	TRIP BLANK 2		06/19/19	1130	LM	GW	2	2								X	
17	MW5-P-2019-06-19		06/19/19	0855	LM	GW	3	3								X	

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush TAT data available via LabLink

Approved by (SGS Project Manager)/Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format: EQuIS
- [x] Other: NJ DEP Excel Report

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Sample Inventory is verified upon receipt in the Laboratory

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	06/19/19 1600	1 FedEx	2 FedEx	6/20/19 1005	2
3	Date Time:	3	4	Date Time:	4
5	Date Time:	5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp.

Form:SM088-03C (revised 2/12/18)

SGS Sample Receipt Summary

Job Number: JC90273 **Client:** _____ **Project:** _____

Date / Time Received: 6/20/2019 10:15:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (1.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 206717 pH 12+: 208717 Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90273

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90273-1 Collected: 19-JUN-19 09:10 By: LM MW13-5A-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-1	SW846 8260C	26-JUN-19 09:57	DG			V8260SL
JC90273-2 Collected: 19-JUN-19 09:20 By: LM PZ13-3D-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-2	SW846 8260C	26-JUN-19 10:26	DG			V8260SL
JC90273-3 Collected: 19-JUN-19 09:50 By: LM PW13-1-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-3	SW846 8260C	26-JUN-19 10:55	DG			V8260SL
JC90273-4 Collected: 19-JUN-19 09:40 By: LM MW13-3-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-4	SW846 8260C	26-JUN-19 11:23	DG			V8260SL
JC90273-5 Collected: 19-JUN-19 09:30 By: LM MW13-5D-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-5	SW846 8260C	26-JUN-19 12:50	DG			V8260SL
JC90273-6 Collected: 19-JUN-19 09:00 By: LM MW13-4-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-6	SW846 8260C	26-JUN-19 11:52	DG			V8260SL
JC90273-7 Collected: 19-JUN-19 10:10 By: LM MW13-4D-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-7	SW846 8260C	26-JUN-19 13:18	DG			V8260SL
JC90273-8 Collected: 19-JUN-19 10:20 By: LM PW13-4D-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-8	SW846 8260C	26-JUN-19 13:47	DG			V8260SL

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90273

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90273-9 Collected: 19-JUN-19 07:55 By: LM RW5-1-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-9	SW846 8260C	26-JUN-19 15:43	DG			V8260SL
JC90273-10 Collected: 19-JUN-19 07:45 By: LM MW5-1DA-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-10	SW846 8260C	26-JUN-19 16:12	DG			V8260SL
JC90273-11 Collected: 19-JUN-19 08:20 By: LM RW5-4-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-11	SW846 8260C	26-JUN-19 16:40	DG			V8260SL
JC90273-12 Collected: 19-JUN-19 08:40 By: LM RW5-2-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-12	SW846 8260C	26-JUN-19 17:09	DG			V8260SL
JC90273-13 Collected: 19-JUN-19 00:00 By: LM MW-FD-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-13	SW846 8260C	26-JUN-19 17:38	DG			V8260SL
JC90273-14 Collected: 19-JUN-19 08:30 By: LM MW5-6-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-14	SW846 8260C	27-JUN-19 00:07	ED			V8260SL
JC90273-15 Collected: 19-JUN-19 08:10 By: LM MW5-5D-2019-06-19				Received: 20-JUN-19	By: AS	
JC90273-15	SW846 8260C	27-JUN-19 00:36	ED			V8260SL
JC90273-15	SW846 8260C	27-JUN-19 11:43	JP			V8260SL
JC90273-16 Collected: 19-JUN-19 10:20 By: LM TRIP BLANK 2				Received: 20-JUN-19	By: AS	

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC90273

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC90273-16	SW846 8260C	27-JUN-19 11:15	JP			V8260SL
JC90273-17	Collected: 19-JUN-19 08:55 By: LM MW5-P-2019-06-19		Received: 20-JUN-19 By: AS			
JC90273-17	SW846 8260C	27-JUN-19 01:34	ED			V8260SL

SGS Internal Chain of Custody

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/20/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90273-1.1	Secured Storage	Jessica Potts	06/26/19 09:43	Retrieve from Storage
JC90273-1.1	Jessica Potts	GCMSX	06/26/19 09:44	Load on Instrument
JC90273-1.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-1.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-2.1	Secured Storage	Jessica Potts	06/26/19 09:43	Retrieve from Storage
JC90273-2.1	Jessica Potts	GCMSX	06/26/19 09:44	Load on Instrument
JC90273-2.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-2.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-3.1	Secured Storage	Jessica Potts	06/26/19 09:43	Retrieve from Storage
JC90273-3.1	Jessica Potts	GCMSX	06/26/19 09:44	Load on Instrument
JC90273-3.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-3.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-4.2	Secured Storage	Jessica Potts	06/26/19 09:43	Retrieve from Storage
JC90273-4.2	Jessica Potts	GCMSX	06/26/19 09:44	Load on Instrument
JC90273-4.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-4.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-5.2	Secured Storage	Jessica Potts	06/26/19 11:57	Retrieve from Storage
JC90273-5.2	Jessica Potts	GCMSX	06/26/19 11:58	Load on Instrument
JC90273-5.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-5.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-6.1	Secured Storage	Jessica Potts	06/26/19 13:53	Retrieve from Storage
JC90273-6.1	Jessica Potts	GCMSX	06/26/19 13:53	Load on Instrument
JC90273-6.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-6.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-6.3	Secured Storage	Jessica Potts	06/26/19 13:53	Retrieve from Storage
JC90273-6.3	Jessica Potts	GCMSX	06/26/19 13:53	Load on Instrument
JC90273-6.3	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-6.3	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-6.6	Secured Storage	Jessica Potts	06/26/19 09:43	Retrieve from Storage
JC90273-6.6	Jessica Potts	GCMSX	06/26/19 09:44	Load on Instrument
JC90273-6.6	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-6.6	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-7.1	Secured Storage	Jessica Potts	06/26/19 11:57	Retrieve from Storage
JC90273-7.1	Jessica Potts	GCMSX	06/26/19 11:58	Load on Instrument
JC90273-7.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-7.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage

SGS Internal Chain of Custody

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/20/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90273-8.1	Secured Storage	Jessica Potts	06/26/19 12:07	Retrieve from Storage
JC90273-8.1	Jessica Potts	GCMSX	06/26/19 12:08	Load on Instrument
JC90273-8.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-8.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-9.2	Secured Storage	Jessica Potts	06/26/19 13:53	Retrieve from Storage
JC90273-9.2	Jessica Potts	GCMSX	06/26/19 13:53	Load on Instrument
JC90273-9.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-9.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-10.1	Secured Storage	Jessica Potts	06/26/19 13:53	Retrieve from Storage
JC90273-10.1	Jessica Potts	GCMSX	06/26/19 13:53	Load on Instrument
JC90273-10.1	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-10.1	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-11.2	Secured Storage	Jessica Potts	06/26/19 13:53	Retrieve from Storage
JC90273-11.2	Jessica Potts	GCMSX	06/26/19 13:53	Load on Instrument
JC90273-11.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-11.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-12.2	Secured Storage	Jessica Potts	06/26/19 14:27	Retrieve from Storage
JC90273-12.2	Jessica Potts	GCMSX	06/26/19 14:27	Load on Instrument
JC90273-12.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-12.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-13.2	Secured Storage	Jessica Potts	06/26/19 14:27	Retrieve from Storage
JC90273-13.2	Jessica Potts	GCMSX	06/26/19 14:27	Load on Instrument
JC90273-13.2	GCMSX	Jessica Potts	06/27/19 11:02	Unload from Instrument
JC90273-13.2	Jessica Potts	Secured Storage	06/27/19 11:02	Return to Storage
JC90273-14.1	Secured Storage	Devin Gomez	06/26/19 22:45	Retrieve from Storage
JC90273-14.1	Devin Gomez	GCMSA	06/26/19 22:46	Load on Instrument
JC90273-14.1	GCMSA	Edward Durner	06/27/19 07:07	Unload from Instrument
JC90273-14.1	Edward Durner	Secured Storage	06/27/19 07:08	Return to Storage
JC90273-15.1	Secured Storage	Devin Gomez	06/26/19 22:45	Retrieve from Storage
JC90273-15.1	Devin Gomez	GCMSA	06/26/19 22:46	Load on Instrument
JC90273-15.1	GCMSA	Edward Durner	06/27/19 07:07	Unload from Instrument
JC90273-15.1	Edward Durner	Secured Storage	06/27/19 07:08	Return to Storage
JC90273-15.2	Secured Storage	Jessica Potts	06/27/19 11:21	Retrieve from Storage
JC90273-15.2	Jessica Potts	GCMSX	06/27/19 11:21	Load on Instrument
JC90273-15.2	GCMSX	Chelsea San Filippo	06/28/19 17:18	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 06/20/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC90273-15.2	Chelsea San Filippo	Secured Storage	06/28/19 17:18	Return to Storage
JC90273-16.1	Secured Storage	Devin Gomez	06/26/19 22:45	Retrieve from Storage
JC90273-16.1	Devin Gomez	GCMSA	06/26/19 22:46	Load on Instrument
JC90273-16.1	GCMSA	Edward Durner	06/27/19 07:07	Unload from Instrument
JC90273-16.1	Edward Durner	Secured Storage	06/27/19 07:08	Return to Storage
JC90273-16.2	Secured Storage	Jessica Potts	06/27/19 11:02	Retrieve from Storage
JC90273-16.2	Jessica Potts	GCMSX	06/27/19 11:02	Load on Instrument
JC90273-16.2	GCMSX	Chelsea San Filippo	06/28/19 17:18	Unload from Instrument
JC90273-16.2	Chelsea San Filippo	Secured Storage	06/28/19 17:18	Return to Storage
JC90273-17.1	Secured Storage	Devin Gomez	06/26/19 22:45	Retrieve from Storage
JC90273-17.1	Devin Gomez	GCMSA	06/26/19 22:46	Load on Instrument
JC90273-17.1	GCMSA	Edward Durner	06/27/19 07:07	Unload from Instrument
JC90273-17.1	Edward Durner	Secured Storage	06/27/19 07:08	Return to Storage

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9712	SW846 8260C						
VA9712-BS	67-64-1	Acetone	BSP	REC	99	%	39-160
VA9712-BS	71-43-2	Benzene	BSP	REC	97	%	79-120
VA9712-BS	74-97-5	Bromochloromethane	BSP	REC	103	%	78-123
VA9712-BS	75-27-4	Bromodichloromethane	BSP	REC	105	%	79-125
VA9712-BS	75-25-2	Bromoform	BSP	REC	111	%	66-130
VA9712-BS	74-83-9	Bromomethane	BSP	REC	95	%	53-141
VA9712-BS	78-93-3	2-Butanone (MEK)	BSP	REC	105	%	56-143
VA9712-BS	75-15-0	Carbon disulfide	BSP	REC	96	%	64-133
VA9712-BS	56-23-5	Carbon tetrachloride	BSP	REC	104	%	72-136
VA9712-BS	108-90-7	Chlorobenzene	BSP	REC	100	%	82-118
VA9712-BS	75-00-3	Chloroethane	BSP	REC	98	%	60-138
VA9712-BS	67-66-3	Chloroform	BSP	REC	95	%	79-124
VA9712-BS	74-87-3	Chloromethane	BSP	REC	91	%	50-139
VA9712-BS	110-82-7	Cyclohexane	BSP	REC	93	%	71-130
VA9712-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	105	%	62-128
VA9712-BS	124-48-1	Dibromochloromethane	BSP	REC	104	%	74-126
VA9712-BS	106-93-4	1,2-Dibromoethane	BSP	REC	108	%	77-121
VA9712-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	102	%	80-119
VA9712-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	102	%	80-119
VA9712-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	100	%	79-118
VA9712-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	100	%	32-152
VA9712-BS	75-34-3	1,1-Dichloroethane	BSP	REC	96	%	77-125
VA9712-BS	107-06-2	1,2-Dichloroethane	BSP	REC	91	%	73-128
VA9712-BS	75-35-4	1,1-Dichloroethene	BSP	REC	96	%	71-131
VA9712-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	99	%	78-123
VA9712-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	100	%	75-124
VA9712-BS	78-87-5	1,2-Dichloropropane	BSP	REC	105	%	78-122
VA9712-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	111	%	75-124
VA9712-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	107	%	73-127
VA9712-BS	123-91-1	1,4-Dioxane	BSP	REC	110	%	59-139
VA9712-BS	100-41-4	Ethylbenzene	BSP	REC	99	%	79-121
VA9712-BS	76-13-1	Freon 113	BSP	REC	97	%	70-136
VA9712-BS	591-78-6	2-Hexanone	BSP	REC	99	%	57-139
VA9712-BS	74-88-4	Iodomethane	BSP	REC	101	%	69-131
VA9712-BS	98-82-8	Isopropylbenzene	BSP	REC	101	%	72-131
VA9712-BS	79-20-9	Methyl Acetate	BSP	REC	98	%	56-136
VA9712-BS	108-87-2	Methylcyclohexane	BSP	REC	93	%	72-132
VA9712-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	101	%	71-124
VA9712-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	103	%	67-130
VA9712-BS	75-09-2	Methylene chloride	BSP	REC	100	%	74-124
VA9712-BS	100-42-5	Styrene	BSP	REC	98	%	78-123
VA9712-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	113	%	71-121

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9712-BS	127-18-4	Tetrachloroethene	BSP	REC	93	%	74-129
VA9712-BS	108-88-3	Toluene	BSP	REC	97	%	80-121
VA9712-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	105	%	69-129
VA9712-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	104	%	69-130
VA9712-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	102	%	74-131
VA9712-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	105	%	80-119
VA9712-BS	79-01-6	Trichloroethene	BSP	REC	99	%	79-123
VA9712-BS	75-69-4	Trichlorofluoromethane	BSP	REC	100	%	65-141
VA9712-BS	75-01-4	Vinyl chloride	BSP	REC	100	%	58-137
VA9712-BS	1330-20-7	Xylene (total)	BSP	REC	101	%	79-121
VA9712-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	80-119
VA9712-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	101	%	81-118
VA9712-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	89-112
VA9712-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	106	%	85-114
JC90525-1MS*	67-64-1	Acetone	MS	REC	104	%	39-160
JC90525-1MS*	71-43-2	Benzene	MS	REC	94	%	79-120
JC90525-1MS*	74-97-5	Bromochloromethane	MS	REC	103	%	78-123
JC90525-1MS*	75-27-4	Bromodichloromethane	MS	REC	103	%	79-125
JC90525-1MS*	75-25-2	Bromoform	MS	REC	106	%	66-130
JC90525-1MS*	74-83-9	Bromomethane	MS	REC	91	%	53-141
JC90525-1MS*	78-93-3	2-Butanone (MEK)	MS	REC	107	%	56-143
JC90525-1MS*	75-15-0	Carbon disulfide	MS	REC	91	%	64-133
JC90525-1MS*	56-23-5	Carbon tetrachloride	MS	REC	103	%	72-136
JC90525-1MS*	108-90-7	Chlorobenzene	MS	REC	97	%	82-118
JC90525-1MS*	75-00-3	Chloroethane	MS	REC	96	%	60-138
JC90525-1MS*	67-66-3	Chloroform	MS	REC	94	%	79-124
JC90525-1MS*	74-87-3	Chloromethane	MS	REC	86	%	50-139
JC90525-1MS*	110-82-7	Cyclohexane	MS	REC	96	%	71-130
JC90525-1MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	108	%	62-128
JC90525-1MS*	124-48-1	Dibromochloromethane	MS	REC	104	%	74-126
JC90525-1MS*	106-93-4	1,2-Dibromoethane	MS	REC	108	%	77-121
JC90525-1MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	98	%	80-119
JC90525-1MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	98	%	80-119
JC90525-1MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	96	%	79-118
JC90525-1MS*	75-71-8	Dichlorodifluoromethane	MS	REC	100	%	32-152
JC90525-1MS*	75-34-3	1,1-Dichloroethane	MS	REC	97	%	77-125
JC90525-1MS*	107-06-2	1,2-Dichloroethane	MS	REC	93	%	73-128
JC90525-1MS*	75-35-4	1,1-Dichloroethene	MS	REC	99	%	71-131
JC90525-1MS*	156-59-2	cis-1,2-Dichloroethene	MS	REC	86	%	78-123
JC90525-1MS*	156-60-5	trans-1,2-Dichloroethene	MS	REC	98	%	75-124
JC90525-1MS*	78-87-5	1,2-Dichloropropane	MS	REC	103	%	78-122
JC90525-1MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	105	%	75-124
JC90525-1MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	106	%	73-127
JC90525-1MS*	123-91-1	1,4-Dioxane	MS	REC	109	%	59-139
JC90525-1MS*	100-41-4	Ethylbenzene	MS	REC	93	%	79-121

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90525-1MS*	76-13-1	Freon 113	MS	REC	98	%	70-136
JC90525-1MS*	591-78-6	2-Hexanone	MS	REC	99	%	57-139
JC90525-1MS*	74-88-4	Iodomethane	MS	REC	101	%	69-131
JC90525-1MS*	98-82-8	Isopropylbenzene	MS	REC	97	%	72-131
JC90525-1MS*	79-20-9	Methyl Acetate	MS	REC	98	%	56-136
JC90525-1MS*	108-87-2	Methylcyclohexane	MS	REC	92	%	72-132
JC90525-1MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	103	%	71-124
JC90525-1MS*	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	102	%	67-130
JC90525-1MS*	75-09-2	Methylene chloride	MS	REC	102	%	74-124
JC90525-1MS*	100-42-5	Styrene	MS	REC	93	%	78-123
JC90525-1MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	114	%	71-121
JC90525-1MS*	127-18-4	Tetrachloroethene	MS	REC	88	%	74-129
JC90525-1MS*	108-88-3	Toluene	MS	REC	95	%	80-121
JC90525-1MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	102	%	69-129
JC90525-1MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	101	%	69-130
JC90525-1MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	101	%	74-131
JC90525-1MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	105	%	80-119
JC90525-1MS*	79-01-6	Trichloroethene	MS	REC	-25 [a]	%	79-123
JC90525-1MS*	75-69-4	Trichlorofluoromethane	MS	REC	102	%	65-141
JC90525-1MS*	75-01-4	Vinyl chloride	MS	REC	98	%	58-137
JC90525-1MS*	1330-20-7	Xylene (total)	MS	REC	95	%	79-121
JC90525-1MS*	1868-53-7	Dibromofluoromethane	MS	SURR	106	%	80-119
JC90525-1MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	103	%	81-118
JC90525-1MS*	2037-26-5	Toluene-D8	MS	SURR	100	%	89-112
JC90525-1MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	105	%	85-114
JC90525-1MSD*	67-64-1	Acetone	MSD	REC	103	%	39-160
JC90525-1MSD*	67-64-1	Acetone	MSD	RPD	1	%	20
JC90525-1MSD*	71-43-2	Benzene	MSD	REC	93	%	79-120
JC90525-1MSD*	71-43-2	Benzene	MSD	RPD	1	%	20
JC90525-1MSD*	74-97-5	Bromochloromethane	MSD	REC	101	%	78-123
JC90525-1MSD*	74-97-5	Bromochloromethane	MSD	RPD	2	%	20
JC90525-1MSD*	75-27-4	Bromodichloromethane	MSD	REC	102	%	79-125
JC90525-1MSD*	75-27-4	Bromodichloromethane	MSD	RPD	0	%	20
JC90525-1MSD*	75-25-2	Bromoform	MSD	REC	109	%	66-130
JC90525-1MSD*	75-25-2	Bromoform	MSD	RPD	3	%	20
JC90525-1MSD*	74-83-9	Bromomethane	MSD	REC	89	%	53-141
JC90525-1MSD*	74-83-9	Bromomethane	MSD	RPD	2	%	20
JC90525-1MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	110	%	56-143
JC90525-1MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	3	%	20
JC90525-1MSD*	75-15-0	Carbon disulfide	MSD	REC	87	%	64-133
JC90525-1MSD*	75-15-0	Carbon disulfide	MSD	RPD	4	%	20
JC90525-1MSD*	56-23-5	Carbon tetrachloride	MSD	REC	99	%	72-136
JC90525-1MSD*	56-23-5	Carbon tetrachloride	MSD	RPD	4	%	20
JC90525-1MSD*	108-90-7	Chlorobenzene	MSD	REC	96	%	82-118
JC90525-1MSD*	108-90-7	Chlorobenzene	MSD	RPD	0	%	20

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90525-1MSD*	75-00-3	Chloroethane	MSD	REC	92	%	60-138
JC90525-1MSD*	75-00-3	Chloroethane	MSD	RPD	4	%	20
JC90525-1MSD*	67-66-3	Chloroform	MSD	REC	92	%	79-124
JC90525-1MSD*	67-66-3	Chloroform	MSD	RPD	2	%	20
JC90525-1MSD*	74-87-3	Chloromethane	MSD	REC	85	%	50-139
JC90525-1MSD*	74-87-3	Chloromethane	MSD	RPD	2	%	20
JC90525-1MSD*	110-82-7	Cyclohexane	MSD	REC	94	%	71-130
JC90525-1MSD*	110-82-7	Cyclohexane	MSD	RPD	3	%	20
JC90525-1MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	104	%	62-128
JC90525-1MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	3	%	20
JC90525-1MSD*	124-48-1	Dibromochloromethane	MSD	REC	102	%	74-126
JC90525-1MSD*	124-48-1	Dibromochloromethane	MSD	RPD	2	%	20
JC90525-1MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	110	%	77-121
JC90525-1MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	1	%	20
JC90525-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	97	%	80-119
JC90525-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	2	%	20
JC90525-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	95	%	80-119
JC90525-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	3	%	20
JC90525-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	94	%	79-118
JC90525-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
JC90525-1MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	98	%	32-152
JC90525-1MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	1	%	20
JC90525-1MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	94	%	77-125
JC90525-1MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	3	%	20
JC90525-1MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	91	%	73-128
JC90525-1MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	2	%	20
JC90525-1MSD*	75-35-4	1,1-Dichloroethene	MSD	REC	93	%	71-131
JC90525-1MSD*	75-35-4	1,1-Dichloroethene	MSD	RPD	7	%	20
JC90525-1MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	REC	86	%	78-123
JC90525-1MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	0	%	20
JC90525-1MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	REC	95	%	75-124
JC90525-1MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	3	%	20
JC90525-1MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	100	%	78-122
JC90525-1MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	3	%	20
JC90525-1MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	105	%	75-124
JC90525-1MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	0	%	20
JC90525-1MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	104	%	73-127
JC90525-1MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	2	%	20
JC90525-1MSD*	123-91-1	1,4-Dioxane	MSD	REC	107	%	59-139
JC90525-1MSD*	123-91-1	1,4-Dioxane	MSD	RPD	2	%	20
JC90525-1MSD*	100-41-4	Ethylbenzene	MSD	REC	93	%	79-121
JC90525-1MSD*	100-41-4	Ethylbenzene	MSD	RPD	0	%	20
JC90525-1MSD*	76-13-1	Freon 113	MSD	REC	94	%	70-136
JC90525-1MSD*	76-13-1	Freon 113	MSD	RPD	3	%	20
JC90525-1MSD*	591-78-6	2-Hexanone	MSD	REC	101	%	57-139

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90525-1MSD*	591-78-6	2-Hexanone	MSD	RPD	2	%	20
JC90525-1MSD*	74-88-4	Iodomethane	MSD	REC	98	%	69-131
JC90525-1MSD*	74-88-4	Iodomethane	MSD	RPD	4	%	20
JC90525-1MSD*	98-82-8	Isopropylbenzene	MSD	REC	96	%	72-131
JC90525-1MSD*	98-82-8	Isopropylbenzene	MSD	RPD	0	%	20
JC90525-1MSD*	79-20-9	Methyl Acetate	MSD	REC	100	%	56-136
JC90525-1MSD*	79-20-9	Methyl Acetate	MSD	RPD	2	%	20
JC90525-1MSD*	108-87-2	Methylcyclohexane	MSD	REC	91	%	72-132
JC90525-1MSD*	108-87-2	Methylcyclohexane	MSD	RPD	1	%	20
JC90525-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	100	%	71-124
JC90525-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	3	%	20
JC90525-1MSD*	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	104	%	67-130
JC90525-1MSD*	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	2	%	20
JC90525-1MSD*	75-09-2	Methylene chloride	MSD	REC	97	%	74-124
JC90525-1MSD*	75-09-2	Methylene chloride	MSD	RPD	5	%	20
JC90525-1MSD*	100-42-5	Styrene	MSD	REC	94	%	78-123
JC90525-1MSD*	100-42-5	Styrene	MSD	RPD	1	%	20
JC90525-1MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	109	%	71-121
JC90525-1MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	4	%	20
JC90525-1MSD*	127-18-4	Tetrachloroethene	MSD	REC	86	%	74-129
JC90525-1MSD*	127-18-4	Tetrachloroethene	MSD	RPD	2	%	20
JC90525-1MSD*	108-88-3	Toluene	MSD	REC	92	%	80-121
JC90525-1MSD*	108-88-3	Toluene	MSD	RPD	3	%	20
JC90525-1MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	102	%	69-129
JC90525-1MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	0	%	20
JC90525-1MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	99	%	69-130
JC90525-1MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	2	%	20
JC90525-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	100	%	74-131
JC90525-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	2	%	20
JC90525-1MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	104	%	80-119
JC90525-1MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	1	%	20
JC90525-1MSD*	79-01-6	Trichloroethene	MSD	REC	-28 [a]	%	79-123
JC90525-1MSD*	79-01-6	Trichloroethene	MSD	RPD	1	%	20
JC90525-1MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	99	%	65-141
JC90525-1MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	3	%	20
JC90525-1MSD*	75-01-4	Vinyl chloride	MSD	REC	96	%	58-137
JC90525-1MSD*	75-01-4	Vinyl chloride	MSD	RPD	2	%	20
JC90525-1MSD*	1330-20-7	Xylene (total)	MSD	REC	95	%	79-121
JC90525-1MSD*	1330-20-7	Xylene (total)	MSD	RPD	0	%	20
JC90525-1MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	103	%	80-119
JC90525-1MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	102	%	81-118
JC90525-1MSD*	2037-26-5	Toluene-D8	MSD	SURR	98	%	89-112
JC90525-1MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	103	%	85-114
VA9712-MB	1868-53-7	Dibromofluoromethane	MB	SURR	102	%	80-119
VA9712-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	107	%	81-118

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9712-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	89-112
VA9712-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	100	%	85-114
JC90273-14	1868-53-7	Dibromofluoromethane	SAMP	SURR	101	%	80-119
JC90273-14	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
JC90273-14	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-14	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
JC90273-15	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90273-15	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-15	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-15	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
JC90273-17	1868-53-7	Dibromofluoromethane	SAMP	SURR	105	%	80-119
JC90273-17	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	81-118
JC90273-17	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC90273-17	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
VX7807	SW846 8260C						
VX7807-BS	67-64-1	Acetone	BSP	REC	101	%	39-160
VX7807-BS	71-43-2	Benzene	BSP	REC	103	%	79-120
VX7807-BS	74-97-5	Bromochloromethane	BSP	REC	107	%	78-123
VX7807-BS	75-27-4	Bromodichloromethane	BSP	REC	101	%	79-125
VX7807-BS	75-25-2	Bromoform	BSP	REC	102	%	66-130
VX7807-BS	74-83-9	Bromomethane	BSP	REC	103	%	53-141
VX7807-BS	78-93-3	2-Butanone (MEK)	BSP	REC	116	%	56-143
VX7807-BS	75-15-0	Carbon disulfide	BSP	REC	100	%	64-133
VX7807-BS	56-23-5	Carbon tetrachloride	BSP	REC	107	%	72-136
VX7807-BS	108-90-7	Chlorobenzene	BSP	REC	101	%	82-118
VX7807-BS	75-00-3	Chloroethane	BSP	REC	98	%	60-138
VX7807-BS	67-66-3	Chloroform	BSP	REC	103	%	79-124
VX7807-BS	74-87-3	Chloromethane	BSP	REC	89	%	50-139
VX7807-BS	110-82-7	Cyclohexane	BSP	REC	102	%	71-130
VX7807-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	108	%	62-128
VX7807-BS	124-48-1	Dibromochloromethane	BSP	REC	101	%	74-126
VX7807-BS	106-93-4	1,2-Dibromoethane	BSP	REC	105	%	77-121
VX7807-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	101	%	80-119
VX7807-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	98	%	80-119
VX7807-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	102	%	79-118
VX7807-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	99	%	32-152
VX7807-BS	75-34-3	1,1-Dichloroethane	BSP	REC	105	%	77-125
VX7807-BS	107-06-2	1,2-Dichloroethane	BSP	REC	91	%	73-128
VX7807-BS	75-35-4	1,1-Dichloroethene	BSP	REC	103	%	71-131
VX7807-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	106	%	78-123
VX7807-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	107	%	75-124
VX7807-BS	78-87-5	1,2-Dichloropropane	BSP	REC	101	%	78-122
VX7807-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	103	%	75-124

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VX7807-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	98	%	73-127
VX7807-BS	123-91-1	1,4-Dioxane	BSP	REC	115	%	59-139
VX7807-BS	100-41-4	Ethylbenzene	BSP	REC	97	%	79-121
VX7807-BS	76-13-1	Freon 113	BSP	REC	111	%	70-136
VX7807-BS	591-78-6	2-Hexanone	BSP	REC	103	%	57-139
VX7807-BS	74-88-4	Iodomethane	BSP	REC	101	%	69-131
VX7807-BS	98-82-8	Isopropylbenzene	BSP	REC	99	%	72-131
VX7807-BS	79-20-9	Methyl Acetate	BSP	REC	89	%	56-136
VX7807-BS	108-87-2	Methylcyclohexane	BSP	REC	116	%	72-132
VX7807-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	95	%	71-124
VX7807-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	109	%	67-130
VX7807-BS	75-09-2	Methylene chloride	BSP	REC	104	%	74-124
VX7807-BS	100-42-5	Styrene	BSP	REC	99	%	78-123
VX7807-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	107	%	71-121
VX7807-BS	127-18-4	Tetrachloroethene	BSP	REC	102	%	74-129
VX7807-BS	108-88-3	Toluene	BSP	REC	99	%	80-121
VX7807-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	119	%	69-129
VX7807-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	118	%	69-130
VX7807-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	108	%	74-131
VX7807-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	102	%	80-119
VX7807-BS	79-01-6	Trichloroethene	BSP	REC	109	%	79-123
VX7807-BS	75-69-4	Trichlorofluoromethane	BSP	REC	110	%	65-141
VX7807-BS	75-01-4	Vinyl chloride	BSP	REC	98	%	58-137
VX7807-BS	1330-20-7	Xylene (total)	BSP	REC	97	%	79-121
VX7807-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	107	%	80-119
VX7807-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	81-118
VX7807-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	89-112
VX7807-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	105	%	85-114
JC90273-6MS	67-64-1	Acetone	MS	REC	73	%	39-160
JC90273-6MS	71-43-2	Benzene	MS	REC	94	%	79-120
JC90273-6MS	74-97-5	Bromochloromethane	MS	REC	99	%	78-123
JC90273-6MS	75-27-4	Bromodichloromethane	MS	REC	93	%	79-125
JC90273-6MS	75-25-2	Bromoform	MS	REC	90	%	66-130
JC90273-6MS	74-83-9	Bromomethane	MS	REC	115	%	53-141
JC90273-6MS	78-93-3	2-Butanone (MEK)	MS	REC	95	%	56-143
JC90273-6MS	75-15-0	Carbon disulfide	MS	REC	104	%	64-133
JC90273-6MS	56-23-5	Carbon tetrachloride	MS	REC	102	%	72-136
JC90273-6MS	108-90-7	Chlorobenzene	MS	REC	96	%	82-118
JC90273-6MS	75-00-3	Chloroethane	MS	REC	113	%	60-138
JC90273-6MS	67-66-3	Chloroform	MS	REC	96	%	79-124
JC90273-6MS	74-87-3	Chloromethane	MS	REC	88	%	50-139
JC90273-6MS	110-82-7	Cyclohexane	MS	REC	111	%	71-130
JC90273-6MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	95	%	62-128
JC90273-6MS	124-48-1	Dibromochloromethane	MS	REC	85	%	74-126
JC90273-6MS	106-93-4	1,2-Dibromoethane	MS	REC	92	%	77-121

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MS	95-50-1	1,2-Dichlorobenzene	MS	REC	92	%	80-119
JC90273-6MS	541-73-1	1,3-Dichlorobenzene	MS	REC	90	%	80-119
JC90273-6MS	106-46-7	1,4-Dichlorobenzene	MS	REC	94	%	79-118
JC90273-6MS	75-71-8	Dichlorodifluoromethane	MS	REC	101	%	32-152
JC90273-6MS	75-34-3	1,1-Dichloroethane	MS	REC	97	%	77-125
JC90273-6MS	107-06-2	1,2-Dichloroethane	MS	REC	82	%	73-128
JC90273-6MS	75-35-4	1,1-Dichloroethene	MS	REC	105	%	71-131
JC90273-6MS	156-59-2	cis-1,2-Dichloroethene	MS	REC	97	%	78-123
JC90273-6MS	156-60-5	trans-1,2-Dichloroethene	MS	REC	101	%	75-124
JC90273-6MS	78-87-5	1,2-Dichloropropane	MS	REC	86	%	78-122
JC90273-6MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	96	%	75-124
JC90273-6MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	87	%	73-127
JC90273-6MS	123-91-1	1,4-Dioxane	MS	REC	100	%	59-139
JC90273-6MS	100-41-4	Ethylbenzene	MS	REC	92	%	79-121
JC90273-6MS	76-13-1	Freon 113	MS	REC	115	%	70-136
JC90273-6MS	591-78-6	2-Hexanone	MS	REC	93	%	57-139
JC90273-6MS	74-88-4	Iodomethane	MS	REC	98	%	69-131
JC90273-6MS	98-82-8	Isopropylbenzene	MS	REC	94	%	72-131
JC90273-6MS	79-20-9	Methyl Acetate	MS	REC	71	%	56-136
JC90273-6MS	108-87-2	Methylcyclohexane	MS	REC	106	%	72-132
JC90273-6MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	83	%	71-124
JC90273-6MS	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	98	%	67-130
JC90273-6MS	75-09-2	Methylene chloride	MS	REC	97	%	74-124
JC90273-6MS	100-42-5	Styrene	MS	REC	92	%	78-123
JC90273-6MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	94	%	71-121
JC90273-6MS	127-18-4	Tetrachloroethene	MS	REC	98	%	74-129
JC90273-6MS	108-88-3	Toluene	MS	REC	93	%	80-121
JC90273-6MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	107	%	69-129
JC90273-6MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	107	%	69-130
JC90273-6MS	71-55-6	1,1,1-Trichloroethane	MS	REC	105	%	74-131
JC90273-6MS	79-00-5	1,1,2-Trichloroethane	MS	REC	92	%	80-119
JC90273-6MS	79-01-6	Trichloroethene	MS	REC	101	%	79-123
JC90273-6MS	75-69-4	Trichlorofluoromethane	MS	REC	132	%	65-141
JC90273-6MS	75-01-4	Vinyl chloride	MS	REC	102	%	58-137
JC90273-6MS	1330-20-7	Xylene (total)	MS	REC	91	%	79-121
JC90273-6MS	1868-53-7	Dibromofluoromethane	MS	SURR	109	%	80-119
JC90273-6MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	95	%	81-118
JC90273-6MS	2037-26-5	Toluene-D8	MS	SURR	99	%	89-112
JC90273-6MS	460-00-4	4-Bromofluorobenzene	MS	SURR	104	%	85-114
JC90273-6MSD	67-64-1	Acetone	MSD	REC	69	%	39-160
JC90273-6MSD	67-64-1	Acetone	MSD	RPD	6	%	20
JC90273-6MSD	71-43-2	Benzene	MSD	REC	94	%	79-120
JC90273-6MSD	71-43-2	Benzene	MSD	RPD	1	%	20
JC90273-6MSD	74-97-5	Bromochloromethane	MSD	REC	98	%	78-123
JC90273-6MSD	74-97-5	Bromochloromethane	MSD	RPD	1	%	20

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MSD	75-27-4	Bromodichloromethane	MSD	REC	91	%	79-125
JC90273-6MSD	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
JC90273-6MSD	75-25-2	Bromoform	MSD	REC	89	%	66-130
JC90273-6MSD	75-25-2	Bromoform	MSD	RPD	1	%	20
JC90273-6MSD	74-83-9	Bromomethane	MSD	REC	114	%	53-141
JC90273-6MSD	74-83-9	Bromomethane	MSD	RPD	0	%	20
JC90273-6MSD	78-93-3	2-Butanone (MEK)	MSD	REC	96	%	56-143
JC90273-6MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	1	%	20
JC90273-6MSD	75-15-0	Carbon disulfide	MSD	REC	102	%	64-133
JC90273-6MSD	75-15-0	Carbon disulfide	MSD	RPD	2	%	20
JC90273-6MSD	56-23-5	Carbon tetrachloride	MSD	REC	100	%	72-136
JC90273-6MSD	56-23-5	Carbon tetrachloride	MSD	RPD	2	%	20
JC90273-6MSD	108-90-7	Chlorobenzene	MSD	REC	95	%	82-118
JC90273-6MSD	108-90-7	Chlorobenzene	MSD	RPD	1	%	20
JC90273-6MSD	75-00-3	Chloroethane	MSD	REC	114	%	60-138
JC90273-6MSD	75-00-3	Chloroethane	MSD	RPD	1	%	20
JC90273-6MSD	67-66-3	Chloroform	MSD	REC	95	%	79-124
JC90273-6MSD	67-66-3	Chloroform	MSD	RPD	1	%	20
JC90273-6MSD	74-87-3	Chloromethane	MSD	REC	90	%	50-139
JC90273-6MSD	74-87-3	Chloromethane	MSD	RPD	2	%	20
JC90273-6MSD	110-82-7	Cyclohexane	MSD	REC	119	%	71-130
JC90273-6MSD	110-82-7	Cyclohexane	MSD	RPD	7	%	20
JC90273-6MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	94	%	62-128
JC90273-6MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	1	%	20
JC90273-6MSD	124-48-1	Dibromochloromethane	MSD	REC	85	%	74-126
JC90273-6MSD	124-48-1	Dibromochloromethane	MSD	RPD	0	%	20
JC90273-6MSD	106-93-4	1,2-Dibromoethane	MSD	REC	93	%	77-121
JC90273-6MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	1	%	20
JC90273-6MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	91	%	80-119
JC90273-6MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	0	%	20
JC90273-6MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	90	%	80-119
JC90273-6MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	0	%	20
JC90273-6MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	93	%	79-118
JC90273-6MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
JC90273-6MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	95	%	32-152
JC90273-6MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	6	%	20
JC90273-6MSD	75-34-3	1,1-Dichloroethane	MSD	REC	96	%	77-125
JC90273-6MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	0	%	20
JC90273-6MSD	107-06-2	1,2-Dichloroethane	MSD	REC	81	%	73-128
JC90273-6MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	1	%	20
JC90273-6MSD	75-35-4	1,1-Dichloroethene	MSD	REC	103	%	71-131
JC90273-6MSD	75-35-4	1,1-Dichloroethene	MSD	RPD	2	%	20
JC90273-6MSD	156-59-2	cis-1,2-Dichloroethene	MSD	REC	96	%	78-123
JC90273-6MSD	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	1	%	20
JC90273-6MSD	156-60-5	trans-1,2-Dichloroethene	MSD	REC	100	%	75-124

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MSD	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	1	%	20
JC90273-6MSD	78-87-5	1,2-Dichloropropane	MSD	REC	84	%	78-122
JC90273-6MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
JC90273-6MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	96	%	75-124
JC90273-6MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	0	%	20
JC90273-6MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	86	%	73-127
JC90273-6MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	1	%	20
JC90273-6MSD	123-91-1	1,4-Dioxane	MSD	REC	98	%	59-139
JC90273-6MSD	123-91-1	1,4-Dioxane	MSD	RPD	2	%	20
JC90273-6MSD	100-41-4	Ethylbenzene	MSD	REC	91	%	79-121
JC90273-6MSD	100-41-4	Ethylbenzene	MSD	RPD	1	%	20
JC90273-6MSD	76-13-1	Freon 113	MSD	REC	112	%	70-136
JC90273-6MSD	76-13-1	Freon 113	MSD	RPD	3	%	20
JC90273-6MSD	591-78-6	2-Hexanone	MSD	REC	94	%	57-139
JC90273-6MSD	591-78-6	2-Hexanone	MSD	RPD	1	%	20
JC90273-6MSD	74-88-4	Iodomethane	MSD	REC	96	%	69-131
JC90273-6MSD	74-88-4	Iodomethane	MSD	RPD	2	%	20
JC90273-6MSD	98-82-8	Isopropylbenzene	MSD	REC	92	%	72-131
JC90273-6MSD	98-82-8	Isopropylbenzene	MSD	RPD	2	%	20
JC90273-6MSD	79-20-9	Methyl Acetate	MSD	REC	69	%	56-136
JC90273-6MSD	79-20-9	Methyl Acetate	MSD	RPD	4	%	20
JC90273-6MSD	108-87-2	Methylcyclohexane	MSD	REC	103	%	72-132
JC90273-6MSD	108-87-2	Methylcyclohexane	MSD	RPD	3	%	20
JC90273-6MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	84	%	71-124
JC90273-6MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	1	%	20
JC90273-6MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	99	%	67-130
JC90273-6MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	1	%	20
JC90273-6MSD	75-09-2	Methylene chloride	MSD	REC	95	%	74-124
JC90273-6MSD	75-09-2	Methylene chloride	MSD	RPD	2	%	20
JC90273-6MSD	100-42-5	Styrene	MSD	REC	91	%	78-123
JC90273-6MSD	100-42-5	Styrene	MSD	RPD	2	%	20
JC90273-6MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	94	%	71-121
JC90273-6MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	0	%	20
JC90273-6MSD	127-18-4	Tetrachloroethene	MSD	REC	98	%	74-129
JC90273-6MSD	127-18-4	Tetrachloroethene	MSD	RPD	0	%	20
JC90273-6MSD	108-88-3	Toluene	MSD	REC	93	%	80-121
JC90273-6MSD	108-88-3	Toluene	MSD	RPD	0	%	20
JC90273-6MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	107	%	69-129
JC90273-6MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	1	%	20
JC90273-6MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	104	%	69-130
JC90273-6MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	3	%	20
JC90273-6MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	102	%	74-131
JC90273-6MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
JC90273-6MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	91	%	80-119
JC90273-6MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	0	%	20

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-6MSD	79-01-6	Trichloroethene	MSD	REC	102	%	79-123
JC90273-6MSD	79-01-6	Trichloroethene	MSD	RPD	1	%	20
JC90273-6MSD	75-69-4	Trichlorofluoromethane	MSD	REC	128	%	65-141
JC90273-6MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	3	%	20
JC90273-6MSD	75-01-4	Vinyl chloride	MSD	REC	104	%	58-137
JC90273-6MSD	75-01-4	Vinyl chloride	MSD	RPD	2	%	20
JC90273-6MSD	1330-20-7	Xylene (total)	MSD	REC	91	%	79-121
JC90273-6MSD	1330-20-7	Xylene (total)	MSD	RPD	1	%	20
JC90273-6MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	106	%	80-119
JC90273-6MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	93	%	81-118
JC90273-6MSD	2037-26-5	Toluene-D8	MSD	SURR	99	%	89-112
JC90273-6MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	107	%	85-114
VX7807-MB	1868-53-7	Dibromofluoromethane	MB	SURR	111	%	80-119
VX7807-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	102	%	81-118
VX7807-MB	2037-26-5	Toluene-D8	MB	SURR	102	%	89-112
VX7807-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	91	%	85-114
JC90273-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	109	%	80-119
JC90273-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90273-1	2037-26-5	Toluene-D8	SAMP	SURR	104	%	89-112
JC90273-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	85-114
JC90273-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	108	%	80-119
JC90273-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-2	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
JC90273-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	92	%	85-114
JC90273-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	111	%	80-119
JC90273-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-3	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	90	%	85-114
JC90273-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90273-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90273-4	2037-26-5	Toluene-D8	SAMP	SURR	106	%	89-112
JC90273-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
JC90273-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90273-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-5	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	94	%	85-114
JC90273-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90273-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
JC90273-6	2037-26-5	Toluene-D8	SAMP	SURR	105	%	89-112
JC90273-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
JC90273-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	112	%	80-119
JC90273-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-7	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	91	%	85-114
JC90273-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	112	%	80-119

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90273-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-8	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
JC90273-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	91	%	85-114
JC90273-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	80-119
JC90273-9	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	100	%	81-118
JC90273-9	2037-26-5	Toluene-D8	SAMP	SURR	103	%	89-112
JC90273-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
JC90273-10	1868-53-7	Dibromofluoromethane	SAMP	SURR	109	%	80-119
JC90273-10	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90273-10	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
JC90273-10	460-00-4	4-Bromofluorobenzene	SAMP	SURR	91	%	85-114
JC90273-11	1868-53-7	Dibromofluoromethane	SAMP	SURR	109	%	80-119
JC90273-11	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
JC90273-11	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-11	460-00-4	4-Bromofluorobenzene	SAMP	SURR	92	%	85-114
JC90273-12	1868-53-7	Dibromofluoromethane	SAMP	SURR	110	%	80-119
JC90273-12	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	81-118
JC90273-12	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
JC90273-12	460-00-4	4-Bromofluorobenzene	SAMP	SURR	93	%	85-114
JC90273-13	1868-53-7	Dibromofluoromethane	SAMP	SURR	111	%	80-119
JC90273-13	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90273-13	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
JC90273-13	460-00-4	4-Bromofluorobenzene	SAMP	SURR	93	%	85-114
VX7809	SW846 8260C						
VX7809-BS	67-64-1	Acetone	BSP	REC	88	%	39-160
VX7809-BS	71-43-2	Benzene	BSP	REC	101	%	79-120
VX7809-BS	74-97-5	Bromochloromethane	BSP	REC	110	%	78-123
VX7809-BS	75-27-4	Bromodichloromethane	BSP	REC	100	%	79-125
VX7809-BS	75-25-2	Bromoform	BSP	REC	101	%	66-130
VX7809-BS	74-83-9	Bromomethane	BSP	REC	113	%	53-141
VX7809-BS	78-93-3	2-Butanone (MEK)	BSP	REC	107	%	56-143
VX7809-BS	75-15-0	Carbon disulfide	BSP	REC	110	%	64-133
VX7809-BS	56-23-5	Carbon tetrachloride	BSP	REC	111	%	72-136
VX7809-BS	108-90-7	Chlorobenzene	BSP	REC	101	%	82-118
VX7809-BS	75-00-3	Chloroethane	BSP	REC	108	%	60-138
VX7809-BS	67-66-3	Chloroform	BSP	REC	101	%	79-124
VX7809-BS	74-87-3	Chloromethane	BSP	REC	94	%	50-139
VX7809-BS	110-82-7	Cyclohexane	BSP	REC	110	%	71-130
VX7809-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	107	%	62-128
VX7809-BS	124-48-1	Dibromochloromethane	BSP	REC	99	%	74-126
VX7809-BS	106-93-4	1,2-Dibromoethane	BSP	REC	102	%	77-121
VX7809-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	100	%	80-119
VX7809-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	97	%	80-119

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VX7809-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	101	%	79-118
VX7809-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	124	%	32-152
VX7809-BS	75-34-3	1,1-Dichloroethane	BSP	REC	104	%	77-125
VX7809-BS	107-06-2	1,2-Dichloroethane	BSP	REC	89	%	73-128
VX7809-BS	75-35-4	1,1-Dichloroethene	BSP	REC	109	%	71-131
VX7809-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	107	%	78-123
VX7809-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	109	%	75-124
VX7809-BS	78-87-5	1,2-Dichloropropane	BSP	REC	99	%	78-122
VX7809-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	100	%	75-124
VX7809-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	93	%	73-127
VX7809-BS	123-91-1	1,4-Dioxane	BSP	REC	115	%	59-139
VX7809-BS	100-41-4	Ethylbenzene	BSP	REC	95	%	79-121
VX7809-BS	76-13-1	Freon 113	BSP	REC	114	%	70-136
VX7809-BS	591-78-6	2-Hexanone	BSP	REC	95	%	57-139
VX7809-BS	74-88-4	Iodomethane	BSP	REC	110	%	69-131
VX7809-BS	98-82-8	Isopropylbenzene	BSP	REC	98	%	72-131
VX7809-BS	79-20-9	Methyl Acetate	BSP	REC	81	%	56-136
VX7809-BS	108-87-2	Methylcyclohexane	BSP	REC	113	%	72-132
VX7809-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	95	%	71-124
VX7809-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	103	%	67-130
VX7809-BS	75-09-2	Methylene chloride	BSP	REC	108	%	74-124
VX7809-BS	100-42-5	Styrene	BSP	REC	97	%	78-123
VX7809-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	102	%	71-121
VX7809-BS	127-18-4	Tetrachloroethene	BSP	REC	102	%	74-129
VX7809-BS	108-88-3	Toluene	BSP	REC	96	%	80-121
VX7809-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	118	%	69-129
VX7809-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	117	%	69-130
VX7809-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	112	%	74-131
VX7809-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	98	%	80-119
VX7809-BS	79-01-6	Trichloroethene	BSP	REC	109	%	79-123
VX7809-BS	75-69-4	Trichlorofluoromethane	BSP	REC	121	%	65-141
VX7809-BS	75-01-4	Vinyl chloride	BSP	REC	101	%	58-137
VX7809-BS	1330-20-7	Xylene (total)	BSP	REC	95	%	79-121
VX7809-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	110	%	80-119
VX7809-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	94	%	81-118
VX7809-BS	2037-26-5	Toluene-D8	BSP	SURR	97	%	89-112
VX7809-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	101	%	85-114
JC90379-1MS*	67-64-1	Acetone	MS	REC	69	%	39-160
JC90379-1MS*	71-43-2	Benzene	MS	REC	93	%	79-120
JC90379-1MS*	74-97-5	Bromochloromethane	MS	REC	99	%	78-123
JC90379-1MS*	75-27-4	Bromodichloromethane	MS	REC	92	%	79-125
JC90379-1MS*	75-25-2	Bromoform	MS	REC	87	%	66-130
JC90379-1MS*	74-83-9	Bromomethane	MS	REC	111	%	53-141
JC90379-1MS*	78-93-3	2-Butanone (MEK)	MS	REC	91	%	56-143
JC90379-1MS*	75-15-0	Carbon disulfide	MS	REC	101	%	64-133

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90379-1MS*	56-23-5	Carbon tetrachloride	MS	REC	103	%	72-136
JC90379-1MS*	108-90-7	Chlorobenzene	MS	REC	93	%	82-118
JC90379-1MS*	75-00-3	Chloroethane	MS	REC	109	%	60-138
JC90379-1MS*	67-66-3	Chloroform	MS	REC	96	%	79-124
JC90379-1MS*	74-87-3	Chloromethane	MS	REC	92	%	50-139
JC90379-1MS*	110-82-7	Cyclohexane	MS	REC	111	%	71-130
JC90379-1MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	93	%	62-128
JC90379-1MS*	124-48-1	Dibromochloromethane	MS	REC	90	%	74-126
JC90379-1MS*	106-93-4	1,2-Dibromoethane	MS	REC	94	%	77-121
JC90379-1MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	89	%	80-119
JC90379-1MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	88	%	80-119
JC90379-1MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	90	%	79-118
JC90379-1MS*	75-71-8	Dichlorodifluoromethane	MS	REC	135	%	32-152
JC90379-1MS*	75-34-3	1,1-Dichloroethane	MS	REC	96	%	77-125
JC90379-1MS*	107-06-2	1,2-Dichloroethane	MS	REC	80	%	73-128
JC90379-1MS*	75-35-4	1,1-Dichloroethene	MS	REC	108	%	71-131
JC90379-1MS*	156-59-2	cis-1,2-Dichloroethene	MS	REC	98	%	78-123
JC90379-1MS*	156-60-5	trans-1,2-Dichloroethene	MS	REC	100	%	75-124
JC90379-1MS*	78-87-5	1,2-Dichloropropane	MS	REC	92	%	78-122
JC90379-1MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	95	%	75-124
JC90379-1MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	87	%	73-127
JC90379-1MS*	123-91-1	1,4-Dioxane	MS	REC	102	%	59-139
JC90379-1MS*	100-41-4	Ethylbenzene	MS	REC	88	%	79-121
JC90379-1MS*	76-13-1	Freon 113	MS	REC	113	%	70-136
JC90379-1MS*	591-78-6	2-Hexanone	MS	REC	98	%	57-139
JC90379-1MS*	74-88-4	Iodomethane	MS	REC	98	%	69-131
JC90379-1MS*	98-82-8	Isopropylbenzene	MS	REC	89	%	72-131
JC90379-1MS*	79-20-9	Methyl Acetate	MS	REC	70	%	56-136
JC90379-1MS*	108-87-2	Methylcyclohexane	MS	REC	94	%	72-132
JC90379-1MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	83	%	71-124
JC90379-1MS*	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	104	%	67-130
JC90379-1MS*	75-09-2	Methylene chloride	MS	REC	98	%	74-124
JC90379-1MS*	100-42-5	Styrene	MS	REC	88	%	78-123
JC90379-1MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	91	%	71-121
JC90379-1MS*	127-18-4	Tetrachloroethene	MS	REC	94	%	74-129
JC90379-1MS*	108-88-3	Toluene	MS	REC	93	%	80-121
JC90379-1MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	94	%	69-129
JC90379-1MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	93	%	69-130
JC90379-1MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	104	%	74-131
JC90379-1MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	89	%	80-119
JC90379-1MS*	79-01-6	Trichloroethene	MS	REC	101	%	79-123
JC90379-1MS*	75-69-4	Trichlorofluoromethane	MS	REC	127	%	65-141
JC90379-1MS*	75-01-4	Vinyl chloride	MS	REC	104	%	58-137
JC90379-1MS*	1330-20-7	Xylene (total)	MS	REC	86	%	79-121
JC90379-1MS*	1868-53-7	Dibromofluoromethane	MS	SURR	110	%	80-119

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90379-1MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	94	%	81-118
JC90379-1MS*	2037-26-5	Toluene-D8	MS	SURR	99	%	89-112
JC90379-1MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	103	%	85-114
JC90379-2DUP*	67-64-1	Acetone	DUP	RPD	200 [b]	%	20
JC90379-2DUP*	71-43-2	Benzene	DUP	RPD	0	%	20
JC90379-2DUP*	74-97-5	Bromochloromethane	DUP	RPD	0	%	20
JC90379-2DUP*	75-27-4	Bromodichloromethane	DUP	RPD	0	%	20
JC90379-2DUP*	75-25-2	Bromoform	DUP	RPD	0	%	20
JC90379-2DUP*	74-83-9	Bromomethane	DUP	RPD	0	%	20
JC90379-2DUP*	78-93-3	2-Butanone (MEK)	DUP	RPD	0	%	20
JC90379-2DUP*	75-15-0	Carbon disulfide	DUP	RPD	0	%	20
JC90379-2DUP*	56-23-5	Carbon tetrachloride	DUP	RPD	0	%	20
JC90379-2DUP*	108-90-7	Chlorobenzene	DUP	RPD	0	%	20
JC90379-2DUP*	75-00-3	Chloroethane	DUP	RPD	0	%	20
JC90379-2DUP*	67-66-3	Chloroform	DUP	RPD	0	%	20
JC90379-2DUP*	74-87-3	Chloromethane	DUP	RPD	0	%	20
JC90379-2DUP*	110-82-7	Cyclohexane	DUP	RPD	0	%	20
JC90379-2DUP*	96-12-8	1,2-Dibromo-3-chloropropane	DUP	RPD	0	%	20
JC90379-2DUP*	124-48-1	Dibromochloromethane	DUP	RPD	0	%	20
JC90379-2DUP*	106-93-4	1,2-Dibromoethane	DUP	RPD	0	%	20
JC90379-2DUP*	95-50-1	1,2-Dichlorobenzene	DUP	RPD	0	%	20
JC90379-2DUP*	541-73-1	1,3-Dichlorobenzene	DUP	RPD	0	%	20
JC90379-2DUP*	106-46-7	1,4-Dichlorobenzene	DUP	RPD	0	%	20
JC90379-2DUP*	75-71-8	Dichlorodifluoromethane	DUP	RPD	0	%	20
JC90379-2DUP*	75-34-3	1,1-Dichloroethane	DUP	RPD	0	%	20
JC90379-2DUP*	107-06-2	1,2-Dichloroethane	DUP	RPD	0	%	20
JC90379-2DUP*	75-35-4	1,1-Dichloroethene	DUP	RPD	0	%	20
JC90379-2DUP*	156-59-2	cis-1,2-Dichloroethene	DUP	RPD	0	%	20
JC90379-2DUP*	156-60-5	trans-1,2-Dichloroethene	DUP	RPD	0	%	20
JC90379-2DUP*	78-87-5	1,2-Dichloropropane	DUP	RPD	0	%	20
JC90379-2DUP*	10061-01-5	cis-1,3-Dichloropropene	DUP	RPD	0	%	20
JC90379-2DUP*	10061-02-6	trans-1,3-Dichloropropene	DUP	RPD	0	%	20
JC90379-2DUP*	123-91-1	1,4-Dioxane	DUP	RPD	0	%	20
JC90379-2DUP*	100-41-4	Ethylbenzene	DUP	RPD	0	%	20
JC90379-2DUP*	76-13-1	Freon 113	DUP	RPD	0	%	20
JC90379-2DUP*	591-78-6	2-Hexanone	DUP	RPD	0	%	20
JC90379-2DUP*	74-88-4	Iodomethane	DUP	RPD	0	%	20
JC90379-2DUP*	98-82-8	Isopropylbenzene	DUP	RPD	200 [c]	%	20
JC90379-2DUP*	79-20-9	Methyl Acetate	DUP	RPD	0	%	20
JC90379-2DUP*	108-87-2	Methylcyclohexane	DUP	RPD	0	%	20
JC90379-2DUP*	1634-04-4	Methyl Tert Butyl Ether	DUP	RPD	0	%	20
JC90379-2DUP*	108-10-1	4-Methyl-2-pentanone(MIBK)	DUP	RPD	0	%	20
JC90379-2DUP*	75-09-2	Methylene chloride	DUP	RPD	0	%	20
JC90379-2DUP*	100-42-5	Styrene	DUP	RPD	0	%	20
JC90379-2DUP*	79-34-5	1,1,2,2-Tetrachloroethane	DUP	RPD	0	%	20

* Sample used for QC is not from job JC90273

QC Evaluation: DOD QSM5 Limits

Job Number: JC90273
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 06/19/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC90379-2DUP*	127-18-4	Tetrachloroethene	DUP	RPD	0	%	20
JC90379-2DUP*	108-88-3	Toluene	DUP	RPD	0	%	20
JC90379-2DUP*	87-61-6	1,2,3-Trichlorobenzene	DUP	RPD	0	%	20
JC90379-2DUP*	120-82-1	1,2,4-Trichlorobenzene	DUP	RPD	0	%	20
JC90379-2DUP*	71-55-6	1,1,1-Trichloroethane	DUP	RPD	0	%	20
JC90379-2DUP*	79-00-5	1,1,2-Trichloroethane	DUP	RPD	0	%	20
JC90379-2DUP*	79-01-6	Trichloroethene	DUP	RPD	0	%	20
JC90379-2DUP*	75-69-4	Trichlorofluoromethane	DUP	RPD	0	%	20
JC90379-2DUP*	75-01-4	Vinyl chloride	DUP	RPD	0	%	20
JC90379-2DUP*	1330-20-7	Xylene (total)	DUP	RPD	5	%	20
JC90379-2DUP*	1868-53-7	Dibromofluoromethane	DUP	SURR	111	%	80-119
JC90379-2DUP*	17060-07-0	1,2-Dichloroethane-D4	DUP	SURR	102	%	81-118
JC90379-2DUP*	2037-26-5	Toluene-D8	DUP	SURR	102	%	89-112
JC90379-2DUP*	460-00-4	4-Bromofluorobenzene	DUP	SURR	93	%	85-114
VX7809-MB	1868-53-7	Dibromofluoromethane	MB	SURR	112	%	80-119
VX7809-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	103	%	81-118
VX7809-MB	2037-26-5	Toluene-D8	MB	SURR	101	%	89-112
VX7809-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	92	%	85-114
JC90273-15	1868-53-7	Dibromofluoromethane	SAMP	SURR	108	%	80-119
JC90273-15	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC90273-15	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
JC90273-15	460-00-4	4-Bromofluorobenzene	SAMP	SURR	92	%	85-114
JC90273-16	1868-53-7	Dibromofluoromethane	SAMP	SURR	108	%	80-119
JC90273-16	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
JC90273-16	2037-26-5	Toluene-D8	SAMP	SURR	102	%	89-112
JC90273-16	460-00-4	4-Bromofluorobenzene	SAMP	SURR	94	%	85-114

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Outside control limits due to vial differences.
(c) RPD acceptable due to low DUP and sample concentrations.

* Sample used for QC is not from job JC90273

MS Volatiles

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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: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-MB	X182397.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-1, JC90273-2, JC90273-3, JC90273-4, JC90273-5, JC90273-6, JC90273-7, JC90273-8, JC90273-9, JC90273-10, JC90273-11, JC90273-12, JC90273-13

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-MB	X182397.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-1, JC90273-2, JC90273-3, JC90273-4, JC90273-5, JC90273-6, JC90273-7, JC90273-8, JC90273-9, JC90273-10, JC90273-11, JC90273-12, JC90273-13

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	111%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	81-124%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	91%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9712-MB	A251129.D	1	06/26/19	ED	n/a	n/a	VA9712

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-14, JC90273-15, JC90273-17

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9712-MB	A251129.D	1	06/26/19	ED	n/a	n/a	VA9712

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-14, JC90273-15, JC90273-17

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	107%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	100%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7809-MB	X182437.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7809-MB	X182437.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	81-124%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	92%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-BS	X182395.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-1, JC90273-2, JC90273-3, JC90273-4, JC90273-5, JC90273-6, JC90273-7, JC90273-8, JC90273-9, JC90273-10, JC90273-11, JC90273-12, JC90273-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	202	101	42-150
71-43-2	Benzene	50	51.4	103	80-120
74-97-5	Bromochloromethane	50	53.4	107	84-121
75-27-4	Bromodichloromethane	50	50.7	101	83-120
75-25-2	Bromoform	50	51.0	102	76-129
74-83-9	Bromomethane	50	51.3	103	57-138
78-93-3	2-Butanone (MEK)	200	232	116	64-137
75-15-0	Carbon disulfide	50	49.9	100	64-137
56-23-5	Carbon tetrachloride	50	53.6	107	75-135
108-90-7	Chlorobenzene	50	50.6	101	84-117
75-00-3	Chloroethane	50	49.2	98	63-132
67-66-3	Chloroform	50	51.3	103	80-119
74-87-3	Chloromethane	50	44.7	89	46-136
110-82-7	Cyclohexane	50	50.9	102	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	54.0	108	72-127
124-48-1	Dibromochloromethane	50	50.4	101	80-123
106-93-4	1,2-Dibromoethane	50	52.5	105	84-117
95-50-1	1,2-Dichlorobenzene	50	50.4	101	84-119
541-73-1	1,3-Dichlorobenzene	50	48.9	98	81-117
106-46-7	1,4-Dichlorobenzene	50	51.1	102	82-117
75-71-8	Dichlorodifluoromethane	50	49.5	99	36-149
75-34-3	1,1-Dichloroethane	50	52.4	105	79-120
107-06-2	1,2-Dichloroethane	50	45.5	91	78-126
75-35-4	1,1-Dichloroethene	50	51.5	103	69-126
156-59-2	cis-1,2-Dichloroethene	50	53.2	106	80-120
156-60-5	trans-1,2-Dichloroethene	50	53.4	107	76-120
78-87-5	1,2-Dichloropropane	50	50.5	101	82-121
10061-01-5	cis-1,3-Dichloropropene	50	51.7	103	83-120
10061-02-6	trans-1,3-Dichloropropene	50	48.8	98	82-121
123-91-1	1,4-Dioxane	1250	1440	115	52-147
100-41-4	Ethylbenzene	50	48.7	97	80-120
76-13-1	Freon 113	50	55.4	111	62-182
591-78-6	2-Hexanone	200	205	103	65-132
74-88-4	Iodomethane	50	50.5	101	72-128
98-82-8	Isopropylbenzene	50	49.4	99	83-120
79-20-9	Methyl Acetate	50	44.5	89	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7807-BS	X182395.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-1, JC90273-2, JC90273-3, JC90273-4, JC90273-5, JC90273-6, JC90273-7, JC90273-8, JC90273-9, JC90273-10, JC90273-11, JC90273-12, JC90273-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	57.9	116	71-134
1634-04-4	Methyl Tert Butyl Ether	50	47.3	95	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	217	109	71-131
75-09-2	Methylene chloride	50	52.0	104	77-120
100-42-5	Styrene	50	49.5	99	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	53.7	107	76-119
127-18-4	Tetrachloroethene	50	51.0	102	70-131
108-88-3	Toluene	50	49.5	99	80-120
87-61-6	1,2,3-Trichlorobenzene	50	59.5	119	76-134
120-82-1	1,2,4-Trichlorobenzene	50	58.9	118	79-132
71-55-6	1,1,1-Trichloroethane	50	54.0	108	81-128
79-00-5	1,1,2-Trichloroethane	50	51.1	102	83-118
79-01-6	Trichloroethene	50	54.7	109	80-120
75-69-4	Trichlorofluoromethane	50	55.1	110	64-136
75-01-4	Vinyl chloride	50	48.8	98	51-135
1330-20-7	Xylene (total)	150	146	97	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	105%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9712-BS	A251127.D	1	06/26/19	ED	n/a	n/a	VA9712

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-14, JC90273-15, JC90273-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	198	99	42-150
71-43-2	Benzene	50	48.5	97	80-120
74-97-5	Bromochloromethane	50	51.4	103	84-121
75-27-4	Bromodichloromethane	50	52.5	105	83-120
75-25-2	Bromoform	50	55.5	111	76-129
74-83-9	Bromomethane	50	47.4	95	57-138
78-93-3	2-Butanone (MEK)	200	209	105	64-137
75-15-0	Carbon disulfide	50	47.9	96	64-137
56-23-5	Carbon tetrachloride	50	52.0	104	75-135
108-90-7	Chlorobenzene	50	50.0	100	84-117
75-00-3	Chloroethane	50	49.1	98	63-132
67-66-3	Chloroform	50	47.3	95	80-119
74-87-3	Chloromethane	50	45.3	91	46-136
110-82-7	Cyclohexane	50	46.3	93	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	52.6	105	72-127
124-48-1	Dibromochloromethane	50	51.9	104	80-123
106-93-4	1,2-Dibromoethane	50	53.8	108	84-117
95-50-1	1,2-Dichlorobenzene	50	51.1	102	84-119
541-73-1	1,3-Dichlorobenzene	50	51.0	102	81-117
106-46-7	1,4-Dichlorobenzene	50	49.8	100	82-117
75-71-8	Dichlorodifluoromethane	50	50.0	100	36-149
75-34-3	1,1-Dichloroethane	50	48.2	96	79-120
107-06-2	1,2-Dichloroethane	50	45.6	91	78-126
75-35-4	1,1-Dichloroethene	50	48.0	96	69-126
156-59-2	cis-1,2-Dichloroethene	50	49.3	99	80-120
156-60-5	trans-1,2-Dichloroethene	50	50.1	100	76-120
78-87-5	1,2-Dichloropropane	50	52.6	105	82-121
10061-01-5	cis-1,3-Dichloropropene	50	55.4	111	83-120
10061-02-6	trans-1,3-Dichloropropene	50	53.3	107	82-121
123-91-1	1,4-Dioxane	1250	1370	110	52-147
100-41-4	Ethylbenzene	50	49.4	99	80-120
76-13-1	Freon 113	50	48.3	97	62-182
591-78-6	2-Hexanone	200	198	99	65-132
74-88-4	Iodomethane	50	50.7	101	72-128
98-82-8	Isopropylbenzene	50	50.5	101	83-120
79-20-9	Methyl Acetate	50	49.1	98	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9712-BS	A251127.D	1	06/26/19	ED	n/a	n/a	VA9712

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-14, JC90273-15, JC90273-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	46.3	93	71-134
1634-04-4	Methyl Tert Butyl Ether	50	50.4	101	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	206	103	71-131
75-09-2	Methylene chloride	50	49.8	100	77-120
100-42-5	Styrene	50	49.2	98	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	56.7	113	76-119
127-18-4	Tetrachloroethene	50	46.4	93	70-131
108-88-3	Toluene	50	48.7	97	80-120
87-61-6	1,2,3-Trichlorobenzene	50	52.4	105	76-134
120-82-1	1,2,4-Trichlorobenzene	50	51.8	104	79-132
71-55-6	1,1,1-Trichloroethane	50	51.2	102	81-128
79-00-5	1,1,2-Trichloroethane	50	52.6	105	83-118
79-01-6	Trichloroethene	50	49.3	99	80-120
75-69-4	Trichlorofluoromethane	50	50.1	100	64-136
75-01-4	Vinyl chloride	50	50.1	100	51-135
1330-20-7	Xylene (total)	150	151	101	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	106%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7809-BS	X182435.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	176	88	42-150
71-43-2	Benzene	50	50.6	101	80-120
74-97-5	Bromochloromethane	50	55.2	110	84-121
75-27-4	Bromodichloromethane	50	49.9	100	83-120
75-25-2	Bromoform	50	50.5	101	76-129
74-83-9	Bromomethane	50	56.6	113	57-138
78-93-3	2-Butanone (MEK)	200	214	107	64-137
75-15-0	Carbon disulfide	50	55.0	110	64-137
56-23-5	Carbon tetrachloride	50	55.3	111	75-135
108-90-7	Chlorobenzene	50	50.3	101	84-117
75-00-3	Chloroethane	50	54.0	108	63-132
67-66-3	Chloroform	50	50.6	101	80-119
74-87-3	Chloromethane	50	47.0	94	46-136
110-82-7	Cyclohexane	50	55.1	110	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	53.3	107	72-127
124-48-1	Dibromochloromethane	50	49.4	99	80-123
106-93-4	1,2-Dibromoethane	50	51.2	102	84-117
95-50-1	1,2-Dichlorobenzene	50	50.1	100	84-119
541-73-1	1,3-Dichlorobenzene	50	48.4	97	81-117
106-46-7	1,4-Dichlorobenzene	50	50.4	101	82-117
75-71-8	Dichlorodifluoromethane	50	62.2	124	36-149
75-34-3	1,1-Dichloroethane	50	51.8	104	79-120
107-06-2	1,2-Dichloroethane	50	44.3	89	78-126
75-35-4	1,1-Dichloroethene	50	54.4	109	69-126
156-59-2	cis-1,2-Dichloroethene	50	53.7	107	80-120
156-60-5	trans-1,2-Dichloroethene	50	54.6	109	76-120
78-87-5	1,2-Dichloropropane	50	49.3	99	82-121
10061-01-5	cis-1,3-Dichloropropene	50	49.8	100	83-120
10061-02-6	trans-1,3-Dichloropropene	50	46.4	93	82-121
123-91-1	1,4-Dioxane	1250	1440	115	52-147
100-41-4	Ethylbenzene	50	47.4	95	80-120
76-13-1	Freon 113	50	56.9	114	62-182
591-78-6	2-Hexanone	200	189	95	65-132
74-88-4	Iodomethane	50	55.2	110	72-128
98-82-8	Isopropylbenzene	50	48.9	98	83-120
79-20-9	Methyl Acetate	50	40.7	81	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX7809-BS	X182435.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	56.4	113	71-134
1634-04-4	Methyl Tert Butyl Ether	50	47.7	95	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	205	103	71-131
75-09-2	Methylene chloride	50	53.8	108	77-120
100-42-5	Styrene	50	48.3	97	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	51.0	102	76-119
127-18-4	Tetrachloroethene	50	50.8	102	70-131
108-88-3	Toluene	50	48.1	96	80-120
87-61-6	1,2,3-Trichlorobenzene	50	58.9	118	76-134
120-82-1	1,2,4-Trichlorobenzene	50	58.3	117	79-132
71-55-6	1,1,1-Trichloroethane	50	56.1	112	81-128
79-00-5	1,1,2-Trichloroethane	50	49.2	98	83-118
79-01-6	Trichloroethene	50	54.6	109	80-120
75-69-4	Trichlorofluoromethane	50	60.3	121	64-136
75-01-4	Vinyl chloride	50	50.5	101	51-135
1330-20-7	Xylene (total)	150	143	95	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	81-124%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	101%	80-120%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90379-1MS	X182443.D	1	06/27/19	JP	n/a	n/a	VX7809
JC90379-1	X182440.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	JC90379-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		200	137	69	34-149
71-43-2	Benzene	11.0		50	57.6	93	54-136
74-97-5	Bromochloromethane	ND		50	49.4	99	79-124
75-27-4	Bromodichloromethane	ND		50	46.0	92	79-124
75-25-2	Bromoform	ND		50	43.4	87	71-130
74-83-9	Bromomethane	ND		50	55.7	111	53-142
78-93-3	2-Butanone (MEK)	ND		200	181	91	54-142
75-15-0	Carbon disulfide	ND		50	50.5	101	59-145
56-23-5	Carbon tetrachloride	ND		50	51.6	103	70-143
108-90-7	Chlorobenzene	ND		50	46.3	93	78-123
75-00-3	Chloroethane	ND		50	54.7	109	57-141
67-66-3	Chloroform	ND		50	48.0	96	76-123
74-87-3	Chloromethane	ND		50	45.8	92	43-141
110-82-7	Cyclohexane	2.7	J	50	58.2	111	51-155
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	46.7	93	66-130
124-48-1	Dibromochloromethane	ND		50	44.9	90	76-125
106-93-4	1,2-Dibromoethane	ND		50	46.8	94	78-119
95-50-1	1,2-Dichlorobenzene	ND		50	44.4	89	77-123
541-73-1	1,3-Dichlorobenzene	ND		50	43.8	88	76-122
106-46-7	1,4-Dichlorobenzene	ND		50	45.0	90	76-122
75-71-8	Dichlorodifluoromethane	ND		50	67.3	135	31-159
75-34-3	1,1-Dichloroethane	ND		50	48.2	96	73-126
107-06-2	1,2-Dichloroethane	ND		50	40.0	80	72-131
75-35-4	1,1-Dichloroethene	ND		50	53.9	108	63-136
156-59-2	cis-1,2-Dichloroethene	ND		50	49.2	98	60-136
156-60-5	trans-1,2-Dichloroethene	ND		50	50.1	100	70-126
78-87-5	1,2-Dichloropropane	ND		50	45.8	92	78-124
10061-01-5	cis-1,3-Dichloropropene	ND		50	47.6	95	79-123
10061-02-6	trans-1,3-Dichloropropene	ND		50	43.5	87	77-123
123-91-1	1,4-Dioxane	ND		1250	1270	102	49-146
100-41-4	Ethylbenzene	ND		50	44.2	88	51-140
76-13-1	Freon 113	ND		50	56.5	113	60-192
591-78-6	2-Hexanone	ND		200	195	98	56-139
74-88-4	Iodomethane	ND		50	49.2	98	67-132
98-82-8	Isopropylbenzene	10.3		50	54.8	89	75-129
79-20-9	Methyl Acetate	ND		50	35.0	70	55-131

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90379-1MS	X182443.D	1	06/27/19	JP	n/a	n/a	VX7809
JC90379-1	X182440.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	JC90379-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
108-87-2	Methylcyclohexane	1.7	J	50	48.8	94	57-155
1634-04-4	Methyl Tert Butyl Ether	ND		50	41.7	83	72-123
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	207	104	66-136
75-09-2	Methylene chloride	ND		50	49.0	98	73-125
100-42-5	Styrene	ND		50	44.2	88	75-129
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	45.7	91	71-122
127-18-4	Tetrachloroethene	ND		50	47.1	94	61-139
108-88-3	Toluene	ND		50	46.3	93	60-135
87-61-6	1,2,3-Trichlorobenzene	ND		50	47.0	94	70-138
120-82-1	1,2,4-Trichlorobenzene	ND		50	46.4	93	72-137
71-55-6	1,1,1-Trichloroethane	ND		50	52.0	104	74-138
79-00-5	1,1,2-Trichloroethane	ND		50	44.5	89	78-121
79-01-6	Trichloroethene	ND		50	50.6	101	62-141
75-69-4	Trichlorofluoromethane	ND		50	63.4	127	57-149
75-01-4	Vinyl chloride	ND		50	51.8	104	43-146
1330-20-7	Xylene (total)	142		150	271	86	56-139

CAS No.	Surrogate Recoveries	MS	JC90379-1	Limits
1868-53-7	Dibromofluoromethane	110%	111%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	102%	81-124%
2037-26-5	Toluene-D8	99%	102%	80-120%
460-00-4	4-Bromofluorobenzene	103%	91%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90273-6MS	X182407.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6MSD	X182408.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6	X182402.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-1, JC90273-2, JC90273-3, JC90273-4, JC90273-5, JC90273-6, JC90273-7, JC90273-8, JC90273-9, JC90273-10, JC90273-11, JC90273-12, JC90273-13

CAS No.	Compound	JC90273-6 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	10	U	200	146	73	200	138	69	6	34-149/17
71-43-2	Benzene	0.50	U	50	47.2	94	50	46.9	94	1	54-136/10
74-97-5	Bromochloromethane	1.0	U	50	49.3	99	50	48.8	98	1	79-124/11
75-27-4	Bromodichloromethane	1.0	U	50	46.6	93	50	45.7	91	2	79-124/11
75-25-2	Bromoform	1.0	U	50	45.0	90	50	44.7	89	1	71-130/11
74-83-9	Bromomethane	2.0	U	50	57.4	115	50	57.2	114	0	53-142/14
78-93-3	2-Butanone (MEK)	13.8		200	203	95	200	205	96	1	54-142/15
75-15-0	Carbon disulfide	2.0	U	50	51.8	104	50	50.8	102	2	59-145/17
56-23-5	Carbon tetrachloride	1.0	U	50	50.9	102	50	50.1	100	2	70-143/12
108-90-7	Chlorobenzene	1.0	U	50	47.9	96	50	47.5	95	1	78-123/10
75-00-3	Chloroethane	1.0	U	50	56.5	113	50	57.2	114	1	57-141/14
67-66-3	Chloroform	1.0	U	50	47.9	96	50	47.4	95	1	76-123/11
74-87-3	Chloromethane	1.0	U	50	44.2	88	50	45.1	90	2	43-141/16
110-82-7	Cyclohexane	5.0	U	50	55.4	111	50	59.7	119	7	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	2.0	U	50	47.5	95	50	46.8	94	1	66-130/13
124-48-1	Dibromochloromethane	1.0	U	50	42.7	85	50	42.7	85	0	76-125/11
106-93-4	1,2-Dibromoethane	1.0	U	50	46.2	92	50	46.7	93	1	78-119/11
95-50-1	1,2-Dichlorobenzene	1.0	U	50	45.8	92	50	45.7	91	0	77-123/11
541-73-1	1,3-Dichlorobenzene	1.0	U	50	45.0	90	50	44.8	90	0	76-122/11
106-46-7	1,4-Dichlorobenzene	1.0	U	50	47.1	94	50	46.6	93	1	76-122/11
75-71-8	Dichlorodifluoromethane	2.0	U	50	50.7	101	50	47.6	95	6	31-159/16
75-34-3	1,1-Dichloroethane	1.0	U	50	48.4	97	50	48.2	96	0	73-126/11
107-06-2	1,2-Dichloroethane	1.0	U	50	40.8	82	50	40.4	81	1	72-131/11
75-35-4	1,1-Dichloroethene	1.0	U	50	52.4	105	50	51.4	103	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	1.0	U	50	48.7	97	50	48.0	96	1	60-136/11
156-60-5	trans-1,2-Dichloroethene	1.0	U	50	50.5	101	50	50.0	100	1	70-126/11
78-87-5	1,2-Dichloropropane	1.0	U	50	43.1	86	50	42.1	84	2	78-124/10
10061-01-5	cis-1,3-Dichloropropene	1.0	U	50	47.9	96	50	47.9	96	0	79-123/11
10061-02-6	trans-1,3-Dichloropropene	1.0	U	50	43.6	87	50	43.1	86	1	77-123/11
123-91-1	1,4-Dioxane	130	U	1250	1250	100	1250	1230	98	2	49-146/26
100-41-4	Ethylbenzene	1.0	U	50	46.1	92	50	45.6	91	1	51-140/20
76-13-1	Freon 113	5.0	U	50	57.7	115	50	56.1	112	3	60-192/14
591-78-6	2-Hexanone	5.9		200	192	93	200	193	94	1	56-139/14
74-88-4	Iodomethane	2.0	U	50	49.0	98	50	48.2	96	2	67-132/14
98-82-8	Isopropylbenzene	1.0	U	50	46.8	94	50	45.8	92	2	75-129/11
79-20-9	Methyl Acetate	5.0	U	50	35.7	71	50	34.3	69	4	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90273-6MS	X182407.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6MSD	X182408.D	1	06/26/19	DG	n/a	n/a	VX7807
JC90273-6	X182402.D	1	06/26/19	DG	n/a	n/a	VX7807

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-1, JC90273-2, JC90273-3, JC90273-4, JC90273-5, JC90273-6, JC90273-7, JC90273-8, JC90273-9, JC90273-10, JC90273-11, JC90273-12, JC90273-13

CAS No.	Compound	JC90273-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	5.0	U	50	53.1	106	50	51.4	103	3	57-155/13
1634-04-4	Methyl Tert Butyl Ether	1.0	U	50	41.7	83	50	42.2	84	1	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	5.0	U	200	195	98	200	197	99	1	66-136/13
75-09-2	Methylene chloride	2.0	U	50	48.3	97	50	47.5	95	2	73-125/13
100-42-5	Styrene	1.0	U	50	46.2	92	50	45.4	91	2	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	50	47.1	94	50	47.2	94	0	71-122/11
127-18-4	Tetrachloroethene	1.0	U	50	48.9	98	50	48.8	98	0	61-139/11
108-88-3	Toluene	1.0	U	50	46.7	93	50	46.5	93	0	60-135/10
87-61-6	1,2,3-Trichlorobenzene	1.0	U	50	53.6	107	50	53.3	107	1	70-138/13
120-82-1	1,2,4-Trichlorobenzene	1.0	U	50	53.6	107	50	51.8	104	3	72-137/13
71-55-6	1,1,1-Trichloroethane	1.0	U	50	52.6	105	50	51.2	102	3	74-138/12
79-00-5	1,1,2-Trichloroethane	1.0	U	50	45.8	92	50	45.6	91	0	78-121/11
79-01-6	Trichloroethene	1.0	U	50	50.4	101	50	50.8	102	1	62-141/10
75-69-4	Trichlorofluoromethane	2.0	U	50	65.9	132	50	63.9	128	3	57-149/14
75-01-4	Vinyl chloride	1.0	U	50	51.1	102	50	52.0	104	2	43-146/15
1330-20-7	Xylene (total)	1.0	U	150	137	91	150	136	91	1	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC90273-6	Limits
1868-53-7	Dibromofluoromethane	109%	106%	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	93%	102%	81-124%
2037-26-5	Toluene-D8	99%	99%	105%	80-120%
460-00-4	4-Bromofluorobenzene	104%	107%	97%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90525-1MS	A251140.D	5	06/27/19	ED	n/a	n/a	VA9712
JC90525-1MSD	A251141.D	5	06/27/19	ED	n/a	n/a	VA9712
JC90525-1 [a]	A251143.D	5	06/27/19	ED	n/a	n/a	VA9712

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-14, JC90273-15, JC90273-17

CAS No.	Compound	JC90525-1 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	ND		1000	1040	104	1000	1030	103	1	34-149/17
71-43-2	Benzene	ND		250	234	94	250	232	93	1	54-136/10
74-97-5	Bromochloromethane	ND		250	257	103	250	252	101	2	79-124/11
75-27-4	Bromodichloromethane	ND		250	257	103	250	256	102	0	79-124/11
75-25-2	Bromoform	ND		250	266	106	250	273	109	3	71-130/11
74-83-9	Bromomethane	ND		250	227	91	250	222	89	2	53-142/14
78-93-3	2-Butanone (MEK)	ND		1000	1070	107	1000	1100	110	3	54-142/15
75-15-0	Carbon disulfide	ND		250	227	91	250	218	87	4	59-145/17
56-23-5	Carbon tetrachloride	ND		250	257	103	250	247	99	4	70-143/12
108-90-7	Chlorobenzene	ND		250	242	97	250	241	96	0	78-123/10
75-00-3	Chloroethane	ND		250	239	96	250	229	92	4	57-141/14
67-66-3	Chloroform	ND		250	235	94	250	231	92	2	76-123/11
74-87-3	Chloromethane	ND		250	216	86	250	212	85	2	43-141/16
110-82-7	Cyclohexane	ND		250	241	96	250	234	94	3	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	270	108	250	261	104	3	66-130/13
124-48-1	Dibromochloromethane	ND		250	261	104	250	256	102	2	76-125/11
106-93-4	1,2-Dibromoethane	ND		250	271	108	250	274	110	1	78-119/11
95-50-1	1,2-Dichlorobenzene	ND		250	246	98	250	242	97	2	77-123/11
541-73-1	1,3-Dichlorobenzene	ND		250	244	98	250	237	95	3	76-122/11
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	236	94	1	76-122/11
75-71-8	Dichlorodifluoromethane	ND		250	249	100	250	246	98	1	31-159/16
75-34-3	1,1-Dichloroethane	ND		250	242	97	250	234	94	3	73-126/11
107-06-2	1,2-Dichloroethane	ND		250	233	93	250	228	91	2	72-131/11
75-35-4	1,1-Dichloroethene	ND		250	248	99	250	232	93	7	63-136/14
156-59-2	cis-1,2-Dichloroethene	114		250	330	86	250	330	86	0	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		250	245	98	250	237	95	3	70-126/11
78-87-5	1,2-Dichloropropane	ND		250	258	103	250	250	100	3	78-124/10
10061-01-5	cis-1,3-Dichloropropene	ND		250	263	105	250	263	105	0	79-123/11
10061-02-6	trans-1,3-Dichloropropene	ND		250	265	106	250	260	104	2	77-123/11
123-91-1	1,4-Dioxane	ND		6250	6800	109	6250	6680	107	2	49-146/26
100-41-4	Ethylbenzene	ND		250	233	93	250	232	93	0	51-140/20
76-13-1	Freon 113	ND		250	244	98	250	236	94	3	60-192/14
591-78-6	2-Hexanone	ND		1000	994	99	1000	1010	101	2	56-139/14
74-88-4	Iodomethane	ND		250	253	101	250	244	98	4	67-132/14
98-82-8	Isopropylbenzene	ND		250	242	97	250	241	96	0	75-129/11
79-20-9	Methyl Acetate	ND		250	245	98	250	251	100	2	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90525-1MS	A251140.D	5	06/27/19	ED	n/a	n/a	VA9712
JC90525-1MSD	A251141.D	5	06/27/19	ED	n/a	n/a	VA9712
JC90525-1 [a]	A251143.D	5	06/27/19	ED	n/a	n/a	VA9712

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-14, JC90273-15, JC90273-17

CAS No.	Compound	JC90525-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	ND		250	229	92	250	227	91	1	57-155/13
1634-04-4	Methyl Tert Butyl Ether	14.8		250	273	103	250	264	100	3	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	1020	102	1000	1040	104	2	66-136/13
75-09-2	Methylene chloride	ND		250	256	102	250	243	97	5	73-125/13
100-42-5	Styrene	ND		250	233	93	250	236	94	1	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	284	114	250	273	109	4	71-122/11
127-18-4	Tetrachloroethene	19.8		250	240	88	250	236	86	2	61-139/11
108-88-3	Toluene	ND		250	238	95	250	231	92	3	60-135/10
87-61-6	1,2,3-Trichlorobenzene	ND		250	255	102	250	255	102	0	70-138/13
120-82-1	1,2,4-Trichlorobenzene	ND		250	252	101	250	247	99	2	72-137/13
71-55-6	1,1,1-Trichloroethane	ND		250	253	101	250	249	100	2	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		250	263	105	250	261	104	1	78-121/11
79-01-6	Trichloroethene	886		250	824	-25* [b]	250	817	-28* [b]	1	62-141/10
75-69-4	Trichlorofluoromethane	ND		250	254	102	250	247	99	3	57-149/14
75-01-4	Vinyl chloride	ND		250	244	98	250	240	96	2	43-146/15
1330-20-7	Xylene (total)	ND		750	714	95	750	712	95	0	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC90525-1	Limits
1868-53-7	Dibromofluoromethane	106%	103%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	106%	81-124%
2037-26-5	Toluene-D8	100%	98%	99%	80-120%
460-00-4	4-Bromofluorobenzene	105%	103%	98%	80-120%

(a) Diluted due to high concentration of target compound.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90379-2DUP	X182445.D	1	06/27/19	JP	n/a	n/a	VX7809
JC90379-2	X182441.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	JC90379-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		25.2		200* [a]	20
71-43-2	Benzene	ND		ND		nc	20
74-97-5	Bromochloromethane	ND		ND		nc	20
75-27-4	Bromodichloromethane	ND		ND		nc	20
75-25-2	Bromoform	ND		ND		nc	20
74-83-9	Bromomethane	ND		ND		nc	20
78-93-3	2-Butanone (MEK)	ND		ND		nc	20
75-15-0	Carbon disulfide	ND		ND		nc	20
56-23-5	Carbon tetrachloride	ND		ND		nc	20
108-90-7	Chlorobenzene	ND		ND		nc	20
75-00-3	Chloroethane	ND		ND		nc	20
67-66-3	Chloroform	ND		ND		nc	20
74-87-3	Chloromethane	ND		ND		nc	20
110-82-7	Cyclohexane	ND		ND		nc	20
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	20
124-48-1	Dibromochloromethane	ND		ND		nc	20
106-93-4	1,2-Dibromoethane	ND		ND		nc	20
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	20
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	20
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	20
75-71-8	Dichlorodifluoromethane	ND		ND		nc	20
75-34-3	1,1-Dichloroethane	ND		ND		nc	20
107-06-2	1,2-Dichloroethane	ND		ND		nc	20
75-35-4	1,1-Dichloroethene	ND		ND		nc	20
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	20
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	20
78-87-5	1,2-Dichloropropane	ND		ND		nc	20
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	20
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	20
123-91-1	1,4-Dioxane	ND		ND		nc	20
100-41-4	Ethylbenzene	ND		ND		nc	20
76-13-1	Freon 113	ND		ND		nc	20
591-78-6	2-Hexanone	ND		ND		nc	20
74-88-4	Iodomethane	ND		ND		nc	20
98-82-8	Isopropylbenzene	ND		1.0		200* [b]	20
79-20-9	Methyl Acetate	ND		ND		nc	20

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC90379-2DUP	X182445.D	1	06/27/19	JP	n/a	n/a	VX7809
JC90379-2	X182441.D	1	06/27/19	JP	n/a	n/a	VX7809

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC90273-15, JC90273-16

CAS No.	Compound	JC90379-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
108-87-2	Methylcyclohexane	ND		ND		nc	20
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	20
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	20
75-09-2	Methylene chloride	ND		ND		nc	20
100-42-5	Styrene	ND		ND		nc	20
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	20
127-18-4	Tetrachloroethene	ND		ND		nc	20
108-88-3	Toluene	ND		ND		nc	20
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	20
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	20
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	20
79-01-6	Trichloroethene	ND		ND		nc	20
75-69-4	Trichlorofluoromethane	ND		ND		nc	20
75-01-4	Vinyl chloride	ND		ND		nc	20
1330-20-7	Xylene (total)	1.9		2.0		5	20

CAS No.	Surrogate Recoveries	DUP	JC90379-2	Limits
1868-53-7	Dibromofluoromethane	111%	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	103%	81-124%
2037-26-5	Toluene-D8	102%	102%	80-120%
460-00-4	4-Bromofluorobenzene	93%	92%	80-120%

(a) Outside control limits due to vial differences.
(b) RPD acceptable due to low DUP and sample concentrations.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9645-BFB
Lab File ID: A249730.D
Instrument ID: GCMSA
Injection Date: 05/11/19
Injection Time: 14:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	8968	17.1		Pass
75	30.0 - 60.0% of mass 95	24730	47.2		Pass
95	Base peak, 100% relative abundance	52402	100.0		Pass
96	5.0 - 9.0% of mass 95	3491	6.66		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	49818	95.1		Pass
175	5.0 - 9.0% of mass 174	4035	7.70	(8.10) [a]	Pass
176	95.0 - 101.0% of mass 174	48597	92.7	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3296	6.29	(6.78) [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
VA9645-IC9645	A249731.D	05/11/19	15:31	00:39	Initial cal 0.2
VA9645-IC9645	A249732.D	05/11/19	16:00	01:08	Initial cal 0.5
VA9645-IC9645	A249733.D	05/11/19	16:29	01:37	Initial cal 1
VA9645-IC9645	A249734.D	05/11/19	16:57	02:05	Initial cal 2
VA9645-IC9645	A249735.D	05/11/19	17:26	02:34	Initial cal 4
VA9645-IC9645	A249736.D	05/11/19	17:55	03:03	Initial cal 8
VA9645-IC9645	A249737.D	05/11/19	18:24	03:32	Initial cal 20
VA9645-ICC9645	A249738.D	05/11/19	18:53	04:01	Initial cal 50
VA9645-IC9645	A249739.D	05/11/19	19:21	04:29	Initial cal 100
VA9645-IC9645	A249740.D	05/11/19	19:50	04:58	Initial cal 200
VA9645-ICV9645	A249743.D	05/11/19	21:17	06:25	Initial cal verification 50
VA9645-ICV9645	A249744.D	05/11/19	21:46	06:54	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9712-BFB
Lab File ID: A251126.D
Instrument ID: GCMSA
Injection Date: 06/26/19
Injection Time: 19:02

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	9184	16.3		Pass
75	30.0 - 60.0% of mass 95	25563	45.5		Pass
95	Base peak, 100% relative abundance	56219	100.0		Pass
96	5.0 - 9.0% of mass 95	3877	6.90		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	52755	93.8		Pass
175	5.0 - 9.0% of mass 174	4299	7.65	(8.15) [a]	Pass
176	95.0 - 101.0% of mass 174	51083	90.9	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	3408	6.06	(6.67) [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
VA9712-CC9645	A251126.D	06/26/19	19:02	00:00	Continuing cal 50
VA9712-BS	A251127.D	06/26/19	19:36	00:34	Blank Spike
VA9712-MB	A251129.D	06/26/19	20:46	01:44	Method Blank
ZZZZZZ	A251130.D	06/26/19	21:14	02:12	(unrelated sample)
ZZZZZZ	A251131.D	06/26/19	21:43	02:41	(unrelated sample)
ZZZZZZ	A251132.D	06/26/19	22:12	03:10	(unrelated sample)
ZZZZZZ	A251133.D	06/26/19	22:41	03:39	(unrelated sample)
ZZZZZZ	A251134.D	06/26/19	23:10	04:08	(unrelated sample)
ZZZZZZ	A251135.D	06/26/19	23:38	04:36	(unrelated sample)
JC90273-14	A251136.D	06/27/19	00:07	05:05	MW5-6-2019-06-19
JC90273-15	A251137.D	06/27/19	00:36	05:34	MW5-5D-2019-06-19
JC90273-17	A251139.D	06/27/19	01:34	06:32	MW5-P-2019-06-19
JC90525-1MS	A251140.D	06/27/19	02:03	07:01	Matrix Spike
JC90525-1MSD	A251141.D	06/27/19	02:32	07:30	Matrix Spike Duplicate
JC90525-1	A251143.D	06/27/19	03:29	08:27	(used for QC only; not part of job JC90273)
ZZZZZZ	A251144.D	06/27/19	03:58	08:56	(unrelated sample)
ZZZZZZ	A251145.D	06/27/19	04:27	09:25	(unrelated sample)
ZZZZZZ	A251146.D	06/27/19	04:56	09:54	(unrelated sample)
ZZZZZZ	A251147.D	06/27/19	05:25	10:23	(unrelated sample)
VA9712-ECC9645	A251148.D	06/27/19	05:53	10:51	Ending cal 50

Instrument Performance Check (BFB)

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VX7749-BFB
Lab File ID: X181279.D
Instrument ID: GCMSX
Injection Date: 05/02/19
Injection Time: 16:28

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14769	17.6		Pass
75	30.0 - 60.0% of mass 95	38133	45.6		Pass
95	Base peak, 100% relative abundance	83690	100.0		Pass
96	5.0 - 9.0% of mass 95	5531	6.61		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	80445	96.1		Pass
175	5.0 - 9.0% of mass 174	6070	7.25	(7.55) [a]	Pass
176	95.0 - 101.0% of mass 174	79192	94.6	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	5418	6.47	(6.84) [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
VX7749-IC7749	X181280.D	05/02/19	17:02	00:34	Initial cal 0.2
VX7749-IC7749	X181281.D	05/02/19	17:31	01:03	Initial cal 0.5
VX7749-IC7749	X181282.D	05/02/19	17:59	01:31	Initial cal 1
VX7749-IC7749	X181283.D	05/02/19	18:28	02:00	Initial cal 2
VX7749-IC7749	X181284.D	05/02/19	18:56	02:28	Initial cal 4
VX7749-IC7749	X181285.D	05/02/19	19:25	02:57	Initial cal 8
VX7749-IC7749	X181286.D	05/02/19	19:54	03:26	Initial cal 20
VX7749-ICC7749	X181287.D	05/02/19	20:22	03:54	Initial cal 50
VX7749-IC7749	X181288.D	05/02/19	20:51	04:23	Initial cal 100
VX7749-IC7749	X181289.D	05/02/19	21:19	04:51	Initial cal 200
VX7749-ICV7749	X181292.D	05/02/19	22:45	06:17	Initial cal verification 50
VX7749-ICV7749	X181293.D	05/02/19	23:14	06:46	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VX7807-BFB
Lab File ID: X182393.D
Instrument ID: GCMSX
Injection Date: 06/26/19
Injection Time: 06:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11533	15.9		Pass
75	30.0 - 60.0% of mass 95	30520	42.1		Pass
95	Base peak, 100% relative abundance	72544	100.0		Pass
96	5.0 - 9.0% of mass 95	4626	6.38		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	67712	93.3		Pass
175	5.0 - 9.0% of mass 174	5506	7.59	(8.13) [a]	Pass
176	95.0 - 101.0% of mass 174	66677	91.9	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	4392	6.05	(6.59) [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
VX7807-CC7749	X182393.D	06/26/19	06:55	00:00	Continuing cal 20
VX7807-BS	X182395.D	06/26/19	07:57	01:02	Blank Spike
VX7807-MB	X182397.D	06/26/19	09:08	02:13	Method Blank
JC90273-1	X182398.D	06/26/19	09:57	03:02	MW13-5A-2019-06-19
JC90273-2	X182399.D	06/26/19	10:26	03:31	PZ13-3D-2019-06-19
JC90273-3	X182400.D	06/26/19	10:55	04:00	PW13-1-2019-06-19
JC90273-4	X182401.D	06/26/19	11:23	04:28	MW13-3-2019-06-19
JC90273-6	X182402.D	06/26/19	11:52	04:57	MW13-4-2019-06-19
ZZZZZZ	X182403.D	06/26/19	12:21	05:26	(unrelated sample)
JC90273-5	X182404.D	06/26/19	12:50	05:55	MW13-5D-2019-06-19
JC90273-7	X182405.D	06/26/19	13:18	06:23	MW13-4D-2019-06-19
JC90273-8	X182406.D	06/26/19	13:47	06:52	PW13-4D-2019-06-19
JC90273-6MS	X182407.D	06/26/19	14:16	07:21	Matrix Spike
JC90273-6MSD	X182408.D	06/26/19	14:45	07:50	Matrix Spike Duplicate
JC90273-9	X182410.D	06/26/19	15:43	08:48	RW5-1-2019-06-19
JC90273-10	X182411.D	06/26/19	16:12	09:17	MW5-1DA-2019-06-19
JC90273-11	X182412.D	06/26/19	16:40	09:45	RW5-4-2019-06-19
JC90273-12	X182413.D	06/26/19	17:09	10:14	RW5-2-2019-06-19
JC90273-13	X182414.D	06/26/19	17:38	10:43	MW-FD-2019-06-19
VX7807-ECC7749	X182415.D	06/26/19	18:07	11:12	Ending cal 50

Instrument Performance Check (BFB)

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VX7809-BFB
Lab File ID: X182431.D
Instrument ID: GCMSX
Injection Date: 06/27/19
Injection Time: 06:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	10732	15.2		Pass
75	30.0 - 60.0% of mass 95	30584	43.4		Pass
95	Base peak, 100% relative abundance	70530	100.0		Pass
96	5.0 - 9.0% of mass 95	4779	6.78		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	67133	95.2		Pass
175	5.0 - 9.0% of mass 174	4998	7.09	(7.44) [a]	Pass
176	95.0 - 101.0% of mass 174	66272	94.0	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4349	6.17	(6.56) [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
VX7809-CC7749	X182431.D	06/27/19	06:24	00:00	Continuing cal 20
VX7809-BS	X182435.D	06/27/19	09:25	03:01	Blank Spike
VX7809-MB	X182437.D	06/27/19	10:32	04:08	Method Blank
JC90273-16	X182438.D	06/27/19	11:15	04:51	TRIP BLANK 2
JC90273-15	X182439.D	06/27/19	11:43	05:19	MW5-5D-2019-06-19
JC90379-1	X182440.D	06/27/19	12:13	05:49	(used for QC only; not part of job JC90273)
JC90379-2	X182441.D	06/27/19	12:42	06:18	(used for QC only; not part of job JC90273)
ZZZZZZ	X182442.D	06/27/19	13:11	06:47	(unrelated sample)
JC90379-1MS	X182443.D	06/27/19	13:39	07:15	Matrix Spike
JC90379-2DUP	X182445.D	06/27/19	14:37	08:13	Duplicate
ZZZZZZ	X182446.D	06/27/19	15:06	08:42	(unrelated sample)
ZZZZZZ	X182447.D	06/27/19	15:35	09:11	(unrelated sample)
ZZZZZZ	X182448.D	06/27/19	16:05	09:41	(unrelated sample)
ZZZZZZ	X182449.D	06/27/19	16:34	10:10	(unrelated sample)
ZZZZZZ	X182450.D	06/27/19	17:04	10:40	(unrelated sample)
VX7809-ECC7749	X182451.D	06/27/19	17:33	11:09	Ending cal 50

Internal Standard Area Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VA9712-CC9645	**Injection Date:**	06/26/19
Lab File ID:	A251126.D	**Injection Time:**	19:02
Instrument ID:	GCMSA	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	264932	8.17	196459	10.54	287923	11.50	243654	14.89	129600	17.51
Upper Limit [a]	529864	8.67	392918	11.04	575846	12.00	487308	15.39	259200	18.01
Lower Limit [b]	132466	7.67	98230	10.04	143962	11.00	121827	14.39	64800	17.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA9712-BS	274737	8.16	198712	10.54	292639	11.50	256662	14.90	137180	17.52
VA9712-MB	277474	8.16	198843	10.54	279446	11.50	227615	14.89	138919	17.51
ZZZZZZ	282876	8.15	190053	10.54	270159	11.50	227107	14.89	140510	17.51
ZZZZZZ	264879	8.16	186938	10.54	261416	11.50	211220	14.89	131190	17.51
ZZZZZZ	278210	8.16	193357	10.54	271167	11.50	215620	14.89	133091	17.51
ZZZZZZ	261789	8.15	180709	10.53	254405	11.50	208220	14.89	130050	17.51
ZZZZZZ	256168	8.16	178650	10.54	256659	11.50	203784	14.89	126461	17.51
ZZZZZZ	269799	8.15	186479	10.54	256824	11.50	204268	14.89	125035	17.51
JC90273-14	254962	8.15	181942	10.54	253119	11.50	205354	14.89	128527	17.51
JC90273-15	263486	8.15	185176	10.54	266042	11.50	211718	14.90	131768	17.52
JC90273-17	249042	8.15	179938	10.54	253155	11.50	206669	14.89	129776	17.52
JC90525-1MS	261712	8.16	184048	10.54	273677	11.51	233808	14.89	123387	17.51
JC90525-1MSD	272670	8.16	190203	10.54	282302	11.50	246301	14.89	134312	17.51
JC90525-1	267950	8.16	185276	10.54	260942	11.50	210337	14.89	129580	17.51
ZZZZZZ	273004	8.15	185544	10.53	258588	11.50	211095	14.90	130379	17.51
ZZZZZZ	258059	8.16	182856	10.54	253972	11.50	206993	14.89	129245	17.51
ZZZZZZ	269426	8.16	187212	10.54	263474	11.50	213062	14.90	132727	17.52
ZZZZZZ	263170	8.15	182113	10.54	255382	11.50	205919	14.89	128134	17.52
VA9712-ECC9645	257586	8.15	183055	10.54	267382	11.50	236438	14.90	124182	17.51

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VX7807-CC7749	**Injection Date:**	06/26/19
Lab File ID:	X182393.D	**Injection Time:**	06:55
Instrument ID:	GCMSX	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	131265	7.40	192685	10.20	260927	11.39	262071	15.60	147792	18.39
Upper Limit [a]	262530	7.90	385370	10.70	521854	11.89	524142	16.10	295584	18.89
Lower Limit [b]	65633	6.90	96343	9.70	130464	10.89	131036	15.10	73896	17.89

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VX7807-BS	138229	7.40	191602	10.20	260813	11.39	266607	15.60	143631	18.39
VX7807-MB	142797	7.39	204076	10.20	278274	11.39	273831	15.60	183451	18.40
JC90273-1	158447	7.40	212822	10.20	283810	11.39	278167	15.60	176516	18.40
JC90273-2	133507	7.40	202847	10.19	273870	11.39	273092	15.60	181382	18.39
JC90273-3	139805	7.40	200918	10.20	273692	11.39	273302	15.60	183942	18.39
JC90273-4	137222	7.40	203107	10.20	272505	11.39	262036	15.60	156505	18.39
JC90273-6	123224	7.40	202922	10.20	273422	11.39	266143	15.60	166930	18.39
ZZZZZZ	147377	7.40	205943	10.20	275237	11.39	272910	15.60	177859	18.40
JC90273-5	128930	7.40	200493	10.20	277167	11.39	274271	15.60	177854	18.40
JC90273-7	130913	7.41	202880	10.20	274746	11.39	272725	15.60	180640	18.40
JC90273-8	141782	7.40	202217	10.20	272360	11.39	269627	15.60	179396	18.40
JC90273-6MS	116734	7.41	186221	10.20	257095	11.39	260327	15.60	142889	18.39
JC90273-6MSD	115566	7.41	191547	10.20	263658	11.39	268048	15.60	141930	18.40
JC90273-9	135916	7.41	209683	10.20	278530	11.39	275142	15.60	171192	18.40
JC90273-10	139033	7.40	208158	10.20	277209	11.39	274450	15.60	184604	18.40
JC90273-11	149876	7.41	207978	10.20	275132	11.39	273601	15.60	181069	18.40
JC90273-12	136095	7.40	205342	10.20	279875	11.39	278739	15.60	179807	18.40
JC90273-13	143534	7.40	203283	10.20	277106	11.39	274336	15.60	183521	18.40
VX7807-ECC7749	121845	7.41	190706	10.20	259159	11.39	264567	15.60	142972	18.40

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VX7809-CC7749	**Injection Date:**	06/27/19
Lab File ID:	X182431.D	**Injection Time:**	06:24
Instrument ID:	GCMSX	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	131394	7.39	191614	10.19	255487	11.38	255353	15.60	150338	18.39
Upper Limit [a]	262788	7.89	383228	10.69	510974	11.88	510706	16.10	300676	18.89
Lower Limit [b]	65697	6.89	95807	9.69	127744	10.88	127677	15.10	75169	17.89

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VX7809-BS	123345	7.41	181783	10.19	247483	11.38	256330	15.60	140703	18.39
VX7809-MB	137601	7.40	205059	10.19	274810	11.38	272746	15.60	179552	18.39
JC90273-16	140215	7.40	209125	10.19	281352	11.38	279508	15.60	180078	18.39
JC90273-15	134549	7.40	203156	10.19	269924	11.38	269899	15.60	178820	18.39
JC90379-1	132872	7.40	197583	10.19	263842	11.38	261292	15.60	167454	18.39
JC90379-2	122005	7.40	201684	10.19	268067	11.38	268909	15.59	177986	18.39
ZZZZZZ	131141	7.40	202800	10.19	270201	11.38	272751	15.60	179840	18.39
JC90379-1MS	121757	7.41	185733	10.19	257577	11.38	261650	15.59	141957	18.39
JC90379-2DUP	122897	7.40	199582	10.19	271666	11.38	271170	15.59	177920	18.39
ZZZZZZ	134771	7.40	200840	10.19	268114	11.39	267286	15.60	181770	18.39
ZZZZZZ	125486	7.41	199148	10.19	270248	11.39	269780	15.60	180725	18.39
ZZZZZZ	139387	7.40	199710	10.20	270942	11.39	271476	15.60	180784	18.39
ZZZZZZ	127408	7.41	200906	10.19	270740	11.39	266003	15.60	182183	18.39
ZZZZZZ	128575	7.41	181305	10.20	269464	11.39	263267	15.60	171472	18.39
VX7809-ECC7749	114985	7.41	183036	10.20	253848	11.39	257058	15.60	140452	18.39

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC90273
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

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
JC90273-1	X182398.D	109	103	104	95
JC90273-2	X182399.D	108	104	102	92
JC90273-3	X182400.D	111	104	101	90
JC90273-4	X182401.D	110	103	106	97
JC90273-5	X182404.D	110	104	101	94
JC90273-6	X182402.D	110	102	105	97
JC90273-7	X182405.D	112	104	101	91
JC90273-8	X182406.D	112	104	102	91
JC90273-9	X182410.D	106	100	103	96
JC90273-10	X182411.D	109	103	102	91
JC90273-11	X182412.D	109	104	101	92
JC90273-12	X182413.D	110	101	102	93
JC90273-13	X182414.D	111	103	102	93
JC90273-14	A251136.D	101	107	101	98
JC90273-15	X182439.D	108	103	101	92
JC90273-15	A251137.D	105	104	101	97
JC90273-16	X182438.D	108	102	102	94
JC90273-17	A251139.D	105	108	100	97
JC90273-6MS	X182407.D	109	95	99	104
JC90273-6MSD	X182408.D	106	93	99	107
JC90379-1MS	X182443.D	110	94	99	103
JC90379-2DUP	X182445.D	111	102	102	93
JC90525-1MS	A251140.D	106	103	100	105
JC90525-1MSD	A251141.D	103	102	98	103
VA9712-BS	A251127.D	101	101	98	106
VA9712-MB	A251129.D	102	107	99	100
VX7807-BS	X182395.D	107	96	98	105
VX7807-MB	X182397.D	111	102	102	91
VX7809-BS	X182435.D	110	94	97	101
VX7809-MB	X182437.D	112	103	101	92

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Initial Calibration Summary

Job Number: JC90273 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Response Factor Report MSA

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Calibration Files
4 =A249735.D 2 =A249734.D 20 =A249737.D 50 =A249738.D
100 =A249739.D 1 =A249733.D 200 =A249740.D 0.5 =A249732.D
8 =A249736.D 0.2 =A249731.D = =

Compound	4	2	20	50	100	1	200	0.5	8	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) ethanol											0.000#	-1.00
3) tertiary butyl alcohol	1.103	1.004	1.044	1.018	1.061		1.007		0.991		1.033	3.79
4) 1,4-dioxane	0.067	0.055	0.070	0.071	0.075		0.065		0.065		0.067	9.81
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	1.040	1.020	0.962	0.964	0.981	0.916	0.925		0.960		0.971	4.36
7) dichlorodifluoromethane	1.175	1.254	1.210	1.229	1.318	1.076	1.187	0.966	1.216		1.181	8.75
8) chloromethane	1.118	1.249	1.139	1.504	1.569	1.138	1.436	1.213	1.179		1.283	13.49
9) vinyl chloride	1.015	1.106	1.089	1.124	1.201	1.079	1.097	0.981	1.090		1.087	5.75
10) 1,3-butadiene	1.193	1.165	1.013	0.966	0.952	1.074	0.880		1.044		1.036	10.30
11) bromomethane	0.742	0.782	0.738	0.756	0.805	0.780	0.731	0.782	0.754		0.763	3.28
12) chloroethane	0.563	0.552	0.545	0.570	0.613	0.474	0.559	0.513	0.585		0.552	7.31
13) vinyl bromide	0.709	0.770	0.740	0.751	0.821	0.694	0.754	0.550	0.766		0.728	10.48
14) trichlorofluoromethane	1.092	1.144	1.109	1.133	1.213	1.054	1.110		1.143		1.125	4.13
15) ethyl ether	0.273	0.237	0.265	0.265	0.263	0.203	0.255		0.251		0.252	8.95
16) acrolein			0.109	0.118	0.125		0.122		0.099		0.114	9.25
17) freon 113	0.573	0.546	0.546	0.550	0.572	0.502	0.544		0.538		0.547	4.06
18) 1,1-dichloroethene	0.591	0.554	0.529	0.529	0.566	0.467	0.564		0.525		0.541	6.92
19) acetone *This compound fails for EPA 624.1*												
	0.072	0.069	0.073	0.076	0.077		0.072		0.069		0.073	4.40
20) acetonitrile	0.121	0.120	0.117	0.117	0.119	0.107	0.107		0.113		0.115	4.72
21) iodomethane	1.015	0.949	0.949	0.962	1.023	0.949	1.010	0.815	0.971		0.960	6.47
22) carbon disulfide	1.951	1.859	1.681	1.686	1.767	1.825	1.737	1.994	1.687		1.799	6.51
23) methylene chloride												

Initial Calibration Summary

Job Number: JC90273 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
      0.630 0.578 0.555 0.563 0.590 0.538 0.587 0.453 0.573        0.563    8.62
24)  methyl acetate
      0.583 0.466 0.500 0.529 0.516       0.492       0.479        0.509    7.60
25)  methyl tert butyl ether
      1.715 1.647 1.601 1.605 1.684 1.511 1.635 1.388 1.555        1.593    6.20
26)  trans-1,2-dichloroethene
      0.518 0.467 0.485 0.483 0.490 0.430 0.479 0.414 0.460        0.470    6.73
27)  hexane
      0.713 0.736 0.668 0.679 0.696 0.694 0.665 0.596 0.664        0.679    5.79
28)  di-isopropyl ether
      1.778 1.714 1.645 1.644 1.694 1.625 1.623 1.577 1.610 1.410  1.632    5.96
29)  ethyl tert-butyl ether
      1.684 1.610 1.595 1.594 1.669 1.568 1.602 1.390 1.541 1.359  1.561    6.88
30)  2-butanone
      0.088 0.078 0.087 0.090 0.095 0.061 0.095       0.077        0.084   13.63
31)  1,1-dichloroethane
      0.935 0.870 0.853 0.835 0.847 0.890 0.813 0.734 0.819        0.844    6.63
32)  chloroprene
      0.735 0.704 0.695 0.699 0.710 0.606 0.675 0.649 0.684        0.684    5.49
33)  acrylonitrile
      0.290       0.256 0.260 0.266       0.258       0.227        0.259    7.84
34)  vinyl acetate
      0.110       0.106 0.107 0.113       0.113       0.099        0.108    4.76
35)  ethyl acetate
      0.087       0.089 0.102 0.107       0.099       0.080        0.094   11.15
36)  2,2-dichloropropane
      0.911 0.877 0.820 0.817 0.833 0.862 0.796 0.671 0.818        0.823    8.16
37)  cis-1,2-dichloroethene
      0.602 0.548 0.557 0.549 0.561 0.508 0.545 0.460 0.541        0.541    7.20
38)  methyl acrylate
      0.079       0.090 0.099 0.104       0.105       0.085        0.094   11.30
39)  propionitrile
      0.124 0.109 0.116 0.119 0.122 0.098 0.118 0.083 0.110        0.111   11.91
40)  bromochloromethane
      0.311 0.279 0.289 0.285 0.297 0.257 0.285 0.203 0.279        0.276   11.21
41)  tetrahydrofuran
      0.259 0.258 0.236 0.238 0.242 0.240 0.233       0.218        0.241    5.57
42)  chloroform
      0.946 0.917 0.838 0.823 0.842 0.824 0.806 0.943 0.846 0.988  0.877    7.35
43)  tert-butyl formate
      0.481 0.466 0.457 0.463 0.481 0.338 0.460       0.420        0.446   10.66
44)  dibromofluoromethane (s)
      0.496 0.496 0.497 0.493 0.495 0.495 0.488 0.497 0.494 0.477  0.493    1.29
45)  methacrylonitrile
      0.245 0.201 0.241 0.248 0.261       0.258       0.225        0.240    8.68
46)  cyclohexane
      0.912 0.949 0.886 0.928 1.018 0.823 0.955 0.821 0.916        0.912    6.90
47)  1,1,1-trichloroethane
      0.937 0.901 0.873 0.880 0.912 0.847 0.883 0.815 0.842 0.707  0.860    7.48
48)  iso-butyl alcohol
      0.089 0.080 0.084 0.086 0.091 0.070 0.085       0.079        0.083    8.09
49)  1,1-dichloropropene
      0.733 0.651 0.632 0.643 0.676 0.595 0.650 0.571 0.630        0.642    7.18
50)  carbon tetrachloride
      0.842 0.836 0.772 0.773 0.806 0.708 0.779 0.653 0.748        0.768    7.84
51)  tert-amyl alcohol
      0.080       0.079 0.079 0.080       0.073       0.071        0.077    5.05

52) I   1,4-difluorobenzene   ----------------ISTD---------------------
53)  1,2-dichloroethane-d4 (s)
```

0.368 0.367 0.358 0.350 0.345 0.369 0.335 0.364 0.369 0.366 0.359 3.29

54) benzene
1.388 1.355 1.283 1.244 1.286 1.323 1.213 1.283 1.248 1.140 1.276 5.56

55) iso-octane
1.278 1.146 1.234 1.261 1.345 1.060 1.254 1.043 1.161 1.198 8.54

56) tert-amyl methyl ether
1.206 1.113 1.126 1.082 1.106 1.095 1.040 1.039 1.094 0.969 1.087 5.76

57) heptane
0.274 0.236 0.246 0.239 0.251 0.234 0.231 0.184 0.241 0.237 10.05

58) isopropyl acetate
0.096 0.088 0.098 0.095 0.100 0.093 0.085 0.094 5.76

59) 1,2-dichloroethane
0.480 0.457 0.439 0.422 0.429 0.494 0.403 0.566 0.433 0.458 10.82

60) n-butyl alcohol
0.023 0.021 0.023 0.024 0.024 0.018 0.021 0.021 0.022 8.52

61) ethyl acrylate
0.414 0.351 0.427 0.435 0.457 0.438 0.391 0.416 8.48

62) trichloroethene
0.351 0.350 0.315 0.309 0.331 0.331 0.316 0.309 0.314 0.325 5.03

63) 2-nitropropane
0.148 0.142 0.137 0.147 0.148 0.108 0.142 0.130 0.138 9.79

64) methylcyclohexane
0.717 0.734 0.687 0.670 0.694 0.644 0.657 0.639 0.655 0.611 0.671 5.59

65) 2-chloroethyl vinyl ether
0.169 0.156 0.174 0.185 0.200 0.142 0.196 0.159 0.173 11.72

66) methyl methacrylate
0.088 0.078 0.093 0.100 0.104 0.101 0.080 0.092 11.23

67) 1,2-dichloropropane
0.335 0.309 0.316 0.308 0.325 0.289 0.315 0.269 0.305 0.308 6.26

68) dibromomethane
0.227 0.218 0.207 0.206 0.218 0.167 0.210 0.206 0.207 8.56

69) bromodichloromethane
0.460 0.435 0.428 0.422 0.442 0.390 0.433 0.407 0.413 0.426 4.84

70) epichlorohydrin
0.048 0.046 0.048 0.050 0.051 0.034 0.049 0.044 0.046 11.90

71) cis-1,3-dichloropropene
0.480 0.473 0.471 0.481 0.513 0.428 0.499 0.374 0.449 0.379 0.455 10.40

72) 4-methyl-2-pentanone
0.220 0.195 0.200 0.197 0.202 0.170 0.191 0.155 0.183 0.190 10.00

73) 3-methyl-1-butanol
0.038 0.036 0.038 0.038 0.038 0.029 0.035 0.034 0.036 9.21

74) I chlorobenzene-d5 ----------ISTD----------

75) toluene-d8 (s)
1.363 1.362 1.351 1.308 1.251 1.367 1.220 1.371 1.369 1.334 1.330 4.03

76) toluene
0.978 0.958 0.880 0.865 0.863 0.860 0.817 0.963 0.850 0.802 0.884 7.00

77) trans-1,3-dichloropropene
0.498 0.424 0.475 0.478 0.491 0.426 0.463 0.423 0.463 0.404 0.455 7.17

78) ethyl methacrylate
0.504 0.475 0.477 0.471 0.476 0.444 0.450 0.385 0.455 0.460 7.22

79) 1,1,2-trichloroethane
0.279 0.271 0.262 0.258 0.262 0.226 0.246 0.219 0.250 0.252 7.87

80) 2-hexanone
0.212 0.195 0.192 0.186 0.186 0.172 0.177 0.174 0.185 0.187 6.45

81) tetrachloroethene
0.487 0.457 0.431 0.417 0.418 0.431 0.392 0.445 0.415 0.433 6.39

82) 1,3-dichloropropane
0.529 0.481 0.500 0.498 0.506 0.505 0.484 0.455 0.486 0.414 0.486 6.58

83) butyl acetate

Initial Calibration Summary

Job Number: JC90273 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
      0.309 0.283 0.281 0.272 0.271       0.258       0.270        0.278    5.84
 84)  dibromochloromethane
      0.406 0.370 0.380 0.378 0.390 0.351 0.374 0.396 0.358        0.378    4.62
 85)  1,2-dibromoethane
      0.377 0.362 0.355 0.354 0.371 0.324 0.358 0.257 0.354        0.346   10.50
 86)  n-butyl ether
      1.623 1.521 1.462 1.407 1.417 1.458 1.321 1.460 1.390        1.451    5.90
 87)  chlorobenzene
      1.031 0.924 0.918 0.924 0.958 0.898 0.929 0.901 0.894 0.812  0.919    5.95
 88)  1,1,1,2-tetrachloroethane
      0.521 0.498 0.461 0.441 0.444 0.470 0.422 0.434 0.458 0.454  0.460    6.49
 89)  ethylbenzene
      1.777 1.710 1.616 1.598 1.619 1.613 1.533 1.713 1.558 1.677  1.642    4.63
 90)  m,p-xylene
      0.688 0.640 0.647 0.628 0.650 0.622 0.622 0.621 0.625        0.638    3.39
 91)  o-xylene
      0.778 0.738 0.723 0.694 0.713 0.680 0.685 0.692 0.671 0.686  0.706    4.62
 92)  styrene
      1.141 0.993 0.992 0.977 1.007 0.980 1.004 1.030 0.962 1.066  1.015    5.23
 93)  butyl acrylate
      0.826 0.806 0.767 0.695 0.681 0.718 0.637 0.629 0.755        0.724    9.67
 94)  n-amyl acetate
      0.381 0.362 0.340 0.304 0.291 0.319 0.276       0.331        0.325   10.87
 95)  bromoform
      0.306 0.281 0.272 0.264 0.266 0.238 0.259 0.221 0.261        0.263    9.20
 96)  isopropylbenzene
      2.136 2.026 1.993 1.896 1.899 1.864 1.760 1.885 1.885 1.755  1.910    6.09
 97)  cis-1,4-dichloro-2-butene   *This compounds fails Initial Calibration criteria*
      0.028       0.045 0.064 0.076       0.098       0.029        0.057   48.84

 98) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 99)  4-bromofluorobenzene (s)
      0.738 0.741 0.767 0.800 0.856 0.753 0.870 0.745 0.756 0.763  0.779    6.14
100)  bromobenzene
      0.773 0.671 0.720 0.750 0.834 0.677 0.826 0.669 0.697        0.735    8.78
101)  1,1,2,2-tetrachloroethane
      0.986 0.935 0.960 0.985 1.068 0.905 1.021 0.852 0.885 0.953  0.955    6.74
102)  trans-1,4-dichloro-2-butene  *This compounds fails Initial Calibration criteria*
      0.026       0.062 0.091 0.111       0.114       0.040        0.074   50.09
103)  1,2,3-trichloropropane
      0.278 0.250 0.281 0.279 0.303 0.249 0.290 0.263 0.268        0.273    6.59
104)  n-propylbenzene
      3.684 3.424 3.570 3.629 3.973 3.371 3.755 3.136 3.323 4.010  3.588    7.85
105)  2-chlorotoluene
      0.809 0.733 0.794 0.817 0.920 0.695 0.904       0.721        0.799   10.28
106)  4-chlorotoluene
      1.926 1.831 1.834 1.856 2.042 1.772 1.990 1.767 1.752 1.904  1.867    5.20
107)  1,3,5-trimethylbenzene
      2.807 2.589 2.837 2.982 3.303 2.508 3.120 2.453 2.564 2.501  2.766   10.60
108)  tert-butylbenzene
      0.600 0.516 0.641 0.668 0.755       0.736       0.570        0.641   13.55
109)  1,2,4-trimethylbenzene
      2.852 2.627 2.754 2.816 3.136 2.330 2.981 2.503 2.537 2.837  2.737    8.79
110)  sec-butylbenzene
      3.643 3.469 3.828 4.010 4.434 3.256 4.106       3.467        3.777   10.38
111)  1,3-dichlorobenzene
      1.596 1.424 1.417 1.415 1.503 1.435 1.439 1.370 1.340 1.636  1.458    6.47
112)  p-isopropyltoluene
      3.261 2.976 3.241 3.322 3.742 2.732 3.500 2.809 2.927 2.961  3.147   10.22
113)  1,4-dichlorobenzene
```

Initial Calibration Summary

Job Number: JC90273 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
       1.584 1.472 1.420 1.410 1.492 1.547 1.423 1.556 1.374        1.475    5.02
114)  1,2-dichlorobenzene
       1.684 1.565 1.523 1.528 1.642 1.521 1.581 1.415 1.457 1.880  1.579    8.36
115)  n-butylbenzene
       1.647 1.584 1.556 1.530 1.658 1.428 1.596 1.449 1.442 1.499  1.539    5.43
116)  1,2-dibromo-3-chloropropane
       0.324 0.324 0.338 0.346 0.361 0.298 0.338       0.339        0.334    5.63
117)  1,3,5-trichlorobenzene
       1.596 1.447 1.425 1.424 1.530 1.482 1.461 1.435 1.386 1.705  1.489    6.51
118)  2-ethylhexyl acrylate
                 0.574 0.739 0.907       0.894       0.541        0.731   23.54
              ----- Linear regression -----  Coefficient =  0.9952
                Response Ratio = -0.01690 + 0.90861 *A

119)  1,2,4-trichlorobenzene
       1.409 1.300 1.342 1.342 1.428 1.302 1.343 1.258 1.286 1.387  1.340    4.12
120)  hexachlorobutadiene
       0.547 0.478 0.510 0.525 0.603 0.516 0.581       0.502        0.533    7.86
121)  naphthalene
       4.003 3.646 3.935 3.962 4.189 3.586 3.852 3.449 3.779 4.766  3.917    9.44
122)  1,2,3-trichlorobenzene
       1.426 1.225 1.368 1.365 1.487 1.308 1.388 1.218 1.317        1.345    6.57
123)  hexachloroethane
       0.441 0.385 0.479 0.523 0.617       0.610       0.411        0.495   18.64
124)  2-methylnaphthalene
                 1.912 2.142 2.466       2.320       1.602        2.089   16.35
125)  ethylenimine
                                                                    0.000#  -1.00
126)  bis(chloromethyl)ether
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MA9645.M          Tue May 14 14:12:27 2019   RPT1
```

Initial Calibration Verification

Job Number: JC90273 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9645\A249743.D Vial: 14
Acq On : 11 May 2019 9:17 pm Operator: PrashanS
Sample : ICV9645-50 Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.042	-0.9	107	0.00	8.29
4		1,4-dioxane	0.067	0.073	-9.0	108	0.00	12.18
5	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	10.55
6	M	chlorodifluoromethane	0.971	1.099	-13.2	120	0.00	4.58
7	M	dichlorodifluoromethane	1.181	1.204	-1.9	104	0.01	4.55
8	M	chloromethane	1.283	1.462	-14.0	103	0.00	4.99
9	M	vinyl chloride	1.087	1.057	2.8	99	0.00	5.25
10		1,3-butadiene	1.036	1.160	-12.0	127	0.00	5.27
11	M	bromomethane	0.763	0.717	6.0	100	0.00	5.92
12	M	chloroethane	0.552	0.543	1.6	101	0.00	6.11
13		vinyl bromide	0.728	0.740	-1.6	104	0.01	6.49
14	M	trichlorofluoromethane	1.125	1.082	3.8	101	0.00	6.63
15	M	ethyl ether	0.252	0.262	-4.0	105	0.00	7.01
16	M	acrolein	0.114	0.120	-5.3	108	0.00	7.27
17		freon 113	0.547	0.627	-14.6	120	0.00	7.51
18	M	1,1-dichloroethene	0.541	0.522	3.5	104	0.00	7.48
19	M	acetone	0.073	0.075	-2.7	104	0.00	7.48
20	M	acetonitrile	0.115	0.082	28.7	75	0.00	7.93
21	M	iodomethane	0.960	1.138	-18.5	125	0.00	7.75
22	M	carbon disulfide	1.799	1.901	-5.7	119	0.00	7.90
23	M	methylene chloride	0.563	0.573	-1.8	108	0.00	8.23
24	M	methyl acetate	0.509	0.515	-1.2	103	0.00	7.97
25	M	methyl tert butyl ether	1.593	1.648	-3.5	109	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.478	-1.7	105	0.00	8.64
27		hexane	0.679	0.709	-4.4	110	0.00	9.01
28	M	di-isopropyl ether	1.632	1.581	3.1	102	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.571	-0.6	104	0.00	9.71
30	M	2-butanone	0.084	0.091	-8.3	107	0.00	9.92
31	M	1,1-dichloroethane	0.844	0.849	-0.6	107	0.00	9.25
32	M	chloroprene	0.684	0.730	-6.7	110	0.00	9.35
33	M	acrylonitrile	0.259	0.286	-10.4	116	0.00	8.53
34	M	vinyl acetate	0.108	0.101	6.5	100	0.00	9.18
35	M	ethyl acetate	0.094	0.093	1.1	96	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.797	3.2	103	0.00	10.03
37	M	cis-1,2-dichloroethene	0.541	0.533	1.5	103	0.00	9.99
38		methyl acrylate	0.094	0.100	-6.4	107	0.00	10.02
39	M	propionitrile	0.111	0.122	-9.9	108	0.00	10.00
40	M	bromochloromethane	0.276	0.296	-7.2	110	0.00	10.30
41	M	tetrahydrofuran	0.241	0.244	-1.2	108	0.00	10.32

Initial Calibration Verification

Job Number: JC90273 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.840	4.2	108	0.00	10.39
43		tert-butyl formate	0.446	0.424	4.9	97	0.00	10.43
44	S	dibromofluoromethane (s)	0.493	0.487	1.2	104	0.00	10.59
45	M	methacrylonitrile	0.240	0.253	-5.4	108	0.00	10.20
46		cyclohexane	0.912	0.960	-5.3	109	0.00	10.78
47	M	1,1,1-trichloroethane	0.860	0.881	-2.4	106	0.00	10.66
48		iso-butyl alcohol	0.083	0.087	-4.8	107	0.00	10.78
49		1,1-dichloropropene	0.642	0.648	-0.9	107	0.00	10.83
50		carbon tetrachloride	0.768	0.793	-3.3	108	0.00	10.86
51		tert-amyl alcohol	0.077	0.083	-7.8	110	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	11.51
53	S	1,2-dichloroethane-d4 (s)	0.359	0.351	2.2	103	0.00	11.02
54	M	benzene	1.276	1.289	-1.0	107	0.00	11.09
55	M	iso-octane	1.198	1.309	-9.3	107	0.00	11.19
56		tert-amyl methyl ether	1.087	1.091	-0.4	104	0.00	11.17
57	M	heptane	0.237	0.284	-19.8	123	0.00	11.35
58	M	isopropyl acetate	0.094	0.092	2.1	100	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.426	7.0	104	0.00	11.11
60		n-butyl alcohol	0.022	0.024	-9.1	106	0.00	11.55
61		ethyl acrylate	0.416	0.454	-9.1	107	0.00	11.81
62	M	trichloroethene	0.325	0.329	-1.2	110	0.00	11.84
63	M	2-nitropropane	0.138	0.158	-14.5	111	0.00	12.63
64	m	methylcyclohexane	0.671	0.693	-3.3	107	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.199	-15.0	111	0.00	12.65
66	M	methyl methacrylate	0.092	0.104	-13.0	107	0.00	12.09
67	M	1,2-dichloropropane	0.308	0.323	-4.9	108	0.00	12.14
68	M	dibromomethane	0.207	0.214	-3.4	107	0.00	12.26
69	M	bromodichloromethane	0.426	0.424	0.5	103	0.00	12.41
70		epichlorohydrin	0.046	0.052	-13.0	108	0.00	12.75
71	M	cis-1,3-dichloropropene	0.455	0.495	-8.8	106	0.00	12.90
72	M	4-methyl-2-pentanone	0.190	0.202	-6.3	106	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.040	-11.1	110	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.90
75	S	toluene-d8 (s)	1.330	1.316	1.1	103	0.00	13.23
76		toluene	0.884	0.885	-0.1	105	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.507	-11.4	109	0.00	13.51
78		ethyl methacrylate	0.460	0.494	-7.4	108	0.00	13.49
79		1,1,2-trichloroethane	0.252	0.267	-6.0	106	0.00	13.75
80		2-hexanone	0.187	0.189	-1.1	105	0.00	13.92
81	M	tetrachloroethene	0.433	0.460	-6.2	113	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.522	-7.4	108	0.00	13.95
83	M	butyl acetate	0.278	0.277	0.4	105	0.00	14.00
84	M	dibromochloromethane	0.378	0.404	-6.9	110	0.00	14.23
85	M	1,2-dibromoethane	0.346	0.366	-5.8	106	0.00	14.40
86	M	n-butyl ether	1.451	1.497	-3.2	109	0.00	14.87
87	M	chlorobenzene	0.919	0.960	-4.5	107	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.460	0.0	107	0.00	15.01
89	M	ethylbenzene	1.642	1.623	1.2	104	0.00	15.00
90	M	m,p-xylene	0.638	0.642	-0.6	105	0.00	15.13
91	M	o-xylene	0.706	0.718	-1.7	106	0.00	15.59
92	M	styrene	1.015	0.992	2.3	104	0.00	15.60
93		butyl acrylate	0.724	0.690	4.7	102	0.00	15.38
94		n-amyl acetate	0.325	0.285	12.3	96	0.00	15.61
95	M	bromoform	0.263	0.288	-9.5	112	0.00	15.86
96		isopropylbenzene	1.910	1.963	-2.8	106	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.060	-5.3	97	0.00	16.02
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	17.52

Initial Calibration Verification

Job Number: JC90273 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.791	-1.5	100	0.00	16.20
100	M	bromobenzene	0.735	0.780	-6.1	105	0.00	16.42
101	M	1,1,2,2-tetrachloroethane	0.955	1.013	-6.1	104	0.00	16.29
102	M	trans-1,4-dichloro-2-bute	0.074	0.099	-33.8#	110	0.00	16.32
103	M	1,2,3-trichloropropane	0.273	0.284	-4.0	103	0.00	16.39
104	M	n-propylbenzene	3.588	3.759	-4.8	105	0.00	16.44
105	M	2-chlorotoluene	0.799	0.834	-4.4	103	0.00	16.60
106	M	4-chlorotoluene	1.867	1.942	-4.0	106	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	3.090	-11.7	105	0.00	16.62
108	M	tert-butylbenzene	0.641	0.709	-10.6	107	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.986	-9.1	107	0.00	17.06
110	M	sec-butylbenzene	3.777	4.196	-11.1	106	0.00	17.25
111	M	1,3-dichlorobenzene	1.458	1.480	-1.5	106	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.546	-12.7	108	0.00	17.39
113	M	1,4-dichlorobenzene	1.475	1.469	0.4	106	0.00	17.55
114	M	1,2-dichlorobenzene	1.579	1.590	-0.7	105	0.00	17.97
115	M	n-butylbenzene	1.539	1.560	-1.4	103	0.00	17.85
116	M	1,2-dibromo-3-chloropropa	0.334	0.345	-3.3	101	0.00	18.82
117	M	1,3,5-trichlorobenzene	1.489	1.460	1.9	104	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	10.247	-2.5	116	0.00	19.76

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.363	-1.7	103	0.00	19.78
120	M	hexachlorobutadiene	0.533	0.534	-0.2	103	0.00	19.90
121	M	naphthalene	3.917	4.198	-7.2	107	0.00	20.11
122	M	1,2,3-trichlorobenzene	1.345	1.423	-5.8	106	0.00	20.36
123	M	hexachloroethane	0.495	0.580	-17.2	112	0.00	18.30
124		2-methylnaphthalene	2.089	2.276	-9.0	108	0.00	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue May 14 14:11:55 2019 RPT1

Initial Calibration Verification

Job Number: JC90273 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9645\A249744.D Vial: 15
Acq On : 11 May 2019 9:46 pm Operator: PrashanS
Sample : ICV9645-50 Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	103	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.54
6	M	chlorodifluoromethane		----------NA----------				
7	M	dichlorodifluoromethane		----------NA----------				
8	M	chloromethane		----------NA----------				
9	M	vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11	M	bromomethane		----------NA----------				
12	M	chloroethane		----------NA----------				
13		vinyl bromide		----------NA----------				
14	M	trichlorofluoromethane		----------NA----------				
15	M	ethyl ether		----------NA----------				
16	M	acrolein		----------NA----------				
17		freon 113		----------NA----------				
18	M	1,1-dichloroethene		----------NA----------				
19	M	acetone		----------NA----------				
20	M	acetonitrile	0.115	0.114	0.9	105	0.00	7.93
21	M	iodomethane		----------NA----------				
22	M	carbon disulfide		----------NA----------				
23	M	methylene chloride		----------NA----------				
24	M	methyl acetate		----------NA----------				
25	M	methyl tert butyl ether		----------NA----------				
26	M	trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28	M	di-isopropyl ether		----------NA----------				
29	M	ethyl tert-butyl ether		----------NA----------				
30	M	2-butanone		----------NA----------				
31	M	1,1-dichloroethane		----------NA----------				
32	M	chloroprene		----------NA----------				
33	M	acrylonitrile	0.259	0.235	9.3	97	0.00	8.53
34	M	vinyl acetate		----------NA----------				
35	M	ethyl acetate		----------NA----------				
36	M	2,2-dichloropropane		----------NA----------				
37	M	cis-1,2-dichloroethene		----------NA----------				
38		methyl acrylate		----------NA----------				
39	M	propionitrile		----------NA----------				
40	M	bromochloromethane		----------NA----------				
41	M	tetrahydrofuran		----------NA----------				

Initial Calibration Verification

Job Number: JC90273 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform		----------NA----------					
43		tert-butyl formate		----------NA----------					
44	S	dibromofluoromethane (s)	0.493	0.481	2.4	104	0.00	10.58	
45	M	methacrylonitrile		----------NA----------					
46		cyclohexane		----------NA----------					
47	M	1,1,1-trichloroethane		----------NA----------					
48		iso-butyl alcohol		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		carbon tetrachloride		----------NA----------					
51		tert-amyl alcohol		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	11.51	
53	S	1,2-dichloroethane-d4 (s)	0.359	0.362	-0.8	103	0.00	11.02	
54	M	benzene		----------NA----------					
55	M	iso-octane		----------NA----------					
56		tert-amyl methyl ether		----------NA----------					
57	M	heptane		----------NA----------					
58	M	isopropyl acetate		----------NA----------					
59	M	1,2-dichloroethane		----------NA----------					
60		n-butyl alcohol		----------NA----------					
61		ethyl acrylate		----------NA----------					
62	M	trichloroethene		----------NA----------					
63	M	2-nitropropane		----------NA----------					
64	m	methylcyclohexane		----------NA----------					
65	M	2-chloroethyl vinyl ether		----------NA----------					
66	M	methyl methacrylate		----------NA----------					
67	M	1,2-dichloropropane		----------NA----------					
68	M	dibromomethane		----------NA----------					
69	M	bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71	M	cis-1,3-dichloropropene		----------NA----------					
72	M	4-methyl-2-pentanone		----------NA----------					
73	M	3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	92	0.00	14.90	
75	S	toluene-d8 (s)	1.330	1.364	-2.6	95	0.00	13.23	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		2-hexanone		----------NA----------					
81	M	tetrachloroethene	0.433	0.422	2.5	93	0.00	13.92	
82	M	1,3-dichloropropane		----------NA----------					
83	M	butyl acetate		----------NA----------					
84	M	dibromochloromethane		----------NA----------					
85	M	1,2-dibromoethane		----------NA----------					
86	M	n-butyl ether		----------NA----------					
87	M	chlorobenzene		----------NA----------					
88	M	1,1,1,2-tetrachloroethane		----------NA----------					
89	M	ethylbenzene		----------NA----------					
90	M	m,p-xylene		----------NA----------					
91	M	o-xylene		----------NA----------					
92	M	styrene		----------NA----------					
93		butyl acrylate		----------NA----------					
94		n-amyl acetate		----------NA----------					
95	M	bromoform		----------NA----------					
96		isopropylbenzene		----------NA----------					
97		cis-1,4-dichloro-2-butene		----------NA----------					
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	17.52	

Initial Calibration Verification

Job Number: JC90273 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.759	2.6	104	0.00	16.20	
100	M	bromobenzene	----------NA----------						
101	M	1,1,2,2-tetrachloroethane	----------NA----------						
102	M	trans-1,4-dichloro-2-bute	----------NA----------						
103	M	1,2,3-trichloropropane	----------NA----------						
104	M	n-propylbenzene	----------NA----------						
105	M	2-chlorotoluene	----------NA----------						
106	M	4-chlorotoluene	----------NA----------						
107	M	1,3,5-trimethylbenzene	----------NA----------						
108	M	tert-butylbenzene	----------NA----------						
109	M	1,2,4-trimethylbenzene	----------NA----------						
110	M	sec-butylbenzene	----------NA----------						
111	M	1,3-dichlorobenzene	----------NA----------						
112	M	p-isopropyltoluene	----------NA----------						
113	M	1,4-dichlorobenzene	----------NA----------						
114	M	1,2-dichlorobenzene	----------NA----------						
115	M	n-butylbenzene	----------NA----------						
116	M	1,2-dibromo-3-chloropropa	----------NA----------						
117	M	1,3,5-trichlorobenzene	----------NA----------						
		---------- True	Calc.	% Drift ----------					
118		2-ethylhexyl acrylate	----------NA----------						
		---------- AvgRF	CCRF	% Dev ----------					
119	M	1,2,4-trichlorobenzene	----------NA----------						
120	M	hexachlorobutadiene	----------NA----------						
121	M	naphthalene	----------NA----------						
122	M	1,2,3-trichlorobenzene	----------NA----------						
123	M	hexachloroethane	----------NA----------						
124		2-methylnaphthalene	----------NA----------						
125		ethylenimine	----------NA----------						
126		bis(chloromethyl)ether	----------NA----------						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue May 14 14:11:57 2019 RPT1

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VA9712-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251126.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jonkm\va9712\a251126.d Vial: 27
Acq On : 26 Jun 2019 7:02 pm Operator: edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9712,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.053	-1.9	103	0.00	8.29
4		1,4-dioxane	0.067	0.074	-10.4	104	0.00	12.17
5	I	pentafluorobenzene	1.000	1.000	0.0	109	0.00	10.54
6	M	chlorodifluoromethane	0.971	0.904	6.9	102	0.02	4.59
7	M	dichlorodifluoromethane	1.181	1.120	5.2	99	0.03	4.56
8	M	chloromethane	1.283	1.129	12.0	82	0.02	5.00
9	M	vinyl chloride	1.087	1.039	4.4	101	0.02	5.27
10		1,3-butadiene	1.036	0.678	34.6#	76	0.02	5.29
11	M	bromomethane	0.763	0.691	9.4	100	0.01	5.93
12	M	chloroethane	0.552	0.537	2.7	103	0.01	6.11
13		vinyl bromide	0.728	0.617	15.2	89	0.02	6.50
14	M	trichlorofluoromethane	1.125	1.097	2.5	106	0.01	6.64
15	M	ethyl ether	0.252	0.258	-2.4	106	0.00	7.02
16	M	acrolein	0.114	0.122	-7.0	113	0.00	7.26
17		freon 113	0.547	0.509	6.9	101	0.00	7.51
18	M	1,1-dichloroethene	0.541	0.543	-0.4	112	0.00	7.47
19	M	acetone	0.073	0.074	-1.4	106	0.00	7.47
20	M	acetonitrile	0.115	0.118	-2.6	110	0.00	7.93
21	M	iodomethane	0.960	1.005	-4.7	114	0.00	7.76
22	M	carbon disulfide	1.799	1.707	5.1	110	0.01	7.92
23	M	methylene chloride	0.563	0.592	-5.2	115	0.00	8.23
24	M	methyl acetate	0.509	0.523	-2.8	108	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.625	-2.0	110	0.00	8.61
26	M	trans-1,2-dichloroethene	0.470	0.472	-0.4	107	0.00	8.64
27		hexane	0.679	0.609	10.3	98	0.00	9.01
28	M	di-isopropyl ether	1.632	1.654	-1.3	110	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.608	-3.0	110	0.00	9.72
30	M	2-butanone	0.084	0.087	-3.6	105	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.830	1.7	108	0.00	9.24
32	M	chloroprene	0.684	0.661	3.4	103	0.00	9.34
33	M	acrylonitrile	0.259	0.265	-2.3	111	0.00	8.53
34	M	vinyl acetate	0.108	0.111	-2.8	114	0.00	9.17
35	M	ethyl acetate	0.094	0.100	-6.4	107	0.00	9.92
36	M	2,2-dichloropropane	0.823	0.857	-4.1	114	-0.01	10.02
37	M	cis-1,2-dichloroethene	0.541	0.548	-1.3	109	0.00	9.99
38		methyl acrylate	0.094	0.097	-3.2	107	0.00	10.02
39	M	propionitrile	0.111	0.115	-3.6	106	0.00	9.99
40	M	bromochloromethane	0.276	0.291	-5.4	111	0.00	10.29
41	M	tetrahydrofuran	0.241	0.227	5.8	104	0.00	10.31

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VA9712-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251126.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.858	2.2	114	0.00	10.38
43		tert-butyl formate	0.446	0.511	-14.6	120	0.00	10.42
44	S	dibromofluoromethane (s)	0.493	0.504	-2.2	111	0.00	10.58
45	M	methacrylonitrile	0.240	0.254	-5.8	112	0.00	10.20
46		cyclohexane	0.912	0.828	9.2	97	0.00	10.78
47	M	1,1,1-trichloroethane	0.860	0.887	-3.1	110	0.00	10.66
48		iso-butyl alcohol	0.083	0.081	2.4	103	0.00	10.78
49		1,1-dichloropropene	0.642	0.624	2.8	106	0.00	10.83
50		carbon tetrachloride	0.768	0.794	-3.4	112	0.00	10.86
51		tert-amyl alcohol	0.077	0.074	3.9	102	0.00	10.95
52	I	1,4-difluorobenzene	1.000	1.000	0.0	107	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.373	-3.9	114	0.00	11.01
54	M	benzene	1.276	1.265	0.9	109	0.00	11.09
55	M	iso-octane	1.198	1.212	-1.2	103	0.00	11.18
56		tert-amyl methyl ether	1.087	1.127	-3.7	112	0.00	11.16
57	M	heptane	0.237	0.219	7.6	99	0.00	11.34
58	M	isopropyl acetate	0.094	0.097	-3.2	109	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.436	4.8	111	0.00	11.11
60		n-butyl alcohol	0.022	0.023	-4.5	103	0.00	11.55
61		ethyl acrylate	0.416	0.433	-4.1	107	0.00	11.80
62	M	trichloroethene	0.325	0.320	1.5	111	0.00	11.83
63	M	2-nitropropane	0.138	0.140	-1.4	102	0.00	12.62
64	m	methylcyclohexane	0.671	0.611	8.9	98	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.194	-12.1	113	-0.01	12.64
66	M	methyl methacrylate	0.092	0.102	-10.9	110	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.326	-5.8	114	0.00	12.13
68	M	dibromomethane	0.207	0.226	-9.2	118	0.00	12.25
69	M	bromodichloromethane	0.426	0.464	-8.9	118	-0.01	12.40
70		epichlorohydrin	0.046	0.049	-6.5	106	0.00	12.74
71	M	cis-1,3-dichloropropene	0.455	0.515	-13.2	115	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.196	-3.2	107	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.036	0.0	102	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	14.89
75	S	toluene-d8 (s)	1.330	1.348	-1.4	107	0.00	13.23
76		toluene	0.884	0.893	-1.0	107	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.507	-11.4	110	0.00	13.50
78		ethyl methacrylate	0.460	0.487	-5.9	107	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.282	-11.9	113	-0.01	13.74
80		2-hexanone	0.187	0.186	0.5	104	0.00	13.92
81	M	tetrachloroethene	0.433	0.409	5.5	102	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.521	-7.2	108	-0.01	13.94
83	M	butyl acetate	0.278	0.284	-2.2	108	0.00	14.00
84	M	dibromochloromethane	0.378	0.409	-8.2	112	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.386	-11.6	113	0.00	14.40
86	M	n-butyl ether	1.451	1.441	0.7	106	0.00	14.87
87	M	chlorobenzene	0.919	0.944	-2.7	106	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.477	-3.7	112	0.00	15.00
89	M	ethylbenzene	1.642	1.635	0.4	106	0.00	14.99
90	M	m,p-xylene	0.638	0.641	-0.5	106	0.00	15.13
91	M	o-xylene	0.706	0.724	-2.5	108	0.00	15.58
92	M	styrene	1.015	0.999	1.6	106	0.00	15.59
93		butyl acrylate	0.724	0.735	-1.5	110	0.00	15.37
94		n-amyl acetate	0.325	0.320	1.5	109	0.00	15.61
95	M	bromoform	0.263	0.292	-11.0	115	-0.01	15.85
96		isopropylbenzene	1.910	1.966	-2.9	108	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.176	-208.8#	284#	0.00	16.01
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	17.51

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VA9712-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251126.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.818	-5.0	107	0.00	16.20
100	M	bromobenzene	0.735	0.805	-9.5	112	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.106	-15.8	117	-0.01	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.201	-171.6#	230#	0.00	16.32
103	M	1,2,3-trichloropropane	0.273	0.306	-12.1	114	-0.01	16.38
104	M	n-propylbenzene	3.588	3.832	-6.8	110	0.00	16.44
105	M	2-chlorotoluene	0.799	0.850	-6.4	108	0.00	16.59
106	M	4-chlorotoluene	1.867	1.969	-5.5	110	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	3.107	-12.3	108	0.00	16.61
108	M	tert-butylbenzene	0.641	0.704	-9.8	110	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.967	-8.4	110	0.00	17.05
110	M	sec-butylbenzene	3.777	4.154	-10.0	108	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.471	-0.9	108	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.484	-10.7	109	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.495	-1.4	110	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.646	-4.2	112	0.00	17.96
115	M	n-butylbenzene	1.539	1.618	-5.1	110	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.348	-4.2	105	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.527	-2.6	112	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	9.699	3.0	112	0.00	19.75

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.428	-6.6	111	-0.01	19.77
120	M	hexachlorobutadiene	0.533	0.575	-7.9	114	-0.01	19.89
121	M	naphthalene	3.917	3.949	-0.8	104	-0.01	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.459	-8.5	111	-0.01	20.35
123	M	hexachloroethane	0.495	0.642	-29.7#	128	0.00	18.29
124		2-methylnaphthalene	2.089	1.860	11.0	90	-0.01	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Thu Jun 27 11:10:45 2019

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VA9712-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251148.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jonkm\va9712\a251148.d Vial: 49
Acq On : 27 Jun 2019 5:53 am Operator: deving
Sample : ecc9645-50 Inst : MSA
Misc : MS35779,VA9712,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	97	-0.02	8.15
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.074	-4.0	102	0.00	8.29
4		1,4-dioxane	0.067	0.075	-11.9	103	0.00	12.18
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	10.54
6	M	chlorodifluoromethane	0.971	0.965	0.6	102	0.00	4.58
7	M	dichlorodifluoromethane	1.181	1.195	-1.2	99	0.02	4.56
8	M	chloromethane	1.283	1.195	6.9	81	0.01	5.00
9	M	vinyl chloride	1.087	1.118	-2.9	101	0.01	5.26
10		1,3-butadiene	1.036	0.937	9.6	98	0.01	5.28
11	M	bromomethane	0.763	0.737	3.4	99	0.01	5.94
12	M	chloroethane	0.552	0.549	0.5	98	0.01	6.11
13		vinyl bromide	0.728	0.657	9.8	89	0.01	6.49
14	M	trichlorofluoromethane	1.125	1.154	-2.6	103	0.00	6.63
15	M	ethyl ether	0.252	0.250	0.8	96	0.00	7.01
16	M	acrolein	0.114	0.114	0.0	98	-0.01	7.25
17		freon 113	0.547	0.536	2.0	99	0.00	7.51
18	M	1,1-dichloroethene	0.541	0.546	-0.9	105	0.00	7.47
19	M	acetone	0.073	0.077	-5.5	102	0.00	7.47
20	M	acetonitrile	0.115	0.124	-7.8	108	0.00	7.92
21	M	iodomethane	0.960	1.024	-6.7	108	0.00	7.75
22	M	carbon disulfide	1.799	1.734	3.6	104	0.00	7.90
23	M	methylene chloride	0.563	0.591	-5.0	107	0.00	8.22
24	M	methyl acetate	0.509	0.524	-2.9	101	0.00	7.97
25	M	methyl tert butyl ether	1.593	1.694	-6.3	107	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.486	-3.4	102	0.00	8.63
27		hexane	0.679	0.603	11.2	90	0.00	9.01
28	M	di-isopropyl ether	1.632	1.700	-4.2	105	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.670	-7.0	106	0.00	9.71
30	M	2-butanone	0.084	0.093	-10.7	105	0.00	9.92
31	M	1,1-dichloroethane	0.844	0.850	-0.7	103	0.00	9.24
32	M	chloroprene	0.684	0.671	1.9	97	0.00	9.35
33	M	acrylonitrile	0.259	0.277	-6.9	108	0.00	8.53
34	M	vinyl acetate	0.108	0.110	-1.9	104	0.00	9.17
35	M	ethyl acetate	0.094	0.105	-11.7	104	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.763	7.3	95	0.00	10.03
37	M	cis-1,2-dichloroethene	0.541	0.548	-1.3	101	0.00	9.98
38		methyl acrylate	0.094	0.097	-3.2	100	0.00	10.02
39	M	propionitrile	0.111	0.120	-8.1	103	0.00	10.00
40	M	bromochloromethane	0.276	0.294	-6.5	105	0.00	10.29
41	M	tetrahydrofuran	0.241	0.234	2.9	100	0.00	10.31

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VA9712-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251148.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.862	1.7	106	0.00	10.38
43		tert-butyl formate	0.446	0.517	-15.9	113	0.00	10.42
44	S	dibromofluoromethane (s)	0.493	0.511	-3.7	105	0.00	10.58
45	M	methacrylonitrile	0.240	0.252	-5.0	103	0.00	10.19
46		cyclohexane	0.912	0.868	4.8	95	0.00	10.77
47	M	1,1,1-trichloroethane	0.860	0.931	-8.3	107	0.00	10.65
48		iso-butyl alcohol	0.083	0.086	-3.6	101	0.00	10.77
49		1,1-dichloropropene	0.642	0.633	1.4	100	0.00	10.83
50		carbon tetrachloride	0.768	0.813	-5.9	107	0.00	10.86
51		tert-amyl alcohol	0.077	0.078	-1.3	100	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.374	-4.2	106	0.00	11.02
54	M	benzene	1.276	1.298	-1.7	104	0.00	11.08
55	M	iso-octane	1.198	1.197	0.1	95	0.00	11.18
56		tert-amyl methyl ether	1.087	1.165	-7.2	107	0.00	11.16
57	M	heptane	0.237	0.212	10.5	89	0.00	11.34
58	M	isopropyl acetate	0.094	0.104	-10.6	109	0.00	10.97
59	M	1,2-dichloroethane	0.458	0.457	0.2	108	0.00	11.11
60		n-butyl alcohol	0.022	0.024	-9.1	103	0.00	11.55
61		ethyl acrylate	0.416	0.454	-9.1	104	0.00	11.80
62	M	trichloroethene	0.325	0.332	-2.2	107	0.00	11.83
63	M	2-nitropropane	0.138	0.148	-7.2	100	0.00	12.62
64	m	methylcyclohexane	0.671	0.629	6.3	94	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.202	-16.8	109	0.00	12.65
66	M	methyl methacrylate	0.092	0.104	-13.0	104	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.333	-8.1	108	0.00	12.13
68	M	dibromomethane	0.207	0.232	-12.1	112	0.00	12.25
69	M	bromodichloromethane	0.426	0.470	-10.3	111	0.00	12.41
70		epichlorohydrin	0.046	0.051	-10.9	101	0.00	12.75
71	M	cis-1,3-dichloropropene	0.455	0.507	-11.4	105	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.207	-8.9	105	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.039	-8.3	101	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.90
75	S	toluene-d8 (s)	1.330	1.314	1.2	101	0.00	13.23
76		toluene	0.884	0.875	1.0	102	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.487	-7.0	103	0.00	13.50
78		ethyl methacrylate	0.460	0.489	-6.3	104	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.282	-11.9	110	0.00	13.75
80		2-hexanone	0.187	0.192	-2.7	104	0.00	13.92
81	M	tetrachloroethene	0.433	0.420	3.0	101	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.524	-7.8	106	0.00	13.94
83	M	butyl acetate	0.278	0.293	-5.4	109	0.00	14.00
84	M	dibromochloromethane	0.378	0.412	-9.0	110	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.390	-12.7	111	0.00	14.39
86	M	n-butyl ether	1.451	1.449	0.1	104	0.00	14.86
87	M	chlorobenzene	0.919	0.949	-3.3	103	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.485	-5.4	111	0.00	15.00
89	M	ethylbenzene	1.642	1.635	0.4	103	0.00	14.99
90	M	m,p-xylene	0.638	0.639	-0.2	102	0.00	15.13
91	M	o-xylene	0.706	0.722	-2.3	105	0.00	15.58
92	M	styrene	1.015	1.004	1.1	103	0.00	15.59
93		butyl acrylate	0.724	0.761	-5.1	110	0.00	15.37
94		n-amyl acetate	0.325	0.334	-2.8	111	0.00	15.60
95	M	bromoform	0.263	0.296	-12.5	113	0.00	15.85
96		isopropylbenzene	1.910	1.961	-2.7	104	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.067	-17.5	105	0.00	16.01
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	17.51

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VA9712-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251148.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.830	-6.5	104	0.00	16.20
100	M	bromobenzene	0.735	0.821	-11.7	109	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.126	-17.9	114	0.00	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.097	-31.1	107	0.00	16.31
103	M	1,2,3-trichloropropane	0.273	0.313	-14.7	112	0.00	16.38
104	M	n-propylbenzene	3.588	3.868	-7.8	106	0.00	16.44
105	M	2-chlorotoluene	0.799	0.870	-8.9	106	0.00	16.59
106	M	4-chlorotoluene	1.867	2.012	-7.8	108	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	3.145	-13.7	105	0.00	16.61
108	M	tert-butylbenzene	0.641	0.717	-11.9	107	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	3.047	-11.3	108	0.00	17.05
110	M	sec-butylbenzene	3.777	4.239	-12.2	105	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.547	-6.1	109	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.538	-12.4	106	0.00	17.39
113	M	1,4-dichlorobenzene	1.475	1.527	-3.5	108	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.678	-6.3	110	0.00	17.96
115	M	n-butylbenzene	1.539	1.643	-6.8	107	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.374	-12.0	108	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.552	-4.2	109	0.00	19.02
			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	10.415	-4.1	116	0.00	19.74
			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.469	-9.6	109	0.00	19.77
120	M	hexachlorobutadiene	0.533	0.584	-9.6	111	0.00	19.90
121	M	naphthalene	3.917	4.116	-5.1	104	0.00	20.11
122	M	1,2,3-trichlorobenzene	1.345	1.484	-10.3	109	0.00	20.35
123	M	hexachloroethane	0.495	0.632	-27.7	121	0.00	18.29
124		2-methylnaphthalene	2.089	1.925	7.9	90	0.00	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Thu Jun 27 11:11:49 2019

Initial Calibration Summary

Job Number: JC90273 **Sample:** VX7749-ICC7749
Account: EAENYES EA Engineering **Lab FileID:** X181287.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Response Factor Report ACC-VOA-M

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Calibration Files
1 =X181282.D 2 =X181283.D 100 =X181288.D 50 =X181287.D
20 =X181286.D 200 =X181289.D 4 =X181284.D 8 =X181285.D
0.5 =X181281.D 0.2 =X181280.D = =

Compound	1	2	100	50	20	200	4	8	0.5	0.2	Avg	%RSD
1) I tert butyl alcohol-d9	----------ISTD----------											
2) ethanol											0.000	-1.00
3) tertiary butyl alcohol	1.126	1.146	1.163	1.122	1.176	1.050	1.152				1.134	3.65
4) 1,4-dioxane			0.099	0.101	0.096	0.101	0.075	0.090			0.093	10.89
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	1.656	1.625	1.511	1.546	1.520	1.326	1.466	1.533	1.566		1.528	6.23
7) dichlorodifluoromethane	1.461	1.603	1.591	1.638	1.566	1.479	1.535	1.607	1.179		1.518	9.23
8) chloromethane	2.149	2.094	1.838	1.922	1.905	1.573	1.940	1.988			1.926	9.10
9) vinyl chloride	1.663	1.660	1.487	1.558	1.550	1.301	1.547	1.612	1.628	1.876	1.588	9.21
10) bromomethane	0.899	0.847	0.764	0.817	0.764	0.639	0.782	0.812			0.790	9.61
11) chloroethane	0.605	0.538	0.524	0.551	0.503	0.466	0.515	0.552	0.566	0.502	0.532	7.34
12) vinyl bromide	0.584	0.636	0.628	0.645	0.570	0.578	0.552	0.598	0.565		0.595	5.67
13) trichlorofluoromethane	0.975	1.040	0.987	1.010	0.953	0.924	0.956	1.012	0.854		0.968	5.73
14) 1,3-butadiene	0.769	0.791	0.626	0.669	0.643	0.577	0.667	0.718	0.711	0.612	0.678	10.11
15) ethyl ether	0.203	0.216	0.222	0.220	0.217	0.204	0.219	0.221			0.215	3.55
16) acrolein			0.090	0.093	0.103	0.081		0.133			0.100	19.97
17) 1,1-dichloroethene	0.373	0.392	0.351	0.352	0.354	0.316	0.362	0.380	0.364	0.362	0.361	5.63
18) freon 113	0.541	0.657	0.558	0.592	0.570	0.555	0.545	0.622			0.580	7.10
19) acetone		0.149	0.124	0.125	0.137	0.114	0.124	0.147			0.131	9.97
20) acetonitrile			0.080	0.084	0.089	0.075	0.096	0.099			0.087	10.42
21) iodomethane	0.733	0.708	0.701	0.695	0.683	0.649	0.644	0.700	0.674	0.751	0.694	4.80
22) carbon disulfide	1.356	1.318	1.243	1.266	1.230	1.140	1.217	1.292	1.288	1.471	1.282	6.94
23) methylene chloride												

	0.471	0.475	0.437	0.431	0.433	0.405	0.442	0.463	0.547		0.456	8.91
24)	methyl acetate												
		0.392	0.310	0.324	0.339	0.293	0.418	0.356			0.347	12.87
25)	methyl tert butyl ether												
	1.657	1.615	1.501	1.535	1.502	1.402	1.500	1.545	1.593	1.847	1.570	7.69
26)	trans-1,2-dichloroethene												
	0.437	0.413	0.372	0.375	0.384	0.329	0.378	0.406	0.403	0.399	0.390	7.52
27)	hexane												
	0.573	0.646	0.538	0.568	0.558	0.560	0.545	0.578			0.571	5.83
28)	di-isopropyl ether												
	1.915	1.904	1.617	1.703	1.699	1.519	1.746	1.770	1.977	2.160	1.801	10.48
29)	2-butanone												
		0.035	0.048	0.049	0.048	0.047	0.043	0.045			0.045	10.64
30)	1,1-dichloroethane												
	0.819	0.762	0.712	0.727	0.742	0.641	0.721	0.784	0.817	0.744	0.747	7.09
31)	chloroprene												
	0.634	0.567	0.554	0.562	0.572	0.511	0.576	0.576	0.497	0.516	0.556	7.20
32)	acrylonitrile												
			0.173	0.172	0.170	0.165	0.129	0.168			0.163	10.37
33)	vinyl acetate												
			0.079	0.078	0.078	0.077		0.070			0.076	4.95
34)	ethyl tert-butyl ether												
	1.669	1.677	1.681	1.705	1.634	1.597	1.584	1.675	1.730	1.722	1.667	2.94
35)	ethyl acetate												
			0.070	0.074	0.079	0.068	0.060	0.067			0.070	9.54
36)	2,2-dichloropropane												
	0.928	0.844	0.697	0.731	0.722	0.670	0.762	0.775			0.766	10.99
37)	cis-1,2-dichloroethene												
	0.526	0.506	0.421	0.430	0.443	0.381	0.443	0.468	0.420		0.449	10.06
38)	methyl acrylate												
			0.058	0.061	0.060	0.056	0.034	0.049			0.053	19.01
39)	propionitrile												
	0.065	0.066	0.061	0.066	0.067	0.059	0.063	0.066			0.064	4.70
40)	tert-butyl formate												
	0.445	0.439	0.403	0.427	0.418	0.378	0.441	0.442	0.377		0.419	6.48
41)	bromochloromethane												
	0.221	0.232	0.231	0.233	0.232	0.216	0.233	0.232	0.226		0.229	2.66
42)	tetrahydrofuran												
			0.054	0.058	0.061	0.053	0.048	0.053			0.055	8.48
43)	chloroform												
	0.805	0.758	0.688	0.695	0.699	0.634	0.718	0.729	0.839		0.729	8.64
44)	dibromofluoromethane (s)												
	0.402	0.401	0.420	0.402	0.400	0.412	0.401	0.413	0.404	0.413	0.407	1.73
45)	methacrylonitrile												
		0.159	0.170	0.172	0.169	0.167	0.149	0.168			0.165	4.91
46)	1,1,1-trichloroethane												
	0.817	0.746	0.773	0.774	0.724	0.770	0.709	0.727	0.785	0.664	0.749	5.90
47)	cyclohexane												
	0.872	0.802	0.853	0.890	0.847	0.855	0.760	0.779	0.768	0.850	0.828	5.60
48)	tert amyl alcohol												
		0.030	0.024	0.025	0.026	0.025	0.025	0.027			0.026	7.46
49)	1,1-dichloropropene												
	0.514	0.523	0.468	0.482	0.497	0.430	0.464	0.497	0.450		0.481	6.28
50)	isobutyl alcohol												
											0.000	-1.00
51)	carbon tetrachloride												
	0.714	0.686	0.611	0.637	0.614	0.599	0.624	0.624	0.562	0.616	0.629	6.85
52)	isopropyl acetate												
		0.074	0.091	0.094	0.092	0.091	0.079	0.084			0.086	8.53

Initial Calibration Summary

Job Number: JC90273 **Sample:** VX7749-ICC7749
Account: EAENYES EA Engineering **Lab FileID:** X181287.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

53) I	1,4-difluorobenzene	----------ISTD----------										
54)	1,2-dichloroethane-d4 (s)											
	0.341	0.339	0.309	0.320	0.337	0.291	0.334	0.342	0.343	0.343	0.330	5.36
55)	iso-octane											
	0.869	0.953	0.929	0.894	0.833	1.024	0.808	0.860	0.732	0.980	0.888	9.75
56)	epichlorohydrin											
	0.034	0.036	0.034	0.035	0.035	0.033	0.037	0.038			0.035	4.32
57)	n-butyl alcohol											
	0.010	0.011	0.012	0.012	0.011	0.012	0.011	0.011			0.011	5.99
58)	benzene											
	1.295	1.219	1.063	1.116	1.136	0.995	1.147	1.152	1.319		1.160	8.96
59)	tert-amyl methyl ether											
	1.179	1.199	1.062	1.092	1.090	1.007	1.080	1.116	1.161	1.282	1.127	7.04
60)	heptane											
	0.179	0.199	0.171	0.182	0.180	0.182	0.167	0.173	0.161		0.177	6.10
61)	1,2-dichloroethane											
	0.471	0.441	0.351	0.367	0.379	0.322	0.402	0.398			0.391	12.27
62)	trichloroethene											
	0.303	0.324	0.306	0.309	0.311	0.285	0.303	0.316	0.288	0.301	0.304	3.85
63)	ethyl acrylate											
	0.323	0.389	0.389	0.404	0.413	0.377	0.365	0.397			0.382	7.35
64)	2-nitropropane											
		0.083	0.086	0.087	0.083	0.105	0.091				0.089	9.36
65)	2-chloroethyl vinyl ether											
	0.208	0.230	0.211	0.224	0.229	0.198	0.220	0.225	0.199	0.220	0.216	5.39
66)	methyl methacrylate											
		0.085	0.085	0.083	0.084	0.073	0.075				0.081	6.82
67)	1,2-dichloropropane											
	0.125	0.135	0.122	0.130	0.134	0.112	0.132	0.134			0.128	6.10
68)	dibromomethane											
	0.189	0.201	0.185	0.195	0.196	0.174	0.203	0.201	0.195		0.193	4.76
69)	methylcyclohexane											
	0.552	0.599	0.503	0.530	0.511	0.526	0.522	0.519			0.533	5.71
70)	bromodichloromethane											
	0.433	0.430	0.416	0.425	0.426	0.401	0.422	0.425	0.446	0.495	0.432	5.82
71)	cis-1,3-dichloropropene											
	0.519	0.522	0.513	0.522	0.518	0.490	0.522	0.516	0.473	0.609	0.520	6.75
72)	4-methyl-2-pentanone											
	0.125	0.146	0.129	0.141	0.140	0.131	0.138	0.138	0.104	0.119	0.131	9.50
73)	3-methyl-1-butanol											
	0.008	0.011	0.011	0.012	0.012	0.011	0.011	0.012			0.011	10.71
74) I	chlorobenzene-d5	----------ISTD----------										
75)	toluene-d8 (s)											
	1.235	1.231	1.141	1.185	1.189	1.145	1.223	1.197	1.223	1.218	1.199	2.84
76)	toluene											
	0.810	0.767	0.679	0.727	0.733	0.647	0.734	0.734	0.740	0.861	0.743	8.12
77)	trans-1,3-dichloropropene											
	0.511	0.520	0.461	0.479	0.491	0.425	0.480	0.495	0.431	0.531	0.482	7.31
78)	ethyl methacrylate											
	0.352	0.402	0.391	0.422	0.423	0.374	0.402	0.415			0.397	6.17
79)	1,1,2-trichloroethane											
	0.256	0.274	0.234	0.252	0.254	0.221	0.259	0.256	0.266	0.254	0.252	5.99
80)	tetrachloroethene											
	0.296	0.300	0.253	0.271	0.275	0.239	0.287	0.279	0.241		0.271	8.37
81)	1,3-dichloropropane											
	0.529	0.531	0.408	0.450	0.482	0.366	0.499	0.495	0.456	0.519	0.473	11.40
82)	2-hexanone											
	0.112	0.128	0.110	0.121	0.128	0.106	0.124	0.134			0.120	8.34
83)	butyl acetate											

Initial Calibration Summary

Job Number: JC90273 **Sample:** VX7749-ICC7749
Account: EAENYES EA Engineering **Lab FileID:** X181287.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	0.240	0.254	0.227	0.243	0.244	0.222	0.255	0.258			0.243	5.38
84)	dibromochloromethane												
	0.375	0.386	0.340	0.352	0.345	0.324	0.356	0.342	0.355	0.342	0.352	5.07
85)	1,2-dibromoethane												
	0.339	0.368	0.329	0.351	0.352	0.306	0.356	0.346	0.296	0.331	0.337	6.65
86)	n-butyl ether												
	1.548	1.440	1.212	1.333	1.338	1.136	1.370	1.350			1.341	9.45
87)	chlorobenzene												
	0.916	0.905	0.786	0.823	0.834	0.738	0.823	0.850	0.833	0.980	0.849	8.12
88)	1,1,1,2-tetrachloroethane												
	0.418	0.397	0.333	0.375	0.374	0.325	0.384	0.382	0.387		0.375	7.84
89)	ethylbenzene												
	1.626	1.534	1.200	1.316	1.376	1.110	1.432	1.404	1.514		1.390	11.77
90)	m,p-xylene												
	0.611	0.608	0.492	0.528	0.547	0.465	0.570	0.568	0.601		0.555	9.31
91)	o-xylene												
	1.398	1.362	1.121	1.240	1.250	1.071	1.299	1.294	1.434		1.274	9.46
92)	styrene												
	1.006	1.004	0.810	0.884	0.917	0.742	0.952	0.961	0.903	1.016	0.920	9.71
93)	butyl acrylate												
	0.863	0.812	0.710	0.739	0.754	0.683	0.766	0.755	0.754	0.914	0.775	8.99
94)	bromoform												
	0.284	0.278	0.241	0.250	0.244	0.232	0.260	0.243	0.233	0.218	0.248	8.31
95)	isopropylbenzene												
	1.844	1.723	1.460	1.634	1.592	1.426	1.639	1.605	1.779		1.633	8.35
96)	cis-1,4-dichloro-2-butene												
	0.150	0.157	0.123	0.130	0.136	0.114	0.129	0.140			0.135	10.43
97)	I 1,4-dichlorobenzene-d ----------ISTD----------												
98)	4-bromofluorobenzene (s)												
	0.776	0.771	0.900	0.876	0.841	0.901	0.784	0.808	0.763	0.771	0.819	6.81
99)	bromobenzene												
	0.706	0.736	0.718	0.751	0.731	0.669	0.696	0.725	0.705	0.810	0.725	5.20
100)	1,1,2,2-tetrachloroethane												
	0.755	0.760	0.817	0.839	0.782	0.803	0.737	0.742	0.712	0.892	0.784	6.96
101)	trans-1,4-dichloro-2-butene												
	0.190	0.167	0.187	0.187	0.185	0.172	0.176	0.181	0.159		0.178	5.88
102)	1,2,3-trichloropropane												
	0.177	0.194	0.199	0.207	0.208	0.190	0.202	0.196			0.197	5.08
103)	n-propylbenzene												
	3.011	3.034	2.931	3.124	2.973	2.832	2.884	2.899	2.914	3.619	3.022	7.48
104)	2-chlorotoluene												
	0.656	0.680	0.698	0.735	0.686	0.695	0.664	0.635	0.624	0.775	0.685	6.59
105)	4-chlorotoluene												
	1.925	1.811	1.752	1.816	1.789	1.664	1.755	1.775	1.868	2.244	1.840	8.59
106)	1,3,5-trimethylbenzene												
	2.252	2.339	2.309	2.469	2.327	2.353	2.246	2.225	2.149		2.297	4.00
107)	tert-butylbenzene												
	1.933	1.980	2.285	2.336	2.106	2.286	1.884	1.940	1.937	2.179	2.087	8.31
108)	1,2,4-trimethylbenzene												
	2.427	2.432	2.334	2.505	2.386	2.314	2.318	2.355	2.491		2.396	3.01
109)	sec-butylbenzene												
	3.024	3.061	3.280	3.421	3.096	3.352	2.930	2.949	2.808	3.685	3.161	8.49
110)	1,3-dichlorobenzene												
	1.575	1.539	1.267	1.346	1.374	1.176	1.407	1.384	1.501		1.397	9.19
111)	p-isopropyltoluene												
	2.653	2.690	2.744	2.890	2.668	2.781	2.547	2.604	2.650	3.294	2.752	7.75
112)	1,4-dichlorobenzene												
	1.465	1.392	1.321	1.350	1.330	1.267	1.333	1.334	1.401		1.355	4.22
113)	1,2-dichlorobenzene												

```
       1.599 1.635 1.457 1.556 1.544 1.394 1.541 1.554 1.601        1.542    4.86
114)  benzyl chloride
       1.661 1.636 1.503 1.569 1.540 1.422 1.526 1.534 1.634        1.558    4.88
115)  n-butylbenzene
       1.327 1.304 1.323 1.410 1.307 1.310 1.216 1.245 1.233 1.444  1.312    5.53
116)  1,2-dibromo-3-chloropropane
       0.222 0.243 0.276 0.283 0.267 0.285 0.231 0.248              0.257    9.40
117)  1,3,5-trichlorobenzene
       1.554 1.518 1.542 1.642 1.592 1.531 1.508 1.556 1.452 1.578  1.547    3.33
118)  hexachlorobutadiene
       0.506 0.525 0.531 0.552 0.513 0.536 0.497 0.510 0.456 0.640  0.527    8.99
119)  naphthalene
                   3.886 4.014 3.826 3.797 2.957 3.467              3.658   10.62
120)  2-ethylhexyl acrylate
      *This compound does not meet initial calibration criteria*
                   0.908 0.734 0.399 1.063       0.225              0.665   52.42
121)  1,2,4-trichlorobenzene
       1.194 1.280 1.622 1.700 1.628 1.593 1.339 1.510              1.483   12.61
122)  1,2,3-trichlorobenzene
       1.170 1.251 1.712 1.742 1.648 1.656 1.327 1.519              1.503   14.90
123)  hexachloroethane
             0.401 0.564 0.557 0.475 0.584 0.402 0.426              0.487   16.50
124)  2-methylnaphthalene
                   2.755 2.269 1.572 2.862       0.987              2.089   38.26
             ----- Linear regression -----  Coefficient =  0.9961
               Response Ratio = -0.19403 + 2.90387 *A

125)  bis(chloromethyl)ether
                                                                    0.000   -1.00
126)  ethylenimine
                                                                    0.000   -1.00

127)     pentafluorobenzene(a) ----------------ISTD---------------------
128)  chlorotrifluoroethene
             0.376 0.460 0.436 0.440 0.455 0.414 0.433              0.430    6.61
129)  freon 123a
       0.637 0.673 0.613 0.623 0.647 0.589 0.674 0.650              0.638    4.59

130)     chlorobenzene-d5(a)   ----------------ISTD---------------------
131)  cyclohexanone
       0.014 0.016 0.017 0.017 0.016 0.019 0.015 0.015              0.016    9.78
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MX7749.M          Thu Jun 27 12:02:43 2019   GCMSX
```

Initial Calibration Verification

Job Number: JC90273 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181292.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7749\X181292.D Vial: 14
Acq On : 2 May 2019 10:45 pm Operator: juntaep
Sample : icv7749-50 Inst : ACC-VOA-M
Misc : MS34046,VX7749,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu May 09 14:26:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	95	0.00	7.40
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.252	-10.4	102	0.00	7.54
4		1,4-dioxane	0.093	0.104	-11.8	98	0.00	12.24
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	10.20
6		chlorodifluoromethane	1.528	1.758	-15.1	115	0.00	3.89
7		dichlorodifluoromethane	1.518	1.677	-10.5	103	0.00	3.88
8		chloromethane	1.926	1.970	-2.3	103	0.00	4.27
9		vinyl chloride	1.588	1.552	2.3	100	-0.01	4.50
10		bromomethane	0.790	0.810	-2.5	100	0.00	5.12
11		chloroethane	0.532	0.548	-3.0	100	-0.01	5.30
12		vinyl bromide	0.595	0.607	-2.0	95	0.00	5.66
13		trichlorofluoromethane	0.968	0.992	-2.5	99	-0.02	5.80
14		1,3-butadiene	0.678	0.789	-16.4	119	-0.01	4.52
15		ethyl ether	0.215	0.233	-8.4	107	0.00	6.21
16		acrolein	0.100	0.097	3.0	105	0.00	6.44
17		1,1-dichloroethene	0.361	0.346	4.2	99	0.00	6.66
18		freon 113	0.580	0.673	-16.0	115	0.00	6.70
19		acetone	0.131	0.139	-6.1	112	0.00	6.66
20		acetonitrile	0.087	0.077	11.5	92	0.00	7.10
21		iodomethane	0.694	0.792	-14.1	115	0.00	6.93
22		carbon disulfide	1.282	1.397	-9.0	111	0.00	7.10
23		methylene chloride	0.456	0.434	4.8	102	0.00	7.46
24		methyl acetate	0.347	0.332	4.3	103	0.00	7.18
25		methyl tert butyl ether	1.570	1.498	4.6	99	0.00	7.88
26		trans-1,2-dichloroethene	0.390	0.364	6.7	98	0.00	7.92
27		hexane	0.571	0.612	-7.2	109	0.00	8.36
28		di-isopropyl ether	1.801	1.640	8.9	97	0.00	8.61
29		2-butanone	0.045	0.050	-11.1	102	0.00	9.39
30		1,1-dichloroethane	0.747	0.758	-1.5	105	0.00	8.60
31		chloroprene	0.556	0.604	-8.6	108	0.00	8.73
32		acrylonitrile	0.163	0.200	-22.7	117	0.00	7.78
33		vinyl acetate	0.076	0.079	-3.9	103	0.00	8.53
34		ethyl tert-butyl ether	1.667	1.668	-0.1	99	0.00	9.18
35		ethyl acetate	0.070	0.076	-8.6	103	0.00	9.43
36		2,2-dichloropropane	0.766	0.682	11.0	94	0.00	9.52
37		cis-1,2-dichloroethene	0.449	0.427	4.9	100	0.00	9.48
38		methyl acrylate	0.053	0.062	-17.0	103	0.00	9.54
39		propionitrile	0.064	0.070	-9.4	106	0.00	9.47
40		tert-butyl formate	0.419	0.390	6.9	92	0.00	10.02
41		bromochloromethane	0.229	0.246	-7.4	106	0.00	9.85

Initial Calibration Verification

Job Number: JC90273 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181292.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.061	-10.9	106	-0.01	9.88
43		chloroform	0.729	0.718	1.5	104	0.00	9.97
44	S	dibromofluoromethane (s)	0.407	0.409	-0.5	103	0.00	10.21
45		methacrylonitrile	0.165	0.182	-10.3	107	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.776	-3.6	101	0.00	10.30
47		cyclohexane	0.828	0.888	-7.2	101	0.00	10.45
48	m	tert amyl alcohol	0.026	0.027	-3.8	107	0.00	10.69
49		1,1-dichloropropene	0.481	0.494	-2.7	104	0.00	10.52
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.650	-3.3	103	0.00	10.56
52		isopropyl acetate	0.086	0.095	-10.5	102	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.318	3.6	101	0.00	10.75
55		iso-octane	0.888	0.919	-3.5	104	0.00	10.98
56		epichlorohydrin	0.035	0.037	-5.7	107	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	102	0.00	11.47
58		benzene	1.160	1.157	0.3	105	0.00	10.83
59		tert-amyl methyl ether	1.127	1.065	5.5	99	0.00	10.97
60		heptane	0.177	0.227	-28.2	126	0.00	11.21
61		1,2-dichloroethane	0.391	0.373	4.6	103	0.00	10.86
62		trichloroethene	0.304	0.325	-6.9	106	0.00	11.79
63	m	ethyl acrylate	0.382	0.435	-13.9	109	0.00	11.80
64		2-nitropropane	0.089	0.094	-5.6	110	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.243	-12.5	110	0.00	12.87
66		methyl methacrylate	0.081	0.084	-3.7	100	0.00	12.15
67		1,2-dichloropropane	0.128	0.124	3.1	97	0.00	12.17
68		dibromomethane	0.193	0.190	1.6	98	0.00	12.31
69		methylcyclohexane	0.533	0.538	-0.9	103	0.00	12.19
70		bromodichloromethane	0.432	0.425	1.6	101	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.537	-3.3	104	0.00	13.16
72		4-methyl-2-pentanone	0.131	0.146	-11.5	105	0.00	13.30
73		3-methyl-1-butanol	0.011	0.012	-9.1	104	0.00	13.32
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.169	2.5	100	0.00	13.57
76		toluene	0.743	0.748	-0.7	104	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.502	-4.1	106	0.00	13.93
78		ethyl methacrylate	0.397	0.444	-11.8	107	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.261	-3.6	105	0.00	14.22
80		tetrachloroethene	0.271	0.288	-6.3	107	0.00	14.42
81		1,3-dichloropropane	0.473	0.465	1.7	105	0.00	14.46
82		2-hexanone	0.120	0.123	-2.5	103	0.00	14.46
83		butyl acetate	0.243	0.245	-0.8	102	0.00	14.60
84		dibromochloromethane	0.352	0.377	-7.1	108	0.00	14.79
85		1,2-dibromoethane	0.337	0.358	-6.2	103	0.00	14.99
86	m	n-butyl ether	1.341	1.432	-6.8	109	0.00	15.66
87		chlorobenzene	0.849	0.864	-1.8	106	0.00	15.64
88		1,1,1,2-tetrachloroethane	0.375	0.379	-1.1	103	0.00	15.74
89		ethylbenzene	1.390	1.355	2.5	104	0.00	15.74
90		m,p-xylene	0.555	0.548	1.3	105	0.00	15.91
91		o-xylene	1.274	1.266	0.6	103	0.00	16.43
92		styrene	0.920	0.907	1.4	104	0.00	16.45
93		butyl acrylate	0.775	0.755	2.6	103	0.00	16.25
94		bromoform	0.248	0.272	-9.7	110	0.00	16.72
95		isopropylbenzene	1.633	1.666	-2.0	103	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.134	0.7	104	0.00	16.92
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	18.39
98	S	4-bromofluorobenzene (s)	0.819	0.886	-8.2	101	0.00	17.11

Initial Calibration Verification

Job Number: JC90273 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181292.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	bromobenzene	0.725	0.762	-5.1	101	0.00	17.31
100	1,1,2,2-tetrachloroethane	0.784	0.874	-11.5	104	0.00	17.21
101	trans-1,4-dichloro-2-bute	0.178	0.217	-21.9	116	0.00	17.25
102	1,2,3-trichloropropane	0.197	0.214	-8.6	103	0.00	17.30
103	n-propylbenzene	3.022	3.256	-7.7	104	0.00	17.37
104	2-chlorotoluene	0.685	0.743	-8.5	101	0.00	17.51
105	4-chlorotoluene	1.840	1.931	-4.9	106	0.00	17.63
106	1,3,5-trimethylbenzene	2.297	2.566	-11.7	103	0.00	17.56
107	tert-butylbenzene	2.087	2.455	-17.6	105	0.00	17.92
108	1,2,4-trimethylbenzene	2.396	2.555	-6.6	102	0.00	17.98
109	sec-butylbenzene	3.161	3.551	-12.3	103	0.00	18.16
110	1,3-dichlorobenzene	1.397	1.398	-0.1	103	0.00	18.32
111	p-isopropyltoluene	2.752	3.033	-10.2	104	0.00	18.30
112	1,4-dichlorobenzene	1.355	1.411	-4.1	104	0.00	18.42
113	1,2-dichlorobenzene	1.542	1.621	-5.1	104	0.00	18.78
114	benzyl chloride	1.558	1.918	-23.1	122	0.00	18.51
115	n-butylbenzene	1.312	1.445	-10.1	102	0.00	18.71
116	1,2-dibromo-3-chloropropa	0.257	0.285	-10.9	100	0.00	19.51
117	1,3,5-trichlorobenzene	1.547	1.690	-9.2	102	0.00	19.69
118	hexachlorobutadiene	0.527	0.554	-5.1	100	0.00	20.38
119	naphthalene	3.658	4.190	-14.5	104	0.00	20.54
120	2-ethylhexyl acrylate	0.665	0.799	-20.2	108	0.00	20.28
121	1,2,4-trichlorobenzene	1.483	1.748	-17.9	102	0.00	20.28
122 m	1,2,3-trichlorobenzene	1.503	1.797	-19.6	103	0.00	20.74
123	hexachloroethane	0.487	0.590	-21.1	106	0.00	19.07

		True	Calc.	% Drift			
124	2-methylnaphthalene	25.000	23.436	6.3	102	0.00	21.61

		AvgRF	CCRF	% Dev
125	bis(chloromethyl)ether		----------NA----------	
126	ethylenimine		----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Thu May 09 14:52:52 2019 GCMSX

Initial Calibration Verification

Job Number: JC90273 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181293.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7749\X181293.D Vial: 15
Acq On : 2 May 2019 11:14 pm Operator: juntaep
Sample : icv7749-50 Inst : ACC-VOA-M
Misc : MS34046,VX7749,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu May 09 14:26:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	107	-0.01	7.39
2		ethanol		----------NA----------				
3		tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.20
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		bromomethane		----------NA----------				
11		chloroethane		----------NA----------				
12		vinyl bromide		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		1,3-butadiene		----------NA----------				
15		ethyl ether		----------NA----------				
16		acrolein		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		freon 113		----------NA----------				
19		acetone		----------NA----------				
20		acetonitrile	0.087	0.092	-5.7	117	0.00	7.10
21		iodomethane		----------NA----------				
22		carbon disulfide		----------NA----------				
23		methylene chloride		----------NA----------				
24		methyl acetate		----------NA----------				
25		methyl tert butyl ether		----------NA----------				
26		trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28		di-isopropyl ether		----------NA----------				
29		2-butanone		----------NA----------				
30		1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile	0.163	0.165	-1.2	103	0.00	7.78
33		vinyl acetate		----------NA----------				
34		ethyl tert-butyl ether		----------NA----------				
35		ethyl acetate		----------NA----------				
36		2,2-dichloropropane		----------NA----------				
37		cis-1,2-dichloroethene		----------NA----------				
38		methyl acrylate		----------NA----------				
39		propionitrile		----------NA----------				
40		tert-butyl formate		----------NA----------				
41		bromochloromethate		----------NA----------				

Initial Calibration Verification

Job Number: JC90273 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181293.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran		----------NA----------					
43		chloroform		----------NA----------					
44	S	dibromofluoromethane (s)	0.407	0.415	-2.0	110	0.00	10.21	
45		methacrylonitrile		----------NA----------					
46		1,1,1-trichloroethane		----------NA----------					
47		cyclohexane		----------NA----------					
48	m	tert amyl alcohol		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		isobutyl alcohol		----------NA----------					
51		carbon tetrachloride		----------NA----------					
52		isopropyl acetate		----------NA----------					
53	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	11.39	
54	S	1,2-dichloroethane-d4 (s)	0.330	0.343	-3.9	113	0.00	10.75	
55		iso-octane		----------NA----------					
56		epichlorohydrin		----------NA----------					
57		n-butyl alcohol		----------NA----------					
58		benzene		----------NA----------					
59		tert-amyl methyl ether		----------NA----------					
60		heptane		----------NA----------					
61		1,2-dichloroethane		----------NA----------					
62		trichloroethene		----------NA----------					
63	m	ethyl acrylate		----------NA----------					
64		2-nitropropane		----------NA----------					
65		2-chloroethyl vinyl ether		----------NA----------					
66		methyl methacrylate		----------NA----------					
67		1,2-dichloropropane		----------NA----------					
68		dibromomethane		----------NA----------					
69		methylcyclohexane		----------NA----------					
70		bromodichloromethane		----------NA----------					
71		cis-1,3-dichloropropene		----------NA----------					
72		4-methyl-2-pentanone		----------NA----------					
73		3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.60	
75	S	toluene-d8 (s)	1.199	1.234	-2.9	105	0.00	13.57	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		tetrachloroethene	0.271	0.284	-4.8	106	0.00	14.42	
81		1,3-dichloropropane		----------NA----------					
82		2-hexanone		----------NA----------					
83		butyl acetate		----------NA----------					
84		dibromochloromethane		----------NA----------					
85		1,2-dibromoethane		----------NA----------					
86	m	n-butyl ether		----------NA----------					
87		chlorobenzene		----------NA----------					
88		1,1,1,2-tetrachloroethane		----------NA----------					
89		ethylbenzene		----------NA----------					
90		m,p-xylene		----------NA----------					
91		o-xylene		----------NA----------					
92		styrene		----------NA----------					
93		butyl acrylate		----------NA----------					
94		bromoform		----------NA----------					
95		isopropylbenzene		----------NA----------					
96		cis-1,4-dichloro-2-butene		----------NA----------					
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	129	0.00	18.39	
98	S	4-bromofluorobenzene (s)	0.819	0.769	6.1	113	0.00	17.11	

Initial Calibration Verification

Job Number: JC90273 **Sample:** VX7749-ICV7749
Account: EAENYES EA Engineering **Lab FileID:** X181293.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	----------NA----------
100		1,1,2,2-tetrachloroethane	----------NA----------
101		trans-1,4-dichloro-2-bute	----------NA----------
102		1,2,3-trichloropropane	----------NA----------
103		n-propylbenzene	----------NA----------
104		2-chlorotoluene	----------NA----------
105		4-chlorotoluene	----------NA----------
106		1,3,5-trimethylbenzene	----------NA----------
107		tert-butylbenzene	----------NA----------
108		1,2,4-trimethylbenzene	----------NA----------
109		sec-butylbenzene	----------NA----------
110		1,3-dichlorobenzene	----------NA----------
111		p-isopropyltoluene	----------NA----------
112		1,4-dichlorobenzene	----------NA----------
113		1,2-dichlorobenzene	----------NA----------
114		benzyl chloride	----------NA----------
115		n-butylbenzene	----------NA----------
116		1,2-dibromo-3-chloropropa	----------NA----------
117		1,3,5-trichlorobenzene	----------NA----------
118		hexachlorobutadiene	----------NA----------
119		naphthalene	----------NA----------
120		2-ethylhexyl acrylate	----------NA----------
121		1,2,4-trichlorobenzene	----------NA----------
122	m	1,2,3-trichlorobenzene	----------NA----------
123		hexachloroethane	----------NA----------

		----------	True	Calc.	% Drift	----------
124		2-methylnaphthalene		----------NA----------		

		----------	AvgRF	CCRF	% Dev	----------
125		bis(chloromethyl)ether		----------NA----------		
126		ethylenimine		----------NA----------		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Thu May 09 14:52:53 2019 GCMSX

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7807-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182393.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7807\X182393.D Vial: 2
Acq On : 26 Jun 2019 6:55 am Operator: deving
Sample : cc7749-20 Inst : ACC-VOA-M
Misc : MS35756,VX7807,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Tue Jun 25 12:21:02 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	86	0.00	7.40
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.068	5.8	82	-0.01	7.53
4		1,4-dioxane	0.093	0.105	-12.9	94	0.00	12.24
5	I	pentafluorobenzene	1.000	1.000	0.0	89	0.00	10.20
6		chlorodifluoromethane	1.528	1.518	0.7	89	0.00	3.90
7		dichlorodifluoromethane	1.518	1.706	-12.4	97	0.00	3.88
8		chloromethane	1.926	1.939	-0.7	90	0.01	4.28
9		vinyl chloride	1.588	1.694	-6.7	97	0.01	4.52
10		bromomethane	0.790	0.904	-14.4	105	0.00	5.13
11		chloroethane	0.532	0.581	-9.2	103	0.00	5.31
12		vinyl bromide	0.595	0.597	-0.3	93	0.00	5.66
13		trichlorofluoromethane	0.968	1.102	-13.8	103	0.00	5.81
14		1,3-butadiene	0.678	0.679	-0.1	94	0.00	4.54
15		ethyl ether	0.215	0.222	-3.3	91	0.00	6.22
16		acrolein	0.100	0.075	25.0#	64	0.00	6.44
17		1,1-dichloroethene	0.361	0.422	-16.9	106	0.00	6.67
18		freon 113	0.580	0.688	-18.6	107	0.01	6.71
19		acetone	0.131	0.132	-0.8	85	0.00	6.66
20		acetonitrile	0.087	0.083	4.6	82	0.00	7.10
21		iodomethane	0.694	0.749	-7.9	97	0.00	6.94
22		carbon disulfide	1.282	1.444	-12.6	104	0.00	7.10
23		methylene chloride	0.456	0.498	-9.2	102	0.00	7.46
24		methyl acetate	0.347	0.306	11.8	80	0.00	7.19
25		methyl tert butyl ether	1.570	1.482	5.6	88	0.00	7.89
26		trans-1,2-dichloroethene	0.390	0.435	-11.5	101	0.00	7.92
27		hexane	0.571	0.556	2.6	89	0.00	8.36
28		di-isopropyl ether	1.801	1.642	8.8	86	0.00	8.62
29		2-butanone	0.045	0.051	-13.3	95	0.00	9.40
30		1,1-dichloroethane	0.747	0.817	-9.4	98	0.00	8.60
31		chloroprene	0.556	0.544	2.2	84	0.00	8.73
32		acrylonitrile	0.163	0.169	-3.7	88	0.00	7.79
33		vinyl acetate	0.076	0.072	5.3	83	0.00	8.53
34		ethyl tert-butyl ether	1.667	1.582	5.1	86	0.00	9.19
35		ethyl acetate	0.070	0.058	17.1	65	0.01	9.44
36		2,2-dichloropropane	0.766	0.865	-12.9	106	0.00	9.52
37		cis-1,2-dichloroethene	0.449	0.489	-8.9	98	0.00	9.49
38		methyl acrylate	0.053	0.054	-1.9	81	0.00	9.54
39		propionitrile	0.064	0.068	-6.3	90	0.00	9.47
40		tert-butyl formate	0.419	0.376	10.3	80	0.00	10.02
41		bromochloromethane	0.229	0.253	-10.5	97	0.00	9.85

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7807-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182393.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.050	9.1	73	0.00	9.89
43		chloroform	0.729	0.765	-4.9	97	0.00	9.97
44	S	dibromofluoromethane (s)	0.407	0.442	-8.6	98	0.00	10.21
45		methacrylonitrile	0.165	0.162	1.8	85	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.811	-8.3	100	0.00	10.30
47		cyclohexane	0.828	0.782	5.6	82	0.00	10.45
48	m	tert amyl alcohol	0.026	0.026	0.0	89	0.00	10.70
49		1,1-dichloropropene	0.481	0.525	-9.1	94	0.00	10.52
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.694	-10.3	100	0.00	10.56
52		isopropyl acetate	0.086	0.086	0.0	83	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	90	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.326	1.2	87	0.00	10.75
55		iso-octane	0.888	0.895	-0.8	97	0.00	10.99
56		epichlorohydrin	0.035	0.034	2.9	86	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	91	0.00	11.47
58		benzene	1.160	1.233	-6.3	98	0.00	10.83
59		tert-amyl methyl ether	1.127	1.061	5.9	88	0.00	10.97
60		heptane	0.177	0.178	-0.6	89	0.00	11.21
61		1,2-dichloroethane	0.391	0.378	3.3	90	0.00	10.87
62		trichloroethene	0.304	0.326	-7.2	94	0.00	11.80
63	m	ethyl acrylate	0.382	0.366	4.2	80	0.00	11.80
64		2-nitropropane	0.089	0.064	28.1#	66	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.228	-5.6	90	0.00	12.87
66		methyl methacrylate	0.081	0.071	12.3	77	0.00	12.16
67		1,2-dichloropropane	0.128	0.130	-1.6	88	0.00	12.17
68		dibromomethane	0.193	0.207	-7.3	95	0.00	12.31
69		methylcyclohexane	0.533	0.572	-7.3	101	0.00	12.20
70		bromodichloromethane	0.432	0.433	-0.2	91	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.526	-1.2	91	0.00	13.16
72		4-methyl-2-pentanone	0.131	0.138	-5.3	88	0.00	13.30
73		3-methyl-1-butanol	0.011	0.011	0.0	88	0.00	13.33
74	I	chlorobenzene-d5	1.000	1.000	0.0	93	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.203	-0.3	94	0.00	13.57
76		toluene	0.743	0.738	0.7	94	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.468	2.9	89	0.00	13.94
78		ethyl methacrylate	0.397	0.391	1.5	86	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.265	-5.2	97	0.00	14.22
80		tetrachloroethene	0.271	0.282	-4.1	96	0.00	14.43
81		1,3-dichloropropane	0.473	0.487	-3.0	94	0.00	14.46
82		2-hexanone	0.120	0.125	-4.2	91	0.00	14.46
83		butyl acetate	0.243	0.230	5.3	88	0.00	14.61
84		dibromochloromethane	0.352	0.354	-0.6	96	0.00	14.79
85		1,2-dibromoethane	0.337	0.352	-4.5	93	0.00	14.99
86	m	n-butyl ether	1.341	1.300	3.1	91	0.00	15.66
87		chlorobenzene	0.849	0.875	-3.1	98	0.00	15.65
88		1,1,1,2-tetrachloroethane	0.375	0.379	-1.1	94	0.00	15.74
89		ethylbenzene	1.390	1.395	-0.4	95	0.00	15.75
90		m,p-xylene	0.555	0.555	0.0	94	0.00	15.91
91		o-xylene	1.274	1.256	1.4	94	0.00	16.43
92		styrene	0.920	0.936	-1.7	95	0.00	16.45
93		butyl acrylate	0.775	0.670	13.5	83	0.00	16.25
94		bromoform	0.248	0.255	-2.8	97	0.00	16.71
95		isopropylbenzene	1.633	1.558	4.6	91	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.130	3.7	89	0.00	16.92
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	18.39
98	S	4-bromofluorobenzene (s)	0.819	0.848	-3.5	96	0.00	17.11

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7807-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182393.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

			True	Calc.	% Drift			
99		bromobenzene	0.725	0.746	-2.9	97	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.803	-2.4	97	0.00	17.21
101		trans-1,4-dichloro-2-bute	0.178	0.169	5.1	87	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.200	-1.5	91	0.00	17.30
103		n-propylbenzene	3.022	3.056	-1.1	98	0.00	17.37
104		2-chlorotoluene	0.685	0.697	-1.8	96	0.00	17.51
105		4-chlorotoluene	1.840	1.843	-0.2	98	0.00	17.63
106		1,3,5-trimethylbenzene	2.297	2.334	-1.6	95	0.00	17.56
107		tert-butylbenzene	2.087	2.037	2.4	92	0.00	17.92
108		1,2,4-trimethylbenzene	2.396	2.429	-1.4	97	0.00	17.98
109		sec-butylbenzene	3.161	3.158	0.1	97	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.432	-2.5	99	0.00	18.32
111		p-isopropyltoluene	2.752	2.708	1.6	96	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.400	-3.3	100	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.593	-3.3	98	0.00	18.78
114		benzyl chloride	1.558	1.630	-4.6	100	0.00	18.51
115		n-butylbenzene	1.312	1.389	-5.9	101	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.259	-0.8	92	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.662	-7.4	99	0.00	19.69
118		hexachlorobutadiene	0.527	0.561	-6.5	104	0.00	20.39
119		naphthalene	3.658	3.845	-5.1	95	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.465	30.1#	111	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.724	-16.3	100	0.00	20.28
122	m	1,2,3-trichlorobenzene	1.503	1.710	-13.8	98	0.00	20.74
123		hexachloroethane	0.487	0.484	0.6	97	0.00	19.07
			True	Calc.	% Drift			
124		2-methylnaphthalene	10.000	8.058	19.4	83	0.00	21.62
			AvgRF	CCRF	% Dev			
125		bis(chloromethyl)ether		NA				
126		ethylenimine		NA				
127		pentafluorobenzene(a)	1.000	1.000	0.0	83	0.00	10.20
128		chlorotrifluoroethene		NA				
129		freon 123a		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181286.D MX7749.M Wed Jun 26 14:46:08 2019 GCMSX

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7807-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182415.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...6-27\vx7807\x182415.d Vial: 24
Acq On : 26 Jun 2019 6:07 pm Operator: jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Tue Jun 25 12:21:02 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	84	0.01	7.41
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.097	3.3	79	0.00	7.54
4		1,4-dioxane	0.093	0.107	-15.1	89	0.00	12.25
5	I	pentafluorobenzene	1.000	1.000	0.0	91	0.00	10.20
6		chlorodifluoromethane	1.528	1.383	9.5	82	0.02	3.91
7		dichlorodifluoromethane	1.518	1.565	-3.1	87	0.02	3.90
8		chloromethane	1.926	1.748	9.2	83	0.02	4.29
9		vinyl chloride	1.588	1.492	6.0	87	0.02	4.53
10		bromomethane	0.790	0.844	-6.8	94	0.02	5.15
11		chloroethane	0.532	0.544	-2.3	90	0.01	5.32
12		vinyl bromide	0.595	0.598	-0.5	85	0.01	5.67
13		trichlorofluoromethane	0.968	1.043	-7.7	94	0.02	5.83
14		1,3-butadiene	0.678	0.773	-14.0	105	0.02	4.55
15		ethyl ether	0.215	0.217	-0.9	90	0.01	6.23
16		acrolein	0.100	0.067	33.0	66	0.00	6.45
17		1,1-dichloroethene	0.361	0.381	-5.5	99	0.00	6.67
18		freon 113	0.580	0.633	-9.1	98	0.01	6.71
19		acetone	0.131	0.111	15.3	81	0.01	6.66
20		acetonitrile	0.087	0.077	11.5	84	0.00	7.11
21		iodomethane	0.694	0.726	-4.6	95	0.01	6.94
22		carbon disulfide	1.282	1.357	-5.9	98	0.01	7.11
23		methylene chloride	0.456	0.475	-4.2	101	0.00	7.46
24		methyl acetate	0.347	0.285	17.9	80	0.00	7.19
25		methyl tert butyl ether	1.570	1.506	4.1	90	0.00	7.90
26		trans-1,2-dichloroethene	0.390	0.404	-3.6	98	0.00	7.93
27		hexane	0.571	0.520	8.9	84	0.01	8.37
28		di-isopropyl ether	1.801	1.617	10.2	87	0.01	8.62
29		2-butanone	0.045	0.047	-4.4	88	0.00	9.40
30		1,1-dichloroethane	0.747	0.758	-1.5	95	0.00	8.60
31		chloroprene	0.556	0.526	5.4	85	0.00	8.73
32		acrylonitrile	0.163	0.162	0.6	86	0.00	7.77
33		vinyl acetate	0.076	0.079	-3.9	92	0.00	8.54
34		ethyl tert-butyl ether	1.667	1.637	1.8	88	0.00	9.19
35		ethyl acetate	0.070	0.061	12.9	75	0.02	9.45
36		2,2-dichloropropane	0.766	0.785	-2.5	98	0.00	9.53
37		cis-1,2-dichloroethene	0.449	0.458	-2.0	97	0.00	9.49
38		methyl acrylate	0.053	0.058	-9.4	88	0.00	9.54
39		propionitrile	0.064	0.064	0.0	88	0.00	9.47
40		tert-butyl formate	0.419	0.395	5.7	85	0.00	10.02
41		bromochloromethane	0.229	0.244	-6.6	95	0.00	9.86

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7807-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182415.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.055	0.0	86	0.00	9.89
43		chloroform	0.729	0.723	0.8	95	0.00	9.98
44	S	dibromofluoromethane (s)	0.407	0.436	-7.1	99	0.00	10.21
45		methacrylonitrile	0.165	0.163	1.2	87	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.780	-4.1	92	0.00	10.31
47		cyclohexane	0.828	0.828	0.0	85	0.00	10.46
48	m	tert amyl alcohol	0.026	0.025	3.8	89	0.00	10.70
49		1,1-dichloropropene	0.481	0.484	-0.6	92	0.00	10.53
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.633	-0.6	91	0.00	10.56
52		isopropyl acetate	0.086	0.090	-4.7	87	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	91	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.310	6.1	88	0.00	10.75
55		iso-octane	0.888	0.854	3.8	87	0.00	10.99
56		epichlorohydrin	0.035	0.032	8.6	82	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	88	0.00	11.47
58		benzene	1.160	1.147	1.1	94	0.00	10.83
59		tert-amyl methyl ether	1.127	1.077	4.4	90	0.00	10.97
60		heptane	0.177	0.168	5.1	84	0.00	11.21
61		1,2-dichloroethane	0.391	0.350	10.5	87	0.00	10.87
62		trichloroethene	0.304	0.314	-3.3	93	0.00	11.80
63	m	ethyl acrylate	0.382	0.365	4.5	83	0.00	11.80
64		2-nitropropane	0.089	0.064	28.1	68	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.201	6.9	82	0.00	12.87
66		methyl methacrylate	0.081	0.080	1.2	86	0.00	12.16
67		1,2-dichloropropane	0.128	0.126	1.6	89	0.00	12.17
68		dibromomethane	0.193	0.193	0.0	90	0.00	12.31
69		methylcyclohexane	0.533	0.558	-4.7	96	0.00	12.20
70		bromodichloromethane	0.432	0.421	2.5	91	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.508	2.3	89	0.00	13.16
72		4-methyl-2-pentanone	0.131	0.135	-3.1	88	0.00	13.30
73		3-methyl-1-butanol	0.011	0.011	0.0	87	0.00	13.32
74	I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.174	2.1	93	0.00	13.58
76		toluene	0.743	0.704	5.2	91	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.440	8.7	86	0.00	13.94
78		ethyl methacrylate	0.397	0.389	2.0	87	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.250	0.8	93	0.00	14.22
80		tetrachloroethene	0.271	0.263	3.0	91	0.00	14.43
81		1,3-dichloropropane	0.473	0.445	5.9	93	0.00	14.46
82		2-hexanone	0.120	0.115	4.2	89	0.00	14.46
83		butyl acetate	0.243	0.227	6.6	88	0.00	14.60
84		dibromochloromethane	0.352	0.339	3.7	90	0.00	14.79
85		1,2-dibromoethane	0.337	0.344	-2.1	92	0.00	14.99
86	m	n-butyl ether	1.341	1.257	6.3	89	0.00	15.66
87		chlorobenzene	0.849	0.831	2.1	95	0.00	15.65
88		1,1,1,2-tetrachloroethane	0.375	0.360	4.0	90	0.00	15.74
89		ethylbenzene	1.390	1.293	7.0	92	0.00	15.75
90		m,p-xylene	0.555	0.517	6.8	92	0.00	15.91
91		o-xylene	1.274	1.183	7.1	90	0.00	16.43
92		styrene	0.920	0.880	4.3	94	0.00	16.45
93		butyl acrylate	0.775	0.675	12.9	86	0.00	16.25
94		bromoform	0.248	0.237	4.4	89	0.00	16.72
95		isopropylbenzene	1.633	1.528	6.4	88	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.061	54.8#	44#	0.00	16.92
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	18.40
98	S	4-bromofluorobenzene (s)	0.819	0.862	-5.3	96	0.00	17.11

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7807-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182415.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	0.725	0.729	-0.6	95	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.812	-3.6	95	0.00	17.21
101		trans-1,4-dichloro-2-bute	0.178	0.093	47.8	49#	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.197	0.0	93	0.00	17.30
103		n-propylbenzene	3.022	2.963	2.0	93	0.00	17.37
104		2-chlorotoluene	0.685	0.687	-0.3	91	0.00	17.51
105		4-chlorotoluene	1.840	1.756	4.6	95	0.00	17.64
106		1,3,5-trimethylbenzene	2.297	2.305	-0.3	91	0.00	17.56
107		tert-butylbenzene	2.087	2.174	-4.2	91	0.00	17.93
108		1,2,4-trimethylbenzene	2.396	2.360	1.5	92	0.00	17.98
109		sec-butylbenzene	3.161	3.200	-1.2	92	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.328	4.9	97	0.00	18.32
111		p-isopropyltoluene	2.752	2.679	2.7	91	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.348	0.5	98	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.516	1.7	95	0.00	18.78
114		benzyl chloride	1.558	1.415	9.2	88	0.00	18.51
115		n-butylbenzene	1.312	1.339	-2.1	93	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.263	-2.3	91	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.593	-3.0	95	0.00	19.69
118		hexachlorobutadiene	0.527	0.518	1.7	92	0.00	20.38
119		naphthalene	3.658	3.843	-5.1	94	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.758	-14.0	101	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.679	-13.2	97	0.00	20.28
122	m	1,2,3-trichlorobenzene	1.503	1.708	-13.6	96	0.00	20.74
123		hexachloroethane	0.487	0.511	-4.9	90	0.00	19.07
		----------	True	Calc.	% Drift	----------		
124		2-methylnaphthalene	25.000	19.669	21.3	82	0.00	21.61
		----------	AvgRF	CCRF	% Dev	----------		
125		bis(chloromethyl)ether		----------NA----------				
126		ethylenimine		----------NA----------				
127		pentafluorobenzene(a)	1.000	1.000	0.0	83	0.00	10.20
128		chlorotrifluoroethene		----------NA----------				
129		freon 123a		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Wed Jun 26 22:24:19 2019

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7809-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182431.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\VX7809\X182431.D Vial: 2
Acq On : 27 Jun 2019 6:24 am Operator: brittank
Sample : cc7749-20 Inst : ACC-VOA-M
Misc : MS35702,VX7809,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu Jun 27 12:00:34 2019
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	tert butyl alcohol-d9	1.000	1.000	0.0	86	-0.01	7.39
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.067	5.9	82	-0.01	7.53
4		1,4-dioxane	0.093	0.105	-12.9	94	0.00	12.24
5	I	pentafluorobenzene	1.000	1.000	0.0	88	0.00	10.19
6		chlorodifluoromethane	1.528	1.450	5.1	84	0.01	3.91
7		dichlorodifluoromethane	1.518	1.721	-13.4	97	0.01	3.89
8		chloromethane	1.926	1.759	8.7	82	0.02	4.29
9		vinyl chloride	1.588	1.614	-1.6	92	0.02	4.53
10		bromomethane	0.790	0.917	-16.1	106	0.02	5.15
11		chloroethane	0.532	0.567	-6.6	100	0.00	5.32
12		vinyl bromide	0.595	0.707	-18.8	110	0.01	5.67
13		trichlorofluoromethane	0.968	1.109	-14.6	103	0.00	5.82
14		1,3-butadiene	0.678	0.789	-16.4	108	0.01	4.54
15		ethyl ether	0.215	0.220	-2.3	89	0.00	6.21
16		acrolein	0.100	0.072	28.0#	61	0.00	6.44
17		1,1-dichloroethene	0.361	0.398	-10.2	99	0.00	6.67
18		freon 113	0.580	0.680	-17.2	105	0.01	6.71
19		acetone	0.131	0.120	8.4	77	0.00	6.66
20		acetonitrile	0.087	0.081	6.9	80	0.00	7.10
21		iodomethane	0.694	0.763	-9.9	99	0.00	6.93
22		carbon disulfide	1.282	1.426	-11.2	102	0.00	7.10
23		methylene chloride	0.456	0.481	-5.5	98	0.00	7.46
24		methyl acetate	0.347	0.295	15.0	77	0.00	7.18
25		methyl tert butyl ether	1.570	1.477	5.9	87	0.00	7.88
26		trans-1,2-dichloroethene	0.390	0.436	-11.8	100	0.00	7.92
27		hexane	0.571	0.560	1.9	89	0.00	8.36
28		di-isopropyl ether	1.801	1.576	12.5	82	0.00	8.62
29		2-butanone	0.045	0.047	-4.4	87	0.00	9.39
30		1,1-dichloroethane	0.747	0.775	-3.7	92	0.00	8.60
31		chloroprene	0.556	0.522	6.1	81	0.00	8.73
32		acrylonitrile	0.163	0.158	3.1	82	-0.01	7.77
33		vinyl acetate	0.076	0.074	2.6	84	0.00	8.54
34		ethyl tert-butyl ether	1.667	1.555	6.7	84	0.00	9.18
35		ethyl acetate	0.070	0.058	17.1	65	0.01	9.44
36		2,2-dichloropropane	0.766	0.874	-14.1	107	0.00	9.53
37		cis-1,2-dichloroethene	0.449	0.480	-6.9	96	-0.01	9.47
38		methyl acrylate	0.053	0.050	5.7	74	0.00	9.54
39		propionitrile	0.064	0.066	-3.1	87	0.00	9.47
40		tert-butyl formate	0.419	0.396	5.5	84	0.00	10.01
41		bromochloromethane	0.229	0.254	-10.9	97	-0.01	9.85

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7809-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182431.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.048	12.7	69	-0.01	9.88
43		chloroform	0.729	0.745	-2.2	94	0.00	9.97
44	S	dibromofluoromethane (s)	0.407	0.434	-6.6	96	0.00	10.21
45		methacrylonitrile	0.165	0.157	4.8	82	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.790	-5.5	96	0.00	10.30
47		cyclohexane	0.828	0.879	-6.2	92	0.00	10.45
48	m	tert amyl alcohol	0.026	0.026	0.0	89	0.00	10.70
49		1,1-dichloropropene	0.481	0.506	-5.2	90	0.00	10.52
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.682	-8.4	98	0.00	10.56
52		isopropyl acetate	0.086	0.086	0.0	83	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	88	0.00	11.38
54	S	1,2-dichloroethane-d4 (s)	0.330	0.317	3.9	83	0.00	10.74
55		iso-octane	0.888	0.921	-3.7	97	0.00	10.98
56		epichlorohydrin	0.035	0.032	8.6	81	0.00	12.96
57		n-butyl alcohol	0.011	0.012	-9.1	90	0.00	11.46
58		benzene	1.160	1.215	-4.7	94	0.00	10.82
59		tert-amyl methyl ether	1.127	1.082	4.0	87	0.00	10.96
60		heptane	0.177	0.188	-6.2	92	0.00	11.21
61		1,2-dichloroethane	0.391	0.367	6.1	85	0.00	10.86
62		trichloroethene	0.304	0.325	-6.9	92	0.00	11.79
63	m	ethyl acrylate	0.382	0.351	8.1	75	0.00	11.80
64		2-nitropropane	0.089	0.067	24.7#	68	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.217	-0.5	83	0.00	12.87
66		methyl methacrylate	0.081	0.075	7.4	79	0.00	12.15
67		1,2-dichloropropane	0.128	0.130	-1.6	86	0.00	12.17
68		dibromomethane	0.193	0.202	-4.7	91	0.00	12.30
69		methylcyclohexane	0.533	0.590	-10.7	102	0.00	12.19
70		bromodichloromethane	0.432	0.429	0.7	89	-0.01	12.52
71		cis-1,3-dichloropropene	0.520	0.520	0.0	88	0.00	13.15
72		4-methyl-2-pentanone	0.131	0.134	-2.3	84	0.00	13.30
73		3-methyl-1-butanol	0.011	0.012	-9.1	88	0.00	13.32
74	I	chlorobenzene-d5	1.000	1.000	0.0	91	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.201	-0.2	92	-0.01	13.56
76		toluene	0.743	0.731	1.6	91	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.453	6.0	84	-0.01	13.93
78		ethyl methacrylate	0.397	0.378	4.8	81	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.256	-1.6	91	-0.01	14.22
80		tetrachloroethene	0.271	0.285	-5.2	94	0.00	14.42
81		1,3-dichloropropane	0.473	0.467	1.3	88	0.00	14.46
82		2-hexanone	0.120	0.119	0.8	85	0.00	14.46
83		butyl acetate	0.243	0.223	8.2	83	0.00	14.60
84		dibromochloromethane	0.352	0.354	-0.6	93	0.00	14.79
85		1,2-dibromoethane	0.337	0.355	-5.3	92	0.00	14.98
86	m	n-butyl ether	1.341	1.264	5.7	86	0.00	15.66
87		chlorobenzene	0.849	0.877	-3.3	95	0.00	15.64
88		1,1,1,2-tetrachloroethane	0.375	0.377	-0.5	92	0.00	15.74
89		ethylbenzene	1.390	1.389	0.1	92	0.00	15.74
90		m,p-xylene	0.555	0.551	0.7	91	0.00	15.91
91		o-xylene	1.274	1.229	3.5	89	0.00	16.43
92		styrene	0.920	0.934	-1.5	92	0.00	16.44
93		butyl acrylate	0.775	0.643	17.0	77	0.00	16.25
94		bromoform	0.248	0.252	-1.6	94	0.00	16.71
95		isopropylbenzene	1.633	1.572	3.7	90	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.092	31.9#	61	0.00	16.91
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	18.39
98	S	4-bromofluorobenzene (s)	0.819	0.808	1.3	93	0.00	17.11

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7809-CC7749
Account: EAENYES EA Engineering **Lab FileID:** X182431.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	0.725	0.733	-1.1	97	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.776	1.0	96	0.00	17.21
101		trans-1,4-dichloro-2-bute	0.178	0.115	35.4#	60	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.200	-1.5	93	0.00	17.29
103		n-propylbenzene	3.022	2.900	4.0	94	0.00	17.37
104		2-chlorotoluene	0.685	0.681	0.6	96	0.00	17.50
105		4-chlorotoluene	1.840	1.753	4.7	95	0.00	17.63
106		1,3,5-trimethylbenzene	2.297	2.239	2.5	93	0.00	17.56
107		tert-butylbenzene	2.087	2.028	2.8	93	0.00	17.92
108		1,2,4-trimethylbenzene	2.396	2.352	1.8	95	0.00	17.98
109		sec-butylbenzene	3.161	3.065	3.0	96	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.414	-1.2	99	0.00	18.32
111		p-isopropyltoluene	2.752	2.618	4.9	95	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.362	-0.5	99	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.582	-2.6	99	0.00	18.78
114		benzyl chloride	1.558	1.602	-2.8	100	0.00	18.51
115		n-butylbenzene	1.312	1.322	-0.8	98	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.261	-1.6	94	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.660	-7.3	101	0.00	19.68
118		hexachlorobutadiene	0.527	0.559	-6.1	105	0.00	20.38
119		naphthalene	3.658	3.807	-4.1	96	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.421	36.7#	102	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.710	-15.3	101	0.00	20.27
122	m	1,2,3-trichlorobenzene	1.503	1.691	-12.5	99	0.00	20.74
123		hexachloroethane	0.487	0.477	2.1	97	0.00	19.07
			True	Calc.	% Drift			
124		2-methylnaphthalene	10.000	7.891	21.1#	81	0.00	21.61
			AvgRF	CCRF	% Dev			
125		bis(chloromethyl)ether		NA				
126		ethylenimine		NA				
127		pentafluorobenzene(a)	1.000	1.000	0.0	82	-0.01	10.19
128		chlorotrifluoroethene		NA				
129		freon 123a		NA				
130		chlorobenzene-d5(a)	1.000	1.000	0.0	94	0.00	15.60
131		cyclohexanone		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181286.D MX7749.M Thu Jun 27 14:45:24 2019 GCMSX

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7809-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182451.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...2819\vx7809\x182451.d Vial: 22
Acq On : 27 Jun 2019 5:33 pm Operator: jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS33702,VX7809,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
Last Update : Thu May 09 14:26:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	tert butyl alcohol-d9	1.000	1.000	0.0	79	0.00	7.41
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.134	1.065	6.1	72	-0.01	7.53
4		1,4-dioxane	0.093	0.098	-5.4	77	0.00	12.24
5	I	pentafluorobenzene	1.000	1.000	0.0	88	0.00	10.20
6		chlorodifluoromethane	1.528	1.410	7.7	80	0.01	3.91
7		dichlorodifluoromethane	1.518	1.693	-11.5	91	0.02	3.89
8		chloromethane	1.926	1.715	11.0	78	0.02	4.29
9		vinyl chloride	1.588	1.508	5.0	85	0.02	4.53
10		bromomethane	0.790	0.851	-7.7	91	0.02	5.15
11		chloroethane	0.532	0.553	-3.9	88	0.02	5.33
12		vinyl bromide	0.595	0.730	-22.7	99	0.02	5.68
13		trichlorofluoromethane	0.968	1.144	-18.2	99	0.02	5.83
14		1,3-butadiene	0.678	0.722	-6.5	95	0.01	4.54
15		ethyl ether	0.215	0.206	4.2	82	0.00	6.22
16		acrolein	0.100	0.071	29.0	67	0.00	6.45
17		1,1-dichloroethene	0.361	0.407	-12.7	101	0.00	6.67
18		freon 113	0.580	0.676	-16.6	100	0.00	6.70
19		acetone	0.131	0.109	16.8	76	0.00	6.66
20		acetonitrile	0.087	0.072	17.2	76	0.00	7.10
21		iodomethane	0.694	0.770	-11.0	97	0.00	6.94
22		carbon disulfide	1.282	1.431	-11.6	99	0.00	7.10
23		methylene chloride	0.456	0.484	-6.1	98	0.00	7.46
24		methyl acetate	0.347	0.275	20.7	74	0.00	7.18
25		methyl tert butyl ether	1.570	1.455	7.3	83	0.00	7.89
26		trans-1,2-dichloroethene	0.390	0.403	-3.3	94	0.00	7.92
27		hexane	0.571	0.508	11.0	78	0.00	8.36
28		di-isopropyl ether	1.801	1.557	13.5	80	0.00	8.62
29		2-butanone	0.045	0.046	-2.2	81	0.00	9.40
30		1,1-dichloroethane	0.747	0.764	-2.3	92	0.00	8.60
31		chloroprene	0.556	0.523	5.9	81	0.00	8.73
32		acrylonitrile	0.163	0.159	2.5	81	0.00	7.77
33		vinyl acetate	0.076	0.076	0.0	85	0.00	8.54
34		ethyl tert-butyl ether	1.667	1.600	4.0	82	0.00	9.18
35		ethyl acetate	0.070	0.059	15.7	69	0.01	9.44
36		2,2-dichloropropane	0.766	0.728	5.0	87	0.00	9.53
37		cis-1,2-dichloroethene	0.449	0.450	-0.2	92	0.00	9.48
38		methyl acrylate	0.053	0.056	-5.7	80	0.00	9.54
39		propionitrile	0.064	0.060	6.3	80	0.00	9.47
40		tert-butyl formate	0.419	0.368	12.2	76	0.00	10.02
41		bromochloromethane	0.229	0.241	-5.2	91	0.00	9.85

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7809-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182451.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42		tetrahydrofuran	0.055	0.053	3.6	79	0.00	9.88
43		chloroform	0.729	0.729	0.0	92	0.00	9.97
44	S	dibromofluoromethane (s)	0.407	0.439	-7.9	96	0.00	10.21
45		methacrylonitrile	0.165	0.157	4.8	80	0.00	9.73
46		1,1,1-trichloroethane	0.749	0.790	-5.5	89	0.00	10.30
47		cyclohexane	0.828	0.791	4.5	78	0.00	10.45
48	m	tert amyl alcohol	0.026	0.024	7.7	85	0.00	10.69
49		1,1-dichloropropene	0.481	0.493	-2.5	90	0.00	10.52
50		isobutyl alcohol		----------NA----------				
51		carbon tetrachloride	0.629	0.644	-2.4	89	0.00	10.56
52		isopropyl acetate	0.086	0.088	-2.3	82	0.00	10.75
53	I	1,4-difluorobenzene	1.000	1.000	0.0	89	0.00	11.39
54	S	1,2-dichloroethane-d4 (s)	0.330	0.314	4.8	88	0.00	10.75
55		iso-octane	0.888	0.861	3.0	86	0.00	10.99
56		epichlorohydrin	0.035	0.030	14.3	76	0.00	12.96
57		n-butyl alcohol	0.011	0.011	0.0	80	0.00	11.47
58		benzene	1.160	1.121	3.4	90	0.00	10.83
59		tert-amyl methyl ether	1.127	1.032	8.4	84	0.00	10.97
60		heptane	0.177	0.159	10.2	78	0.00	11.21
61		1,2-dichloroethane	0.391	0.343	12.3	83	0.00	10.86
62		trichloroethene	0.304	0.317	-4.3	92	0.00	11.79
63	m	ethyl acrylate	0.382	0.345	9.7	76	0.00	11.80
64		2-nitropropane	0.089	0.061	31.5	63	0.00	12.79
65		2-chloroethyl vinyl ether	0.216	0.206	4.6	82	0.00	12.87
66		methyl methacrylate	0.081	0.076	6.2	80	0.00	12.15
67		1,2-dichloropropane	0.128	0.124	3.1	85	0.00	12.17
68		dibromomethane	0.193	0.193	0.0	89	0.00	12.31
69		methylcyclohexane	0.533	0.552	-3.6	93	0.00	12.20
70		bromodichloromethane	0.432	0.416	3.7	87	0.00	12.53
71		cis-1,3-dichloropropene	0.520	0.490	5.8	84	0.00	13.15
72		4-methyl-2-pentanone	0.131	0.129	1.5	82	0.00	13.30
73		3-methyl-1-butanol	0.011	0.011	0.0	82	-0.01	13.32
74	I	chlorobenzene-d5	1.000	1.000	0.0	91	0.00	15.60
75	S	toluene-d8 (s)	1.199	1.183	1.3	91	0.00	13.57
76		toluene	0.743	0.693	6.7	87	0.00	13.67
77		trans-1,3-dichloropropene	0.482	0.436	9.5	83	0.00	13.93
78		ethyl methacrylate	0.397	0.370	6.8	80	0.00	13.95
79		1,1,2-trichloroethane	0.252	0.243	3.6	88	0.00	14.22
80		tetrachloroethene	0.271	0.257	5.2	87	0.00	14.42
81		1,3-dichloropropane	0.473	0.432	8.7	88	0.00	14.46
82		2-hexanone	0.120	0.112	6.7	84	0.00	14.46
83		butyl acetate	0.243	0.214	11.9	80	0.00	14.60
84		dibromochloromethane	0.352	0.330	6.2	86	0.00	14.79
85		1,2-dibromoethane	0.337	0.339	-0.6	88	0.00	14.99
86	m	n-butyl ether	1.341	1.197	10.7	82	0.00	15.66
87		chlorobenzene	0.849	0.809	4.7	90	0.00	15.64
88		1,1,1,2-tetrachloroethane	0.375	0.353	5.9	86	0.00	15.74
89		ethylbenzene	1.390	1.258	9.5	87	0.00	15.74
90		m,p-xylene	0.555	0.502	9.5	87	0.00	15.91
91		o-xylene	1.274	1.162	8.8	86	0.00	16.43
92		styrene	0.920	0.858	6.7	89	0.00	16.45
93		butyl acrylate	0.775	0.652	15.9	81	0.00	16.25
94		bromoform	0.248	0.232	6.5	85	0.00	16.71
95		isopropylbenzene	1.633	1.489	8.8	83	0.00	16.88
96		cis-1,4-dichloro-2-butene	0.135	0.099	26.7	69	0.00	16.91
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	18.39
98	S	4-bromofluorobenzene (s)	0.819	0.837	-2.2	92	0.00	17.11

Continuing Calibration Summary

Job Number: JC90273 **Sample:** VX7809-ECC7749
Account: EAENYES EA Engineering **Lab FileID:** X182451.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99		bromobenzene	0.725	0.706	2.6	90	0.00	17.31
100		1,1,2,2-tetrachloroethane	0.784	0.757	3.4	87	0.00	17.20
101		trans-1,4-dichloro-2-bute	0.178	0.140	21.3	72	0.00	17.25
102		1,2,3-trichloropropane	0.197	0.187	5.1	87	0.00	17.30
103		n-propylbenzene	3.022	2.806	7.1	86	0.00	17.37
104		2-chlorotoluene	0.685	0.657	4.1	86	0.00	17.50
105		4-chlorotoluene	1.840	1.684	8.5	89	0.00	17.63
106		1,3,5-trimethylbenzene	2.297	2.184	4.9	85	0.00	17.56
107		tert-butylbenzene	2.087	2.111	-1.1	87	0.00	17.92
108		1,2,4-trimethylbenzene	2.396	2.243	6.4	86	0.00	17.98
109		sec-butylbenzene	3.161	3.010	4.8	85	0.00	18.16
110		1,3-dichlorobenzene	1.397	1.280	8.4	91	0.00	18.32
111		p-isopropyltoluene	2.752	2.528	8.1	84	0.00	18.30
112		1,4-dichlorobenzene	1.355	1.286	5.1	92	0.00	18.42
113		1,2-dichlorobenzene	1.542	1.448	6.1	89	0.00	18.78
114		benzyl chloride	1.558	1.207	22.5	74	0.00	18.51
115		n-butylbenzene	1.312	1.212	7.6	83	0.00	18.71
116		1,2-dibromo-3-chloropropa	0.257	0.246	4.3	84	0.00	19.51
117		1,3,5-trichlorobenzene	1.547	1.467	5.2	86	0.00	19.69
118		hexachlorobutadiene	0.527	0.473	10.2	82	0.00	20.38
119		naphthalene	3.658	3.677	-0.5	88	0.00	20.54
120		2-ethylhexyl acrylate	0.665	0.681	-2.4	89	0.00	20.28
121		1,2,4-trichlorobenzene	1.483	1.563	-5.4	88	0.00	20.28
122	m	1,2,3-trichlorobenzene	1.503	1.595	-6.1	88	0.00	20.74
123		hexachloroethane	0.487	0.507	-4.1	88	0.00	19.07

			True	Calc.	% Drift			
124		2-methylnaphthalene	25.000	18.841	24.6	76	0.00	21.61

			AvgRF	CCRF	% Dev			
125		bis(chloromethyl)ether		----------NA----------				
126		ethylenimine		----------NA----------				
127		pentafluorobenzene(a)	N/A	1.00	0.0	0#	10.20#	10.20
128		chlorotrifluoroethene	N/A	1.00	0.0	0#	0.00	0.00
129		freon 123a	N/A	1.00	0.0	0#	0.00	0.00
130		chlorobenzene-d5(a)	N/A	1.00	0.0	0#	15.60#	15.60
131		cyclohexanone	N/A	1.00	0.0	0#	17.00#	17.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X181287.D MX7749.M Fri Jun 28 03:38:16 2019

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182398.d
Acq On : 26 Jun 2019 9:57 am
Operator : jessicap
Sample : JC90273-1 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 21:52:45 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

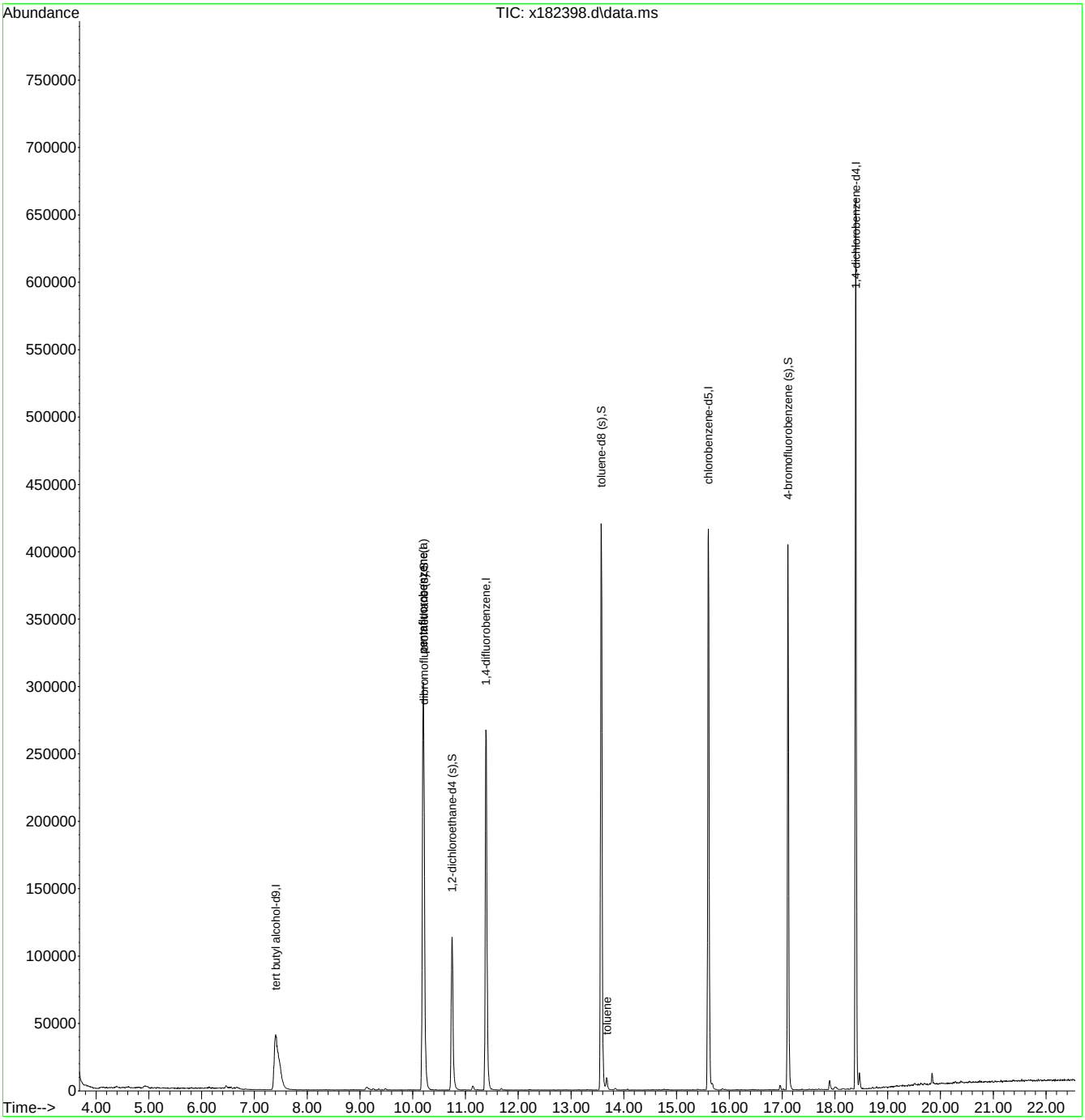
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.404	65	158447	500.00	ug/L	0.00
5) pentafluorobenzene	10.196	168	212822	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	283810	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	278167	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	176516	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	212822	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	94234	54.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.84%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	96351	51.47	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.94%			
75) toluene-d8 (s)	13.575	98	345846	51.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.72%			
98) 4-bromofluorobenzene (s)	17.111	95	137217	47.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.90%			
Target Compounds						Qvalue
76) toluene	13.680	92	4346	1.05	ug/L	96

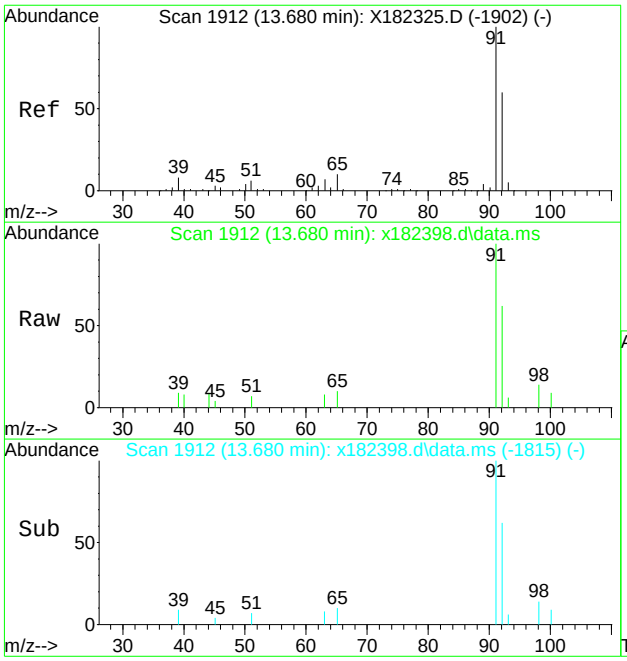
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182398.d
Acq On : 26 Jun 2019 9:57 am
Operator : jessicap
Sample : JC90273-1 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 21:52:45 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

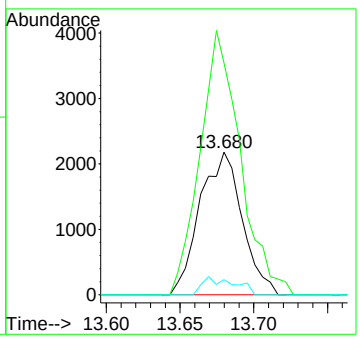




#76
toluene
Concen: 1.05 ug/L
RT: 13.680 min Scan# 1912
Delta R.T. 0.005 min
Lab File: x182398.d
Acq: 26 Jun 2019 9:57 am

Tgt Ion: 92 Resp: 4346

Ion	Ratio	Lower	Upper
92	100		
91	162.4	147.8	187.8
51	10.7	0.0	30.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182399.d
Acq On : 26 Jun 2019 10:26 am
Operator : jessicap
Sample : JC90273-2 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 21:54:12 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

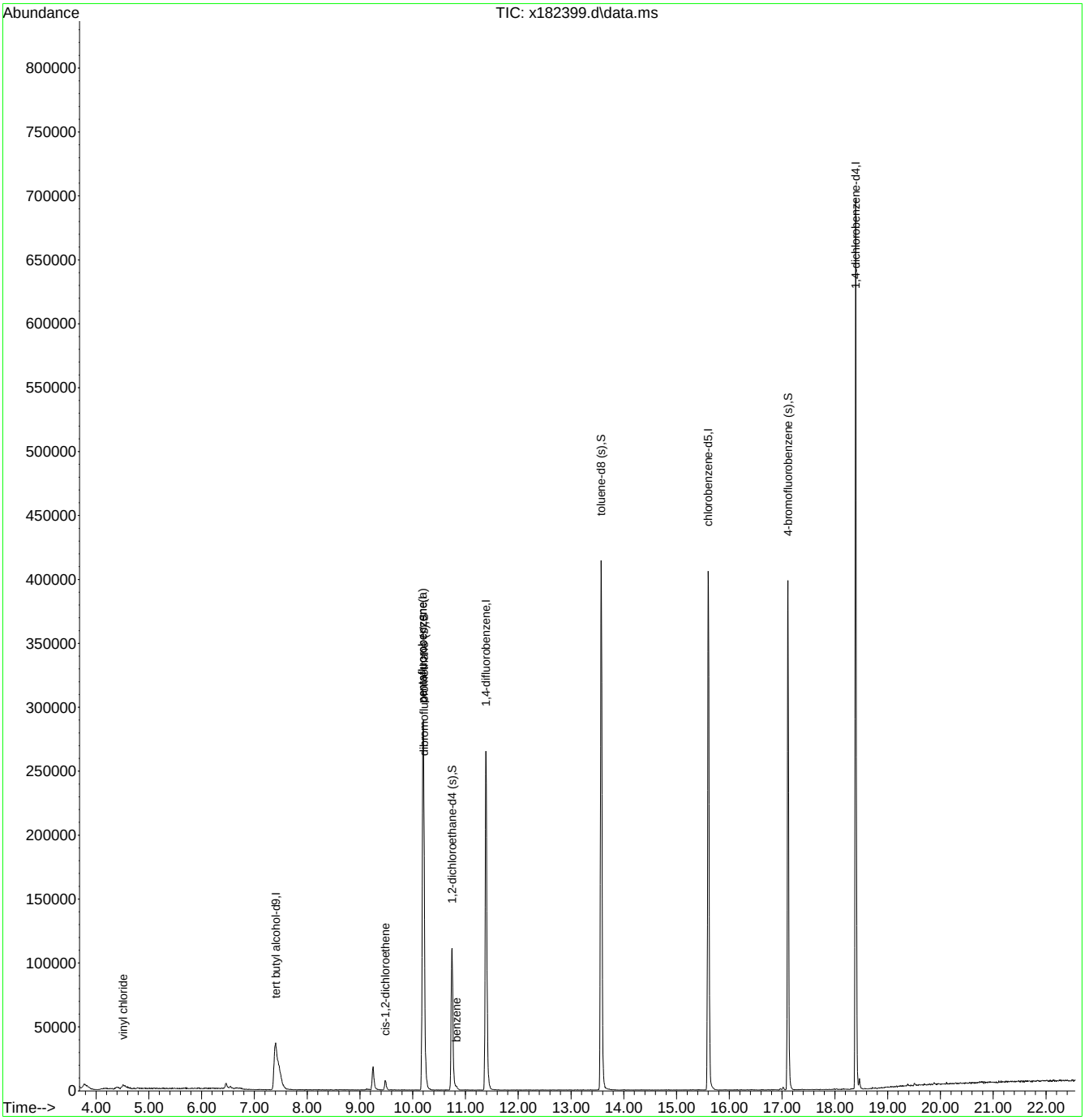
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.404	65	133507	500.00	ug/L	0.00
5) pentafluorobenzene	10.191	168	202847	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	273870	50.00	ug/L	0.00
74) chlorobenzene-d5	15.599	117	273092	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.392	152	181382	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.191	168	202847	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	89506	54.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.46%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	93909	51.98	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.96%			
75) toluene-d8 (s)	13.570	98	332829	50.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.68%			
98) 4-bromofluorobenzene (s)	17.111	95	137341	46.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.44%			
Target Compounds						Qvalue
9) vinyl chloride	4.511	62	8504	1.32	ug/L	87
37) cis-1,2-dichloroethene	9.480	96	4498	2.47	ug/L	86
58) benzene	10.829	78	2686	0.42	ug/L	84

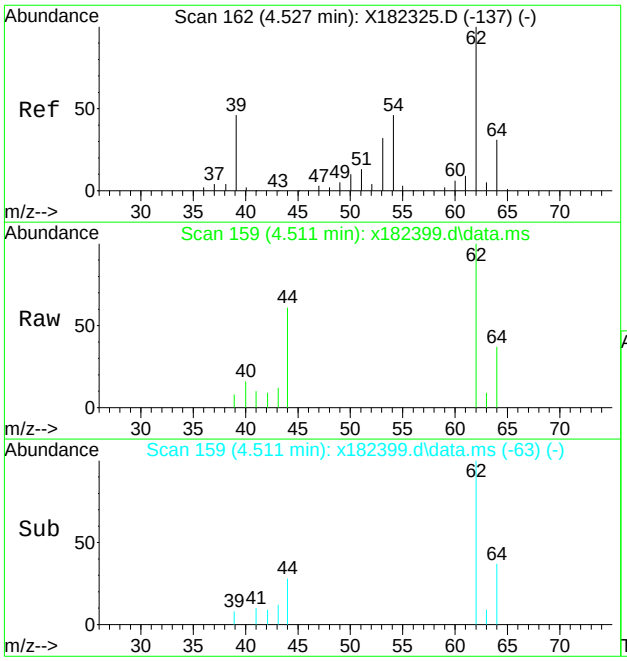
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182399.d
Acq On : 26 Jun 2019 10:26 am
Operator : jessicap
Sample : JC90273-2 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 21:54:12 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

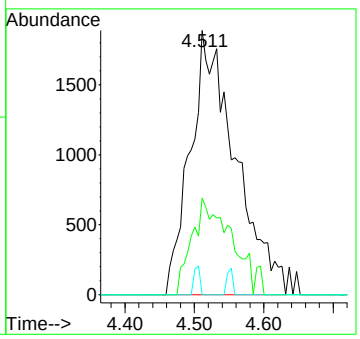


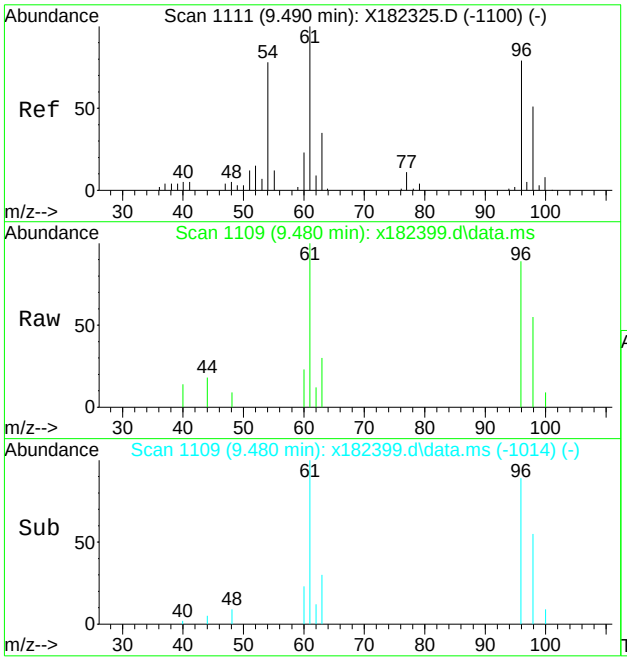


#9
vinyl chloride
Concen: 1.32 ug/L
RT: 4.511 min Scan# 159
Delta R.T. -0.000 min
Lab File: x182399.d
Acq: 26 Jun 2019 10:26 am

Tgt Ion: 62 Resp: 8504

Ion	Ratio	Lower	Upper
62	100		
64	36.6	1.1	61.1
61	0.0	0.0	38.3

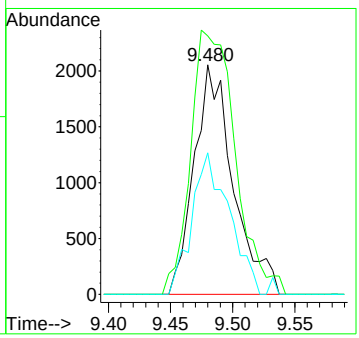


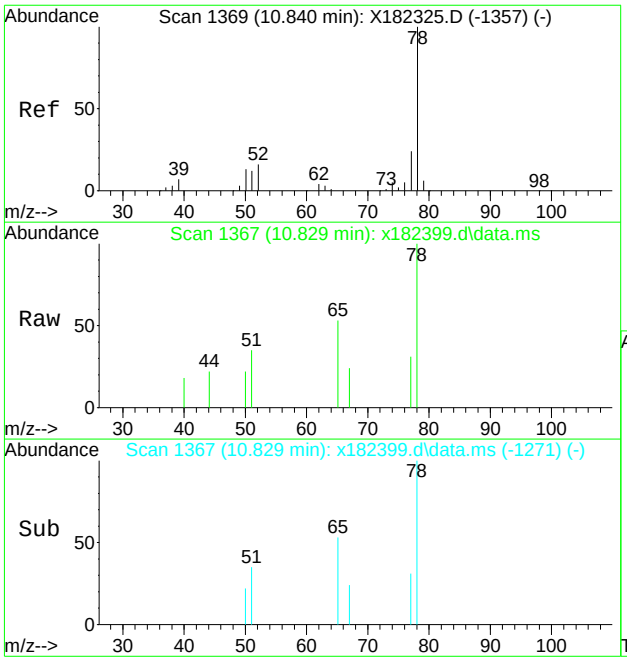


#37
cis-1,2-dichloroethene
Concen: 2.47 ug/L
RT: 9.480 min Scan# 1109
Delta R.T. -0.005 min
Lab File: x182399.d
Acq: 26 Jun 2019 10:26 am

Tgt Ion: 96 Resp: 4498

Ion	Ratio	Lower	Upper
96	100		
61	112.6	106.1	166.1
98	61.8	32.7	92.7

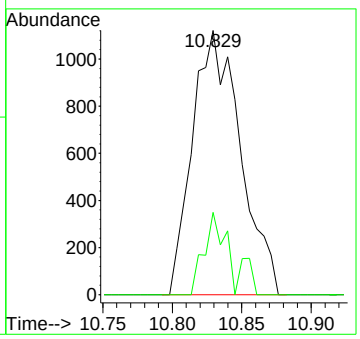




#58
benzene
Concen: 0.42 ug/L
RT: 10.829 min Scan# 1367
Delta R.T. 0.000 min
Lab File: x182399.d
Acq: 26 Jun 2019 10:26 am

Tgt Ion: 78 Resp: 2686

Ion	Ratio	Lower	Upper
78	100		
77	31.1	0.0	53.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182400.d
Acq On : 26 Jun 2019 10:55 am
Operator : jessicap
Sample : JC90273-3 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 21:57:05 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

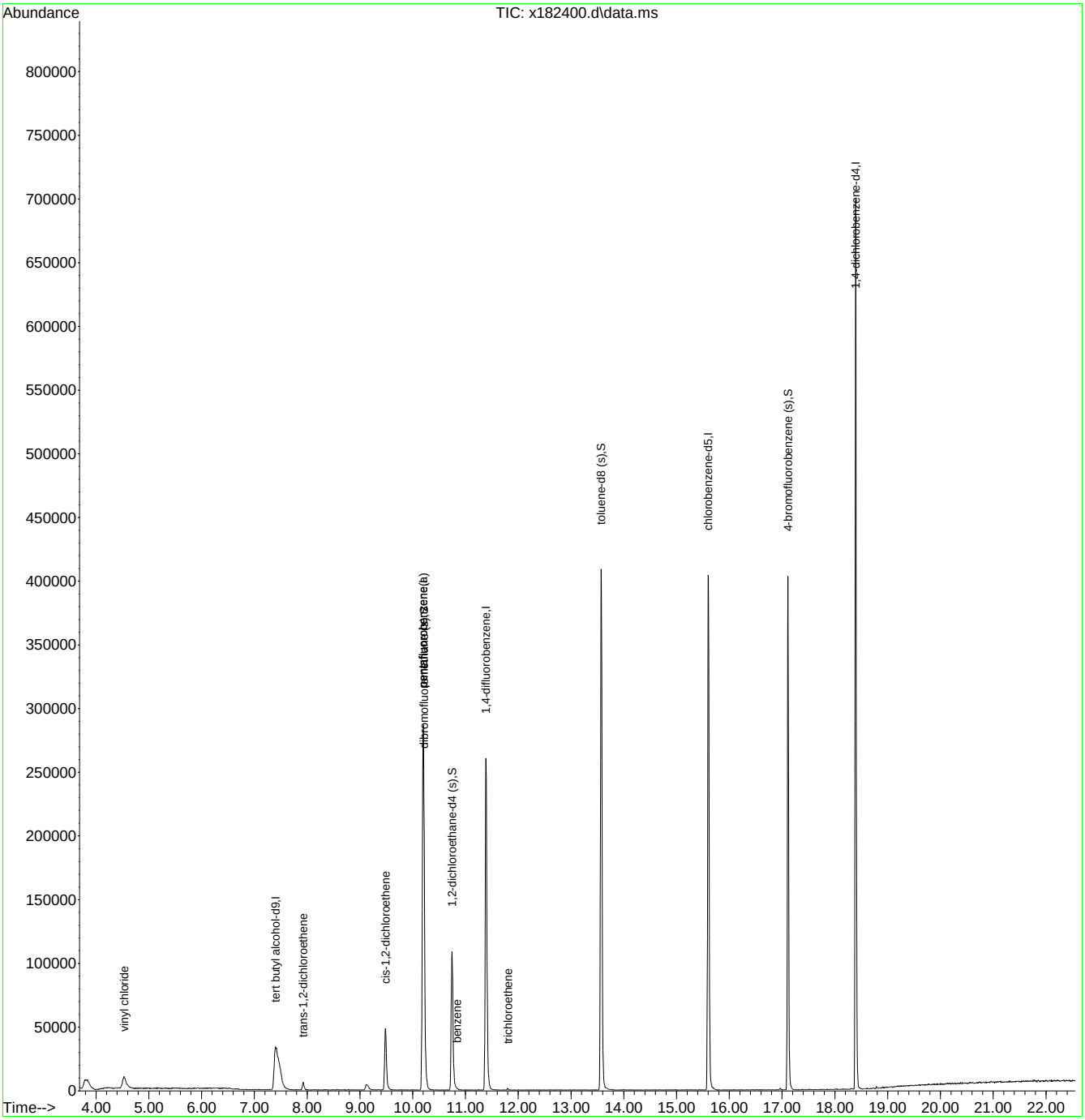
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.398	65	139805	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	200918	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	273692	50.00	ug/L	0.00
74) chlorobenzene-d5	15.599	117	273302	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.392	152	183942	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	200918	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	90605	55.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.84%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	93570	51.83	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.66%			
75) toluene-d8 (s)	13.570	98	331560	50.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.22%			
98) 4-bromofluorobenzene (s)	17.111	95	136161	45.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.36%			
Target Compounds						Qvalue
9) vinyl chloride	4.532	62	26210	4.11	ug/L	99
26) trans-1,2-dichloroethene	7.927	96	3487	2.23	ug/L #	70
37) cis-1,2-dichloroethene	9.485	96	28699	15.92	ug/L	93
58) benzene	10.840	78	1373	0.22	ug/L	81
62) trichloroethene	11.802	130	465	0.28	ug/L #	79

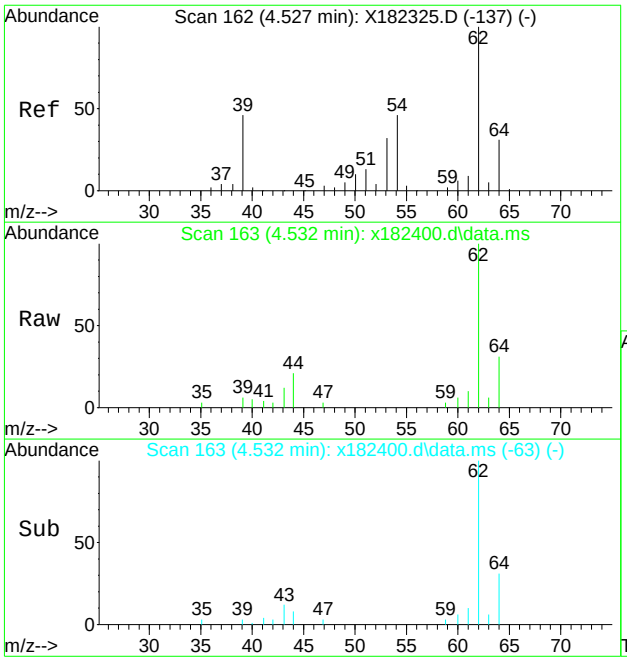
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182400.d
Acq On : 26 Jun 2019 10:55 am
Operator : jessicap
Sample : JC90273-3 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 21:57:05 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

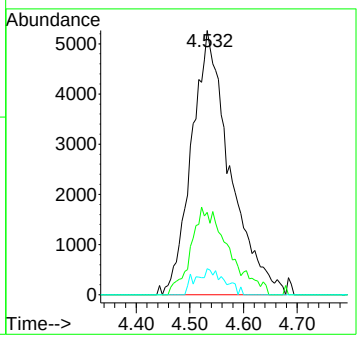


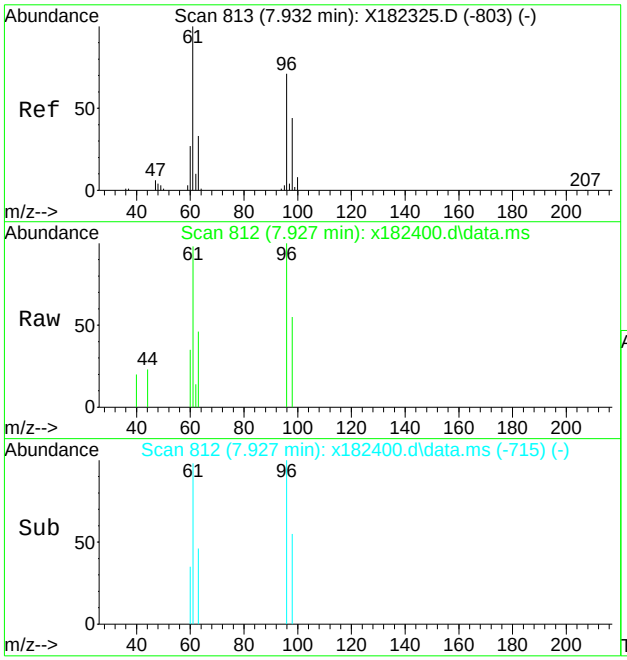


#9
vinyl chloride
Concen: 4.11 ug/L
RT: 4.532 min Scan# 163
Delta R.T. 0.021 min
Lab File: x182400.d
Acq: 26 Jun 2019 10:55 am

Tgt Ion: 62 Resp: 26210

Ion	Ratio	Lower	Upper
62	100		
64	31.2	1.1	61.1
61	9.9	0.0	38.3

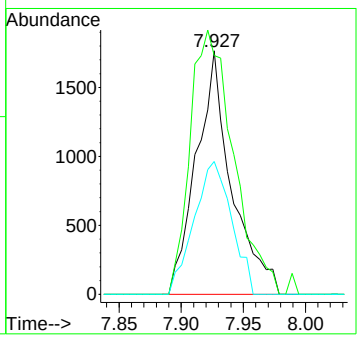


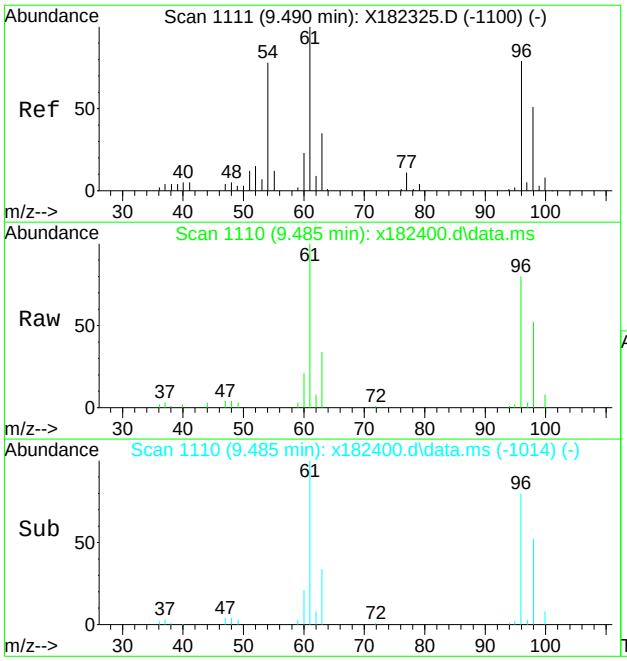


#26
trans-1,2-dichloroethene
Concen: 2.23 ug/L
RT: 7.927 min Scan# 812
Delta R.T. 0.005 min
Lab File: x182400.d
Acq: 26 Jun 2019 10:55 am

Tgt Ion: 96 Resp: 3487

Ion	Ratio	Lower	Upper
96	100		
61	98.1	116.4	176.4#
98	54.6	33.8	93.8

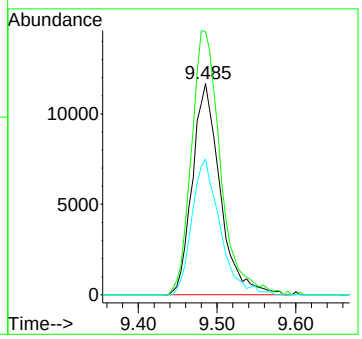


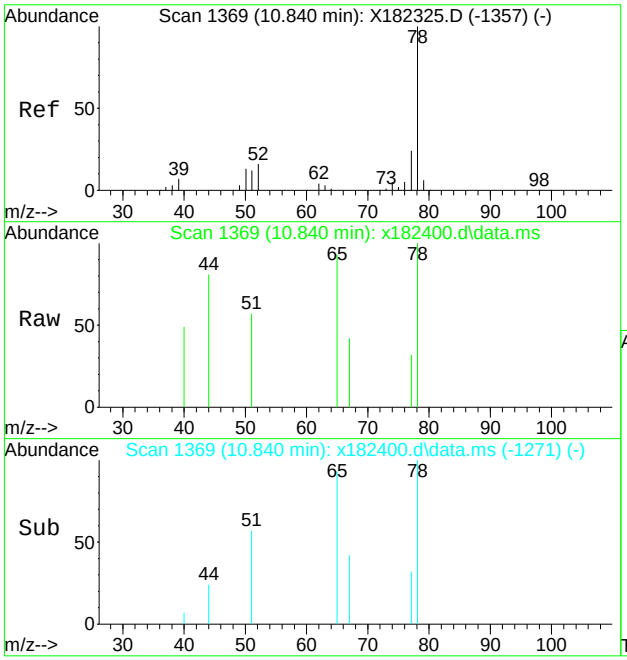


#37
cis-1,2-dichloroethene
Concen: 15.92 ug/L
RT: 9.485 min Scan# 1110
Delta R.T. 0.000 min
Lab File: x182400.d
Acq: 26 Jun 2019 10:55 am

Tgt Ion: 96 Resp: 28699

Ion	Ratio	Lower	Upper
96	100		
61	124.7	106.1	166.1
98	64.4	32.7	92.7

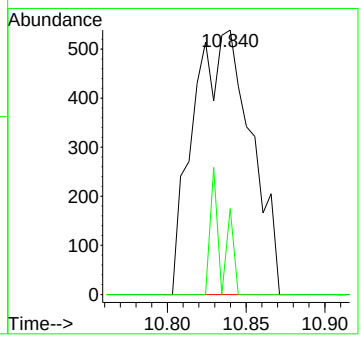


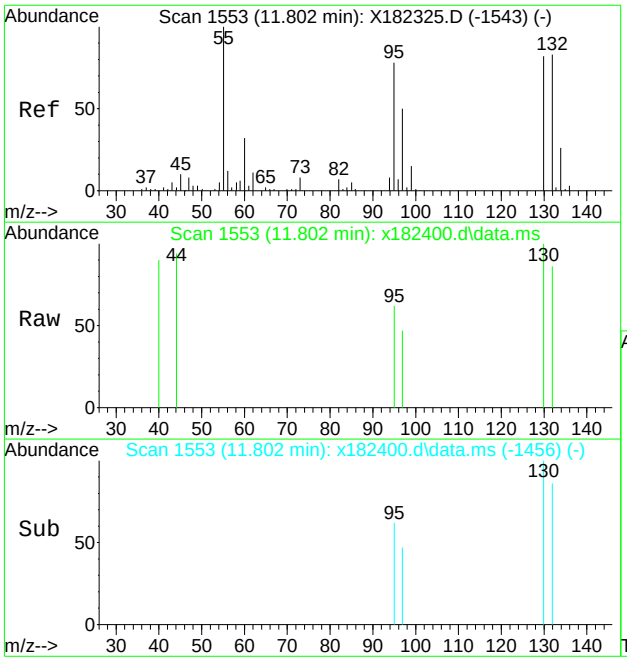


#58
benzene
Concen: 0.22 ug/L
RT: 10.840 min Scan# 1369
Delta R.T. 0.011 min
Lab File: x182400.d
Acq: 26 Jun 2019 10:55 am

Tgt Ion: 78 Resp: 1373

Ion	Ratio	Lower	Upper
78	100		
77	32.5	0.0	53.2

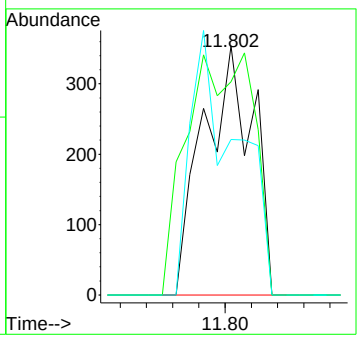




#62
trichloroethene
Concen: 0.28 ug/L
RT: 11.802 min Scan# 1553
Delta R.T. 0.005 min
Lab File: x182400.d
Acq: 26 Jun 2019 10:55 am

Tgt Ion:130 Resp: 465

Ion	Ratio	Lower	Upper
130	100		
132	85.6	65.8	125.8
95	62.4	63.5	123.5#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182401.d
Acq On : 26 Jun 2019 11:23 am
Operator : jessicap
Sample : JC90273-4 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:48:12 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

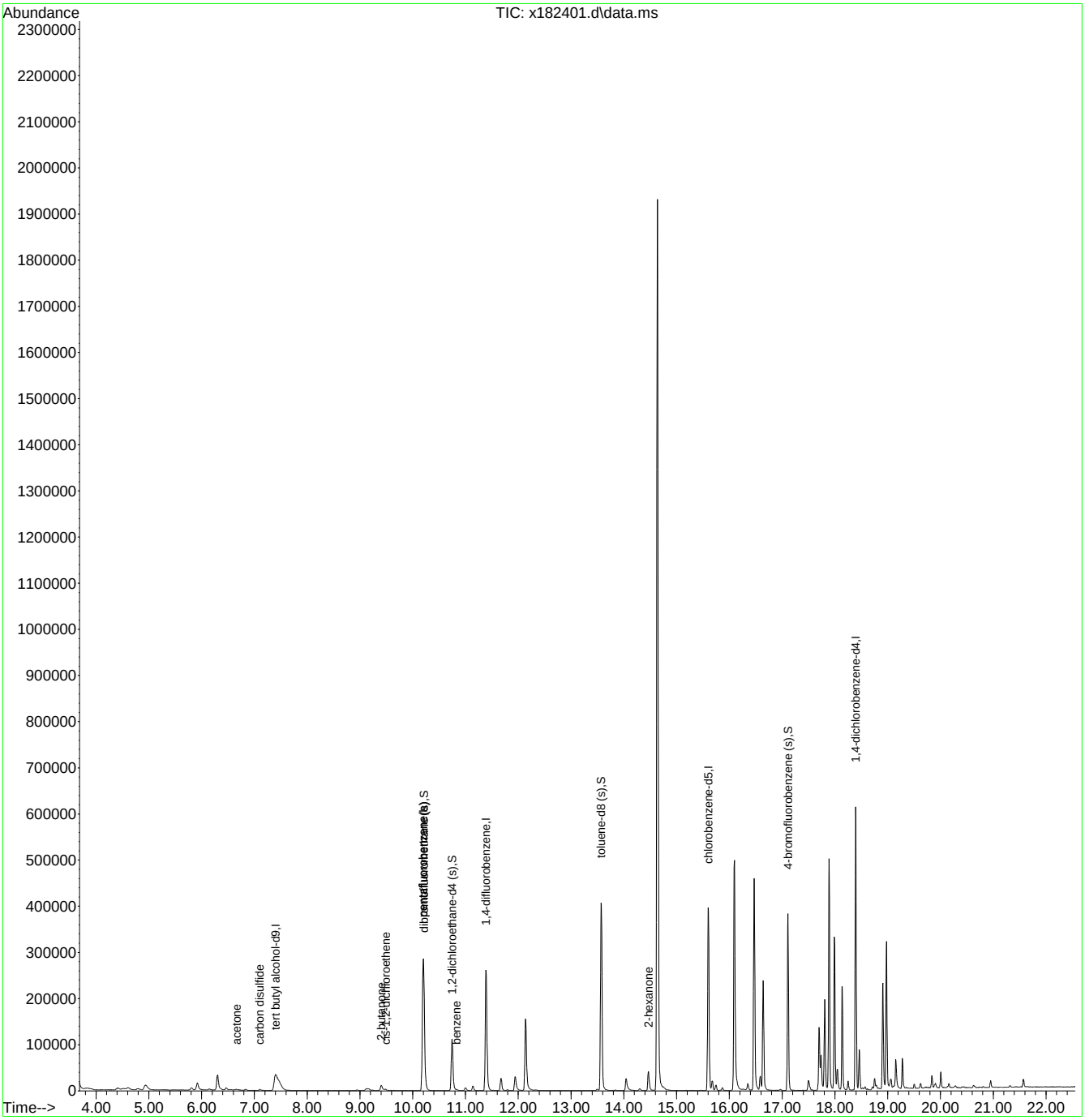
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.398	65	137222	500.00	ug/L	0.00
5) pentafluorobenzene	10.196	168	203107	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	272505	50.00	ug/L	0.00
74) chlorobenzene-d5	15.604	117	262036	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.392	152	156505	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	203107	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	91158	55.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.32%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	92987	51.73	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.46%			
75) toluene-d8 (s)	13.570	98	333520	53.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.18%			
98) 4-bromofluorobenzene (s)	17.111	95	124709	48.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.28%			
Target Compounds						Qvalue
19) acetone	6.661	43	3345	6.26	ug/L	95
22) carbon disulfide	7.100	76	3890	0.75	ug/L	90
29) 2-butanone	9.401	72	5676	31.03	ug/L #	84
37) cis-1,2-dichloroethene	9.490	96	1124	0.62	ug/L #	72
58) benzene	10.829	78	2354	0.37	ug/L	100
82) 2-hexanone	14.469	58	18619	29.56	ug/L	93

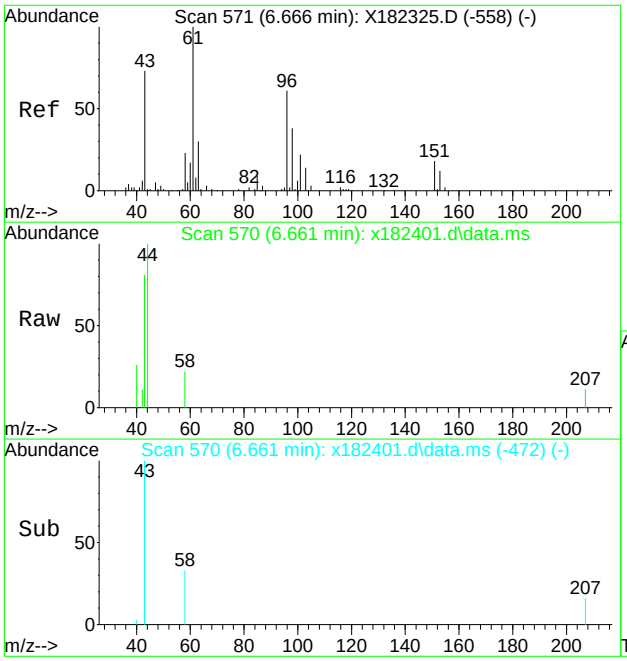
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182401.d
Acq On : 26 Jun 2019 11:23 am
Operator : jessicap
Sample : JC90273-4 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:48:12 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

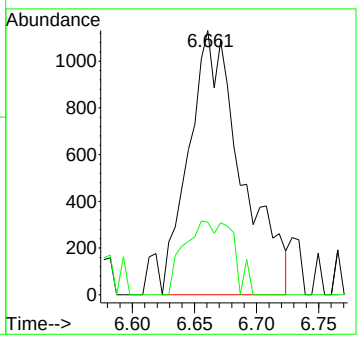


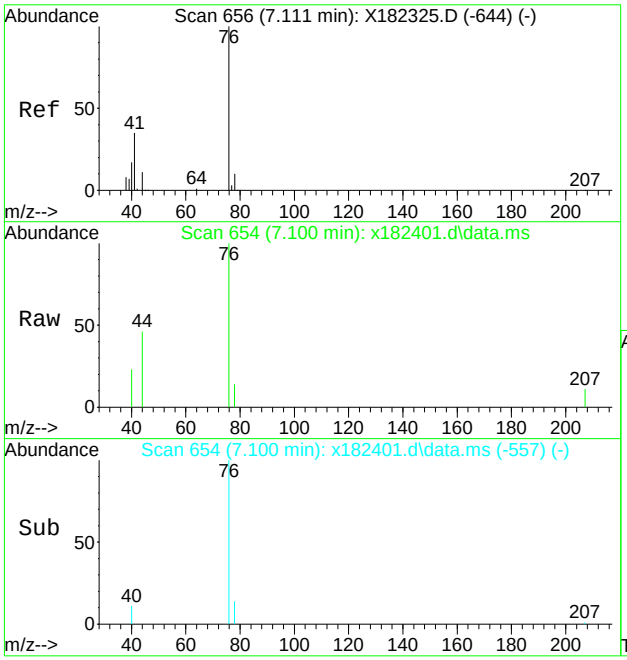


#19
acetone
Concen: 6.26 ug/L
RT: 6.661 min Scan# 570
Delta R.T. 0.010 min
Lab File: x182401.d
Acq: 26 Jun 2019 11:23 am

Tgt Ion: 43 Resp: 3345

Ion	Ratio	Lower	Upper
43	100		
58	27.5	0.3	60.3

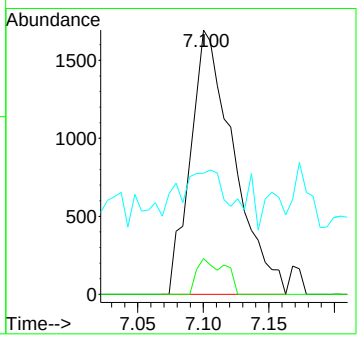


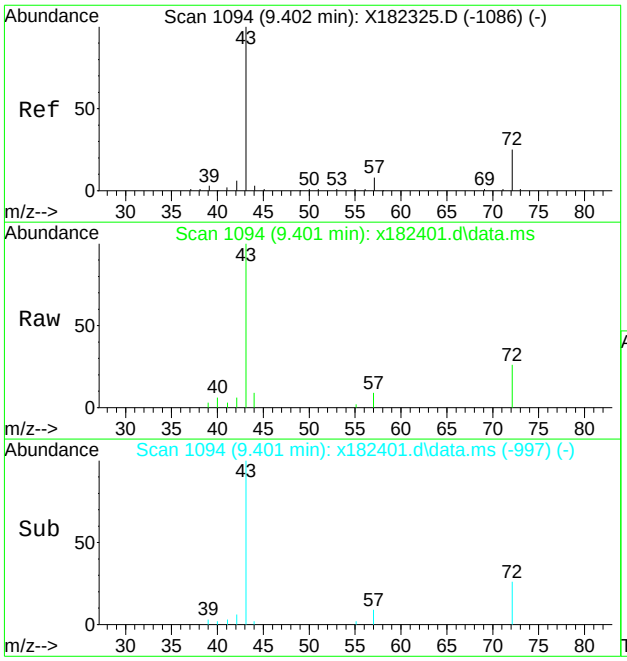


#22
carbon disulfide
Concen: 0.75 ug/L
RT: 7.100 min Scan# 654
Delta R.T. 0.005 min
Lab File: x182401.d
Acq: 26 Jun 2019 11:23 am

Tgt Ion: 76 Resp: 3890

Ion	Ratio	Lower	Upper
76	100		
78	13.6	0.0	39.0
44	16.2	0.0	43.3

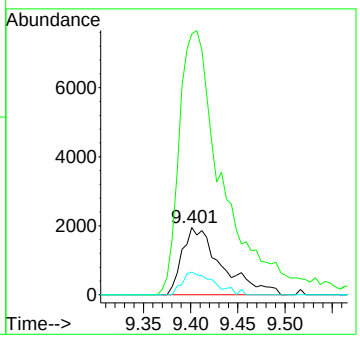


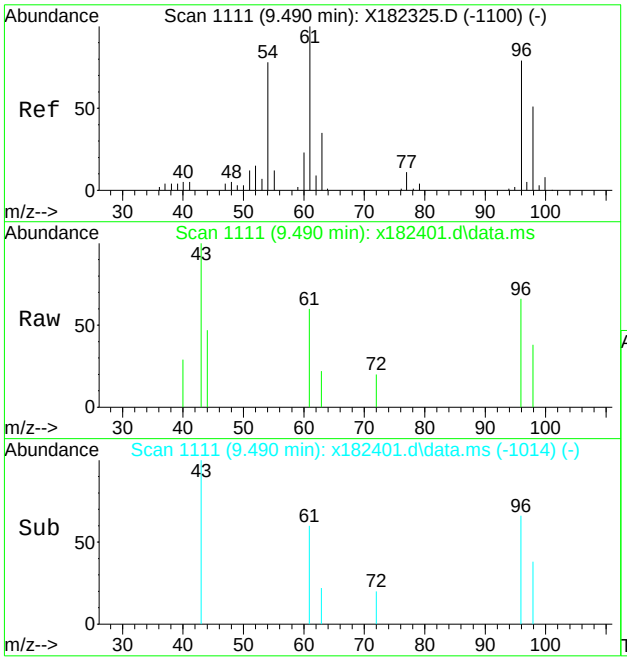


#29
2-butanone
Concen: 31.03 ug/L
RT: 9.401 min Scan# 1094
Delta R.T. 0.005 min
Lab File: x182401.d
Acq: 26 Jun 2019 11:23 am

Tgt Ion: 72 Resp: 5676

Ion	Ratio	Lower	Upper
72	100		
43	379.4	389.8	449.8#
57	33.8	1.3	61.3

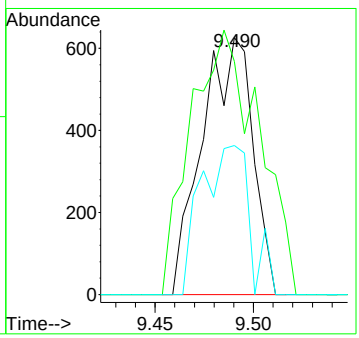


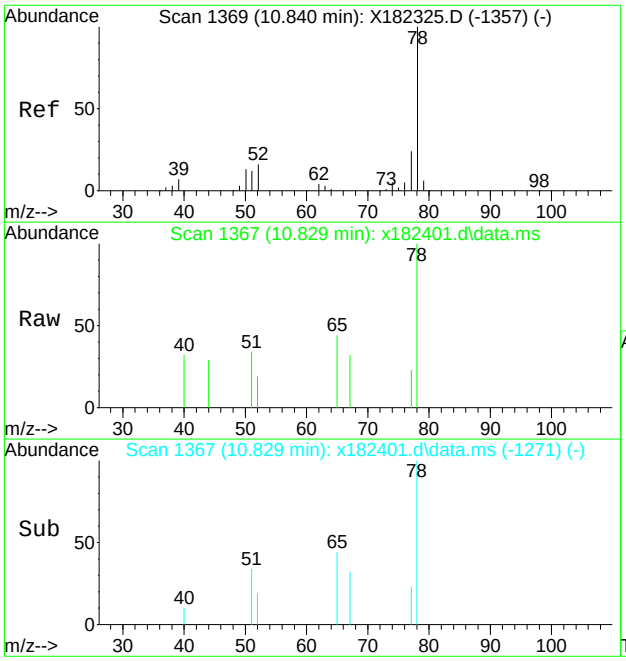


#37
cis-1,2-dichloroethene
Concen: 0.62 ug/L
RT: 9.490 min Scan# 1111
Delta R.T. 0.005 min
Lab File: x182401.d
Acq: 26 Jun 2019 11:23 am

Tgt Ion: 96 Resp: 1124

Ion	Ratio	Lower	Upper
96	100		
61	90.7	106.1	166.1#
98	58.0	32.7	92.7

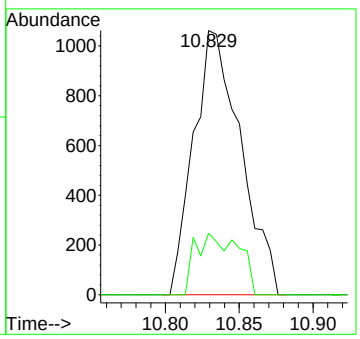


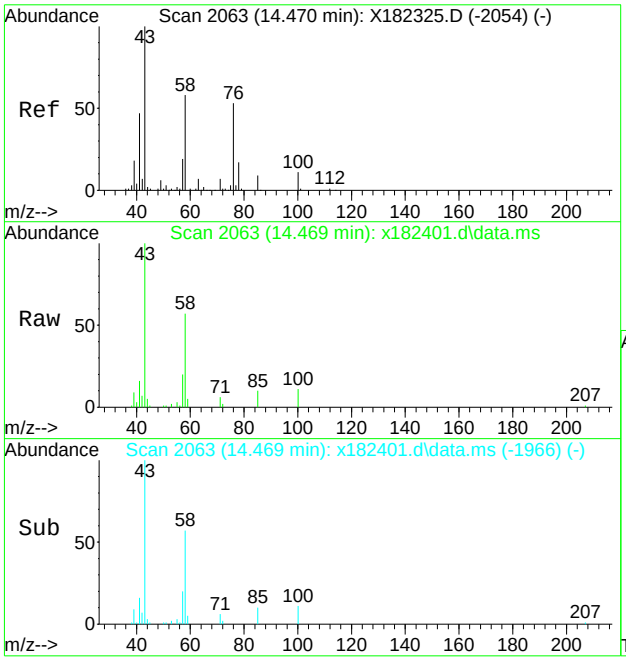


#58
benzene
Concen: 0.37 ug/L
RT: 10.829 min Scan# 1367
Delta R.T. 0.000 min
Lab File: x182401.d
Acq: 26 Jun 2019 11:23 am

Tgt Ion: 78 Resp: 2354

Ion	Ratio	Lower	Upper
78	100		
77	23.3	0.0	53.2

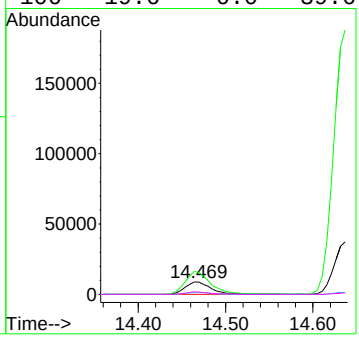




#82
2-hexanone
Concen: 29.56 ug/L
RT: 14.469 min Scan# 2063
Delta R.T. 0.005 min
Lab File: x182401.d
Acq: 26 Jun 2019 11:23 am

Tgt Ion: 58 Resp: 18619

Ion	Ratio	Lower	Upper
58	100		
43	175.0	166.2	206.2
85	16.9	0.0	34.9
100	19.6	0.0	39.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182404.d
Acq On : 26 Jun 2019 12:50 pm
Operator : jessicap
Sample : JC90273-5 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:09:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

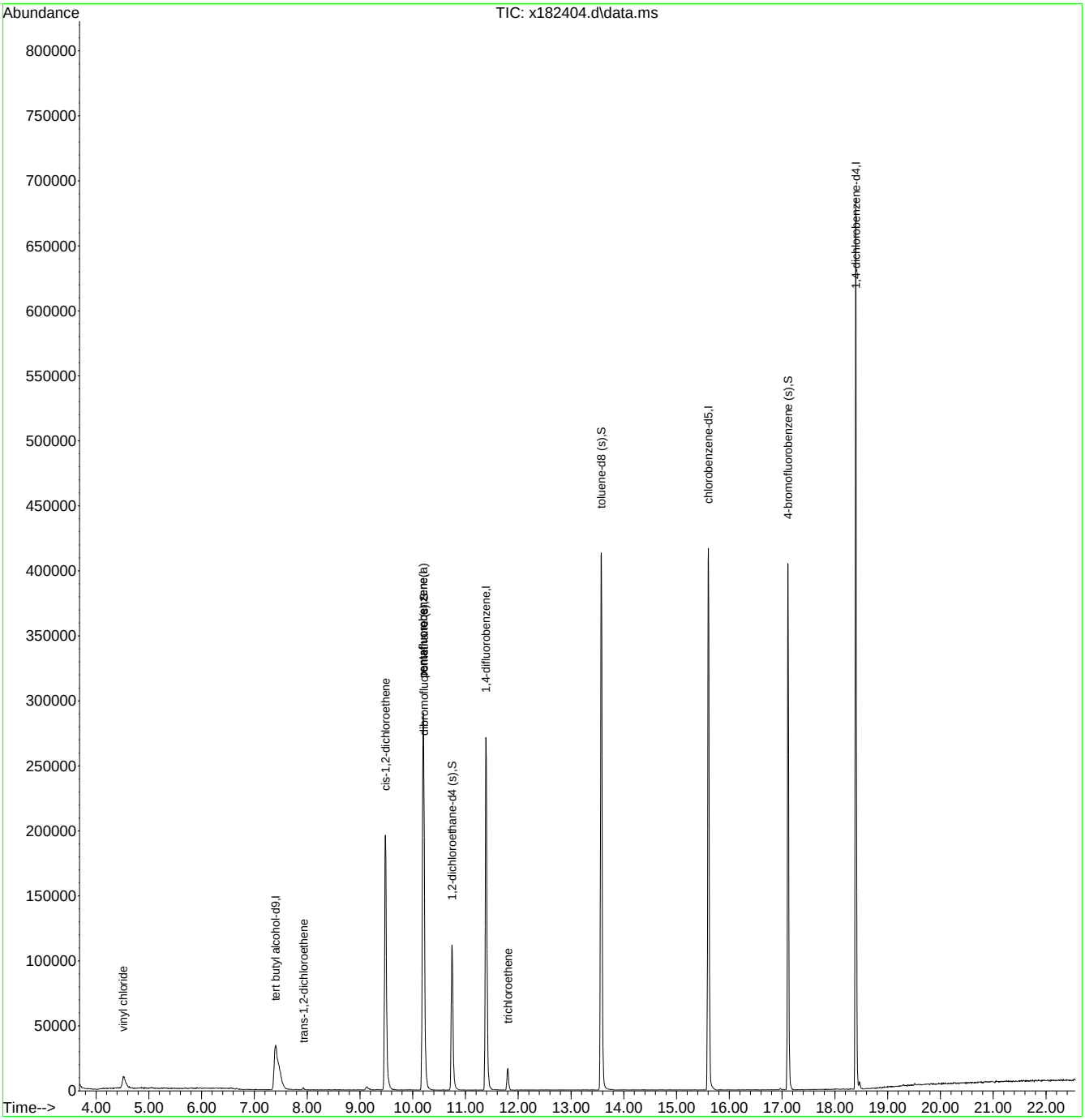
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.398	65	128930	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	200493	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	277167	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	274271	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	177854	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	200493	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	89628	54.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.88%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	95000	51.96	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.92%			
75) toluene-d8 (s)	13.575	98	332166	50.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.04%			
98) 4-bromofluorobenzene (s)	17.111	95	136602	46.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.76%			
Target Compounds						Qvalue
9) vinyl chloride	4.516	62	28555	4.48	ug/L	98
26) trans-1,2-dichloroethene	7.932	96	870	0.56	ug/L #	63
37) cis-1,2-dichloroethene	9.485	96	114620	63.73	ug/L	94
62) trichloroethene	11.802	130	7399	4.38	ug/L	96

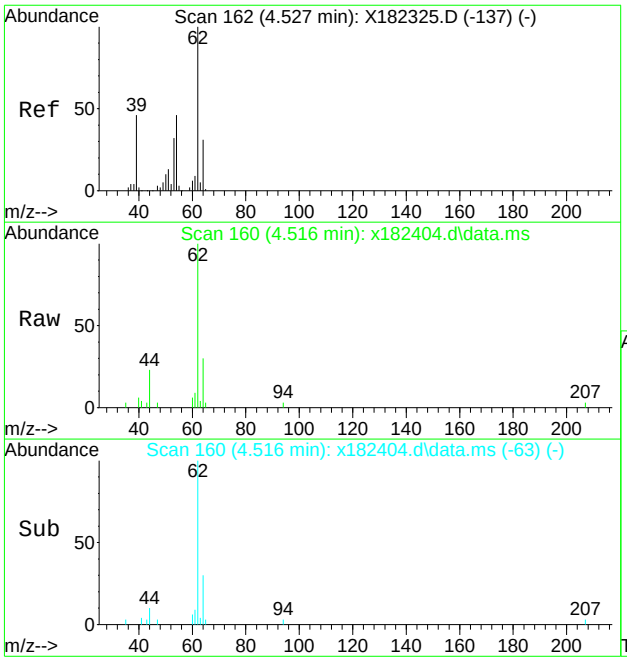
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182404.d
Acq On : 26 Jun 2019 12:50 pm
Operator : jessicap
Sample : JC90273-5 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:09:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

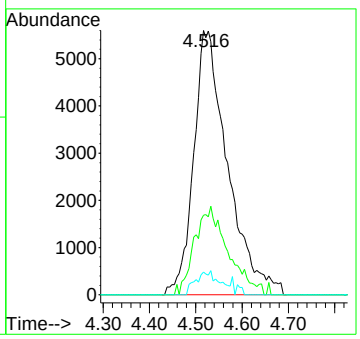


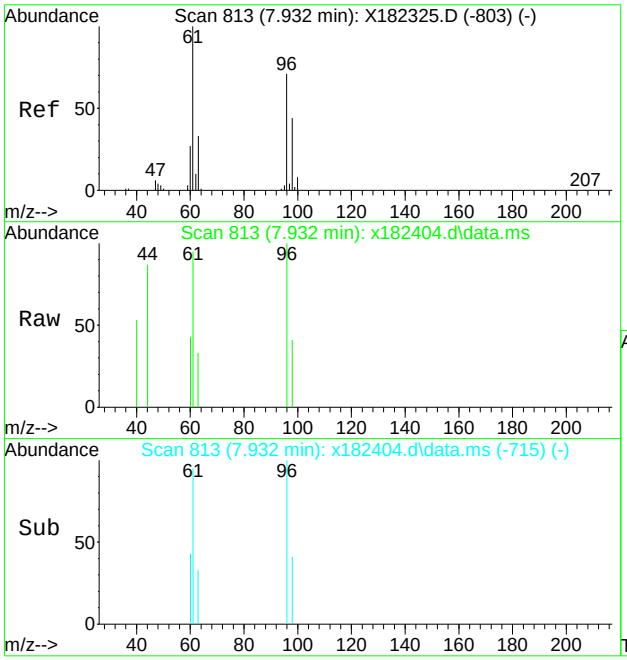


#9
vinyl chloride
Concen: 4.48 ug/L
RT: 4.516 min Scan# 160
Delta R.T. 0.005 min
Lab File: x182404.d
Acq: 26 Jun 2019 12:50 pm

Tgt Ion: 62 Resp: 28555

Ion	Ratio	Lower	Upper
62	100		
64	30.1	1.1	61.1
61	8.6	0.0	38.3

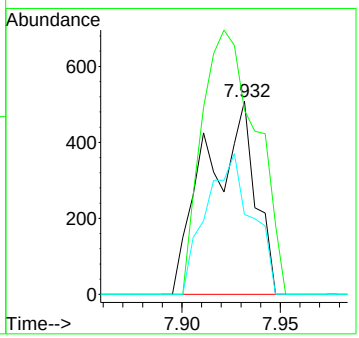


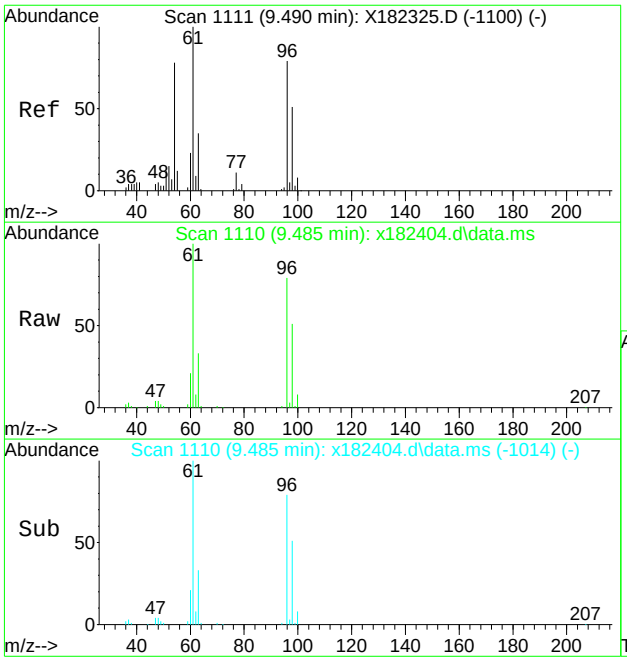


#26
trans-1,2-dichloroethene
Concen: 0.56 ug/L
RT: 7.932 min Scan# 813
Delta R.T. 0.010 min
Lab File: x182404.d
Acq: 26 Jun 2019 12:50 pm

Tgt Ion: 96 Resp: 870

Ion	Ratio	Lower	Upper
96	100		
61	95.5	116.4	176.4#
98	41.3	33.8	93.8

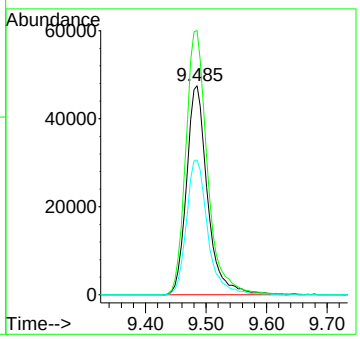


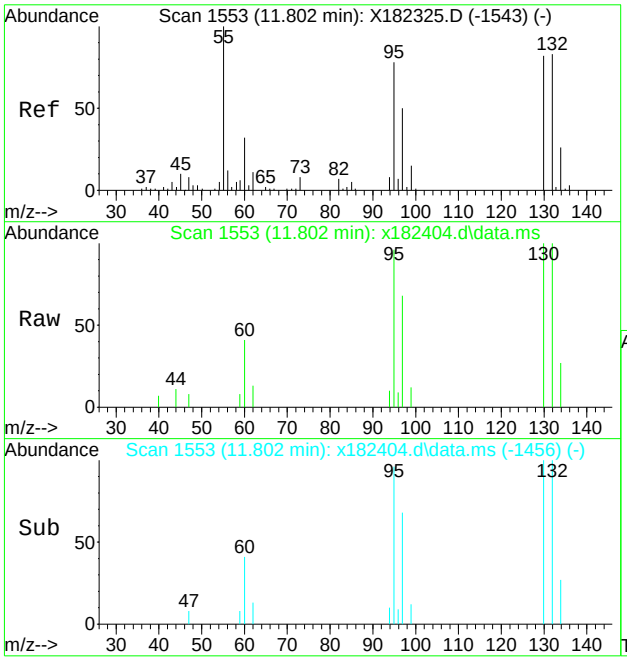


#37
cis-1,2-dichloroethene
Concen: 63.73 ug/L
RT: 9.485 min Scan# 1110
Delta R.T. 0.000 min
Lab File: x182404.d
Acq: 26 Jun 2019 12:50 pm

Tgt Ion: 96 Resp: 114620

Ion	Ratio	Lower	Upper
96	100		
61	126.5	106.1	166.1
98	64.5	32.7	92.7

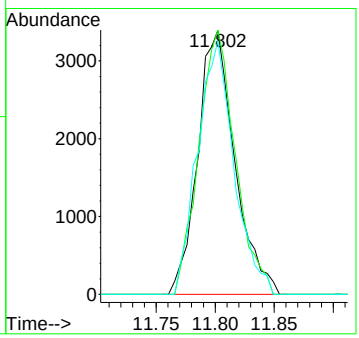




#62
trichloroethene
Concen: 4.38 ug/L
RT: 11.802 min Scan# 1553
Delta R.T. 0.005 min
Lab File: x182404.d
Acq: 26 Jun 2019 12:50 pm

Tgt Ion:130 Resp: 7399

Ion	Ratio	Lower	Upper
130	100		
132	100.2	65.8	125.8
95	96.0	63.5	123.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182402.d
Acq On : 26 Jun 2019 11:52 am
Operator : jessicap
Sample : JC90273-6 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:06:58 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

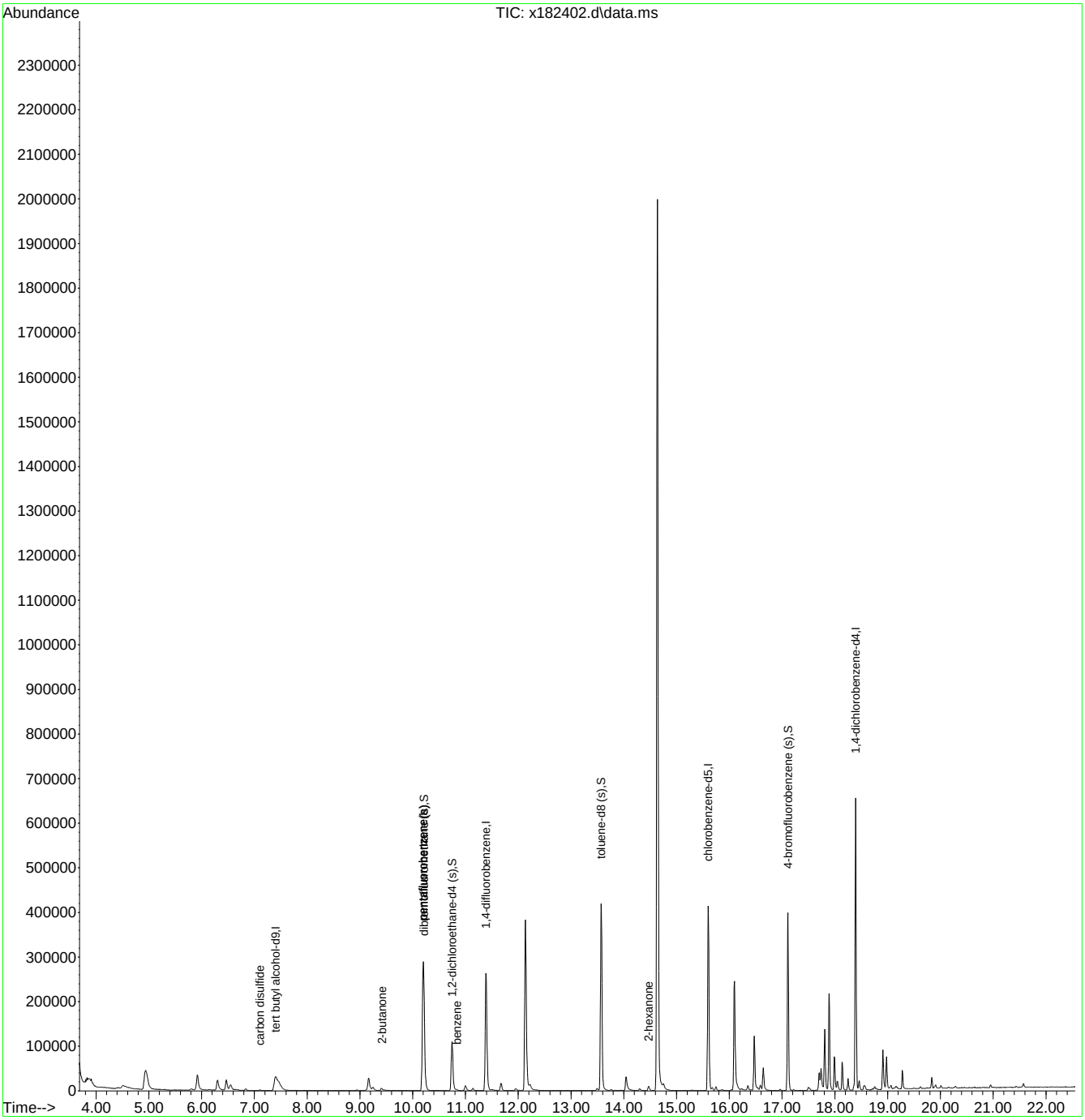
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.398	65	123224	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	202922	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	273422	50.00	ug/L	0.00
74) chlorobenzene-d5	15.599	117	266143	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.392	152	166930	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	203203	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	90458	54.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.58%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	91648	50.81	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.62%			
75) toluene-d8 (s)	13.570	98	335278	52.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.10%			
98) 4-bromofluorobenzene (s)	17.111	95	132242	48.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.72%			
Target Compounds						Qvalue
22) carbon disulfide	7.105	76	2157	0.41	ug/L	77
29) 2-butanone	9.417	72	2530	13.84	ug/L #	48
58) benzene	10.840	78	2520	0.40	ug/L	93
82) 2-hexanone	14.470	58	3804	5.95	ug/L	92

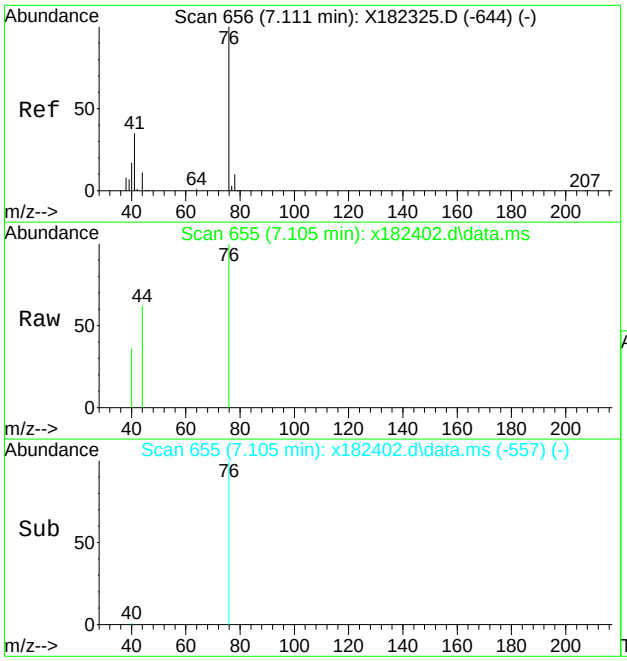
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182402.d
Acq On : 26 Jun 2019 11:52 am
Operator : jessicap
Sample : JC90273-6 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:06:58 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

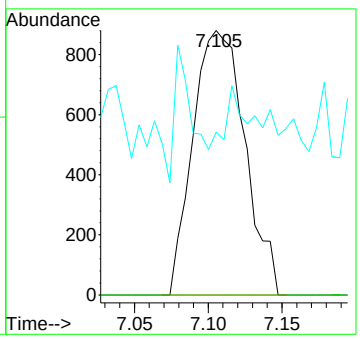


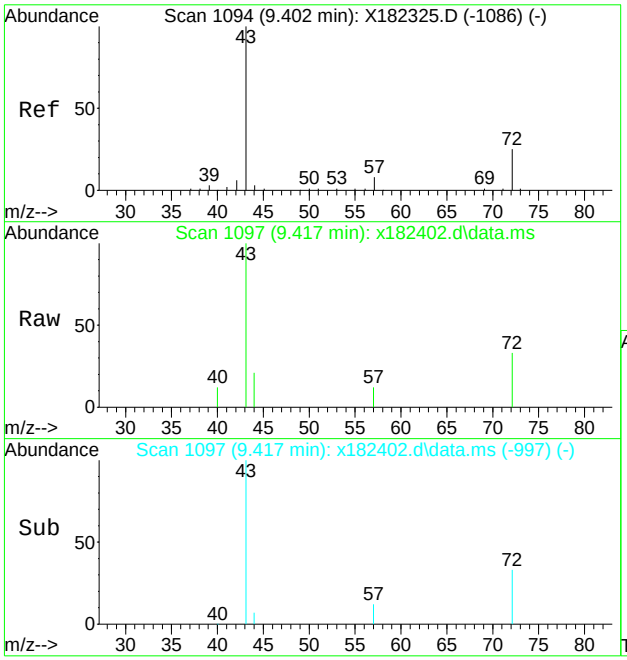


#22
carbon disulfide
Concen: 0.41 ug/L
RT: 7.105 min Scan# 655
Delta R.T. 0.010 min
Lab File: x182402.d
Acq: 26 Jun 2019 11:52 am

Tgt Ion: 76 Resp: 2157

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	4.5	0.0	43.3

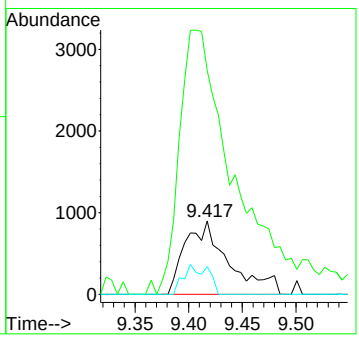


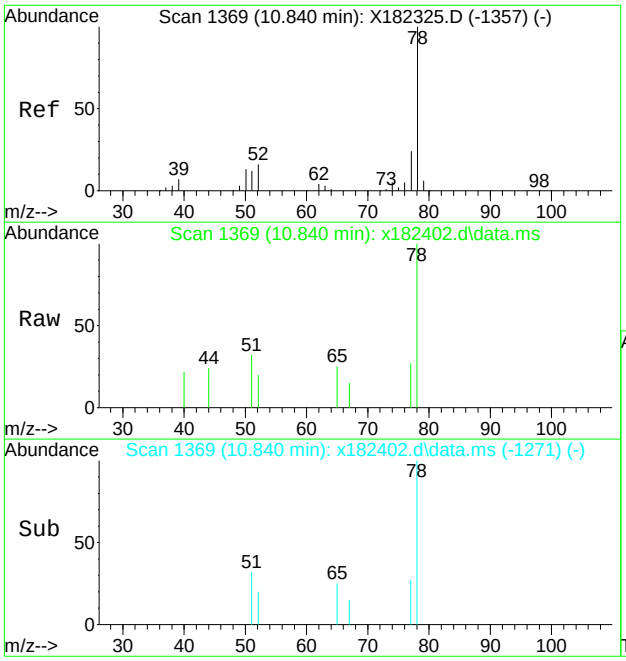


#29
2-butanone
Concen: 13.84 ug/L
RT: 9.417 min Scan# 1097
Delta R.T. 0.021 min
Lab File: x182402.d
Acq: 26 Jun 2019 11:52 am

Tgt Ion: 72 Resp: 2530

Ion	Ratio	Lower	Upper
72	100		
43	285.9	389.8	449.8#
57	37.8	1.3	61.3

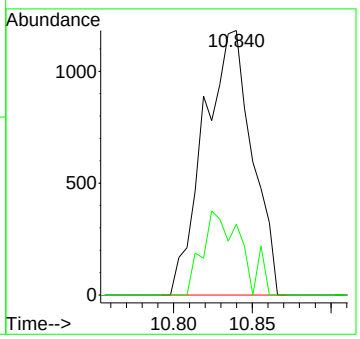


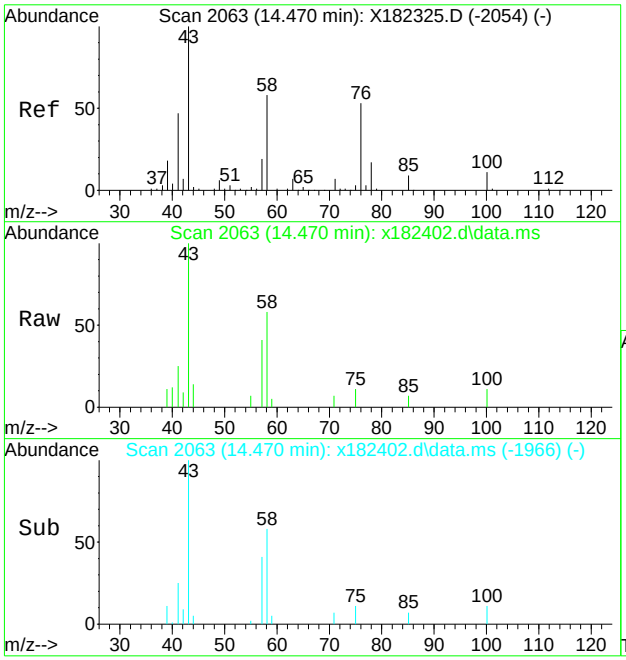


#58
benzene
Concen: 0.40 ug/L
RT: 10.840 min Scan# 1369
Delta R.T. 0.011 min
Lab File: x182402.d
Acq: 26 Jun 2019 11:52 am

Tgt Ion: 78 Resp: 2520

Ion	Ratio	Lower	Upper
78	100		
77	26.8	0.0	53.2

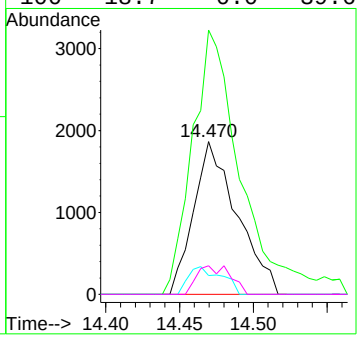




#82
2-hexanone
Concen: 5.95 ug/L
RT: 14.470 min Scan# 2063
Delta R.T. 0.006 min
Lab File: x182402.d
Acq: 26 Jun 2019 11:52 am

Tgt Ion: 58 Resp: 3804

Ion	Ratio	Lower	Upper
58	100		
43	173.0	166.2	206.2
85	12.4	0.0	34.9
100	18.7	0.0	39.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182405.d
Acq On : 26 Jun 2019 1:18 pm
Operator : jessicap
Sample : JC90273-7 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:11:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

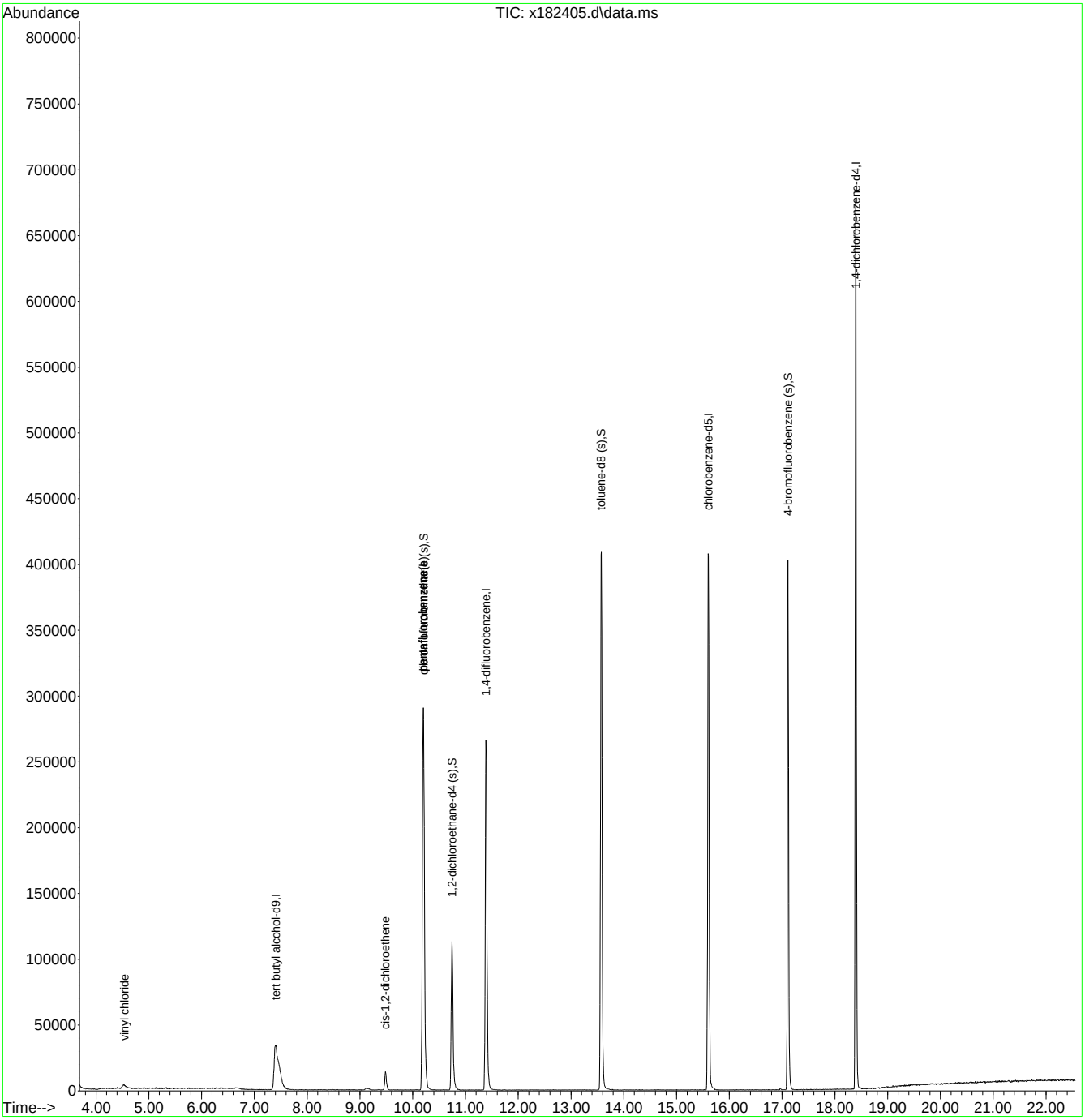
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	130913	500.00	ug/L	0.00
5) pentafluorobenzene	10.196	168	202880	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	274746	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	272725	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	180640	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	202880	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.207	113	92678	56.14	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.28%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	94638	52.22	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.44%			
75) toluene-d8 (s)	13.570	98	331649	50.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.46%			
98) 4-bromofluorobenzene (s)	17.111	95	135339	45.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.46%			
Target Compounds						Qvalue
9) vinyl chloride	4.537	62	10166	1.58	ug/L	94
37) cis-1,2-dichloroethene	9.480	96	8175	4.49	ug/L	86

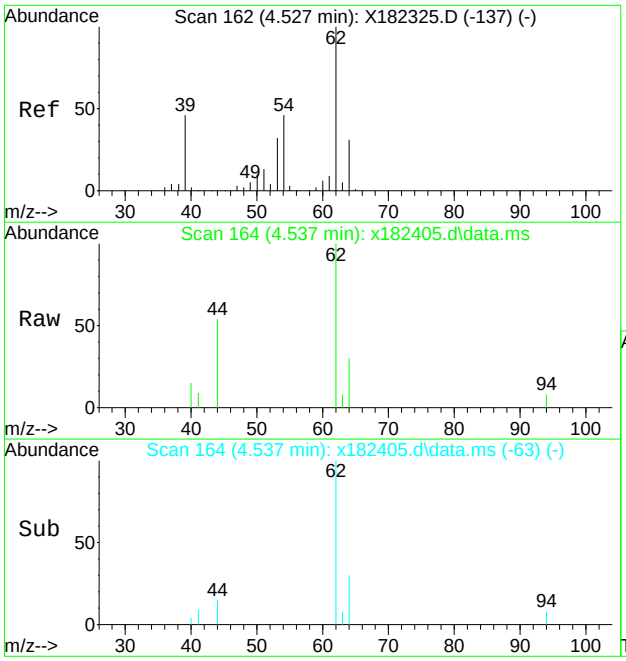
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182405.d
Acq On : 26 Jun 2019 1:18 pm
Operator : jessicap
Sample : JC90273-7 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:11:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

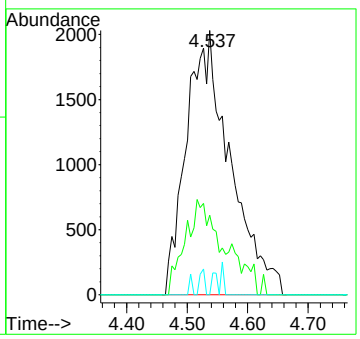


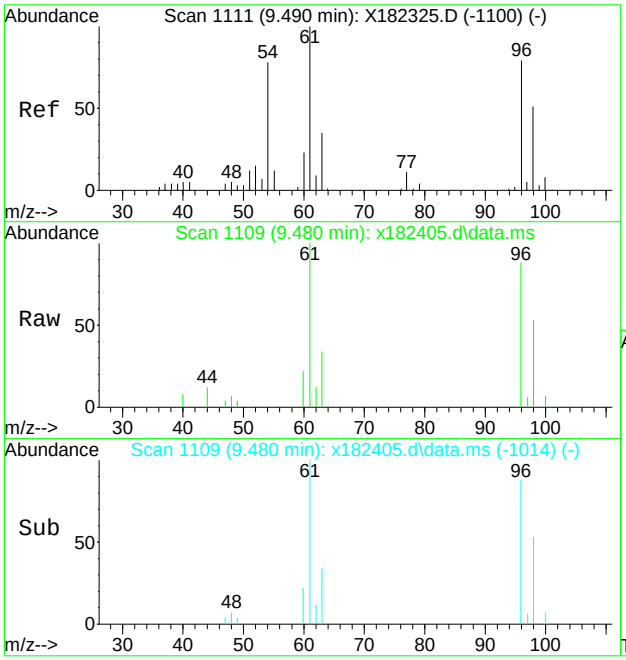


#9
vinyl chloride
Concen: 1.58 ug/L
RT: 4.537 min Scan# 164
Delta R.T. 0.026 min
Lab File: x182405.d
Acq: 26 Jun 2019 1:18 pm

Tgt Ion: 62 Resp: 10166

Ion	Ratio	Lower	Upper
62	100		
64	30.1	1.1	61.1
61	0.0	0.0	38.3

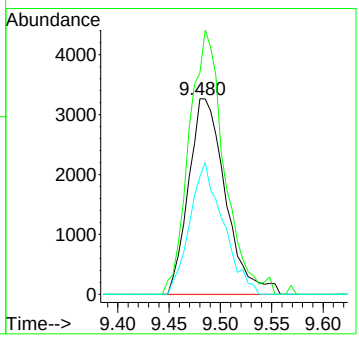




#37
cis-1,2-dichloroethene
Concen: 4.49 ug/L
RT: 9.480 min Scan# 1109
Delta R.T. -0.005 min
Lab File: x182405.d
Acq: 26 Jun 2019 1:18 pm

Tgt Ion: 96 Resp: 8175

Ion	Ratio	Lower	Upper
96	100		
61	113.1	106.1	166.1
98	60.1	32.7	92.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182406.d
Acq On : 26 Jun 2019 1:47 pm
Operator : jessicap
Sample : JC90273-8 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:12:06 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

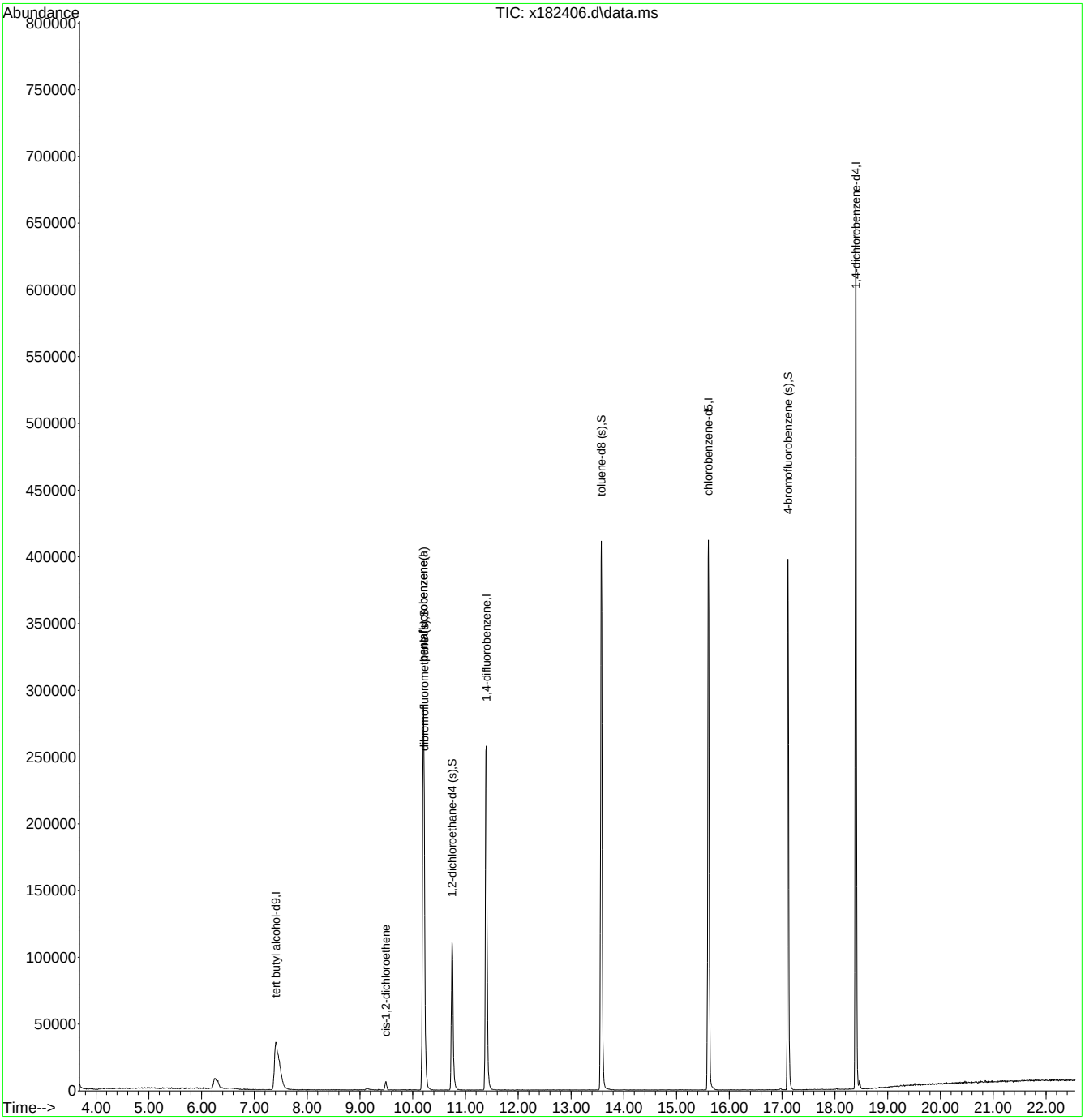
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.404	65	141782	500.00	ug/L	0.00
5) pentafluorobenzene	10.202	168	202217	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.394	114	272360	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	269627	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	179396	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.202	168	202217	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.217	113	92150	56.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.02%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	93305	51.93	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.86%			
75) toluene-d8 (s)	13.575	98	328884	50.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.76%			
98) 4-bromofluorobenzene (s)	17.111	95	134301	45.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.40%			
Target Compounds						Qvalue
37) cis-1,2-dichloroethene	9.490	96	3724	2.05	ug/L	81

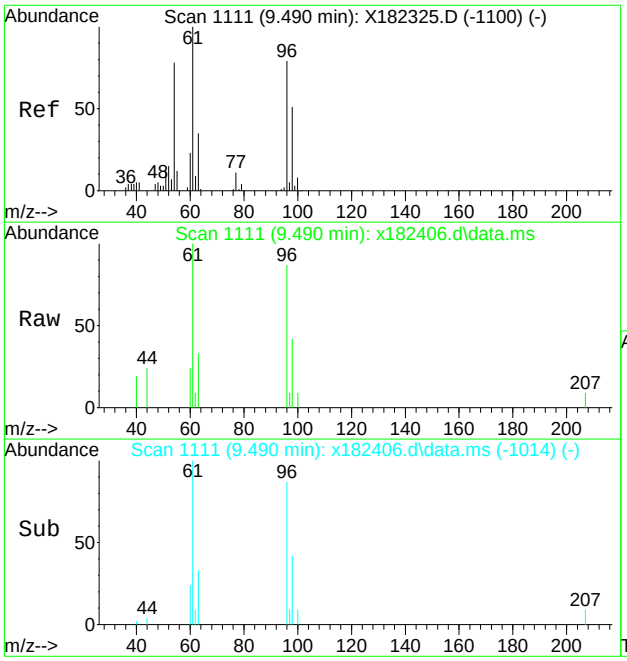
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182406.d
Acq On : 26 Jun 2019 1:47 pm
Operator : jessicap
Sample : JC90273-8 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:12:06 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

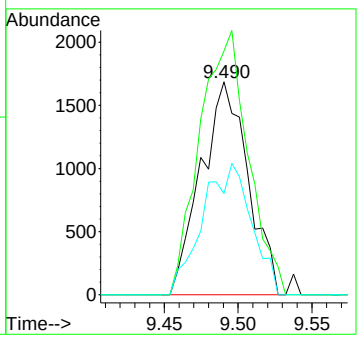




#37
cis-1,2-dichloroethene
Concen: 2.05 ug/L
RT: 9.490 min Scan# 1111
Delta R.T. 0.005 min
Lab File: x182406.d
Acq: 26 Jun 2019 1:47 pm

Tgt Ion: 96 Resp: 3724

Ion	Ratio	Lower	Upper
96	100		
61	114.4	106.1	166.1
98	47.5	32.7	92.7



7.1.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182410.d
Acq On : 26 Jun 2019 3:43 pm
Operator : jessicap
Sample : JC90273-9 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:17:20 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

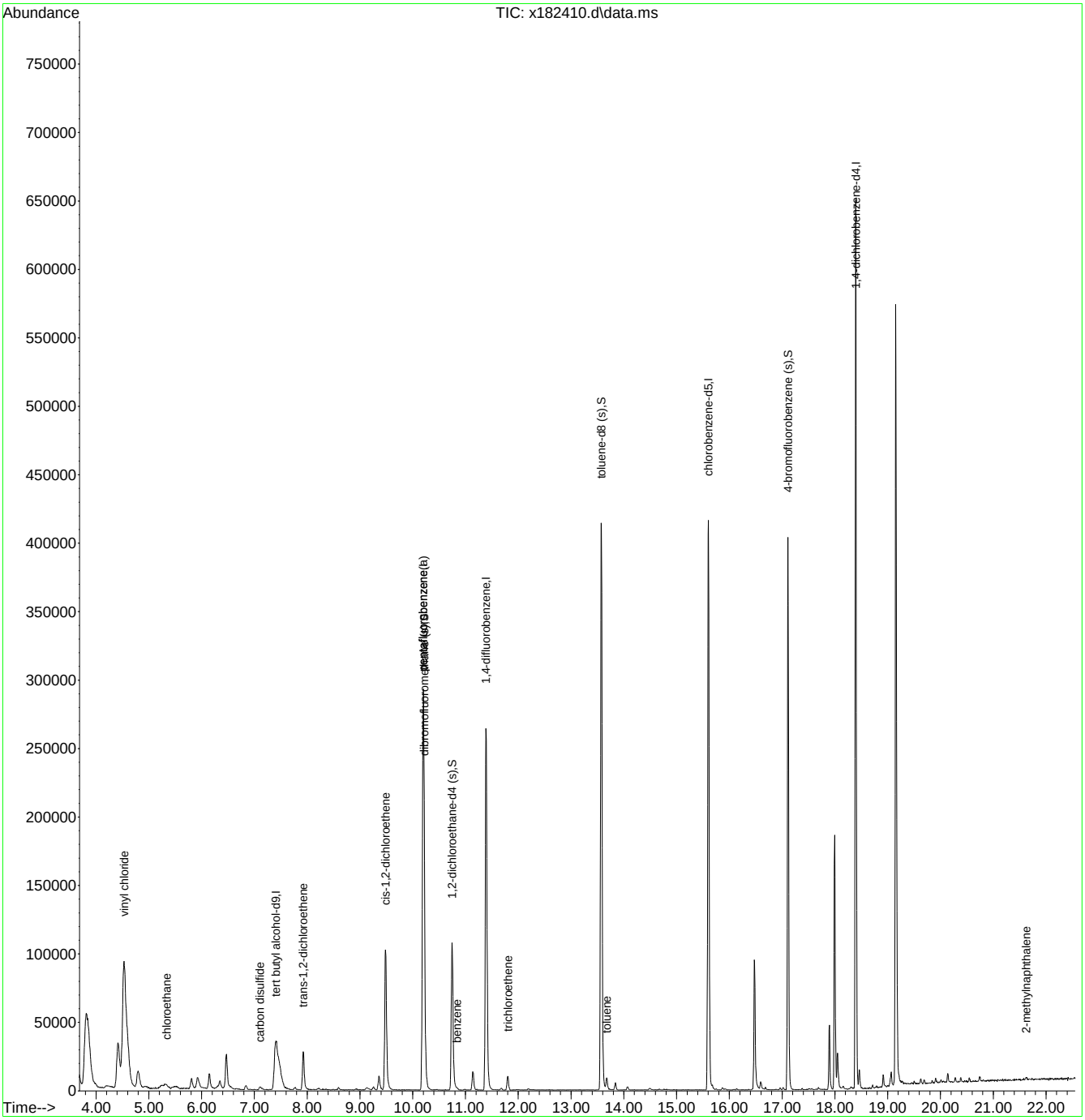
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	135916	500.00	ug/L	0.00
5) pentafluorobenzene	10.196	168	209683	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	278530	50.00	ug/L	0.00
74) chlorobenzene-d5	15.604	117	275142	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	171192	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	209683	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.217	113	90830	53.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.48%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	92137	50.15	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.30%			
75) toluene-d8 (s)	13.575	98	339548	51.48	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.96%			
98) 4-bromofluorobenzene (s)	17.111	95	134355	47.91	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.82%			
Target Compounds						Qvalue
9) vinyl chloride	4.532	62	282650	42.44	ug/L	98
11) chloroethane	5.338	64	6709	3.01	ug/L	89
22) carbon disulfide	7.105	76	4433	0.82	ug/L	96
26) trans-1,2-dichloroethene	7.926	96	15520	9.50	ug/L	98
37) cis-1,2-dichloroethene	9.485	96	60707	32.27	ug/L	95
58) benzene	10.840	78	1645	0.25	ug/L	98
62) trichloroethene	11.802	130	4265	2.51	ug/L	92
76) toluene	13.675	92	4648	1.14	ug/L	96
124) 2-methylnaphthalene	21.624	142	956	3.44	ug/L	83

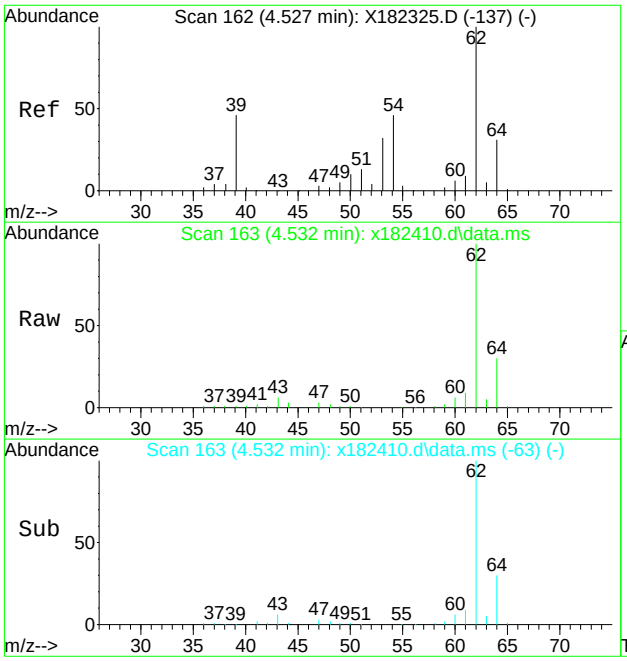
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182410.d
Acq On : 26 Jun 2019 3:43 pm
Operator : jessicap
Sample : JC90273-9 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:17:20 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

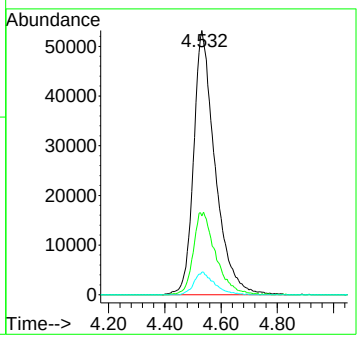


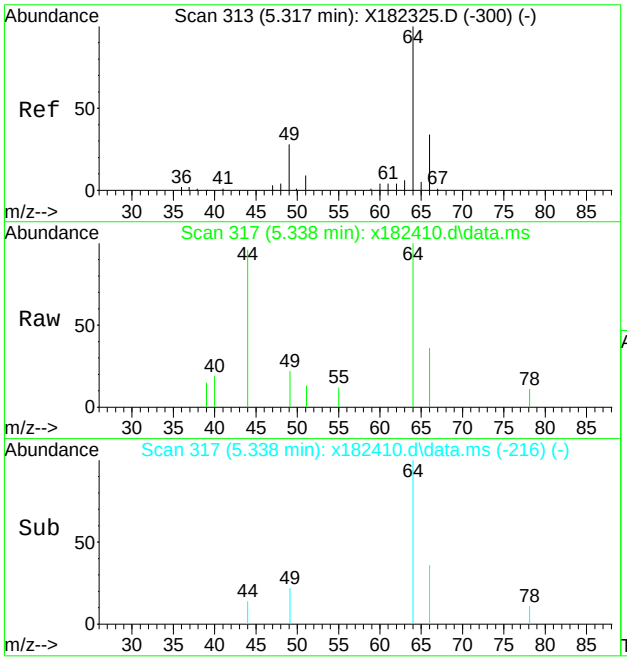


#9
vinyl chloride
Concen: 42.44 ug/L
RT: 4.532 min Scan# 163
Delta R.T. 0.020 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 62 Resp: 282650

Ion	Ratio	Lower	Upper
62	100		
64	29.8	1.1	61.1
61	8.6	0.0	38.3

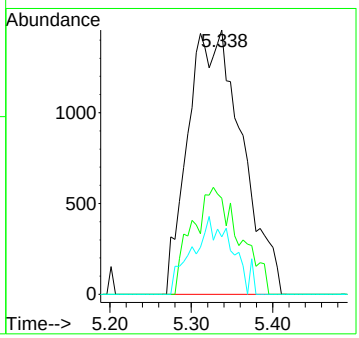


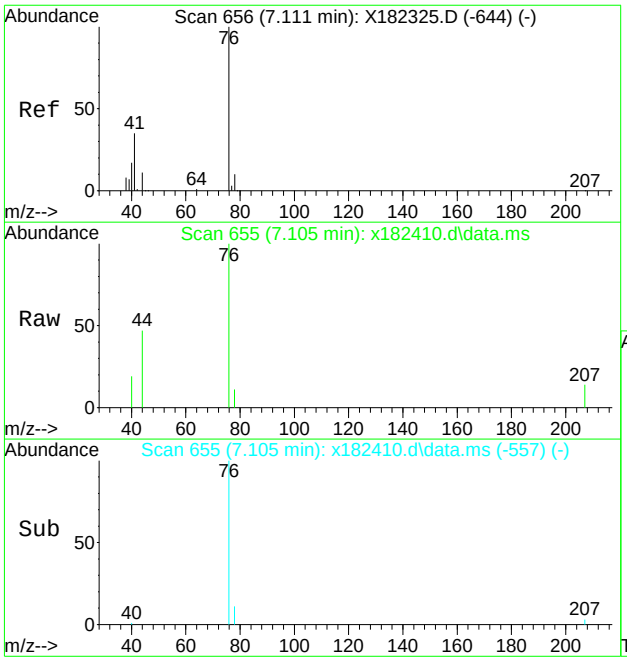


#11
chloroethane
Concen: 3.01 ug/L
RT: 5.338 min Scan# 317
Delta R.T. 0.026 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 64 Resp: 6709

Ion	Ratio	Lower	Upper
64	100		
66	36.4	1.2	61.2
49	21.7	0.0	57.9

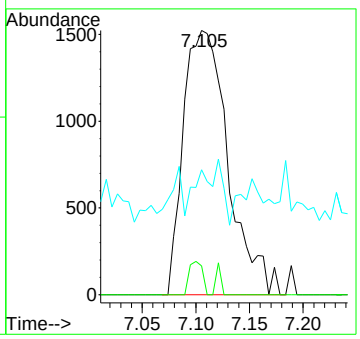


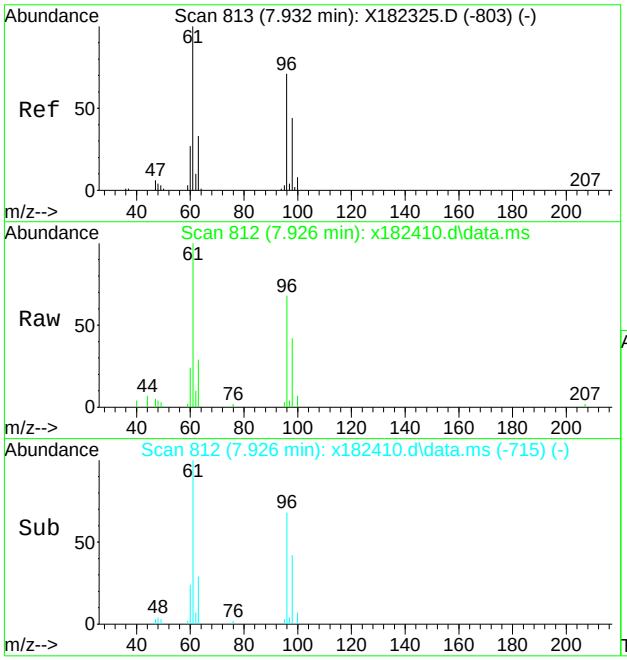


#22
carbon disulfide
Concen: 0.82 ug/L
RT: 7.105 min Scan# 655
Delta R.T. 0.010 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 76 Resp: 4433

Ion	Ratio	Lower	Upper
76	100		
78	10.9	0.0	39.0
44	14.9	0.0	43.3

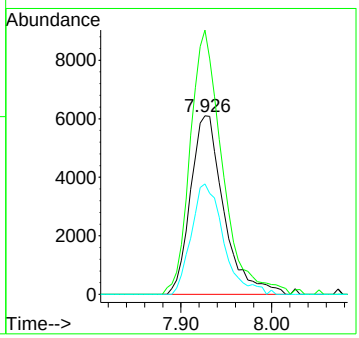


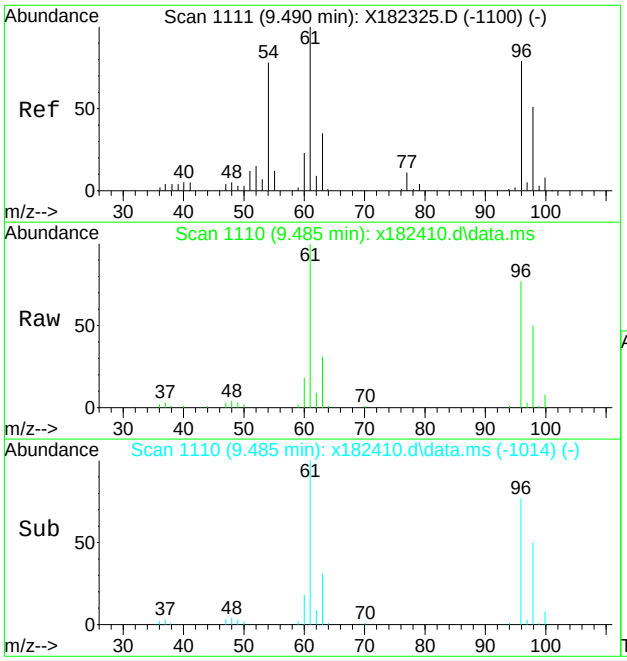


#26
trans-1,2-dichloroethene
Concen: 9.50 ug/L
RT: 7.926 min Scan# 812
Delta R.T. 0.005 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 96 Resp: 15520

Ion	Ratio	Lower	Upper
96	100		
61	148.1	116.4	176.4
98	61.9	33.8	93.8

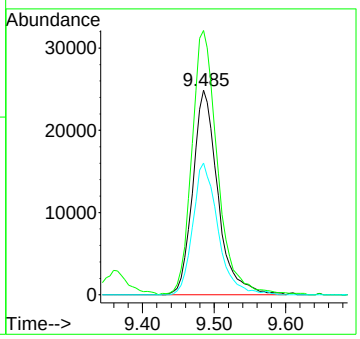


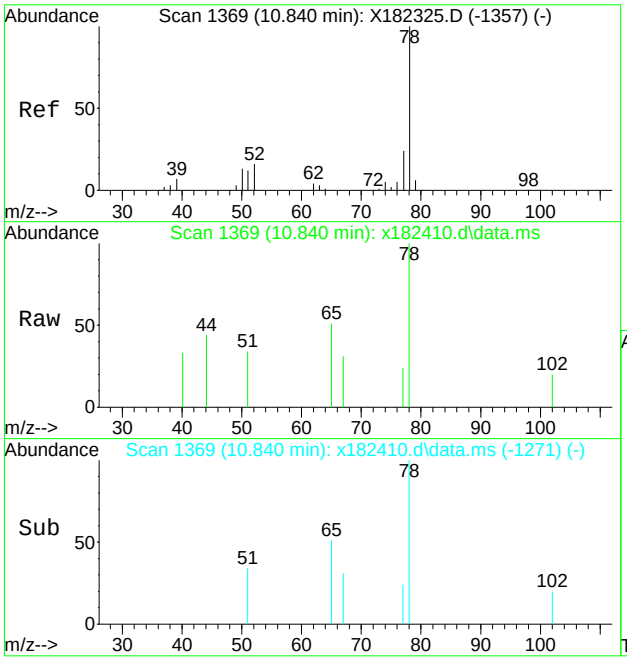


#37
cis-1,2-dichloroethene
Concen: 32.27 ug/L
RT: 9.485 min Scan# 1110
Delta R.T. 0.000 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 96 Resp: 60707

Ion	Ratio	Lower	Upper
96	100		
61	128.6	106.1	166.1
98	64.4	32.7	92.7

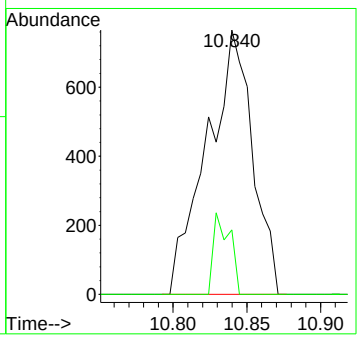


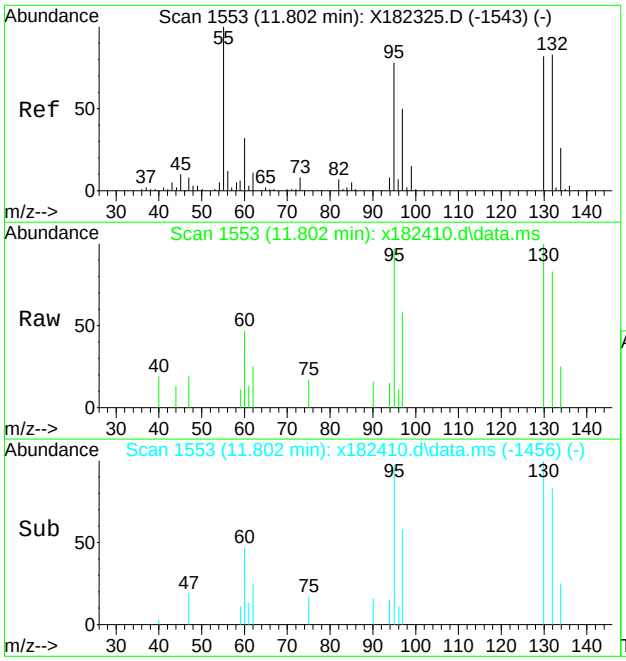


#58
benzene
Concen: 0.25 ug/L
RT: 10.840 min Scan# 1369
Delta R.T. 0.011 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 78 Resp: 1645

Ion	Ratio	Lower	Upper
78	100		
77	24.4	0.0	53.2

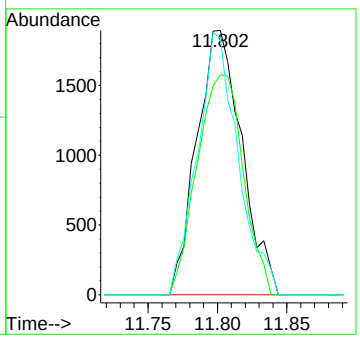


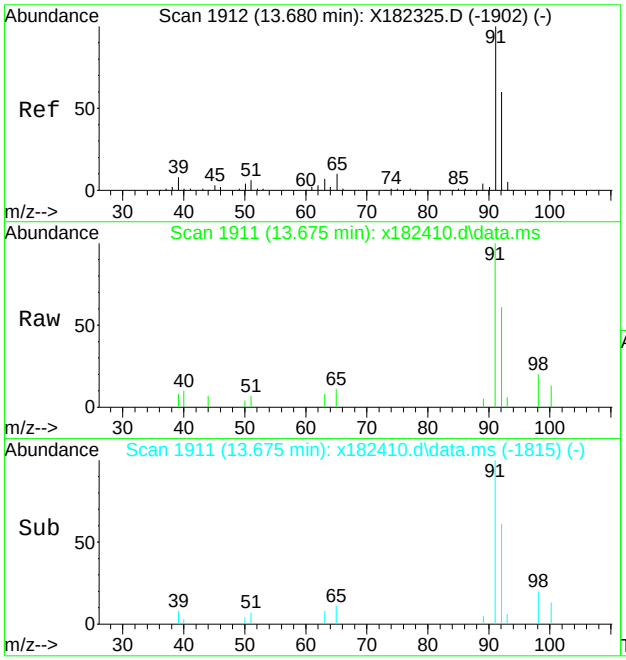


#62
trichloroethene
Concen: 2.51 ug/L
RT: 11.802 min Scan# 1553
Delta R.T. 0.005 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion:130 Resp: 4265

Ion	Ratio	Lower	Upper
130	100		
132	83.2	65.8	125.8
95	97.0	63.5	123.5

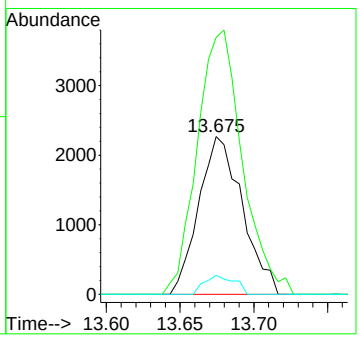




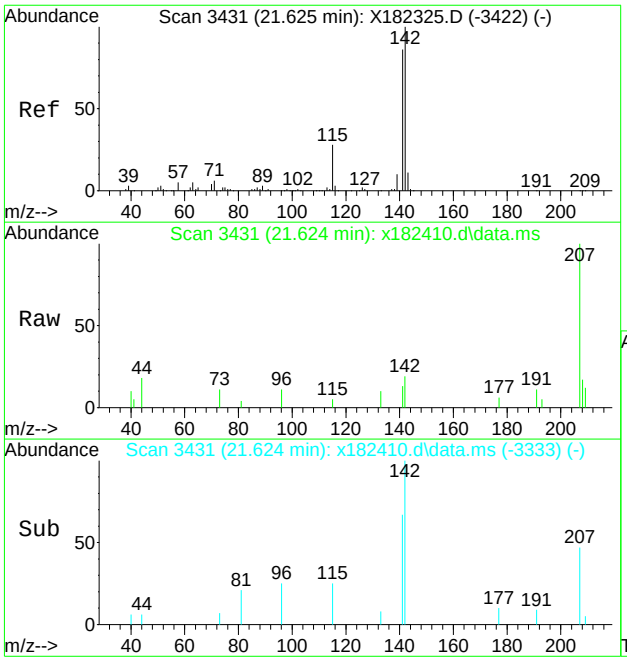
#76
toluene
Concen: 1.14 ug/L
RT: 13.675 min Scan# 1911
Delta R.T. -0.000 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion: 92 Resp: 4648

Ion	Ratio	Lower	Upper
92	100		
91	162.9	147.8	187.8
51	12.2	0.0	30.8



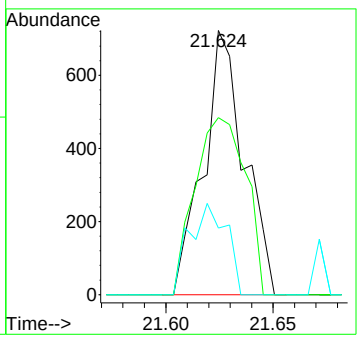
7.1.9
7



#124
2-methylnaphthalene
Concen: 3.44 ug/L
RT: 21.624 min Scan# 3431
Delta R.T. 0.010 min
Lab File: x182410.d
Acq: 26 Jun 2019 3:43 pm

Tgt Ion:142 Resp: 956

Ion	Ratio	Lower	Upper
142	100		
141	66.9	65.5	105.5
115	25.2	10.3	50.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182411.d
Acq On : 26 Jun 2019 4:12 pm
Operator : jessicap
Sample : JC90273-10 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:18:30 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

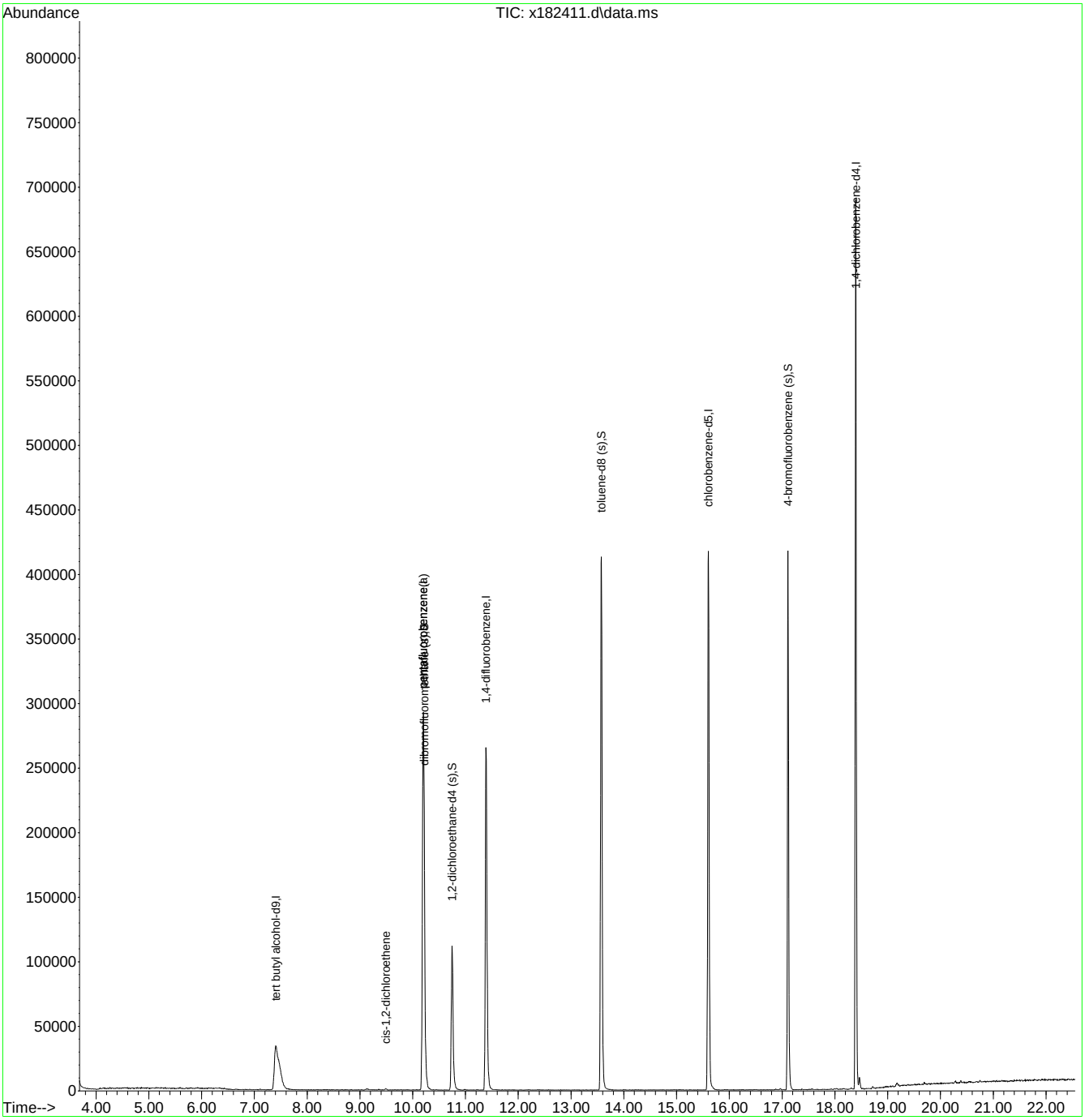
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.404	65	139033	500.00	ug/L	0.00
5) pentafluorobenzene	10.196	168	208158	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	277209	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	274450	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	184604	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	208158	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.217	113	92649	54.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.40%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	94205	51.52	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.04%			
75) toluene-d8 (s)	13.575	98	336048	51.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.16%			
98) 4-bromofluorobenzene (s)	17.111	95	137863	45.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.18%			
Target Compounds						Qvalue
37) cis-1,2-dichloroethene	9.490	96	644	0.34	ug/L	90

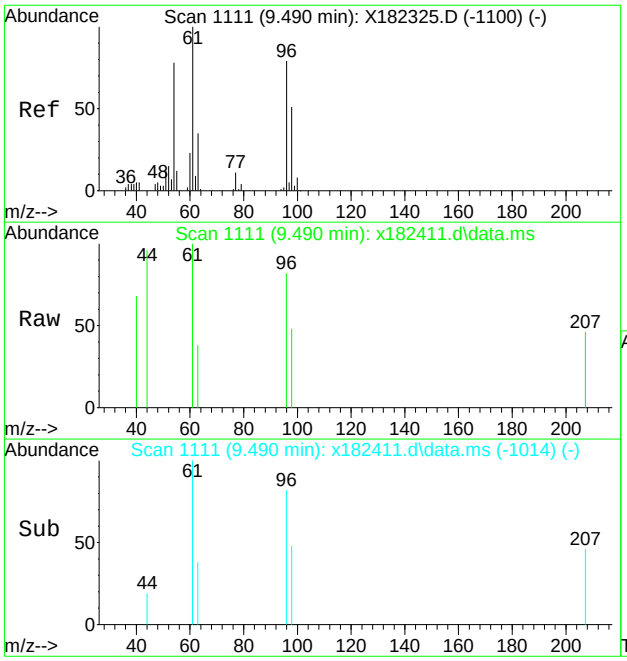
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182411.d
Acq On : 26 Jun 2019 4:12 pm
Operator : jessicap
Sample : JC90273-10 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:18:30 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

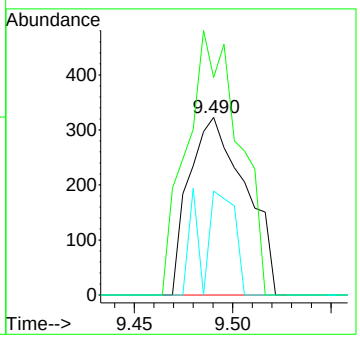




#37
cis-1,2-dichloroethene
Concen: 0.34 ug/L
RT: 9.490 min Scan# 1111
Delta R.T. 0.005 min
Lab File: x182411.d
Acq: 26 Jun 2019 4:12 pm

Tgt Ion: 96 Resp: 644

Ion	Ratio	Lower	Upper
96	100		
61	122.3	106.1	166.1
98	58.5	32.7	92.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182412.d
Acq On : 26 Jun 2019 4:40 pm
Operator : jessicap
Sample : JC90273-11 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:19:23 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

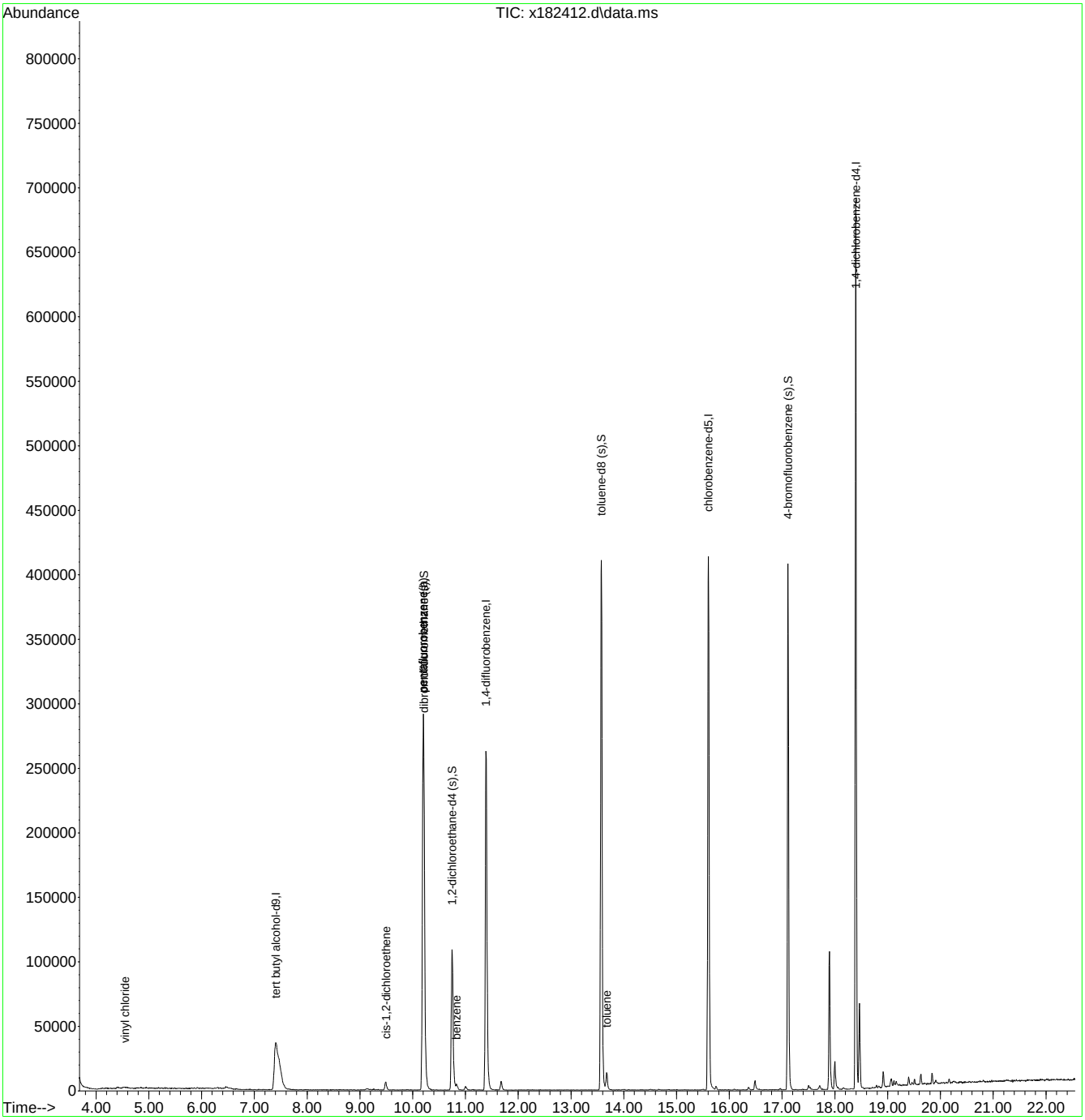
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	149876	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	207978	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	275132	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	273601	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	181069	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	207978	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	92649	54.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.50%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	94257	51.94	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.88%			
75) toluene-d8 (s)	13.575	98	332280	50.66	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.32%			
98) 4-bromofluorobenzene (s)	17.111	95	137022	46.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.38%			
Target Compounds						Qvalue
9) vinyl chloride	4.548	62	2563	0.39	ug/L	87
37) cis-1,2-dichloroethene	9.496	96	3965	2.13	ug/L #	79
58) benzene	10.829	78	4280	0.67	ug/L	85
76) toluene	13.675	92	6593	1.62	ug/L	96

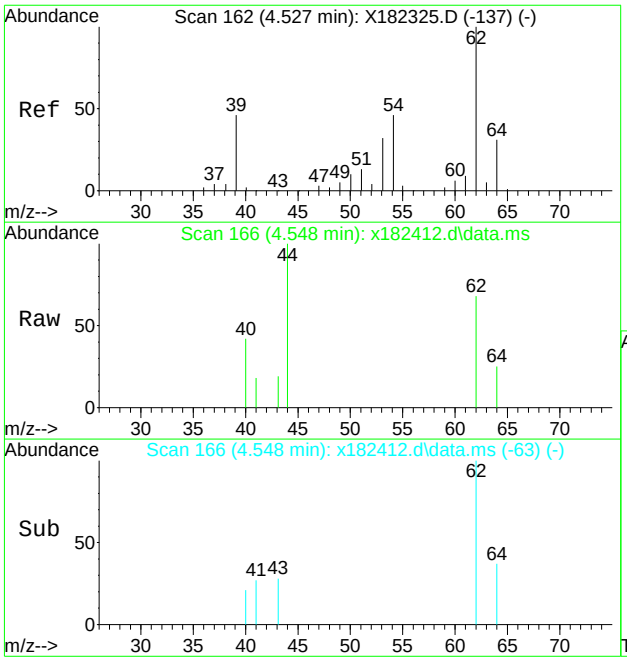
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182412.d
Acq On : 26 Jun 2019 4:40 pm
Operator : jessicap
Sample : JC90273-11 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:19:23 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

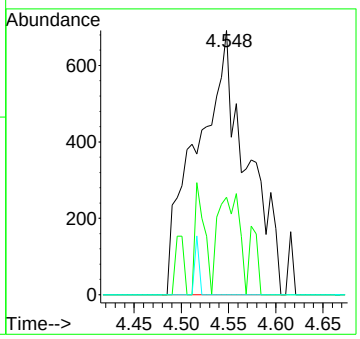


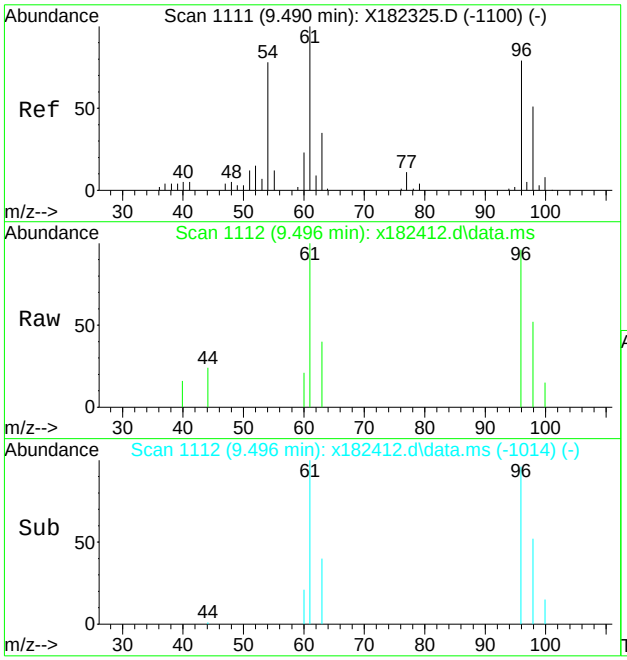


#9
vinyl chloride
Concen: 0.39 ug/L
RT: 4.548 min Scan# 166
Delta R.T. 0.036 min
Lab File: x182412.d
Acq: 26 Jun 2019 4:40 pm

Tgt Ion: 62 Resp: 2563

Ion	Ratio	Lower	Upper
62	100		
64	36.8	1.1	61.1
61	0.0	0.0	38.3

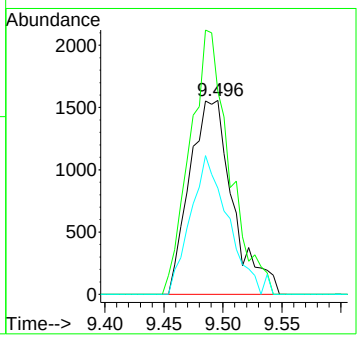


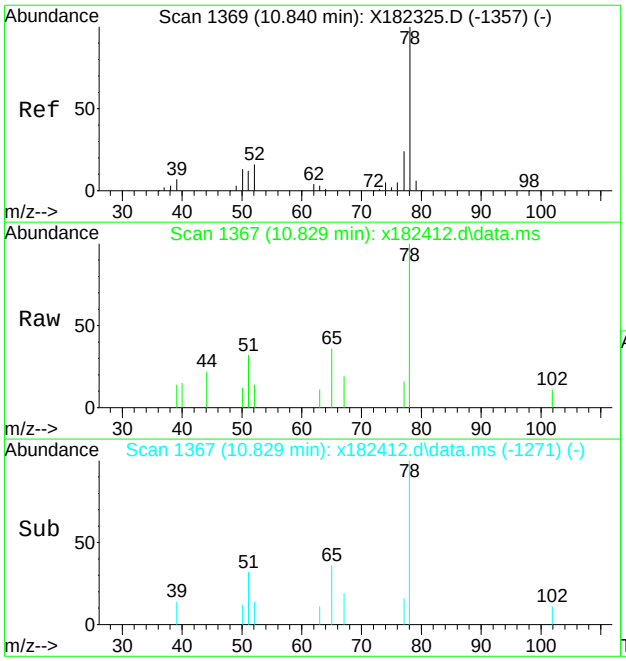


#37
cis-1,2-dichloroethene
Concen: 2.13 ug/L
RT: 9.496 min Scan# 1112
Delta R.T. 0.011 min
Lab File: x182412.d
Acq: 26 Jun 2019 4:40 pm

Tgt Ion: 96 Resp: 3965

Ion	Ratio	Lower	Upper
96	100		
61	104.6	106.1	166.1#
98	54.7	32.7	92.7

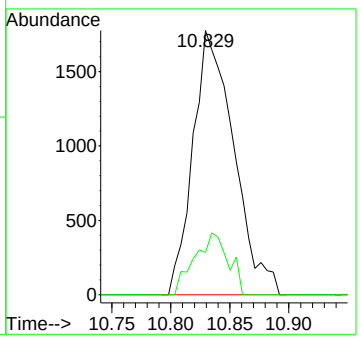


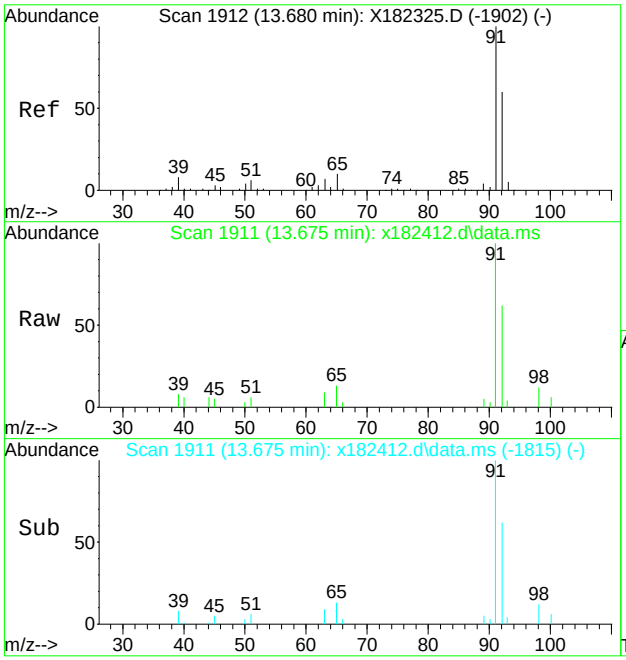


#58
benzene
Concen: 0.67 ug/L
RT: 10.829 min Scan# 1367
Delta R.T. 0.000 min
Lab File: x182412.d
Acq: 26 Jun 2019 4:40 pm

Tgt Ion: 78 Resp: 4280

Ion	Ratio	Lower	Upper
78	100		
77	16.0	0.0	53.2

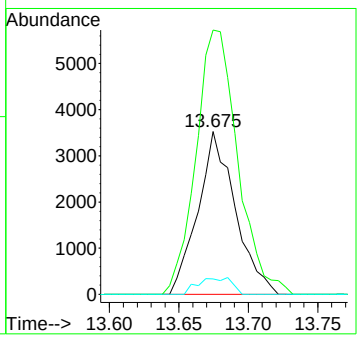




#76
toluene
Concen: 1.62 ug/L
RT: 13.675 min Scan# 1911
Delta R.T. -0.000 min
Lab File: x182412.d
Acq: 26 Jun 2019 4:40 pm

Tgt Ion: 92 Resp: 6593

Ion	Ratio	Lower	Upper
92	100		
91	162.5	147.8	187.8
51	9.5	0.0	30.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182413.d
Acq On : 26 Jun 2019 5:09 pm
Operator : jessicap
Sample : JC90273-12 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:20:18 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

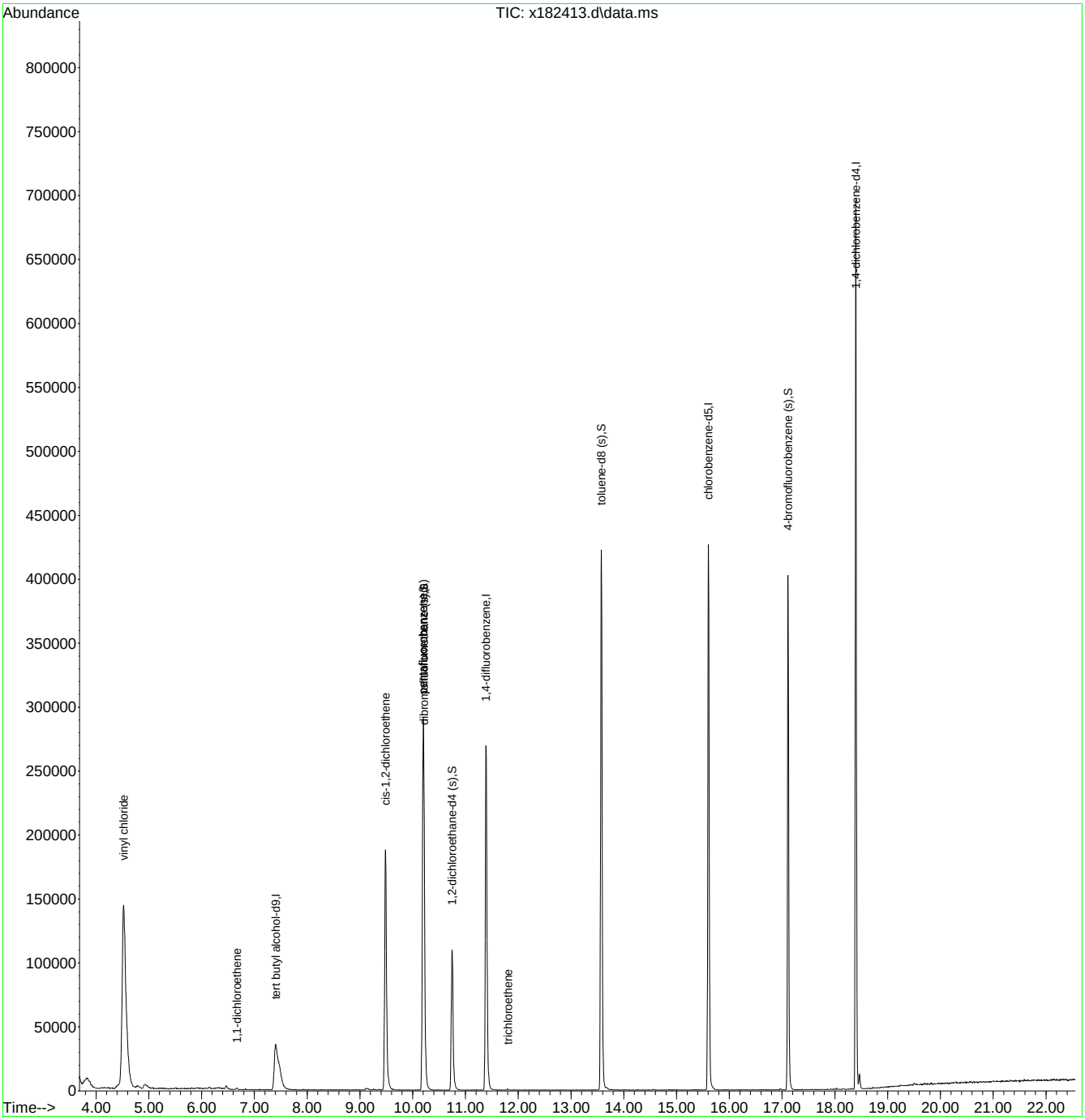
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.404	65	136095	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	205342	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	279875	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	278739	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	179807	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	205342	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	91911	55.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.02%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	93638	50.72	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.44%			
75) toluene-d8 (s)	13.575	98	339508	50.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.62%			
98) 4-bromofluorobenzene (s)	17.111	95	136581	46.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.74%			
Target Compounds						Qvalue
9) vinyl chloride	4.522	62	466495	71.52	ug/L	99
17) 1,1-dichloroethene	6.666	96	449	0.30	ug/L #	81
37) cis-1,2-dichloroethene	9.485	96	109912	59.67	ug/L	97
62) trichloroethene	11.802	130	381	0.22	ug/L #	79

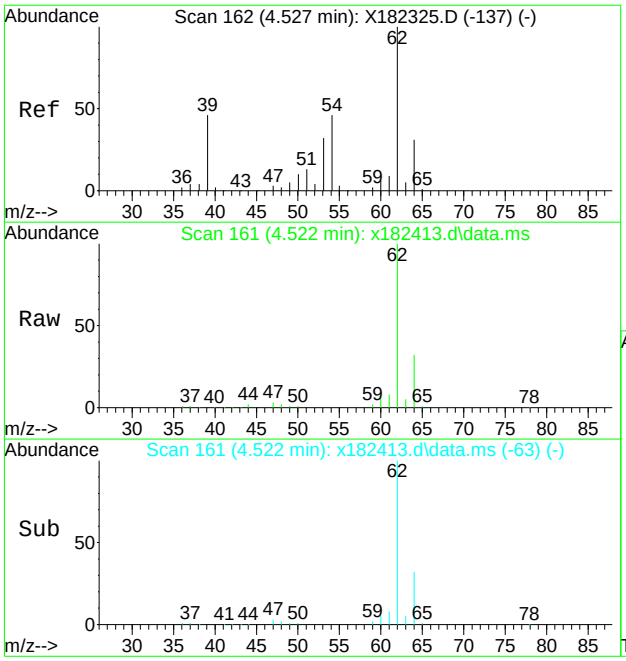
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182413.d
Acq On : 26 Jun 2019 5:09 pm
Operator : jessicap
Sample : JC90273-12 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:20:18 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

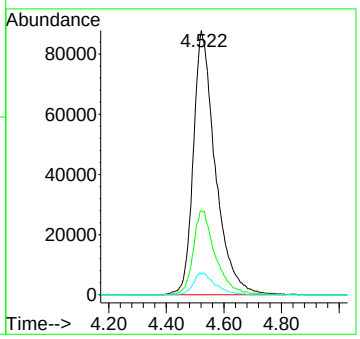


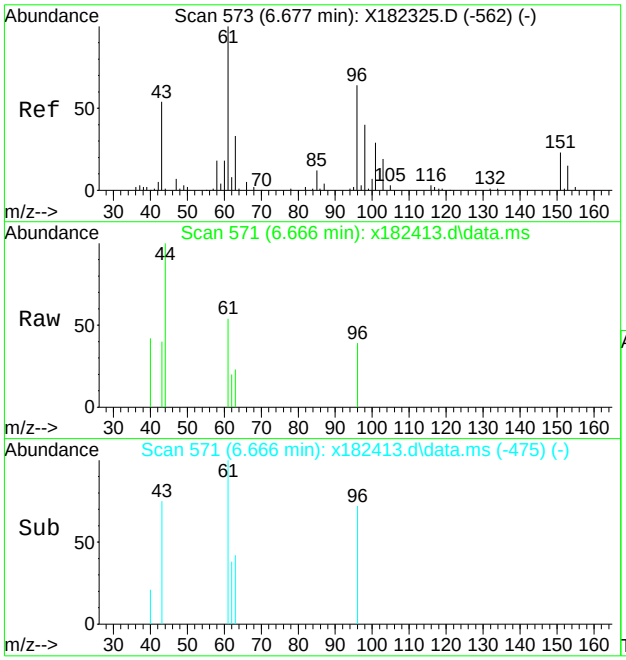


#9
vinyl chloride
Concen: 71.52 ug/L
RT: 4.522 min Scan# 161
Delta R.T. 0.010 min
Lab File: x182413.d
Acq: 26 Jun 2019 5:09 pm

Tgt Ion: 62 Resp: 466495

Ion	Ratio	Lower	Upper
62	100		
64	31.9	1.1	61.1
61	7.8	0.0	38.3

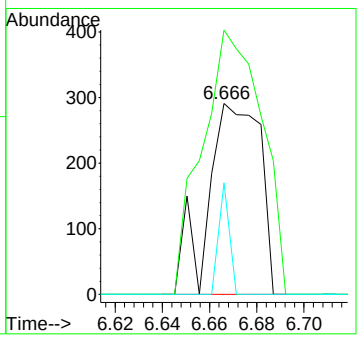


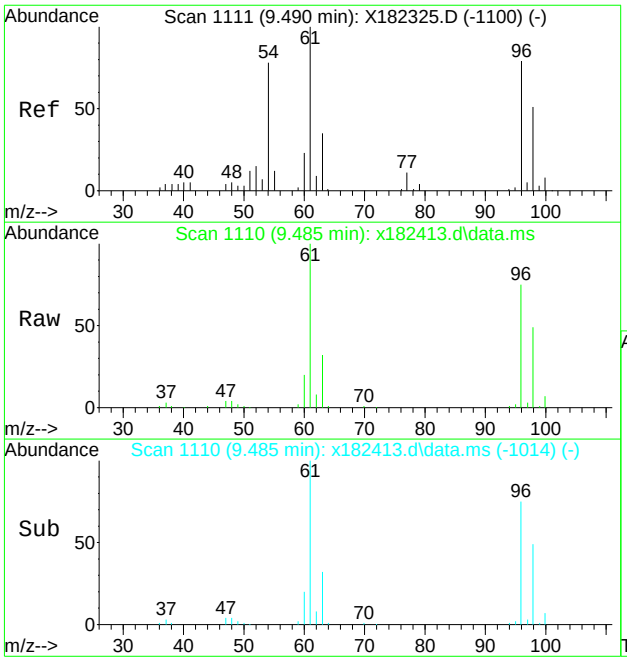


#17
1,1-dichloroethene
Concen: 0.30 ug/L
RT: 6.666 min Scan# 571
Delta R.T. -0.000 min
Lab File: x182413.d
Acq: 26 Jun 2019 5:09 pm

Tgt Ion: 96 Resp: 449

Ion	Ratio	Lower	Upper
96	100		
61	138.5	141.3	201.3#
63	58.4	25.6	85.6

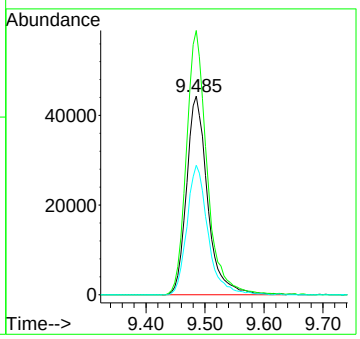


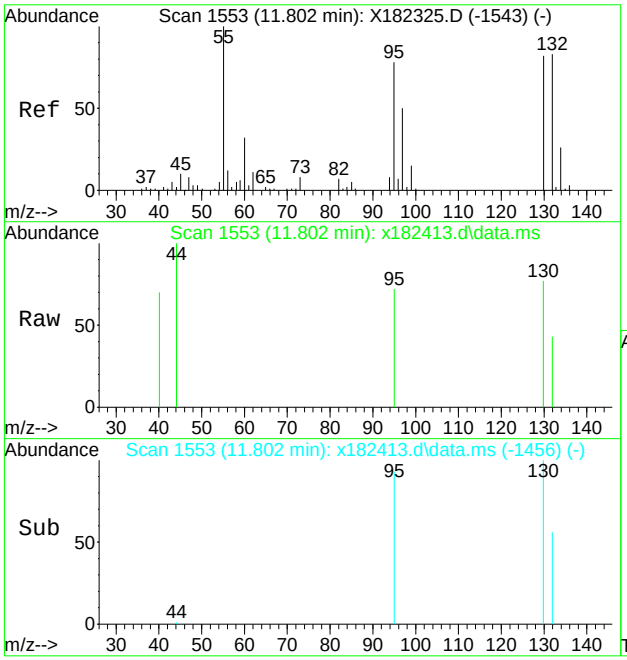


#37
cis-1,2-dichloroethene
Concen: 59.67 ug/L
RT: 9.485 min Scan# 1110
Delta R.T. 0.000 min
Lab File: x182413.d
Acq: 26 Jun 2019 5:09 pm

Tgt Ion: 96 Resp: 109912

Ion	Ratio	Lower	Upper
96	100		
61	133.1	106.1	166.1
98	65.1	32.7	92.7

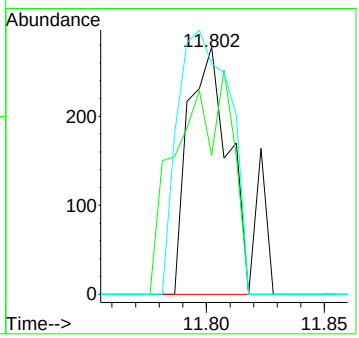




#62
trichloroethene
Concen: 0.22 ug/L
RT: 11.802 min Scan# 1553
Delta R.T. 0.005 min
Lab File: x182413.d
Acq: 26 Jun 2019 5:09 pm

Tgt Ion:130 Resp: 381

Ion	Ratio	Lower	Upper
130	100		
132	56.1	65.8	125.8#
95	93.2	63.5	123.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182414.d
Acq On : 26 Jun 2019 5:38 pm
Operator : jessicap
Sample : JC90273-13 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:21:11 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

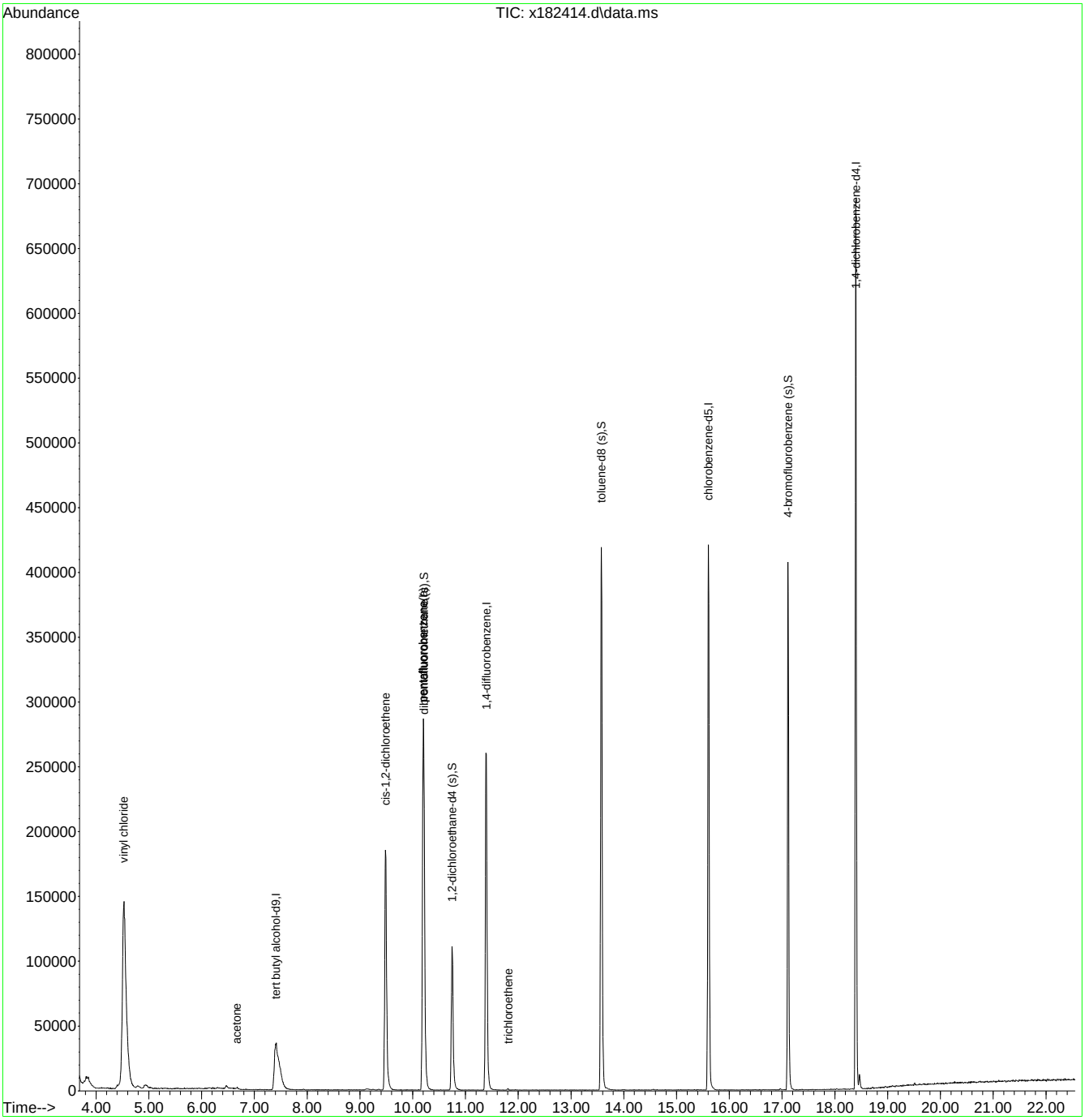
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.404	65	143534	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	203283	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.394	114	277106	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	274336	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	183521	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	203283	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	91707	55.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.88%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	93841	51.34	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.68%			
75) toluene-d8 (s)	13.575	98	335969	51.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.18%			
98) 4-bromofluorobenzene (s)	17.111	95	139324	46.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.68%			
Target Compounds						Qvalue
9) vinyl chloride	4.522	62	458201	70.96	ug/L	99
19) acetone	6.661	43	1820	3.40	ug/L #	44
37) cis-1,2-dichloroethene	9.485	96	108405	59.44	ug/L	97
62) trichloroethene	11.807	130	517	0.31	ug/L #	65

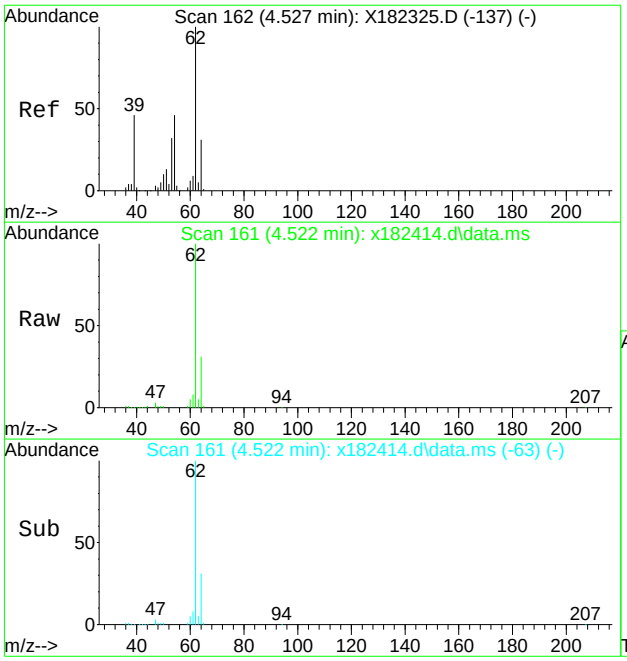
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182414.d
Acq On : 26 Jun 2019 5:38 pm
Operator : jessicap
Sample : JC90273-13 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:21:11 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

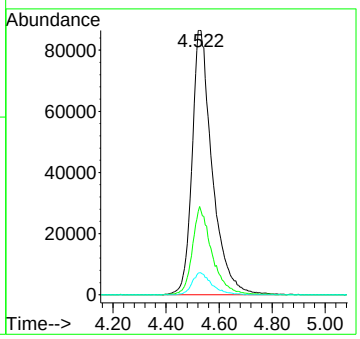


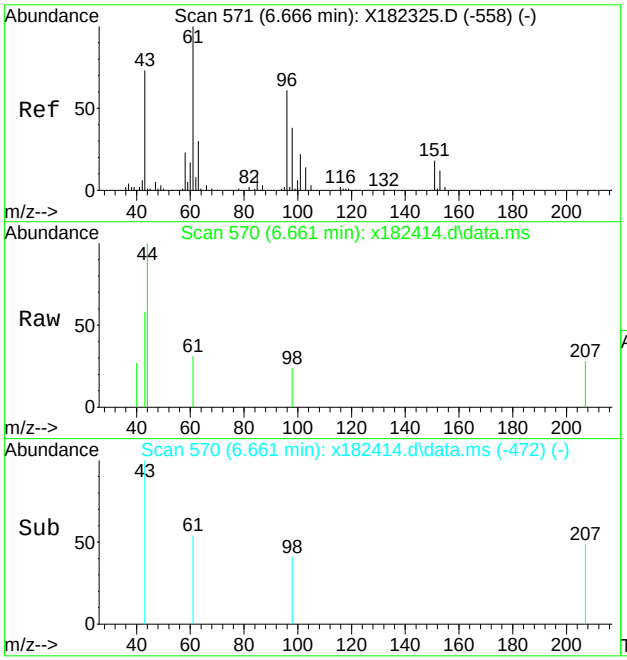


#9
vinyl chloride
Concen: 70.96 ug/L
RT: 4.522 min Scan# 161
Delta R.T. 0.010 min
Lab File: x182414.d
Acq: 26 Jun 2019 5:38 pm

Tgt Ion: 62 Resp: 458201

Ion	Ratio	Lower	Upper
62	100		
64	31.5	1.1	61.1
61	8.2	0.0	38.3

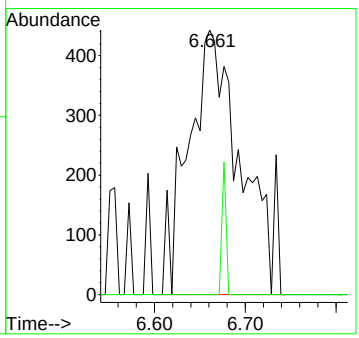


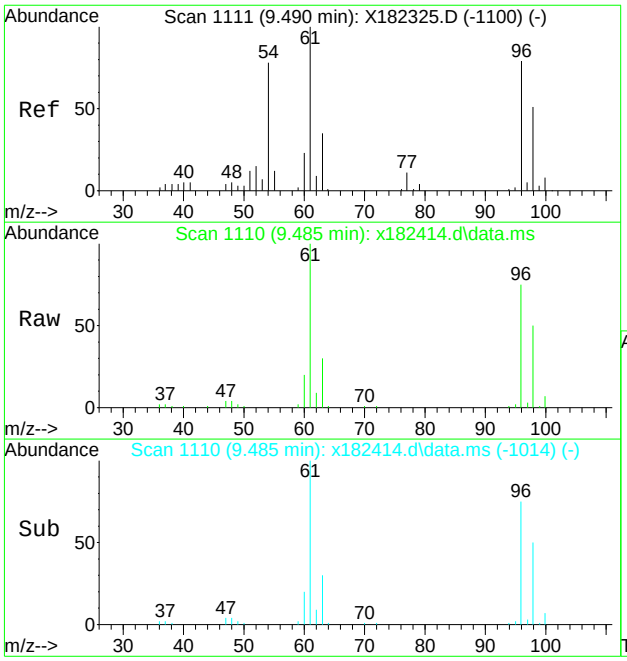


#19
acetone
Concen: 3.40 ug/L
RT: 6.661 min Scan# 570
Delta R.T. 0.010 min
Lab File: x182414.d
Acq: 26 Jun 2019 5:38 pm

Tgt Ion: 43 Resp: 1820

Ion	Ratio	Lower	Upper
43	100		
58	0.0	0.3	60.3#

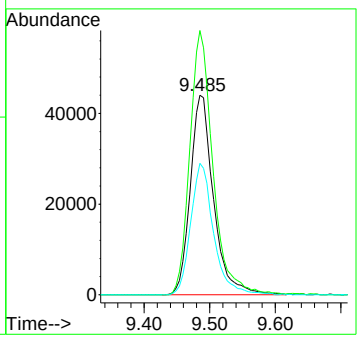


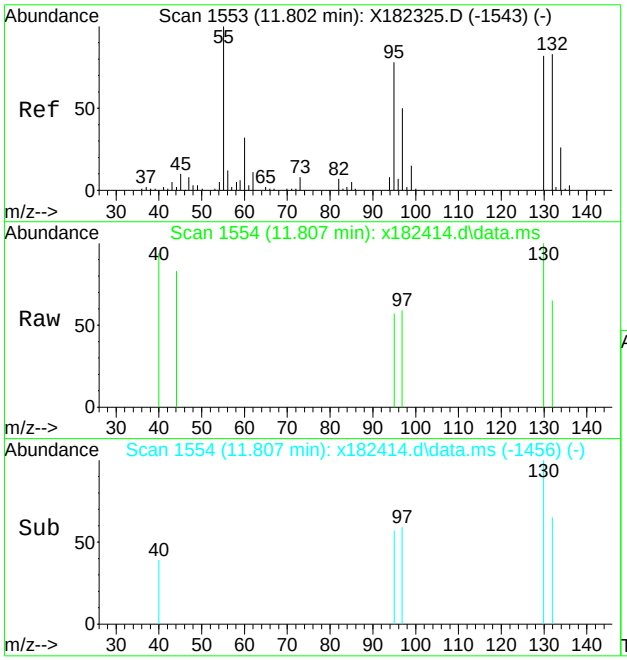


#37
cis-1,2-dichloroethene
Concen: 59.44 ug/L
RT: 9.485 min Scan# 1110
Delta R.T. 0.000 min
Lab File: x182414.d
Acq: 26 Jun 2019 5:38 pm

Tgt Ion: 96 Resp: 108405

Ion	Ratio	Lower	Upper
96	100		
61	132.5	106.1	166.1
98	65.9	32.7	92.7

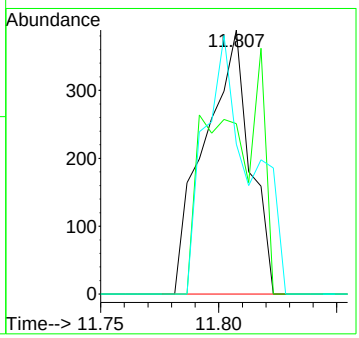




#62
trichloroethene
Concen: 0.31 ug/L
RT: 11.807 min Scan# 1554
Delta R.T. 0.010 min
Lab File: x182414.d
Acq: 26 Jun 2019 5:38 pm

Tgt Ion:130 Resp: 517

Ion	Ratio	Lower	Upper
130	100		
132	64.5	65.8	125.8#
95	56.8	63.5	123.5#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251136.d
Acq On : 27 Jun 2019 12:07 am
Operator : deving
Sample : JC90273-14 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:30:15 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

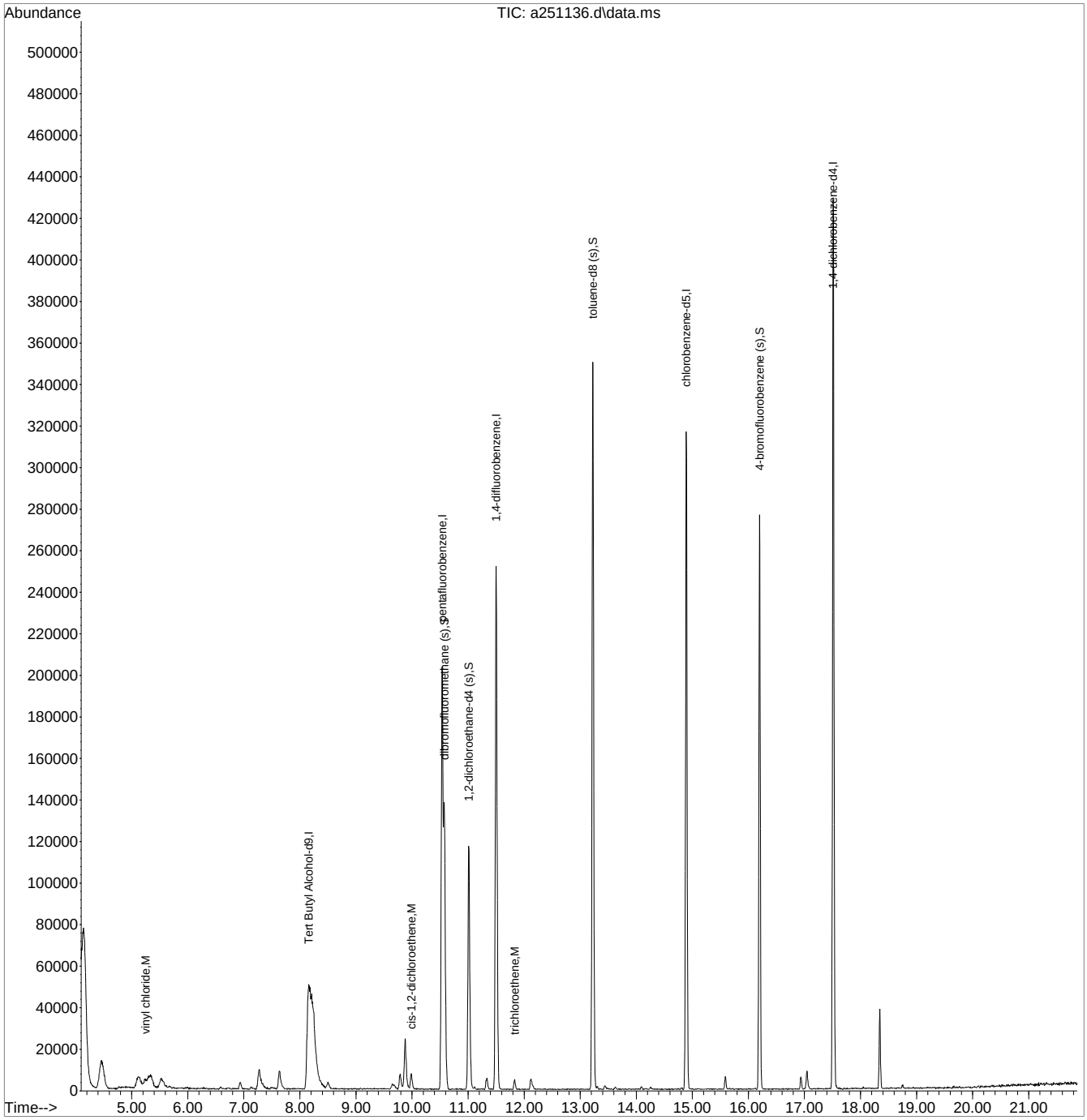
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.155	65	254962	500.00	ug/L	-0.01
5) pentafluorobenzene	10.540	168	181942	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	253119	50.00	ug/L	0.00
74) chlorobenzene-d5	14.891	117	205354	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.511	152	128527	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.576	113	90667	50.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.12%			
53) 1,2-dichloroethane-d4 (s)	11.010	65	97344	53.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.06%			
75) toluene-d8 (s)	13.228	98	274920	50.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.68%			
99) 4-bromofluorobenzene (s)	16.199	95	98456	49.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.36%			
Target Compounds						Qvalue
9) vinyl chloride	5.247	62	8075	2.04	ug/L	83
37) cis-1,2-dichloroethene	9.985	96	4491	2.28	ug/L	86
62) trichloroethene	11.831	95	1699	1.03	ug/L	94

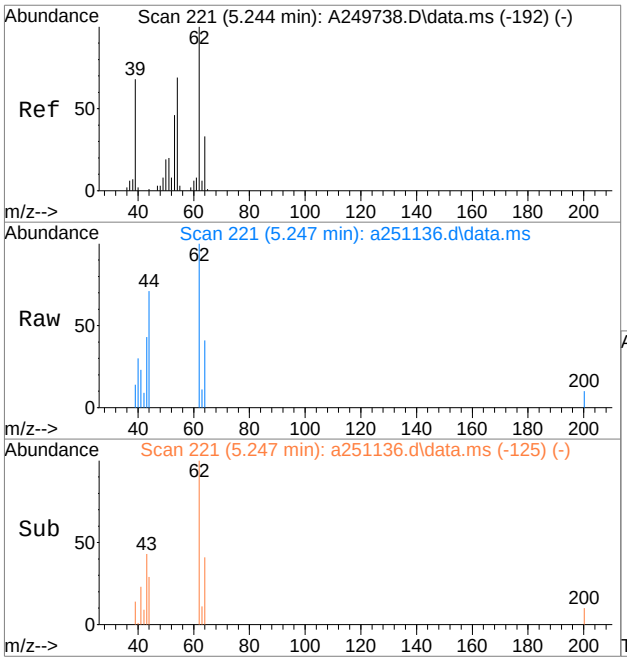
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251136.d
Acq On : 27 Jun 2019 12:07 am
Operator : deving
Sample : JC90273-14 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:30:15 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

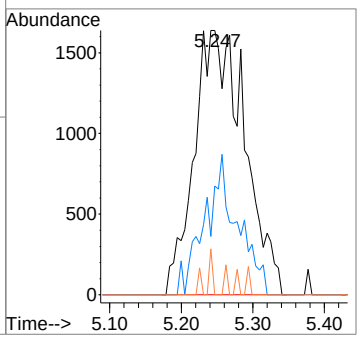


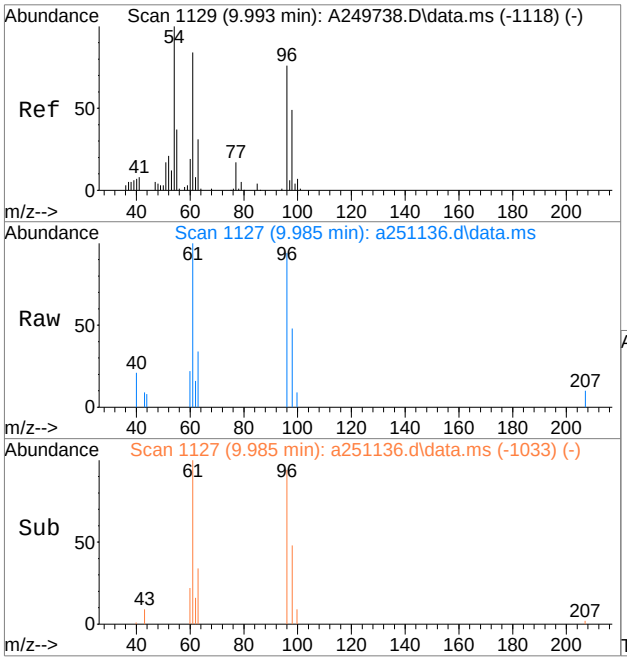


#9
vinyl chloride
Concen: 2.04 ug/L
RT: 5.247 min Scan# 221
Delta R.T. 0.002 min
Lab File: a251136.d
Acq: 27 Jun 2019 12:07 am

Tgt Ion: 62 Resp: 8075

Ion	Ratio	Lower	Upper
62	100		
64	41.2	2.5	62.5
61	0.0	0.0	37.6

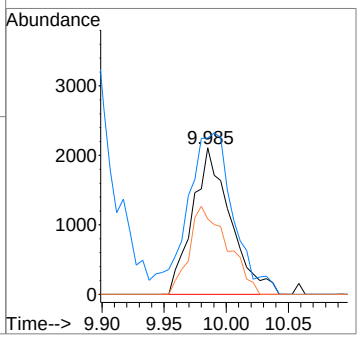


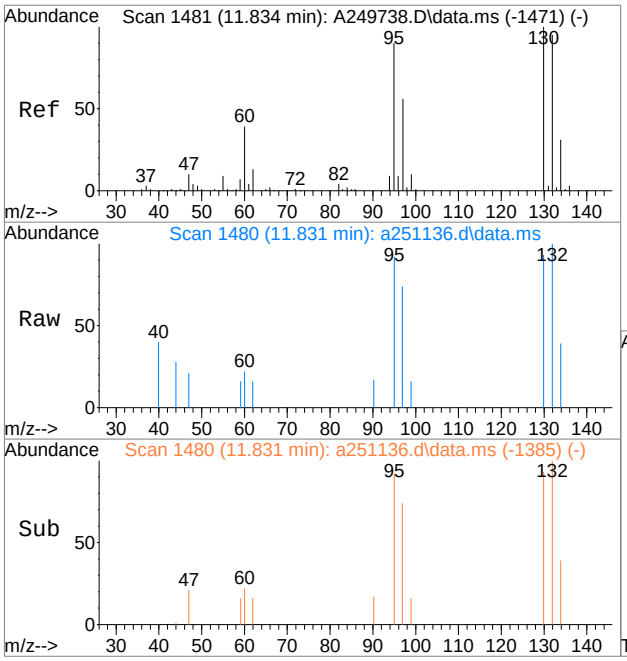


#37
cis-1,2-dichloroethene
Concen: 2.28 ug/L
RT: 9.985 min Scan# 1127
Delta R.T. -0.008 min
Lab File: a251136.d
Acq: 27 Jun 2019 12:07 am

Tgt Ion: 96 Resp: 4491

Ion	Ratio	Lower	Upper
96	100		
61	106.6	91.3	151.3
98	51.4	34.7	94.7

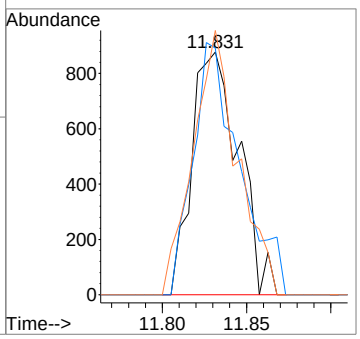




#62
trichloroethene
Concen: 1.03 ug/L
RT: 11.831 min Scan# 1480
Delta R.T. -0.003 min
Lab File: a251136.d
Acq: 27 Jun 2019 12:07 am

Tgt Ion: 95 Resp: 1699

Ion	Ratio	Lower	Upper
95	100		
130	101.6	81.5	141.5
132	108.9	75.4	135.4



Manual Integrations APPROVED (compounds with "m" flag)
MoHui Huang
06/27/19 16:02

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251137.d
Acq On : 27 Jun 2019 12:36 am
Operator : deving
Sample : JC90273-15 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 17:08:52 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.153	65	263486	500.00	ug/L	-0.01
5) pentafluorobenzene	10.538	168	185176	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	266042	50.00	ug/L	0.00
74) chlorobenzene-d5	14.895	117	211718	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.515	152	131768	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.580	113	95407	52.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.54%			
53) 1,2-dichloroethane-d4 (s)	11.009	65	99628	52.13	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.26%			
75) toluene-d8 (s)	13.227	98	284788	50.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.16%			
99) 4-bromofluorobenzene (s)	16.197	95	99299	48.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.76%			
Target Compounds						Qvalue
9) vinyl chloride	5.256	62	4096139	1017.53	ug/L	97
19) acetone	7.484	58	1817m	6.75	ug/L	
22) carbon disulfide	7.897	76	3912m	0.59	ug/L	
26) trans-1,2-dichloroethene	8.635	96	34140	19.63	ug/L	99
37) cis-1,2-dichloroethene	9.989	96	180951	90.28	ug/L	98
62) trichloroethene	11.830	95	1066	0.62	ug/L #	71

(#) = qualifier out of range (m) = manual integration (+) = signals summed

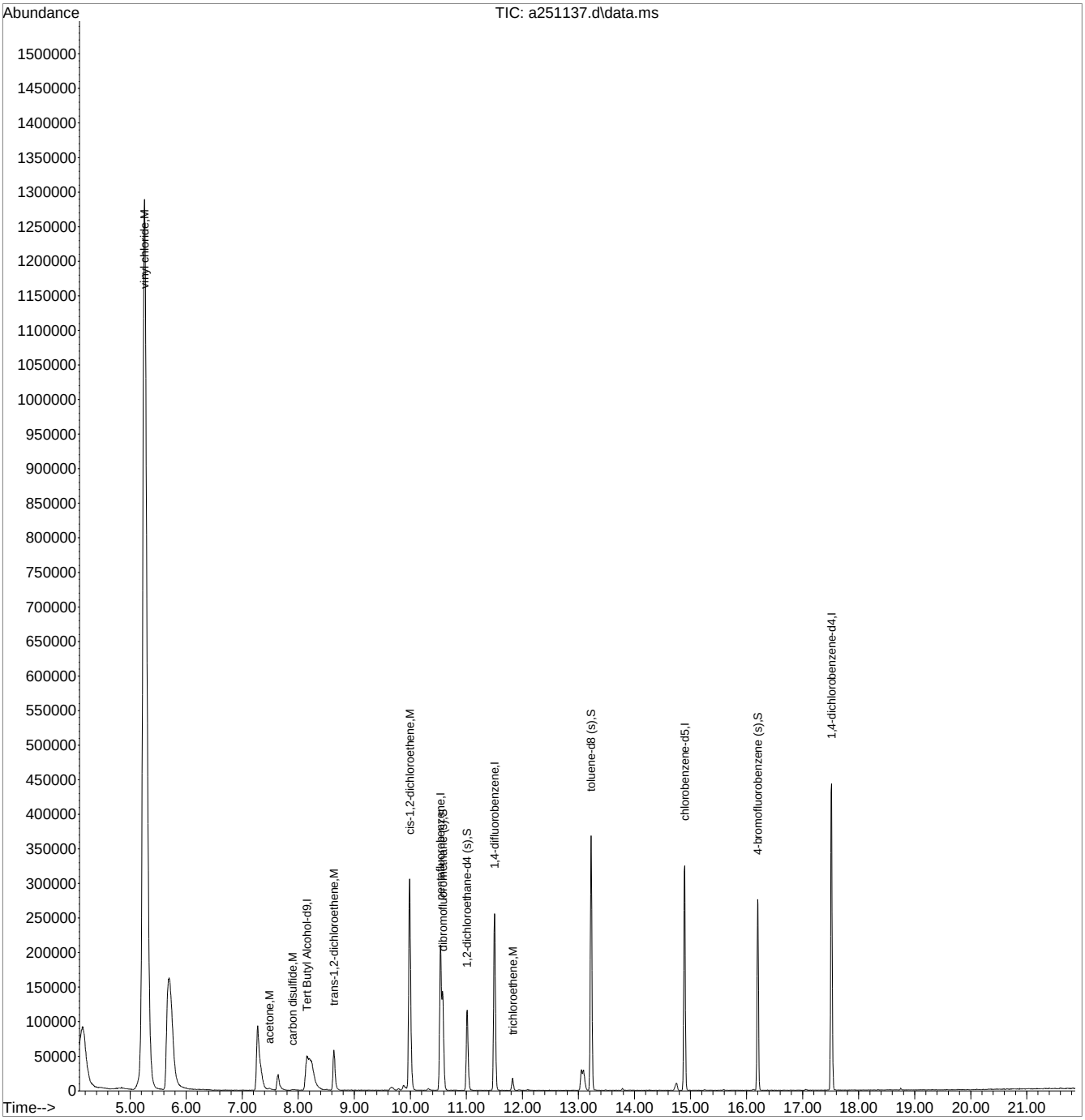
7.1.15

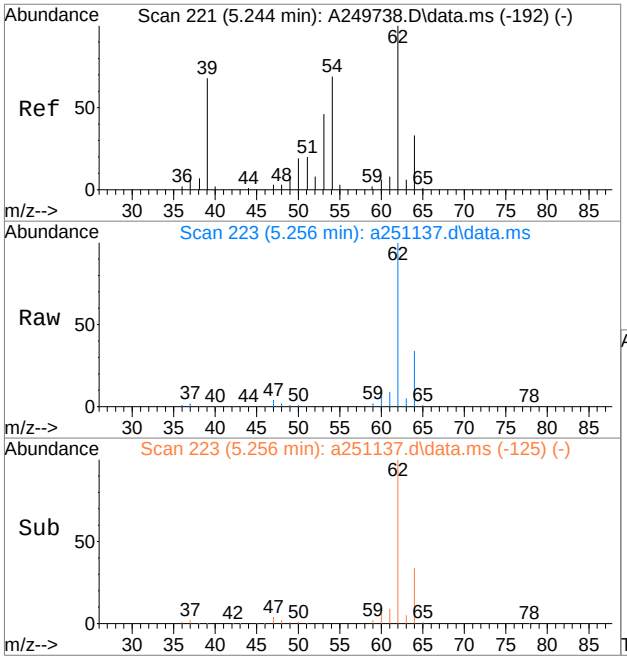
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251137.d
Acq On : 27 Jun 2019 12:36 am
Operator : deving
Sample : JC90273-15 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 17:08:52 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

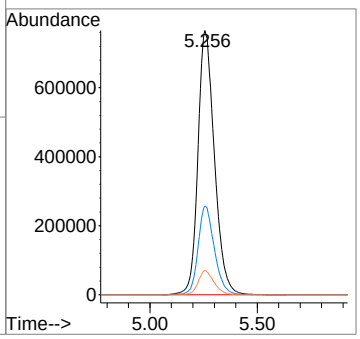


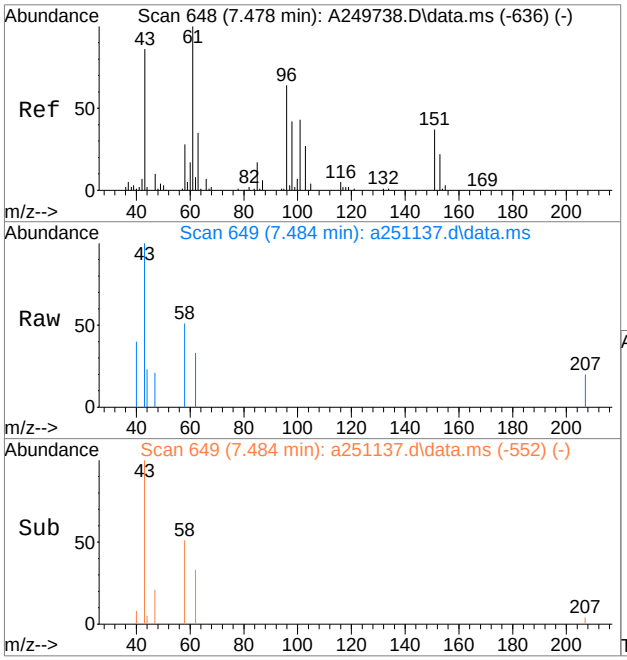


#9
vinyl chloride
Concen: 1017.53 ug/L
RT: 5.256 min Scan# 223
Delta R.T. 0.012 min
Lab File: a251137.d
Acq: 27 Jun 2019 12:36 am

Tgt Ion: 62 Resp: 4096139

Ion	Ratio	Lower	Upper
62	100		
64	33.6	2.5	62.5
61	9.2	0.0	37.6

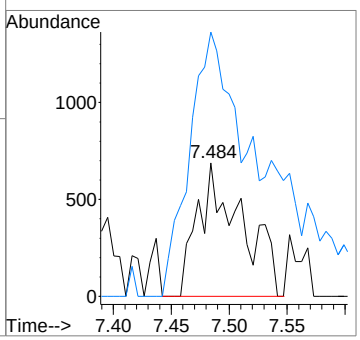


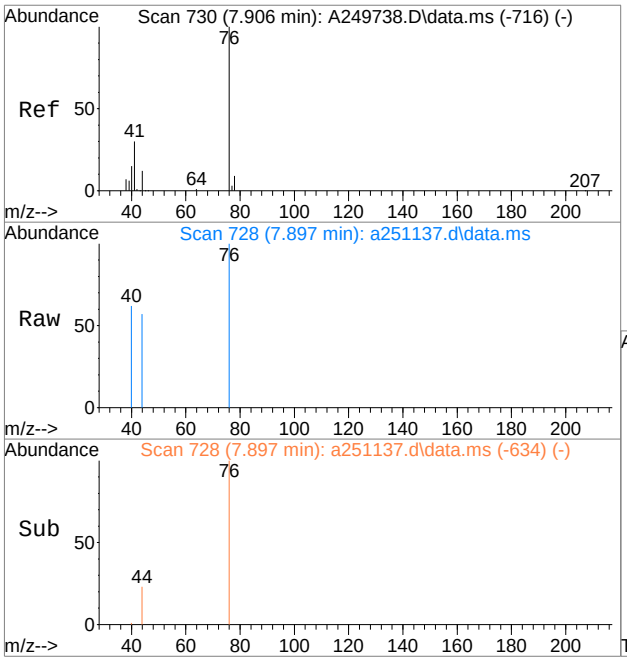


#19
acetone
Concen: 6.75 ug/L m
RT: 7.484 min Scan# 649
Delta R.T. 0.007 min
Lab File: a251137.d
Acq: 27 Jun 2019 12:36 am

Tgt Ion: 58 Resp: 1817

Ion	Ratio	Lower	Upper
58	100		
43	198.0	278.3	338.3#

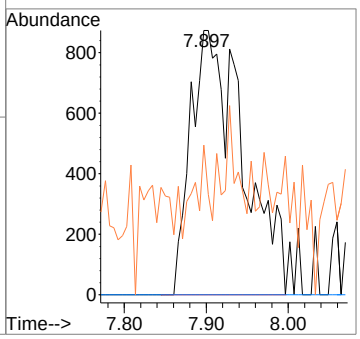


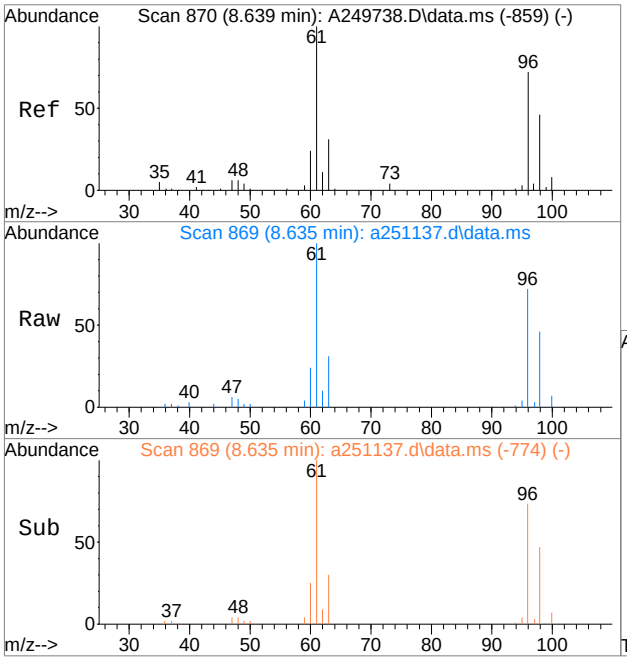


#22
carbon disulfide
Concen: 0.59 ug/L m
RT: 7.897 min Scan# 728
Delta R.T. -0.009 min
Lab File: a251137.d
Acq: 27 Jun 2019 12:36 am

Tgt Ion: 76 Resp: 3912

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.1
44	56.6	0.0	41.6#

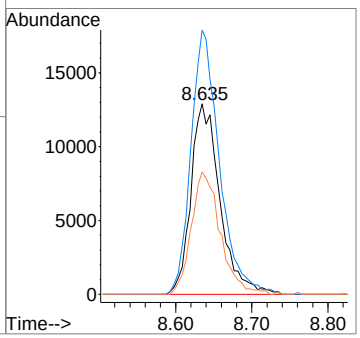


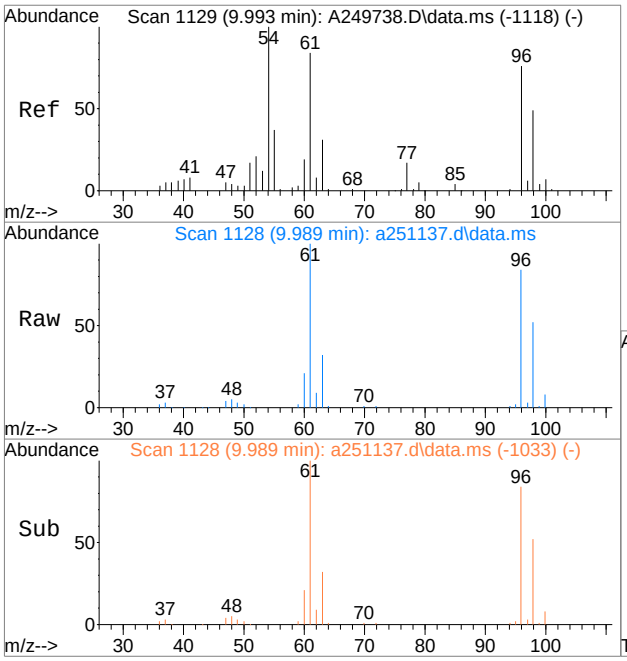


#26
trans-1,2-dichloroethene
Concen: 19.63 ug/L
RT: 8.635 min Scan# 869
Delta R.T. -0.004 min
Lab File: a251137.d
Acq: 27 Jun 2019 12:36 am

Tgt Ion: 96 Resp: 34140

Ion	Ratio	Lower	Upper
96	100		
61	138.8	108.5	168.5
98	64.3	33.4	93.4

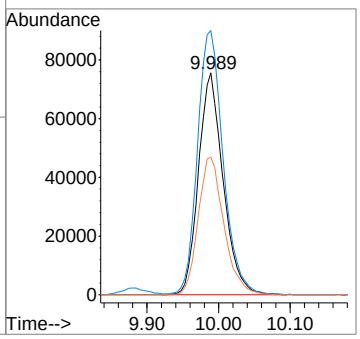


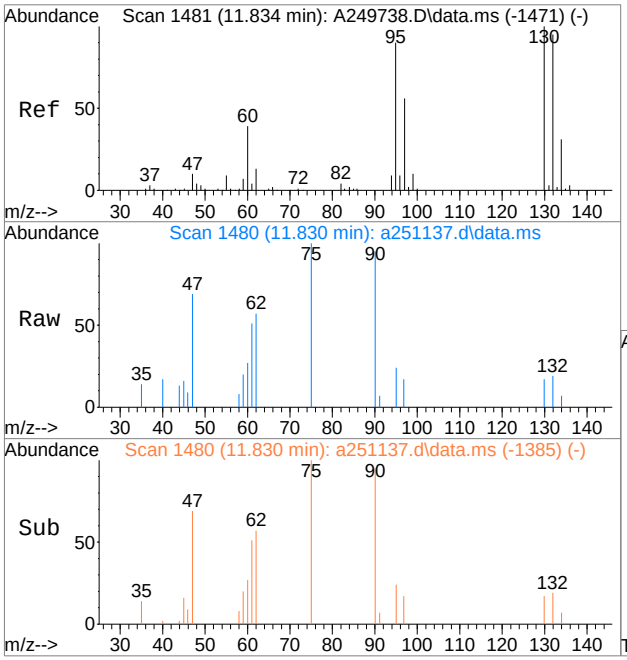


#37
cis-1,2-dichloroethene
Concen: 90.28 ug/L
RT: 9.989 min Scan# 1128
Delta R.T. -0.004 min
Lab File: a251137.d
Acq: 27 Jun 2019 12:36 am

Tgt Ion: 96 Resp: 180951

Ion	Ratio	Lower	Upper
96	100		
61	119.1	91.3	151.3
98	62.0	34.7	94.7

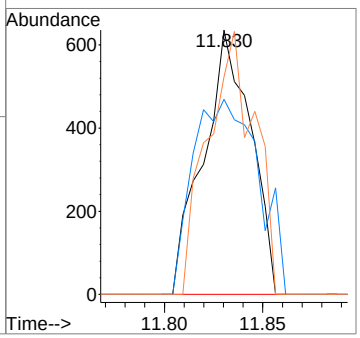




#62
trichloroethene
Concen: 0.62 ug/L
RT: 11.830 min Scan# 1480
Delta R.T. -0.004 min
Lab File: a251137.d
Acq: 27 Jun 2019 12:36 am

Tgt Ion: 95 Resp: 1066

Ion	Ratio	Lower	Upper
95	100		
130	73.7	81.5	141.5#
132	82.2	75.4	135.4



Manual Integration Approval Summary

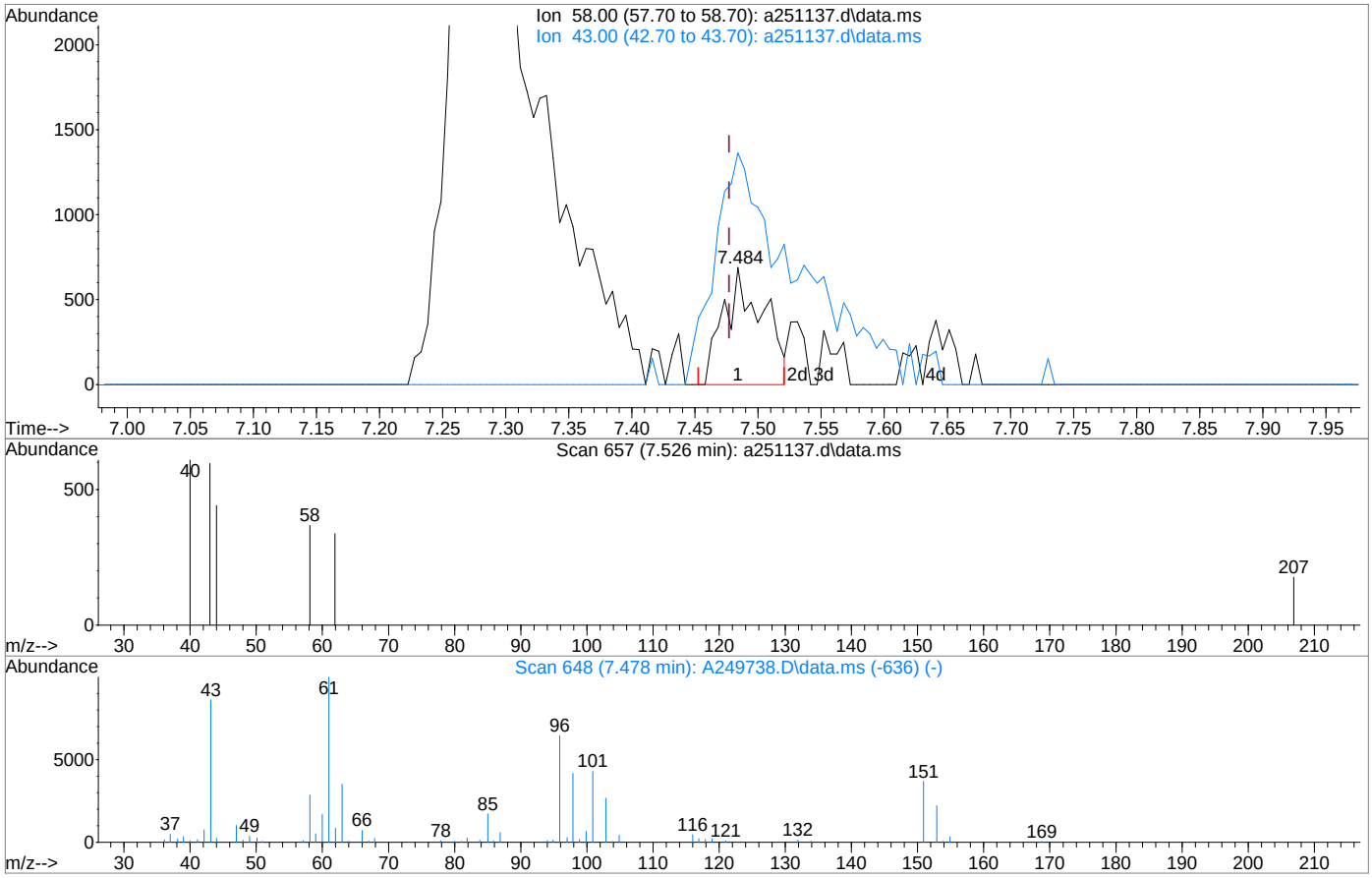
Sample Number: JC90273-15
Lab FileID: A251137.D
Injection Time: 06/27/19 00:36
Method: SW846 8260C
Analyst approved: 06/27/19 11:53 Jon Kreigmor Mamanta
Supervisor approved: 06/27/19 16:02 MoHui Huang

Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetone	67-64-1		7.48	Poor instrument integration
Carbon disulfide	75-15-0		7.90	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251137.d
Acq On : 27 Jun 2019 12:36 am
Operator : deving
Sample : JC90273-15 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 08:29:33 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



TIC: a251137.d\data.ms

(19) acetone (M)

7.484min (+0.007) 5.57ug/L

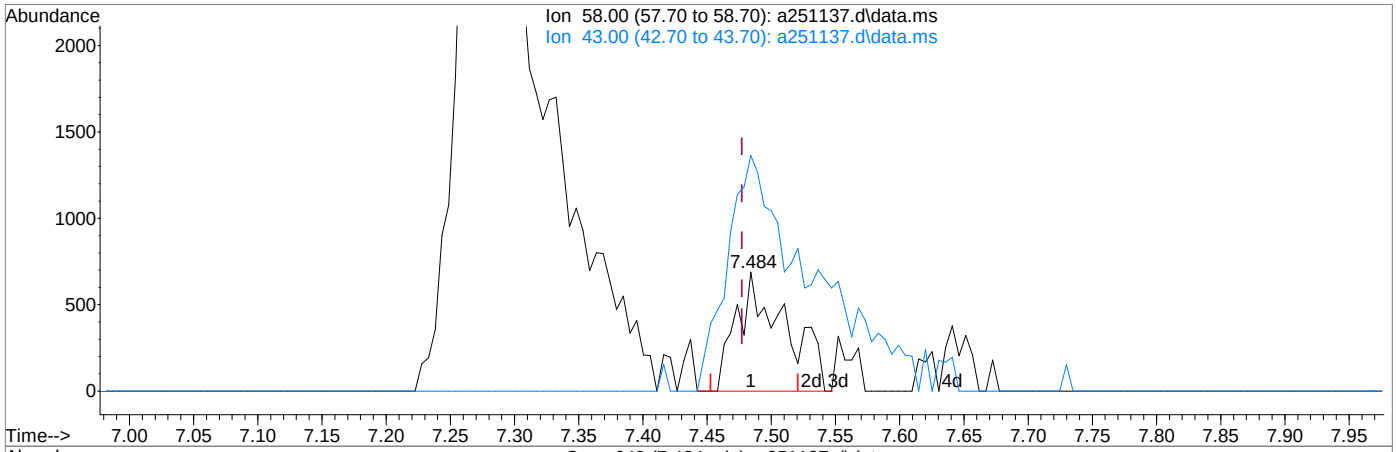
response 1499

Ion	Exp%	Act%
58.00	100	100
43.00	308.30	197.97#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251137.d
Acq On : 27 Jun 2019 12:36 am
Operator : deving
Sample : JC90273-15 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 08:29:33 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



TIC: a251137.d\data.ms

(19) acetone (M)

7.484min (+0.007) 6.75ug/L m

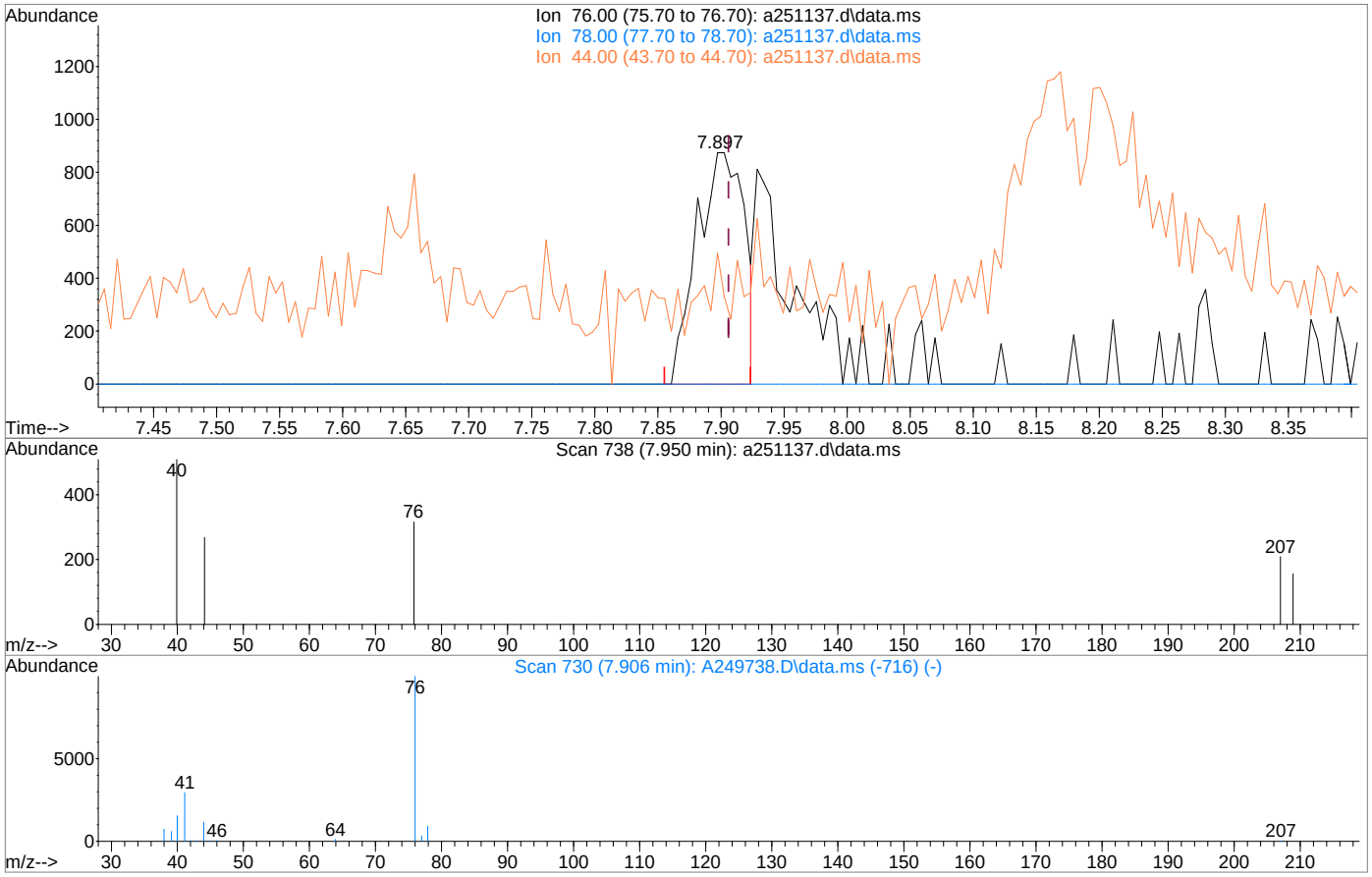
response 1817

Ion	Exp%	Act%
58.00	100	100
43.00	308.30	197.97#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251137.d
Acq On : 27 Jun 2019 12:36 am
Operator : deving
Sample : JC90273-15 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 08:29:33 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



TIC: a251137.d\data.ms

(22) carbon disulfide (M)

7.897min (-0.009) 0.34ug/L

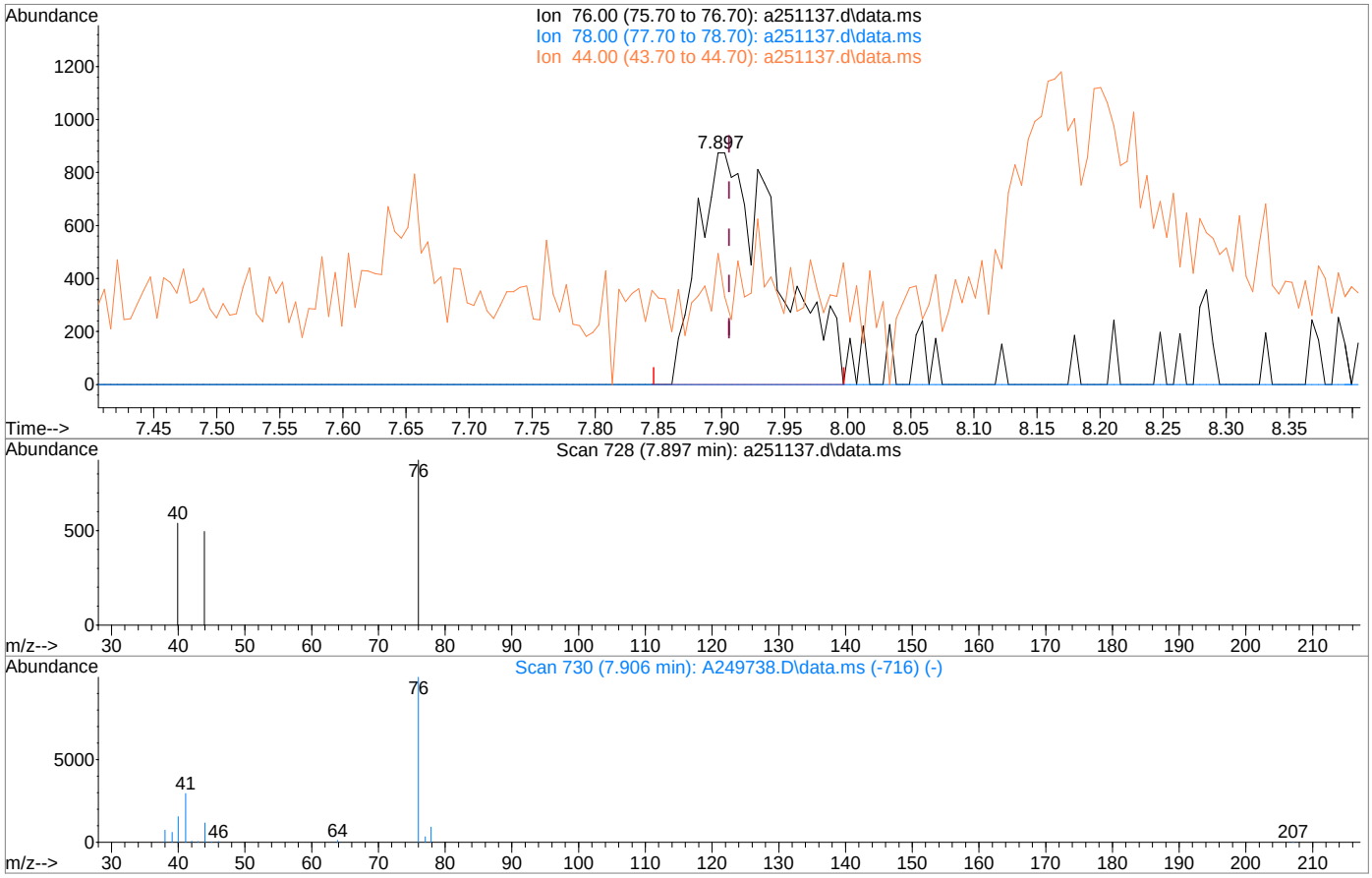
response 2279

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	0.00
44.00	11.60	24.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251137.d
Acq On : 27 Jun 2019 12:36 am
Operator : deving
Sample : JC90273-15 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 08:29:33 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



TIC: a251137.d\data.ms

(22) carbon disulfide (M)

7.897min (-0.009) 0.59ug/L m

response 3912

Ion	Exp%	Act%
76.00	100	100
78.00	9.10	0.00
44.00	11.60	56.64#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182439.D
Acq On : 27 Jun 2019 11:43 am
Operator : jessicap
Sample : JC90273-15
Misc : MS35702,VX7809,5,,,,10
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 27 14:49:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

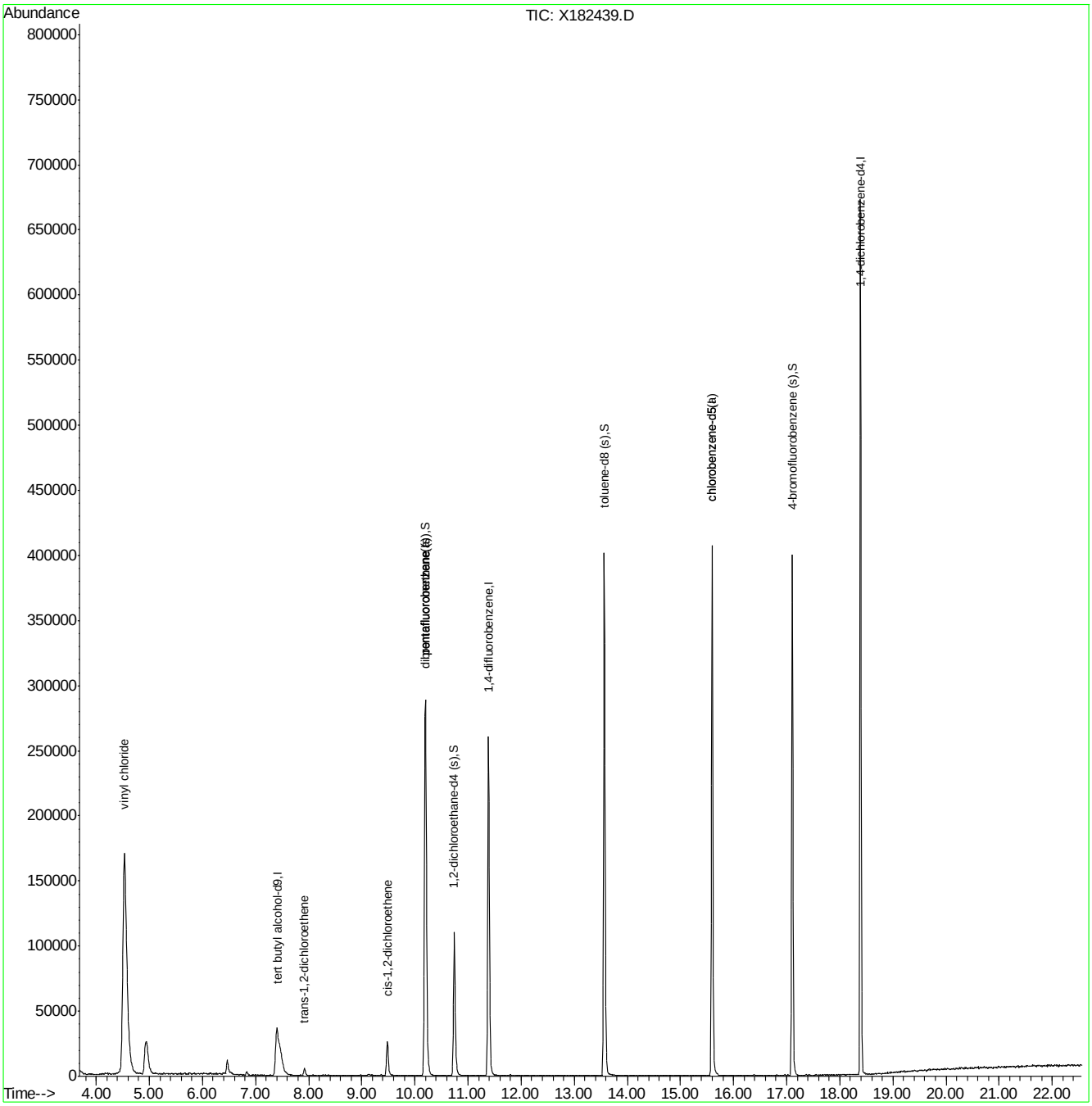
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	134549	500.00	ug/L	0.00
5) pentafluorobenzene	10.19	168	203156	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.38	114	269924	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	269899	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	178820	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.19	168	203156	50.00	ug/L	-0.01
130) chlorobenzene-d5(a)	15.60	117	269899	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	89640	54.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.46%			
54) 1,2-dichloroethane-d4 (s)	10.74	65	91533	51.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.82%			
75) toluene-d8 (s)	13.56	98	328062	50.70	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.40%			
98) 4-bromofluorobenzene (s)	17.11	95	134306	45.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.70%			
Target Compounds						Qvalue
9) vinyl chloride	4.53	62	560933	86.92	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	2866	1.81	ug/L #	77
37) cis-1,2-dichloroethene	9.49	96	15689	8.61	ug/L	93

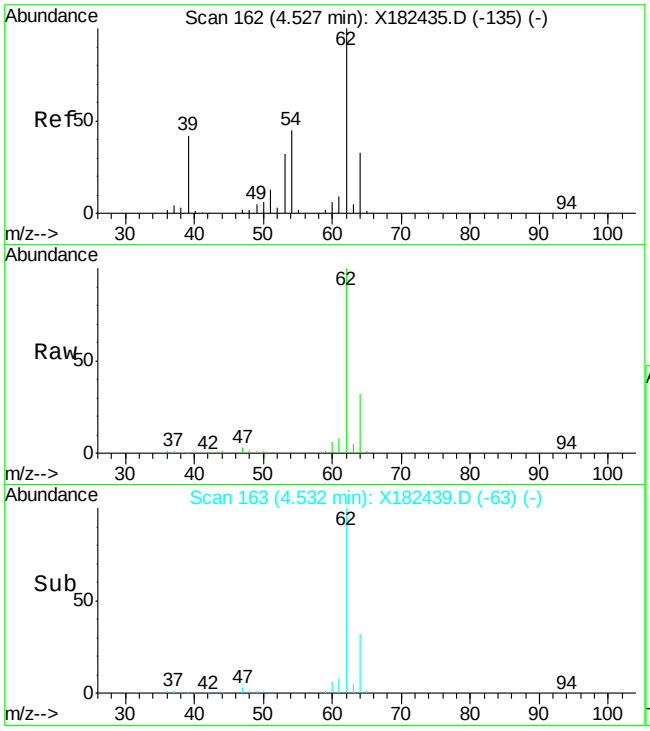
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182439.D
Acq On : 27 Jun 2019 11:43 am
Operator : jessicap
Sample : JC90273-15
Misc : MS35702,VX7809,5,,,,10
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 27 14:49:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

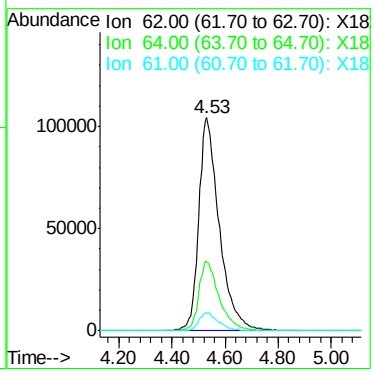


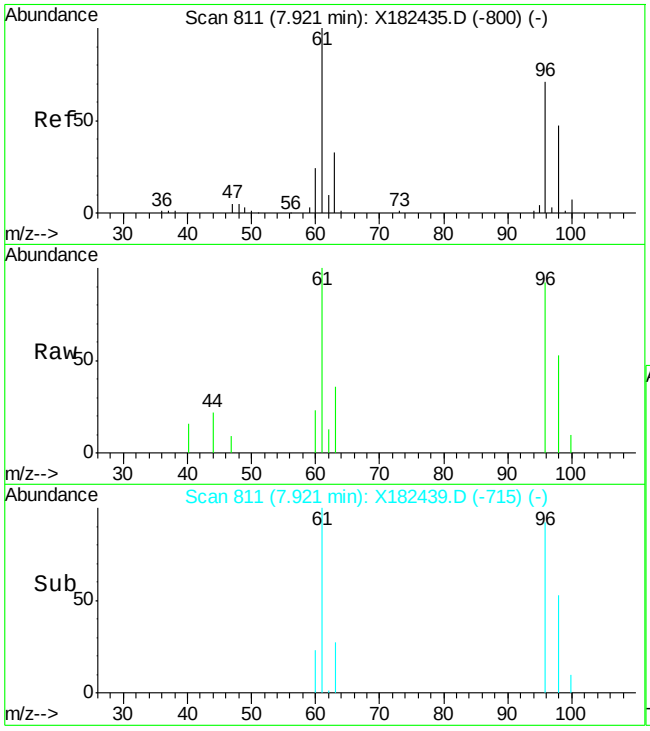


#9
vinyl chloride
Concen: 86.92 ug/L
RT: 4.53 min Scan# 163
Delta R.T. 0.02 min
Lab File: X182439.D
Acq: 27 Jun 2019 11:43 am

Tgt Ion: 62 Resp: 560933

Ion	Ratio	Lower	Upper
62	100		
64	32.0	1.1	61.1
61	8.2	0.0	38.3

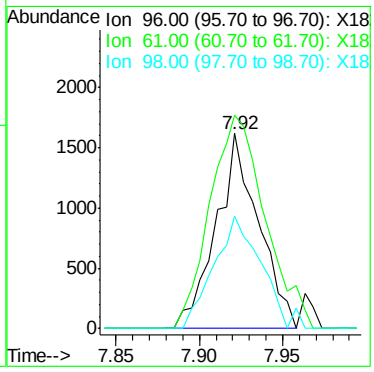


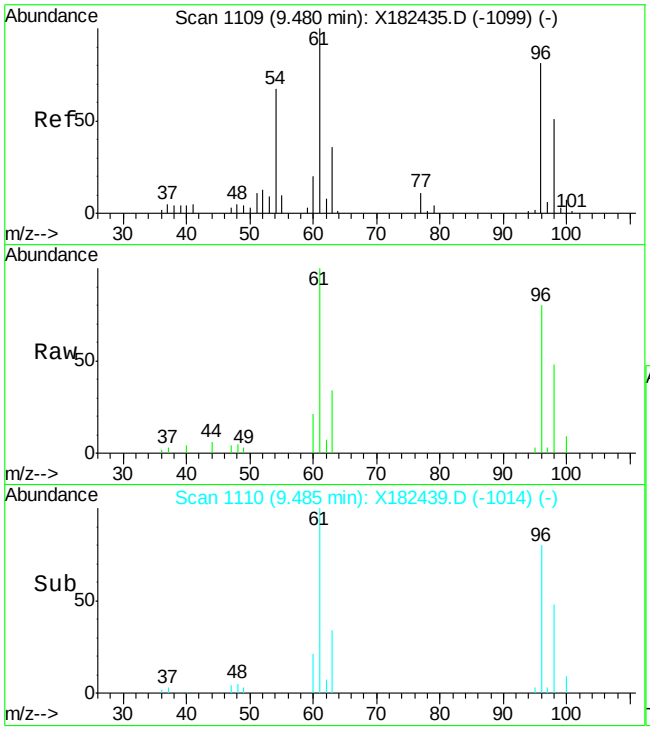


#26
trans-1,2-dichloroethene
Concen: 1.81 ug/L
RT: 7.92 min Scan# 811
Delta R.T. -0.00 min
Lab File: X182439.D
Acq: 27 Jun 2019 11:43 am

Tgt Ion: 96 Resp: 2866

Ion	Ratio	Lower	Upper
96	100		
61	109.3	116.4	176.4#
98	57.8	33.8	93.8

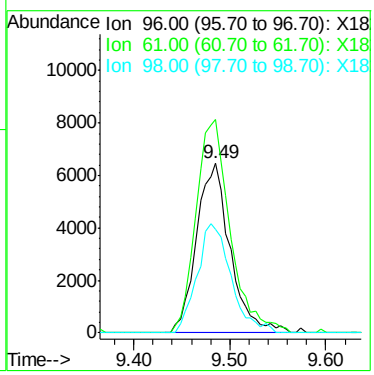




#37
cis-1,2-dichloroethene
Concen: 8.61 ug/L
RT: 9.49 min Scan# 1110
Delta R.T. 0.00 min
Lab File: X182439.D
Acq: 27 Jun 2019 11:43 am

Tgt Ion: 96 Resp: 15689

Ion	Ratio	Lower	Upper
96	100		
61	125.4	106.1	166.1
98	60.7	32.7	92.7



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182438.D
Acq On : 27 Jun 2019 11:15 am
Operator : jessicap
Sample : JC90273-16
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 27 14:49:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	140215	500.00	ug/L	0.00
5) pentafluorobenzene	10.19	168	209125	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.38	114	281352	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	279508	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	180078	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.19	168	209125	50.00	ug/L	-0.01
130) chlorobenzene-d5(a)	15.60	117	279508	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	92102	54.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.26%			
54) 1,2-dichloroethane-d4 (s)	10.74	65	94622	50.98	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.96%			
75) toluene-d8 (s)	13.57	98	340446	50.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.62%			
98) 4-bromofluorobenzene (s)	17.11	95	137937	46.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.52%			

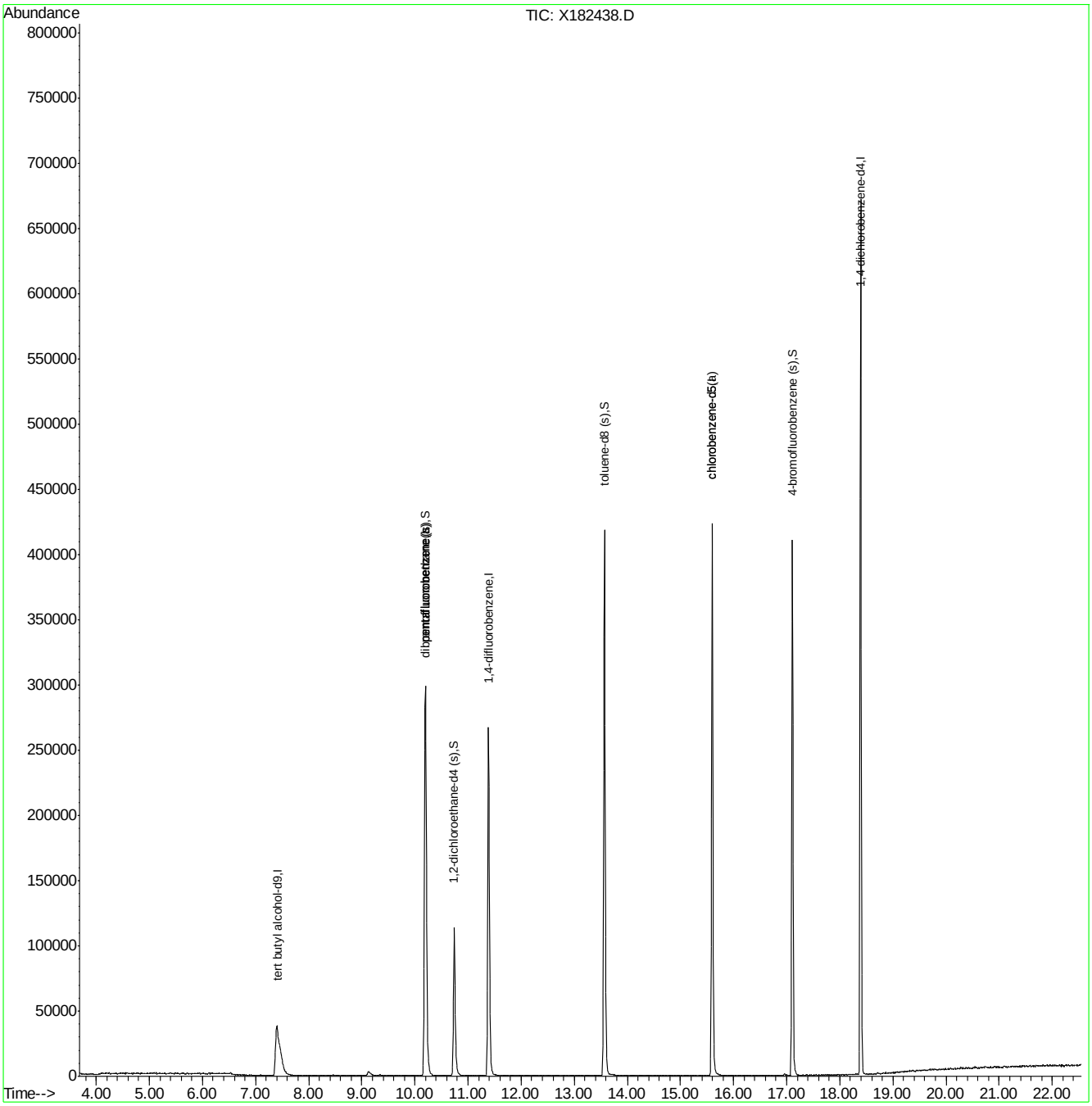
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182438.D
Acq On : 27 Jun 2019 11:15 am
Operator : jessicap
Sample : JC90273-16
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 27 14:49:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251139.d
Acq On : 27 Jun 2019 1:34 am
Operator : deving
Sample : JC90273-17 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:34:18 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

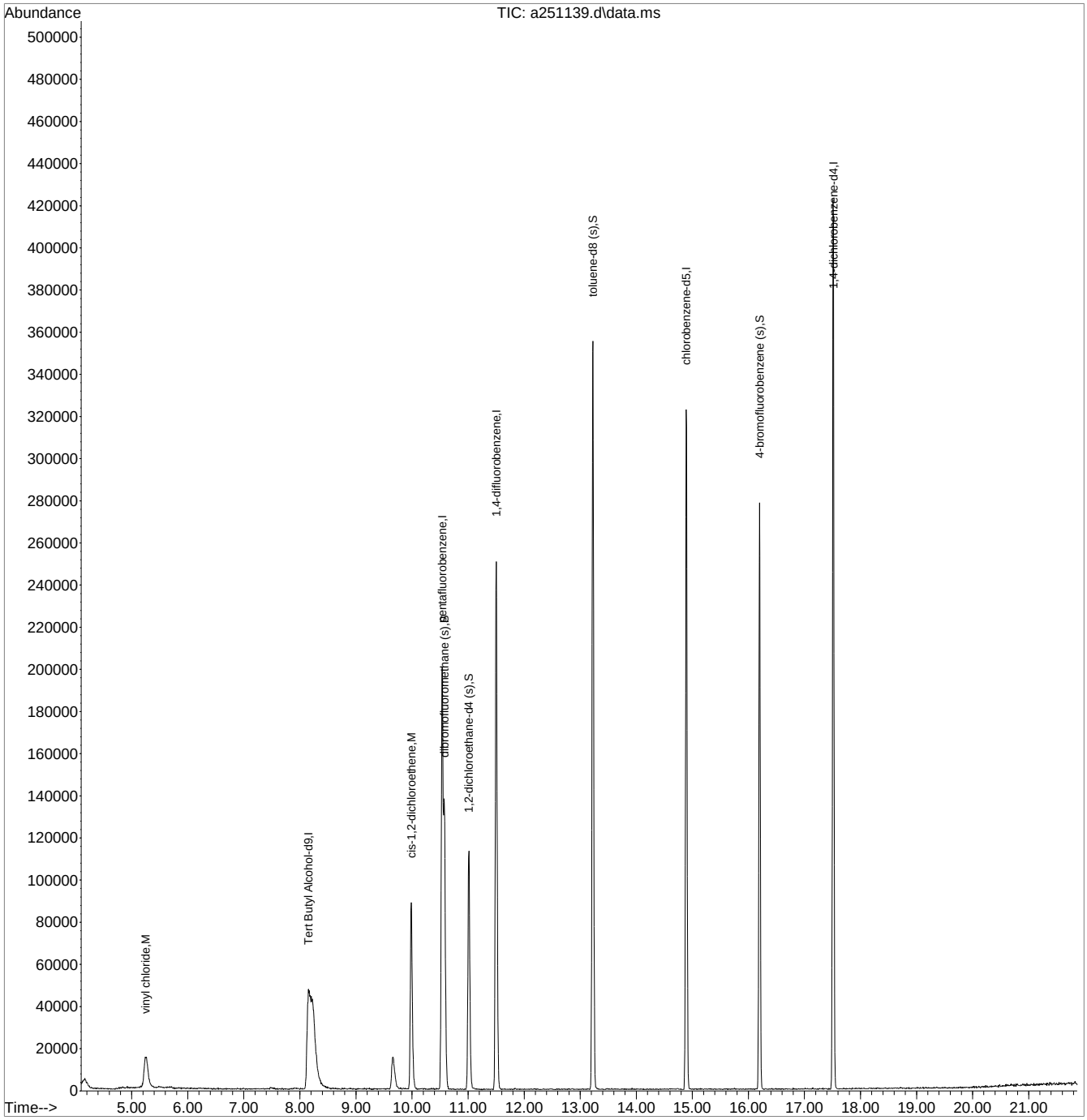
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.149	65	249042	500.00	ug/L	#-0.02
5) pentafluorobenzene	10.539	168	179938	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	253155	50.00	ug/L	0.00
74) chlorobenzene-d5	14.891	117	206669	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.516	152	129776	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.576	113	92944	52.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.82%			
53) 1,2-dichloroethane-d4 (s)	11.010	65	98662	54.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 108.50%			
75) toluene-d8 (s)	13.228	98	274031	49.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.72%			
99) 4-bromofluorobenzene (s)	16.198	95	97866	48.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.82%			
Target Compounds						Qvalue
9) vinyl chloride	5.246	62	45683	11.68	ug/L	93
37) cis-1,2-dichloroethene	9.985	96	52634	27.02	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

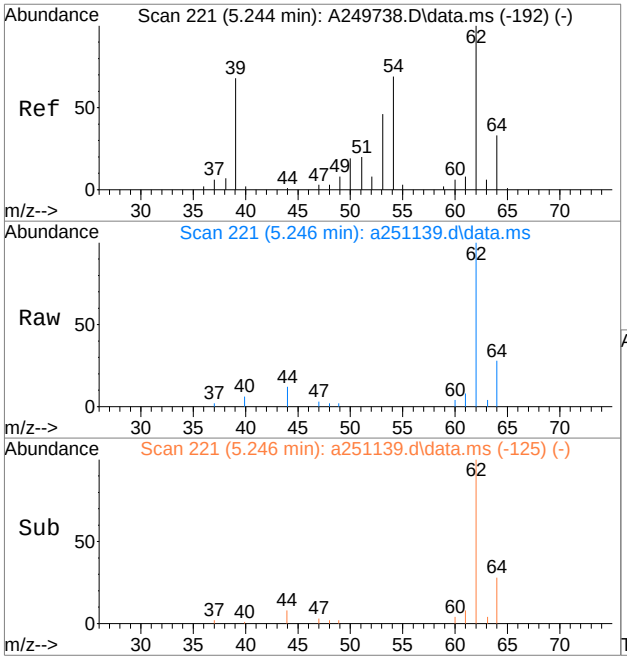
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251139.d
Acq On : 27 Jun 2019 1:34 am
Operator : deving
Sample : JC90273-17 Inst : MSA
Misc : MS35702,VA9712,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:34:18 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



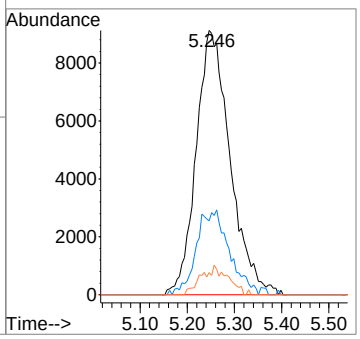
MA9645.M Thu Jun 27 11:50:02 2019 Page: 2

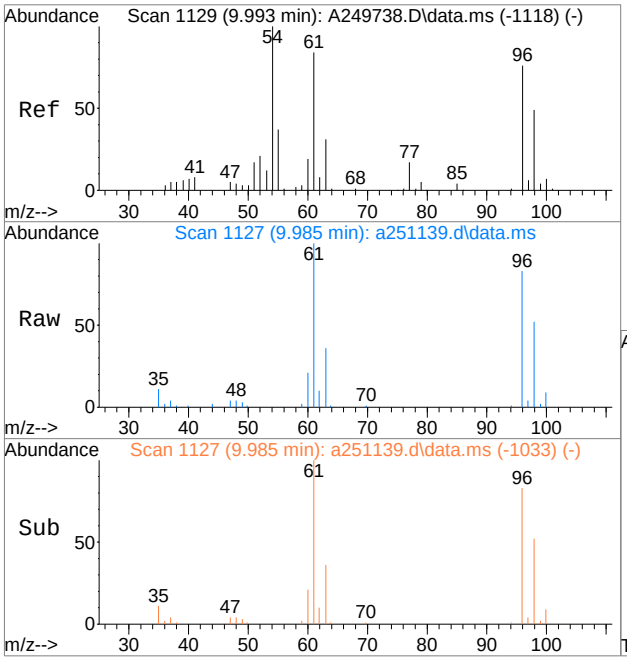


#9
vinyl chloride
Concen: 11.68 ug/L
RT: 5.246 min Scan# 221
Delta R.T. 0.002 min
Lab File: a251139.d
Acq: 27 Jun 2019 1:34 am

Tgt Ion: 62 Resp: 45683

Ion	Ratio	Lower	Upper
62	100		
64	28.0	2.5	62.5
61	8.4	0.0	37.6

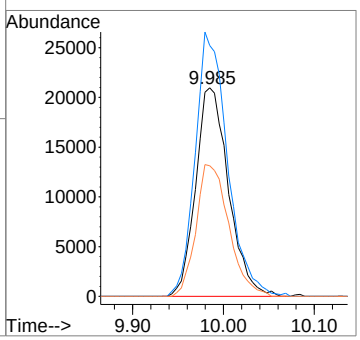




#37
cis-1,2-dichloroethene
Concen: 27.02 ug/L
RT: 9.985 min Scan# 1127
Delta R.T. -0.008 min
Lab File: a251139.d
Acq: 27 Jun 2019 1:34 am

Tgt Ion: 96 Resp: 52634

Ion	Ratio	Lower	Upper
96	100		
61	120.2	91.3	151.3
98	62.6	34.7	94.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182397.d
Acq On : 26 Jun 2019 9:08 am
Operator : jessicap
Sample : mb Inst : ACC-VOA-MSX
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:27:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

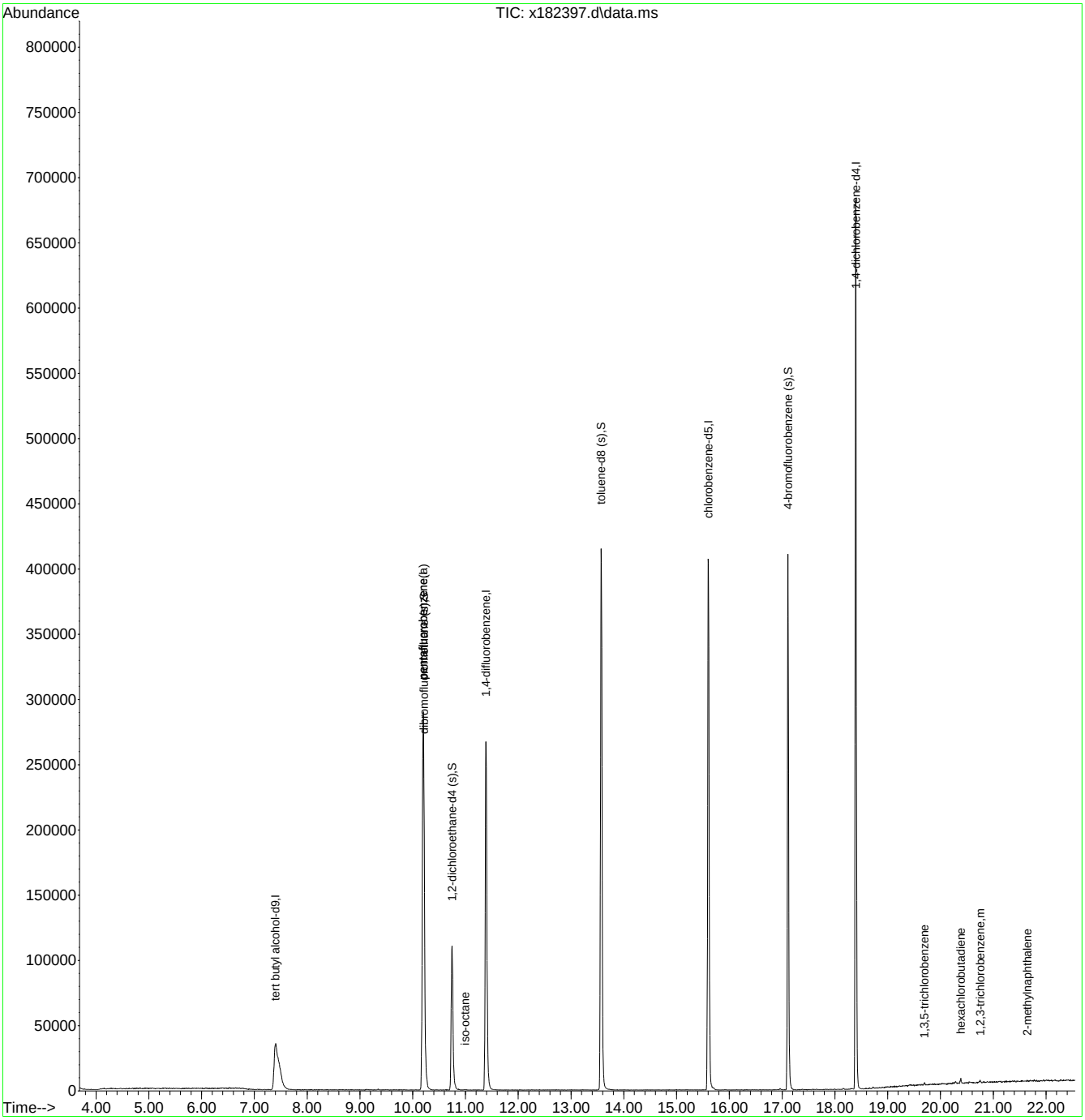
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.393	65	142797	500.00	ug/L	-0.01
5) pentafluorobenzene	10.196	168	204076	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	278274	50.00	ug/L	0.00
74) chlorobenzene-d5	15.604	117	273831	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	183451	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	204076	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	92289	55.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.16%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	94071	51.25	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.50%			
75) toluene-d8 (s)	13.570	98	335309	51.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.16%			
98) 4-bromofluorobenzene (s)	17.111	95	137097	45.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.24%			
Target Compounds						Qvalue
55) iso-octane	10.991	57	646	0.13	ug/L #	45
117) 1,3,5-trichlorobenzene	19.695	180	635	0.11	ug/L #	64
118) hexachlorobutadiene	20.385	225	854	0.44	ug/L	91
122) 1,2,3-trichlorobenzene	20.751	180	643	0.12	ug/L	79
124) 2-methylnaphthalene	21.645	142	243	3.36	ug/L #	85

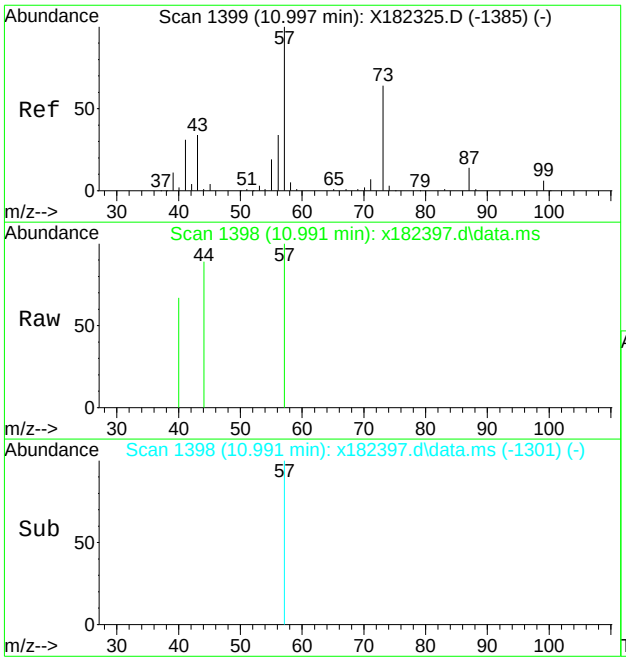
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182397.d
Acq On : 26 Jun 2019 9:08 am
Operator : jessicap
Sample : mb Inst : ACC-VOA-MSX
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:27:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

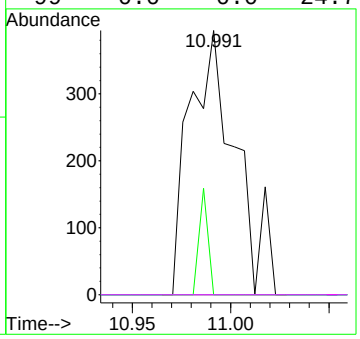


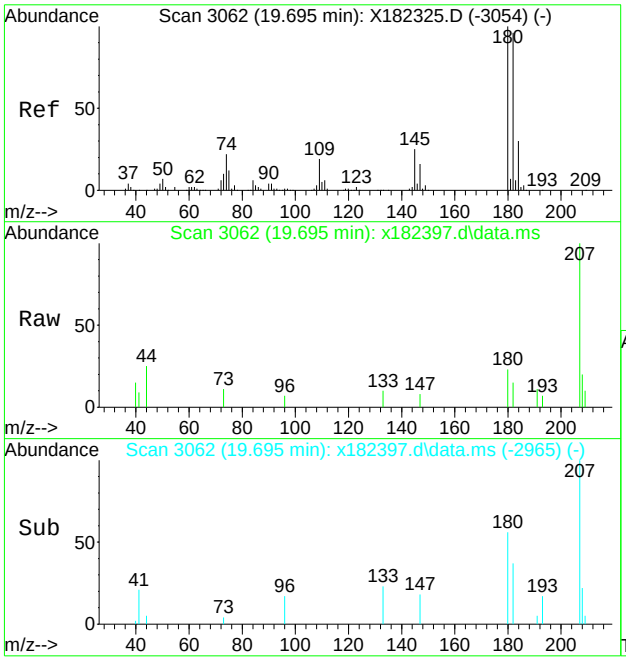


#55
iso-octane
Concen: 0.13 ug/L
RT: 10.991 min Scan# 1398
Delta R.T. 0.005 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion: 57 Resp: 646

Ion	Ratio	Lower	Upper
57	100		
41	0.0	11.7	51.7#
56	0.0	13.2	53.2#
99	0.0	0.0	24.7

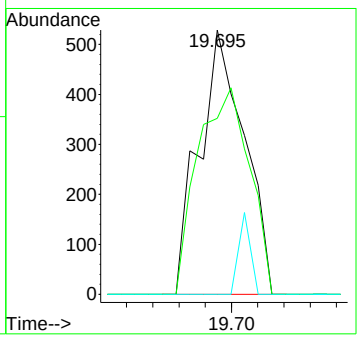


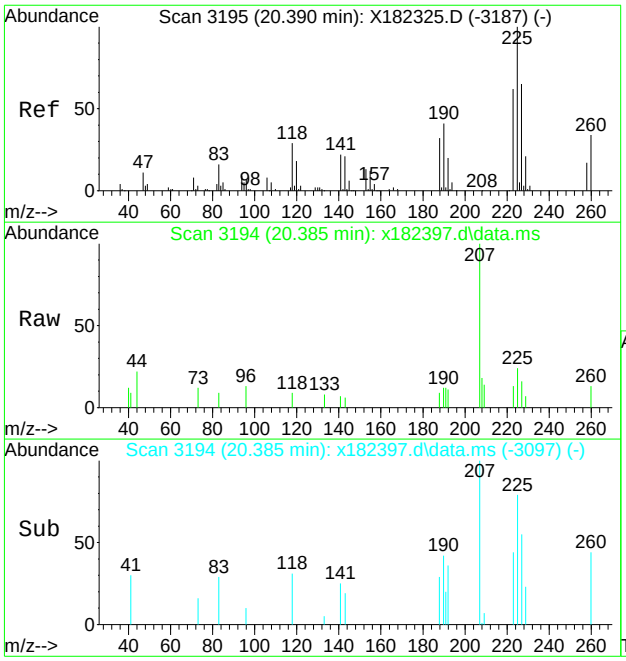


#117
1,3,5-trichlorobenzene
Concen: 0.11 ug/L
RT: 19.695 min Scan# 3062
Delta R.T. 0.005 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:180 Resp: 635

Ion	Ratio	Lower	Upper
180	100		
182	66.5	67.8	127.8#
145	0.0	0.0	55.9

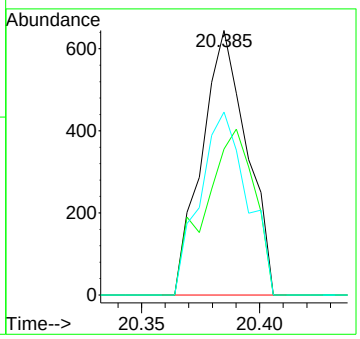


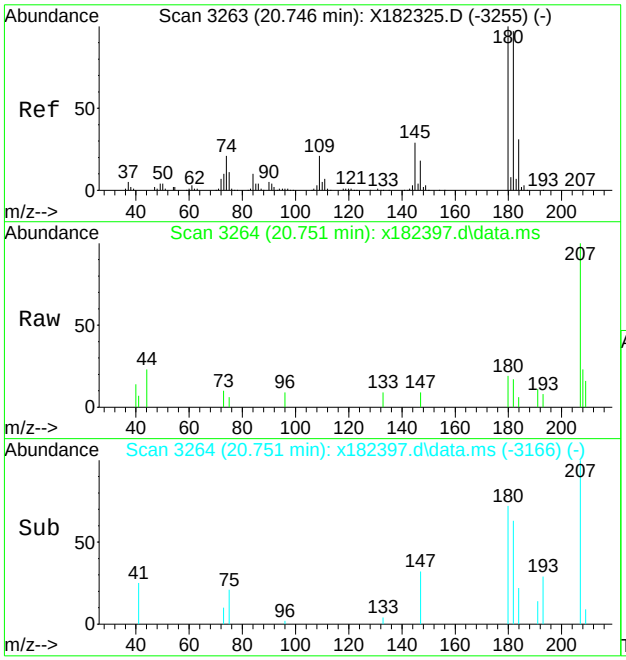


#118
hexachlorobutadiene
Concen: 0.44 ug/L
RT: 20.385 min Scan# 3194
Delta R.T. 0.005 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:225 Resp: 854

Ion	Ratio	Lower	Upper
225	100		
223	55.2	33.3	93.3
227	69.1	33.1	93.1

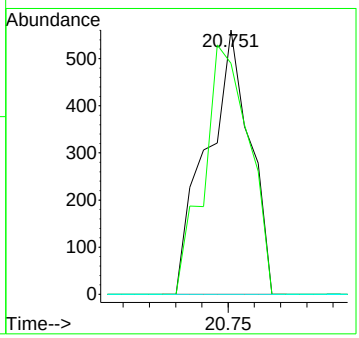


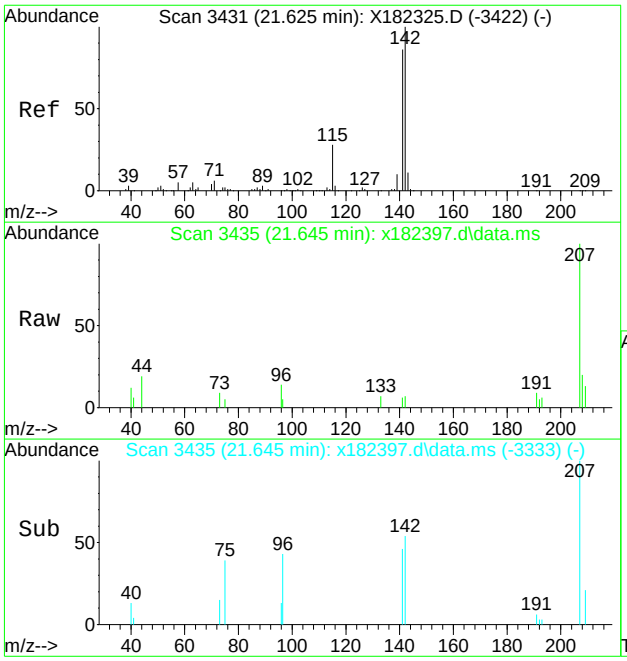


#122
1,2,3-trichlorobenzene
Concen: 0.12 ug/L
RT: 20.751 min Scan# 3264
Delta R.T. 0.010 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:180 Resp: 643

Ion	Ratio	Lower	Upper
180	100		
182	87.3	68.0	128.0
145	0.0	0.0	59.6

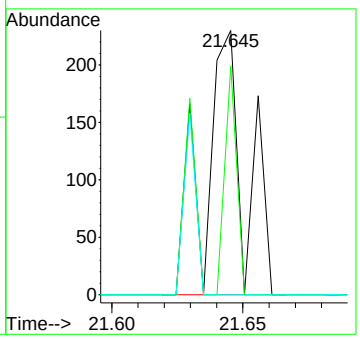




#124
2-methylnaphthalene
Concen: 3.36 ug/L
RT: 21.645 min Scan# 3435
Delta R.T. 0.031 min
Lab File: x182397.d
Acq: 26 Jun 2019 9:08 am

Tgt Ion:142 Resp: 243

Ion	Ratio	Lower	Upper
142	100		
141	86.5	65.5	105.5
115	0.0	10.3	50.3#



7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251129.d
Acq On : 26 Jun 2019 8:46 pm
Operator : deving
Sample : mb Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:16:00 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

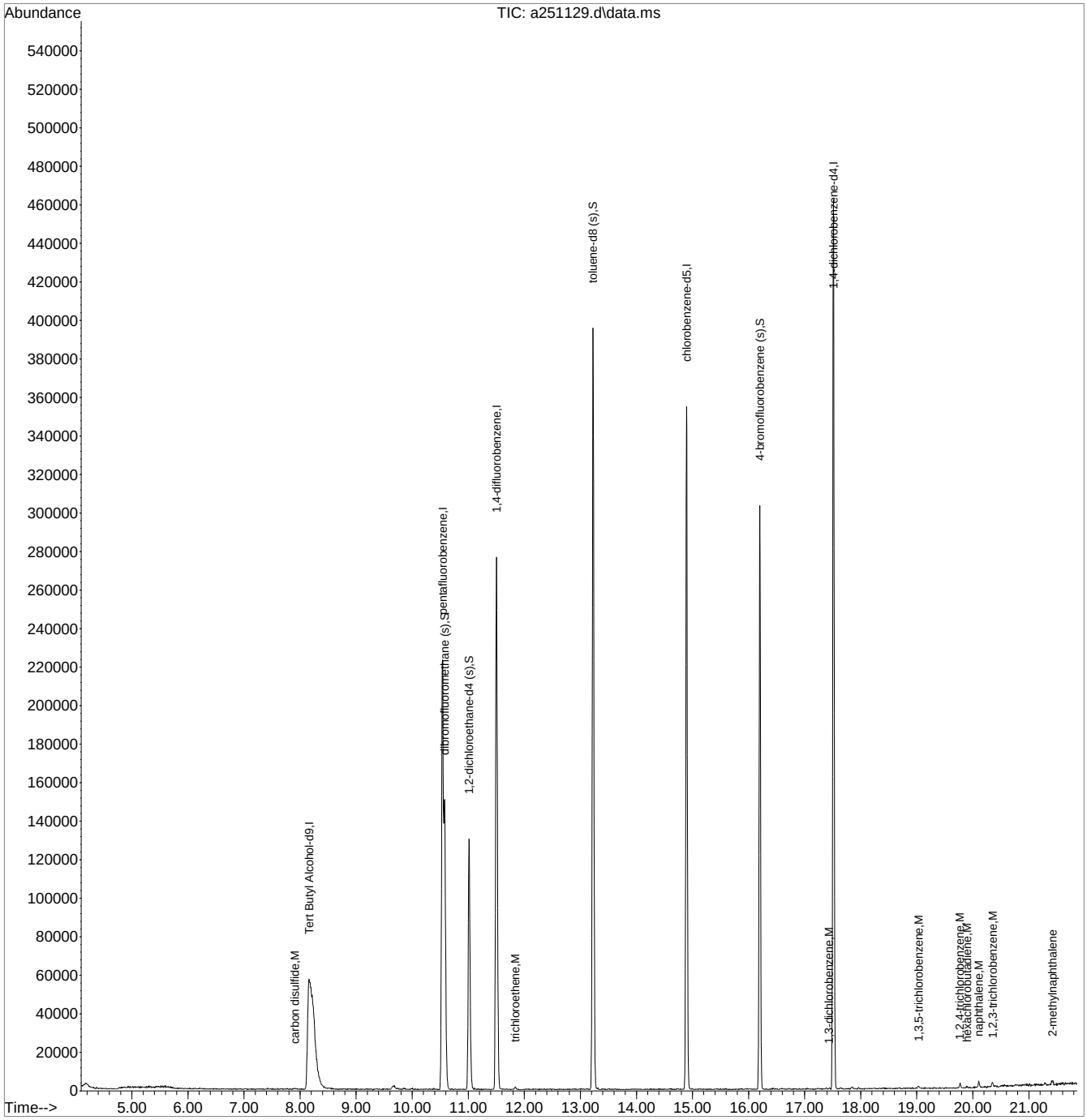
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.162	65	277474	500.00	ug/L	0.00
5) pentafluorobenzene	10.541	168	198843	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.504	114	279446	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	227615	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	138919	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	100296	51.17	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.34%			
53) 1,2-dichloroethane-d4 (s)	11.012	65	107322	53.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.92%			
75) toluene-d8 (s)	13.224	98	300824	49.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.40%			
99) 4-bromofluorobenzene (s)	16.200	95	107827	49.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.66%			
Target Compounds						Qvalue
22) carbon disulfide	7.905	76	1210	0.17	ug/L	64
62) trichloroethene	11.838	95	539	0.30	ug/L	82
111) 1,3-dichlorobenzene	17.435	146	412	0.10	ug/L #	25
117) 1,3,5-trichlorobenzene	19.035	180	684	0.17	ug/L	96
119) 1,2,4-trichlorobenzene	19.767	180	1024	0.28	ug/L	72
120) hexachlorobutadiene	19.898	225	337	0.23	ug/L #	46
121) naphthalene	20.107	128	3367	0.31	ug/L	96
122) 1,2,3-trichlorobenzene	20.353	180	1436	0.38	ug/L	84
124) 2-methylnaphthalene	21.420	142	1533	0.26	ug/L #	86

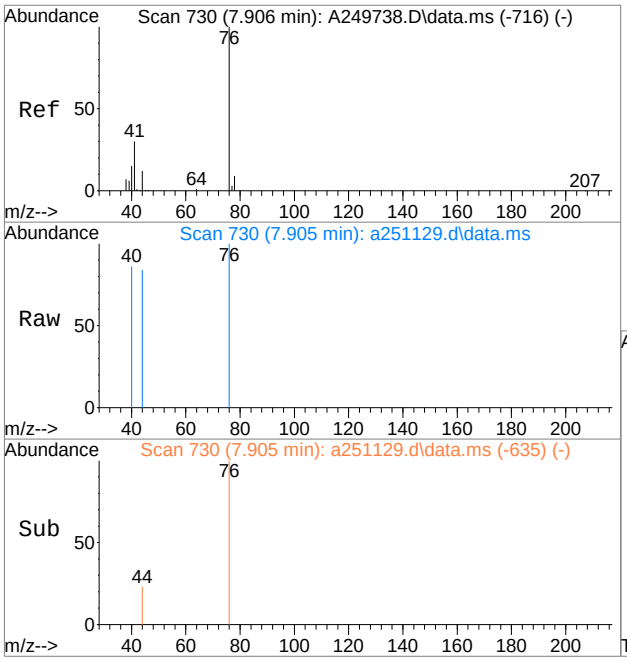
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251129.d
Acq On : 26 Jun 2019 8:46 pm
Operator : deving
Sample : mb Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:16:00 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

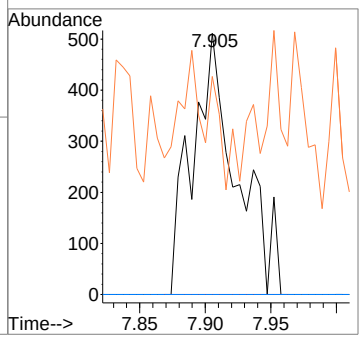


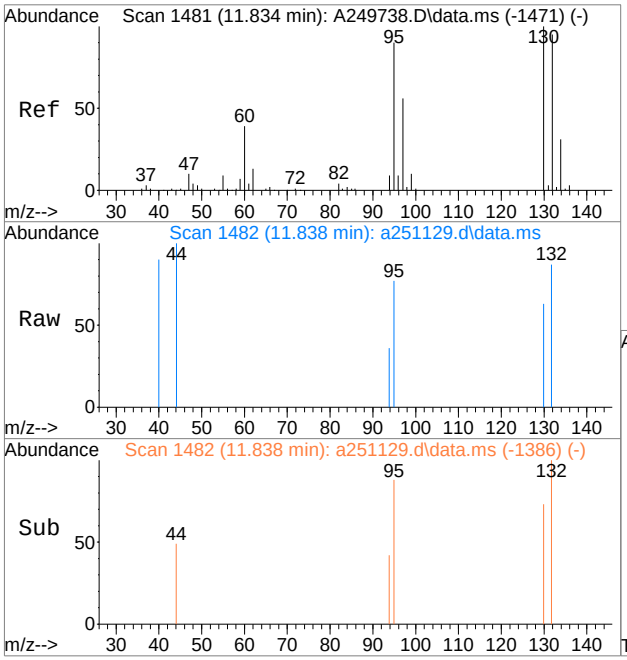


#22
carbon disulfide
Concen: 0.17 ug/L
RT: 7.905 min Scan# 730
Delta R.T. -0.001 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion: 76 Resp: 1210

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.1
44	29.1	0.0	41.6

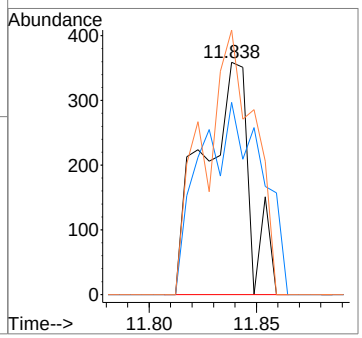


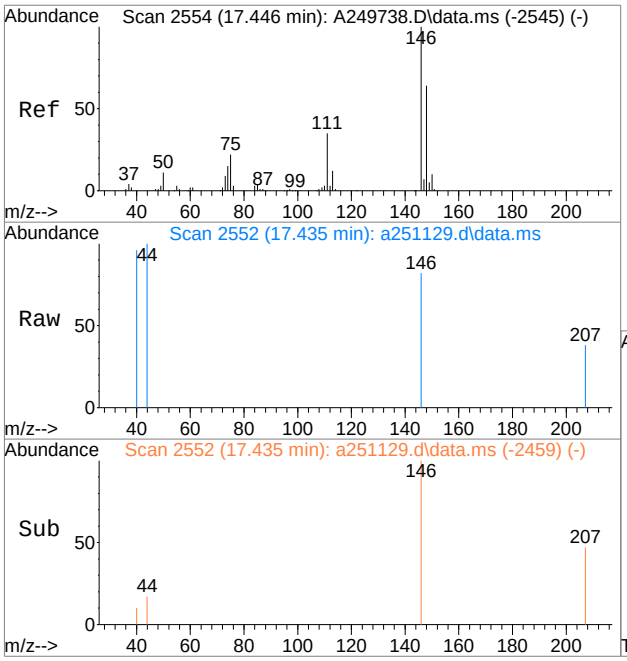


#62
trichloroethene
Concen: 0.30 ug/L
RT: 11.838 min Scan# 1482
Delta R.T. 0.004 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion: 95 Resp: 539

Ion	Ratio	Lower	Upper
95	100		
130	82.7	81.5	141.5
132	113.9	75.4	135.4

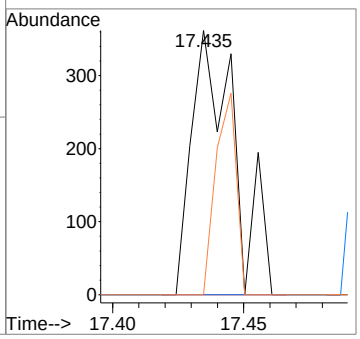


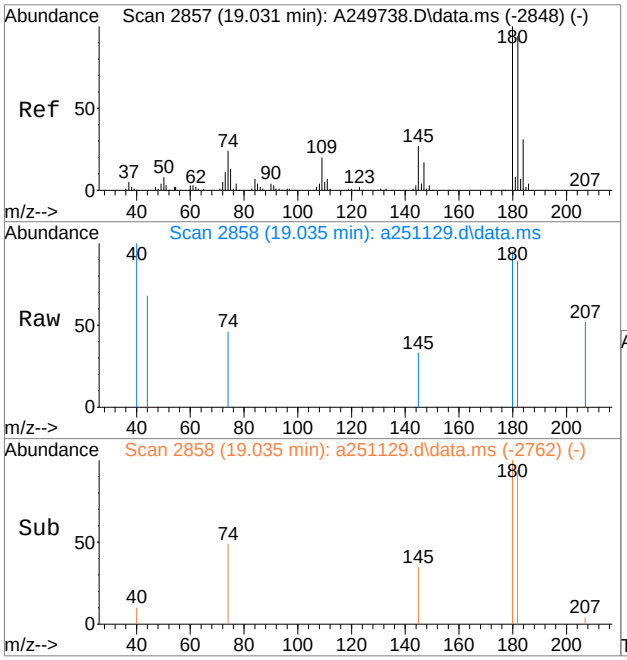


#111
1,3-dichlorobenzene
Concen: 0.10 ug/L
RT: 17.435 min Scan# 2552
Delta R.T. -0.012 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:146 Resp: 412

Ion	Ratio	Lower	Upper
146	100		
111	0.0	5.5	65.5#
148	0.0	34.5	94.5#

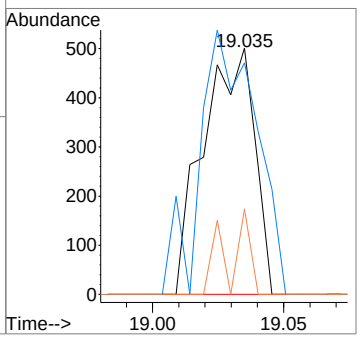


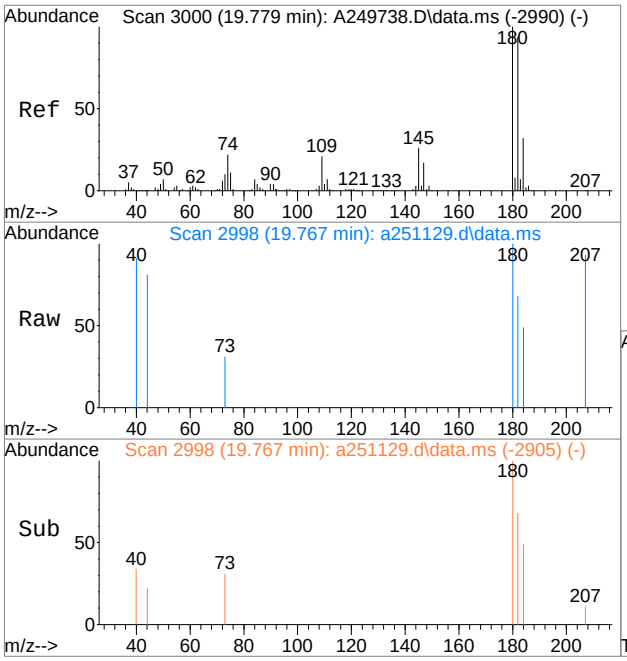


#117
1,3,5-trichlorobenzene
Concen: 0.17 ug/L
RT: 19.035 min Scan# 2858
Delta R.T. 0.004 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:180 Resp: 684

Ion	Ratio	Lower	Upper
180	100		
182	94.0	64.2	124.2
145	34.7	0.0	56.7

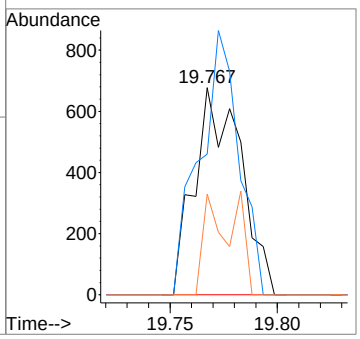


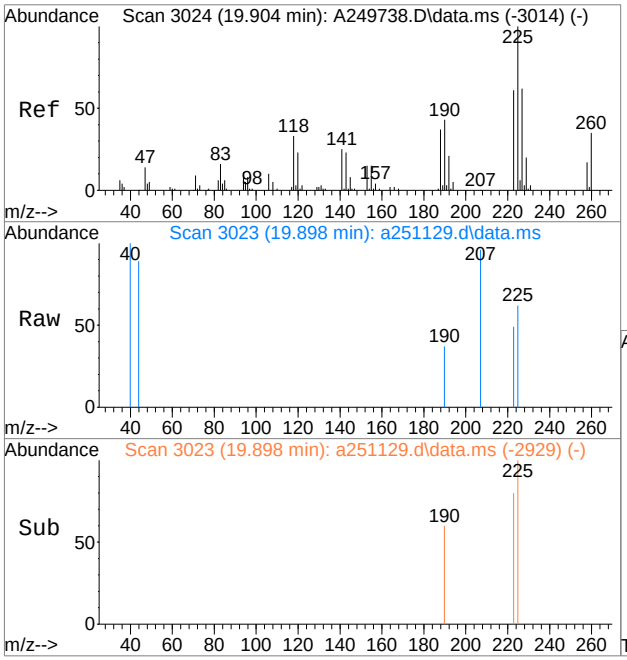


#119
1,2,4-trichlorobenzene
Concen: 0.28 ug/L
RT: 19.767 min Scan# 2998
Delta R.T. -0.012 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:180 Resp: 1024

Ion	Ratio	Lower	Upper
180	100		
182	67.8	64.1	124.1
184	48.5	1.8	61.8

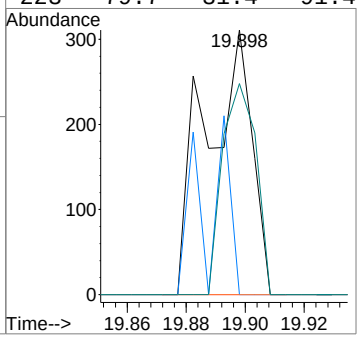


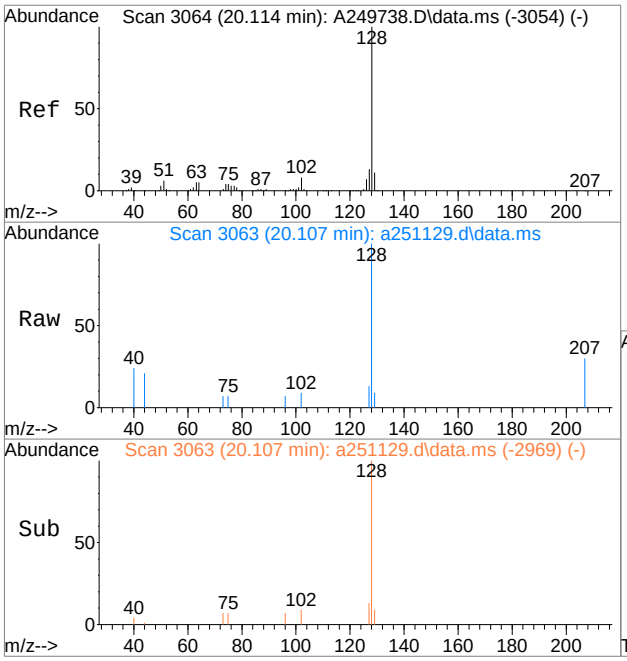


#120
hexachlorobutadiene
Concen: 0.23 ug/L
RT: 19.898 min Scan# 3023
Delta R.T. -0.006 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:225 Resp: 337

Ion	Ratio	Lower	Upper
225	100		
227	0.0	32.5	92.5#
260	0.0	4.5	64.5#
223	79.7	31.4	91.4

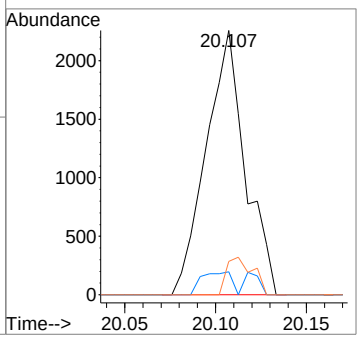


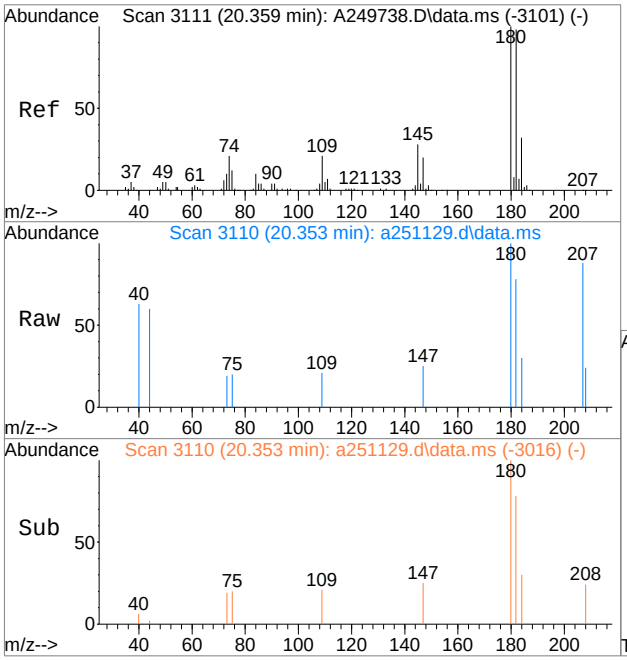


#121
naphthalene
Concen: 0.31 ug/L
RT: 20.107 min Scan# 3063
Delta R.T. -0.006 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:128 Resp: 3367

Ion	Ratio	Lower	Upper
128	100		
129	8.7	0.0	41.4
127	12.6	0.0	43.3

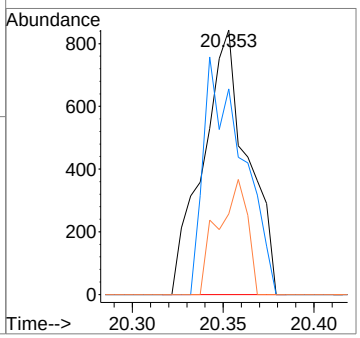


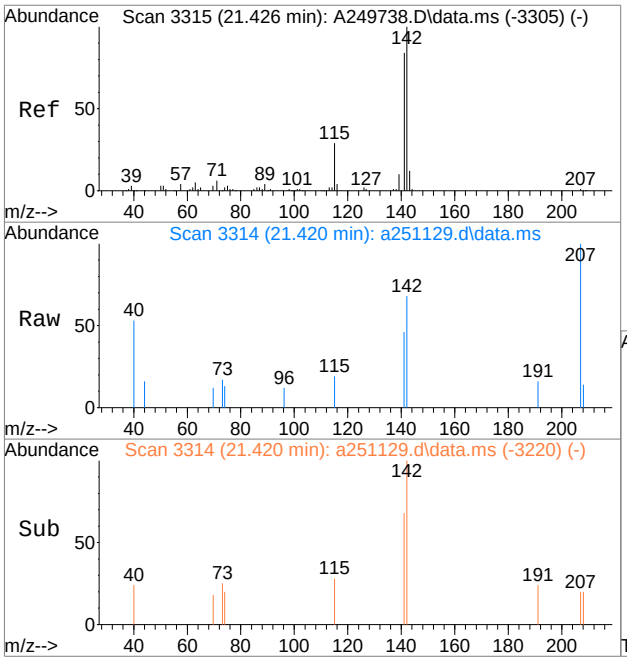


#122
1,2,3-trichlorobenzene
Concen: 0.38 ug/L
RT: 20.353 min Scan# 3110
Delta R.T. -0.006 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:180 Resp: 1436

Ion	Ratio	Lower	Upper
180	100		
182	77.7	68.3	128.3
184	30.5	2.3	62.3

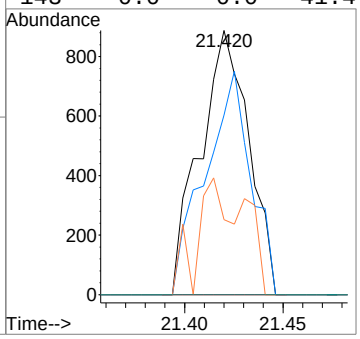




#124
2-methylnaphthalene
Concen: 0.26 ug/L
RT: 21.420 min Scan# 3314
Delta R.T. -0.006 min
Lab File: a251129.d
Acq: 26 Jun 2019 8:46 pm

Tgt Ion:142 Resp: 1533

Ion	Ratio	Lower	Upper
142	100		
141	79.2	67.3	107.3
115	42.5	0.0	59.0
143	0.0	0.0	41.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182437.d
Acq On : 27 Jun 2019 10:32 am
Operator : jessicap
Sample : mb Inst : ACC-VOA-MSX
Misc : MS35693,VX7809,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:12:58 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

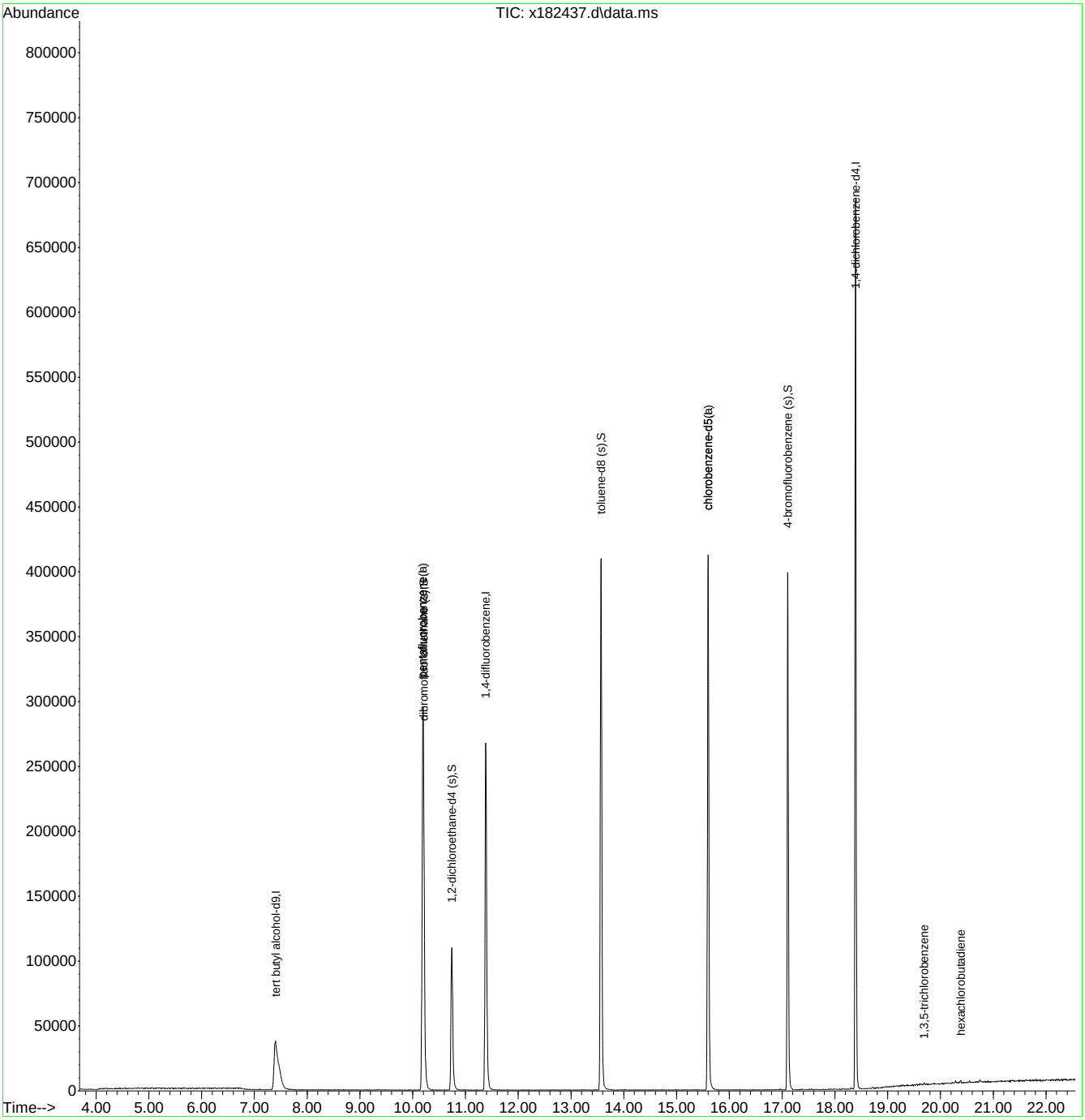
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.403	65	137601	500.00	ug/L	0.00
5) pentafluorobenzene	10.191	168	205059	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.384	114	274810	50.00	ug/L	0.00
74) chlorobenzene-d5	15.599	117	272746	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.392	152	179552	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.191	168	205059	50.00	ug/L	-0.01
130) chlorobenzene-d5(a)	15.599	117	272746	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.207	113	93155	55.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.66%			
54) 1,2-dichloroethane-d4 (s)	10.740	65	93351	51.50	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.00%			
75) toluene-d8 (s)	13.570	98	331346	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
98) 4-bromofluorobenzene (s)	17.106	95	135208	45.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.94%			
Target Compounds						Qvalue
117) 1,3,5-trichlorobenzene	19.689	180	639	0.12	ug/L	77
118) hexachlorobutadiene	20.385	225	655	0.35	ug/L	80

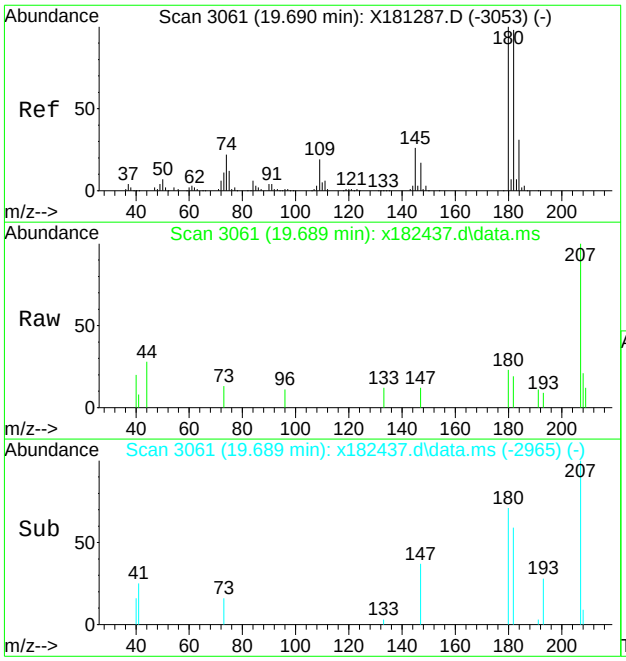
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182437.d
Acq On : 27 Jun 2019 10:32 am
Operator : jessicap
Sample : mb Inst : ACC-VOA-MSX
Misc : MS35693,VX7809,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:12:58 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

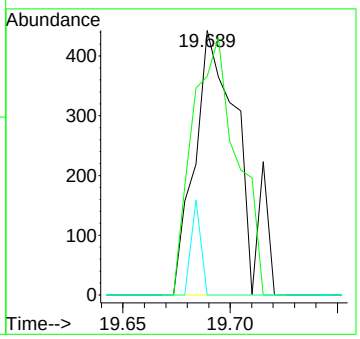


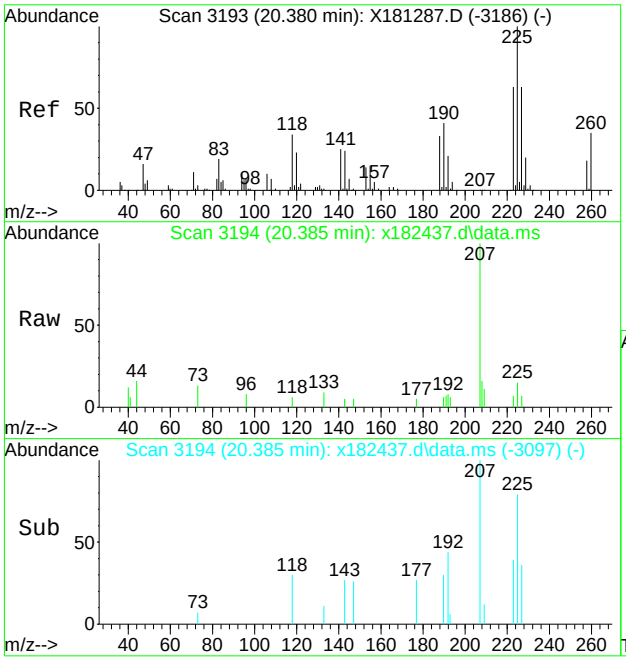


#117
1,3,5-trichlorobenzene
Concen: 0.12 ug/L
RT: 19.689 min Scan# 3061
Delta R.T. -0.000 min
Lab File: x182437.d
Acq: 27 Jun 2019 10:32 am

Tgt Ion:180 Resp: 639

Ion	Ratio	Lower	Upper
180	100		
182	82.6	67.8	127.8
145	0.0	0.0	55.9

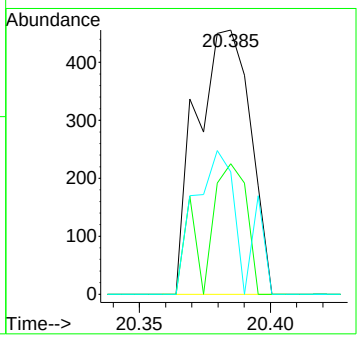




#118
hexachlorobutadiene
Concen: 0.35 ug/L
RT: 20.385 min Scan# 3194
Delta R.T. 0.005 min
Lab File: x182437.d
Acq: 27 Jun 2019 10:32 am

Tgt Ion:225 Resp: 655

Ion	Ratio	Lower	Upper
225	100		
223	49.3	33.3	93.3
227	46.3	33.1	93.1



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	138229	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	191602	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	260813	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	266607	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	143631	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.20	168	191602	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	83735	53.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.42%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	82861	48.16	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.32%			
75) toluene-d8 (s)	13.57	98	314394	49.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.38%			
98) 4-bromofluorobenzene (s)	17.11	95	123061	52.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.60%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.54	59	76181	243.09	ug/L	94
4) 1,4-dioxane	12.24	88	37154	1437.88	ug/L	95
6) chlorodifluoromethane	3.90	51	246030	42.03	ug/L	99
7) dichlorodifluoromethane	3.89	85	288005	49.51	ug/L	98
8) chloromethane	4.28	50	329670	44.66	ug/L	100
9) vinyl chloride	4.52	62	296942	48.79	ug/L	99
10) bromomethane	5.13	96	155290	51.27	ug/L	97
11) chloroethane	5.31	64	100407	49.22	ug/L	94
12) vinyl bromide	5.66	106	122811	53.88	ug/L	94
13) trichlorofluoromethane	5.81	101	204325	55.09	ug/L	98
14) 1,3-butadiene	4.53	54	110063	42.34	ug/L	98
15) ethyl ether	6.22	74	42343	51.32	ug/L	87
16) acrolein	6.44	56	12810	33.37	ug/L	96
17) 1,1-dichloroethene	6.67	96	71104	51.47	ug/L	97
18) freon 113	6.70	101	123250	55.45	ug/L	97
19) acetone	6.66	43	101677	201.79	ug/L	96
20) acetonitrile	7.10	41	154990	464.20	ug/L	99
21) iodomethane	6.93	142	134291	50.50	ug/L	97
22) carbon disulfide	7.10	76	245096	49.89	ug/L	95
23) methylene chloride	7.46	84	90760	51.95	ug/L	91
24) methyl acetate	7.18	43	59229	44.48	ug/L	95
25) methyl tert butyl ether	7.88	73	284441	47.29	ug/L	100
26) trans-1,2-dichloroethene	7.92	96	79708	53.40	ug/L	99
27) hexane	8.36	57	115735	52.90	ug/L	95
28) di-isopropyl ether	8.62	45	308289	44.67	ug/L	97
29) 2-butanone	9.39	72	40123	232.49	ug/L #	82
30) 1,1-dichloroethane	8.60	63	149901	52.38	ug/L	98
31) chloroprene	8.73	53	106457	49.92	ug/L	92
32) acrylonitrile	7.77	53	32941	52.85	ug/L	94
33) vinyl acetate	8.53	86	14380	49.19	ug/L #	69
34) ethyl tert-butyl ether	9.18	59	312846	48.96	ug/L	98
35) ethyl acetate	9.44	45	13692	51.38	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.53	77	160778	54.76	ug/L		94
37) cis-1,2-dichloroethene	9.48	96	91417	53.18	ug/L		97
38) methyl acrylate	9.54	85	11569	56.99	ug/L		97
39) propionitrile	9.47	54	130566	531.13	ug/L		98
40) tert-butyl formate	10.02	59	73358	45.71	ug/L		95
41) bromochloromethane	9.85	128	46740	53.38	ug/L		98
42) tetrahydrofuran	9.88	72	10660	50.93	ug/L		97
43) chloroform	9.97	83	143521	51.34	ug/L		97
45) methacrylonitrile	9.73	67	33287	52.67	ug/L		85
46) 1,1,1-trichloroethane	10.30	97	155100	54.05	ug/L		99
47) cyclohexane	10.45	84	161393	50.90	ug/L		89
48) tert amyl alcohol	10.69	55	27290	273.64	ug/L	#	76
49) 1,1-dichloropropene	10.52	75	99040	53.78	ug/L		96
51) carbon tetrachloride	10.56	117	129226	53.62	ug/L		100
52) isopropyl acetate	10.75	87	18117	54.67	ug/L	#	74
55) iso-octane	10.99	57	259317	55.97	ug/L		98
56) epichlorohydrin	12.96	57	45662	247.90	ug/L		94
57) n-butyl alcohol	11.46	56	172143	2893.85	ug/L		92
58) benzene	10.83	78	310890	51.37	ug/L		98
59) tert-amyl methyl ether	10.97	73	280593	47.74	ug/L		97
60) heptane	11.21	57	53919	58.42	ug/L		91
61) 1,2-dichloroethane	10.86	62	92862	45.49	ug/L		99
62) trichloroethene	11.80	130	86836	54.68	ug/L		97
63) ethyl acrylate	11.80	55	100211	50.29	ug/L		99
64) 2-nitropropane	12.79	41	17696	38.04	ug/L		95
65) 2-chloroethyl vinyl ether	12.87	63	297657	263.68	ug/L		100
66) methyl methacrylate	12.15	100	21203	50.32	ug/L	#	85
67) 1,2-dichloropropane	12.17	76	33718	50.52	ug/L		92
68) dibromomethane	12.31	93	52052	51.62	ug/L		97
69) methylcyclohexane	12.20	83	160981	57.95	ug/L		95
70) bromodichloromethane	12.53	83	114247	50.71	ug/L		96
71) cis-1,3-dichloropropene	13.16	75	140238	51.67	ug/L		90
72) 4-methyl-2-pentanone	13.30	58	148496	217.15	ug/L		88
73) 3-methyl-1-butanol	13.32	70	64754	1151.82	ug/L		93
76) toluene	13.67	92	196111	49.50	ug/L		99
77) trans-1,3-dichloropropene	13.93	75	125615	48.84	ug/L		96
78) ethyl methacrylate	13.95	69	106570	50.28	ug/L		93
79) 1,1,2-trichloroethane	14.22	83	68755	51.08	ug/L		94
80) tetrachloroethene	14.43	164	73765	51.01	ug/L		99
81) 1,3-dichloropropane	14.46	76	120951	47.91	ug/L		91
82) 2-hexanone	14.46	58	131631	205.38	ug/L		93
83) butyl acetate	14.60	56	62216	48.07	ug/L		92
84) dibromochloromethane	14.79	129	94566	50.41	ug/L		98
85) 1,2-dibromoethane	14.99	107	94470	52.55	ug/L		99
86) n-butyl ether	15.66	57	346767	48.51	ug/L		100
87) chlorobenzene	15.64	112	229125	50.63	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	98610	49.34	ug/L		97
89) ethylbenzene	15.74	91	360756	48.67	ug/L		99
90) m,p-xylene	15.91	106	288069	97.40	ug/L		99
91) o-xylene	16.43	91	328086	48.29	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

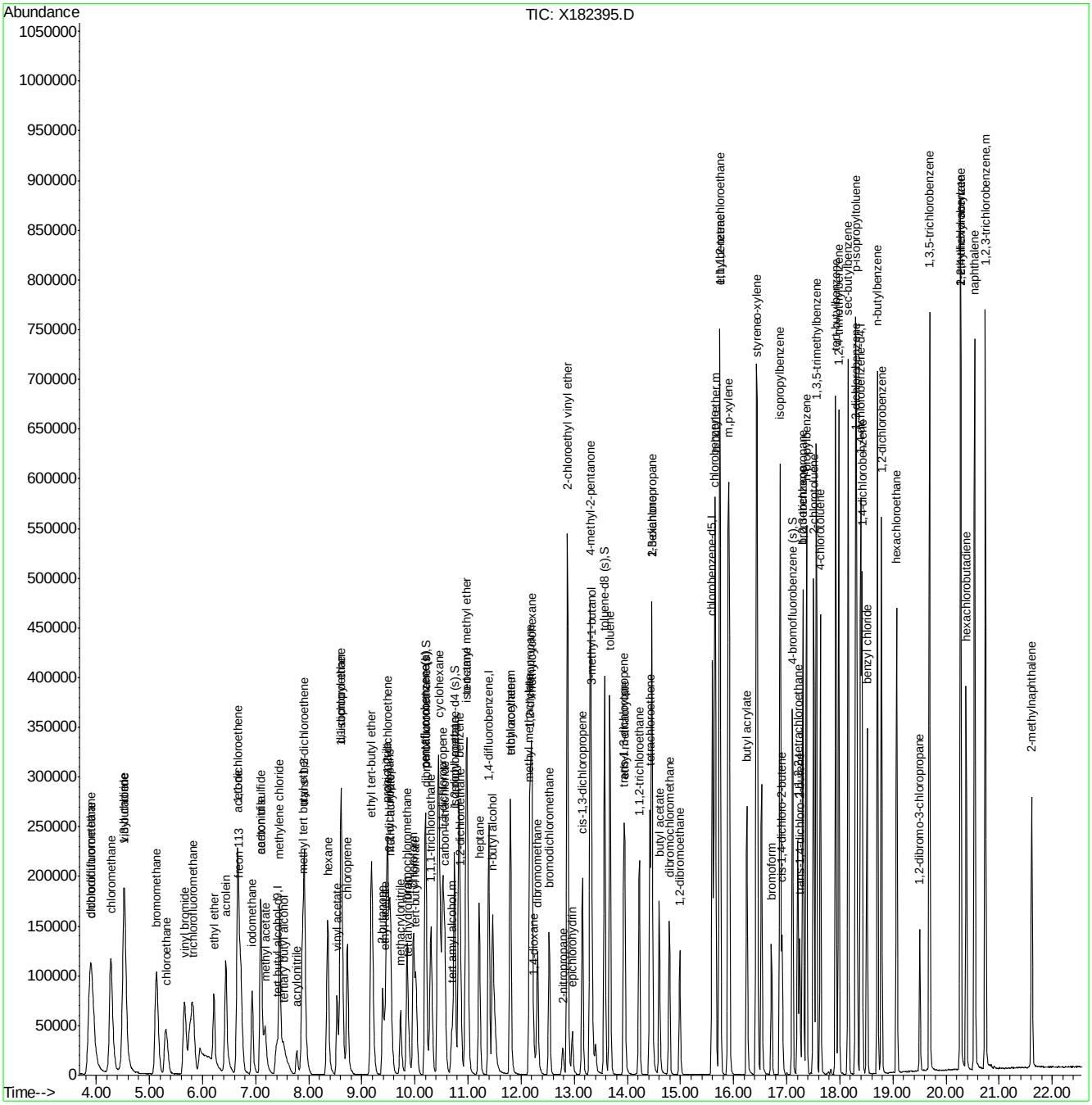
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) styrene	16.45	104	242512	49.46	ug/L		97
93) butyl acrylate	16.25	55	185394	44.86	ug/L		99
94) bromoform	16.72	173	67488	50.99	ug/L		96
95) isopropylbenzene	16.88	105	430321	49.41	ug/L		99
96) cis-1,4-dichloro-2-butene	16.91	88	34438	47.86	ug/L		91
99) bromobenzene	17.31	156	105864	50.86	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.21	83	120831	53.66	ug/L		98
101) trans-1,4-dichloro-2-buten	17.25	53	25079	49.05	ug/L		84
102) 1,2,3-trichloropropane	17.30	110	29106	51.51	ug/L	#	75
103) n-propylbenzene	17.37	91	441421	50.85	ug/L		98
104) 2-chlorotoluene	17.51	126	102589	52.15	ug/L		98
105) 4-chlorotoluene	17.63	91	260662	49.32	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	341980	51.84	ug/L		100
107) tert-butylbenzene	17.92	119	327120	54.57	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	349536	50.79	ug/L		99
109) sec-butylbenzene	18.16	105	482391	53.13	ug/L		98
110) 1,3-dichlorobenzene	18.32	146	196247	48.91	ug/L		99
111) p-isopropyltoluene	18.30	119	404056	51.11	ug/L		98
112) 1,4-dichlorobenzene	18.42	146	198952	51.12	ug/L		98
113) 1,2-dichlorobenzene	18.78	146	223288	50.40	ug/L		98
114) benzyl chloride	18.51	91	234997	52.50	ug/L		99
115) n-butylbenzene	18.71	92	201183	53.39	ug/L		99
116) 1,2-dibromo-3-chloropropan	19.51	157	39829	54.01	ug/L		96
117) 1,3,5-trichlorobenzene	19.69	180	238566	53.67	ug/L		99
118) hexachlorobutadiene	20.38	225	82284	54.39	ug/L		98
119) naphthalene	20.54	128	584235	55.60	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	22111	11.57	ug/L	#	87
121) 1,2,4-trichlorobenzene	20.28	180	251142	58.94	ug/L		98
122) 1,2,3-trichlorobenzene	20.74	180	256851	59.48	ug/L		98
123) hexachloroethane	19.07	201	80275	57.39	ug/L		98
124) 2-methylnaphthalene	21.61	142	142780	20.46	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182395.D
Acq On : 26 Jun 2019 7:57 am
Operator : deving
Sample : bs
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 14:47:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251127.d
Acq On : 26 Jun 2019 7:36 pm
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:14:24 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.160	65	274737	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	198712	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	292639	50.00	ug/L	0.00
74) chlorobenzene-d5	14.897	117	256662	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.517	152	137180	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.582	113	98429	50.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.50%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	106406	50.61	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.22%			
75) toluene-d8 (s)	13.228	98	335842	49.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.40%			
99) 4-bromofluorobenzene (s)	16.199	95	112832	52.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.60%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.286	59	146706	258.55	ug/L	96
4) 1,4-dioxane	12.177	88	50487	1373.78	ug/L	99
6) chlorodifluoromethane	4.577	51	189752	49.17	ug/L	95
7) dichlorodifluoromethane	4.551	85	234584	49.98	ug/L	99
8) chloromethane	4.991	50	230903	45.29	ug/L	97
9) vinyl chloride	5.247	62	216370	50.09	ug/L	99
10) 1,3-butadiene	5.278	54	137964	33.51	ug/L	97
11) bromomethane	5.932	94	143714	47.37	ug/L	99
12) chloroethane	6.110	64	107882	49.13	ug/L	99
13) vinyl bromide	6.486	106	127845	44.17	ug/L	100
14) trichlorofluoromethane	6.622	101	224106	50.14	ug/L	98
15) ethyl ether	7.015	74	50358	50.36	ug/L	96
16) acrolein	7.261	56	18706	41.13	ug/L	91
17) freon 113	7.506	151	104967	48.33	ug/L	97
18) 1,1-dichloroethene	7.475	96	103224	48.05	ug/L	96
19) acetone	7.475	58	57326	198.42	ug/L	94
20) acetonitrile	7.914	41	234067	511.74	ug/L	97
21) iodomethane	7.747	142	193501	50.70	ug/L	98
22) carbon disulfide	7.899	76	342406	47.90	ug/L	99
23) methylene chloride	8.228	84	111483	49.82	ug/L	96
24) methyl acetate	7.961	43	99287	49.06	ug/L	99
25) methyl tert butyl ether	8.599	73	318860	50.35	ug/L	100
26) trans-1,2-dichloroethene	8.636	96	93424	50.06	ug/L	96
27) hexane	9.007	57	121404	44.98	ug/L	99
28) di-isopropyl ether	9.227	45	322976	49.80	ug/L	99
29) ethyl tert-butyl ether	9.708	59	312259	50.33	ug/L	98
30) 2-butanone	9.912	72	69540	208.60	ug/L #	87
31) 1,1-dichloroethane	9.243	63	161669	48.19	ug/L	99
32) chloroprene	9.347	53	129283	47.55	ug/L	99
33) acrylonitrile	8.526	53	51629	50.07	ug/L	95
34) vinyl acetate	9.175	86	21422	49.99	ug/L #	90
35) ethyl acetate	9.923	45	20672	55.49	ug/L #	93
36) 2,2-dichloropropane	10.022	77	177622	54.32	ug/L	99
37) cis-1,2-dichloroethene	9.985	96	106024	49.29	ug/L	95
38) methyl acrylate	10.012	85	18612	50.08	ug/L #	60
39) propionitrile	9.991	54	227560	516.67	ug/L	87
40) bromochloromethane	10.299	128	56422	51.41	ug/L	96
41) tetrahydrofuran	10.315	42	45286	47.36	ug/L	99
42) chloroform	10.383	83	164872	47.28	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251127.d
Acq On : 26 Jun 2019 7:36 pm
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:14:24 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	10.420	59	98055	55.35	ug/L		98
45)	methacrylonitrile	10.200	67	49032	51.44	ug/L		90
46)	cyclohexane	10.780	84	167940	46.33	ug/L		97
47)	1,1,1-trichloroethane	10.660	97	175097	51.24	ug/L		97
48)	iso-butyl alcohol	10.780	43	164229	498.98	ug/L		89
49)	1,1-dichloropropene	10.827	75	120945	47.38	ug/L		95
50)	carbon tetrachloride	10.864	117	158692	51.96	ug/L		99
51)	tert-amyl alcohol	10.958	73	75738	247.54	ug/L		93
54)	benzene	11.084	78	362221	48.49	ug/L		99
55)	iso-octane	11.188	57	341465	48.71	ug/L		98
56)	tert-amyl methyl ether	11.162	73	321859	50.59	ug/L		99
57)	heptane	11.340	71	65598	47.22	ug/L		93
58)	isopropyl acetate	10.979	87	28820	52.58	ug/L	#	94
59)	1,2-dichloroethane	11.105	62	122320	45.63	ug/L		99
60)	n-butyl alcohol	11.549	56	335400	2611.54	ug/L		98
61)	ethyl acrylate	11.806	55	128199	52.62	ug/L		99
62)	trichloroethene	11.832	95	93802	49.30	ug/L		96
63)	2-nitropropane	12.616	41	40519	50.20	ug/L	#	77
64)	methylcyclohexane	12.151	83	181707	46.28	ug/L		98
65)	2-chloroethyl vinyl ether	12.648	63	284543	281.54	ug/L		95
66)	methyl methacrylate	12.083	100	29464	54.72	ug/L		99
67)	1,2-dichloropropane	12.135	63	94822	52.60	ug/L		96
68)	dibromomethane	12.245	93	65345	53.85	ug/L		98
69)	bromodichloromethane	12.407	83	130697	52.47	ug/L		97
70)	epichlorohydrin	12.747	57	74953	276.84	ug/L		99
71)	cis-1,3-dichloropropene	12.893	75	147494	55.41	ug/L		96
72)	4-methyl-2-pentanone	12.998	58	229124	205.68	ug/L		97
73)	3-methyl-1-butanol	12.998	55	210448	1006.58	ug/L		98
76)	toluene	13.307	92	220962	48.71	ug/L		97
77)	trans-1,3-dichloropropene	13.500	75	124314	53.27	ug/L		99
78)	ethyl methacrylate	13.484	69	122315	51.81	ug/L		96
79)	1,1,2-trichloroethane	13.751	83	68131	52.57	ug/L		99
80)	2-hexanone	13.918	58	189637	197.96	ug/L		98
81)	tetrachloroethene	13.918	166	103050	46.41	ug/L		98
82)	1,3-dichloropropane	13.945	76	127288	51.03	ug/L		96
83)	butyl acetate	14.002	56	73001	51.22	ug/L		97
84)	dibromochloromethane	14.222	129	100802	51.93	ug/L		97
85)	1,2-dibromoethane	14.394	107	95524	53.82	ug/L		99
86)	n-butyl ether	14.865	57	364888	48.99	ug/L		99
87)	chlorobenzene	14.933	112	235754	49.99	ug/L		99
88)	1,1,1,2-tetrachloroethane	15.001	131	117421	49.69	ug/L		99
89)	ethylbenzene	14.996	91	416373	49.41	ug/L		99
90)	m,p-xylene	15.127	106	329377	100.54	ug/L		99
91)	o-xylene	15.582	106	183648	50.66	ug/L		99
92)	styrene	15.592	104	256191	49.16	ug/L		97
93)	butyl acrylate	15.372	55	190892	51.39	ug/L		99
94)	n-amyl acetate	15.608	70	81169	48.60	ug/L		99
95)	bromoform	15.854	173	75082	55.55	ug/L		96
96)	isopropylbenzene	15.974	105	495519	50.55	ug/L		99
97)	cis-1,4-dichloro-2-butene	16.005	75	45326	155.42	ug/L		97
100)	bromobenzene	16.413	156	110459	54.76	ug/L		93
101)	1,1,2,2-tetrachloroethane	16.282	83	148573	56.70	ug/L		97
102)	trans-1,4-dichloro-2-b...	16.314	53	27743	136.55	ug/L		94
103)	1,2,3-trichloropropane	16.382	110	40600	54.11	ug/L		99
104)	n-propylbenzene	16.439	91	516512	52.48	ug/L		99
105)	2-chlorotoluene	16.596	126	116233	53.02	ug/L		98
106)	4-chlorotoluene	16.722	91	267500	52.21	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251127.d
Acq On : 26 Jun 2019 7:36 pm
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:14:24 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

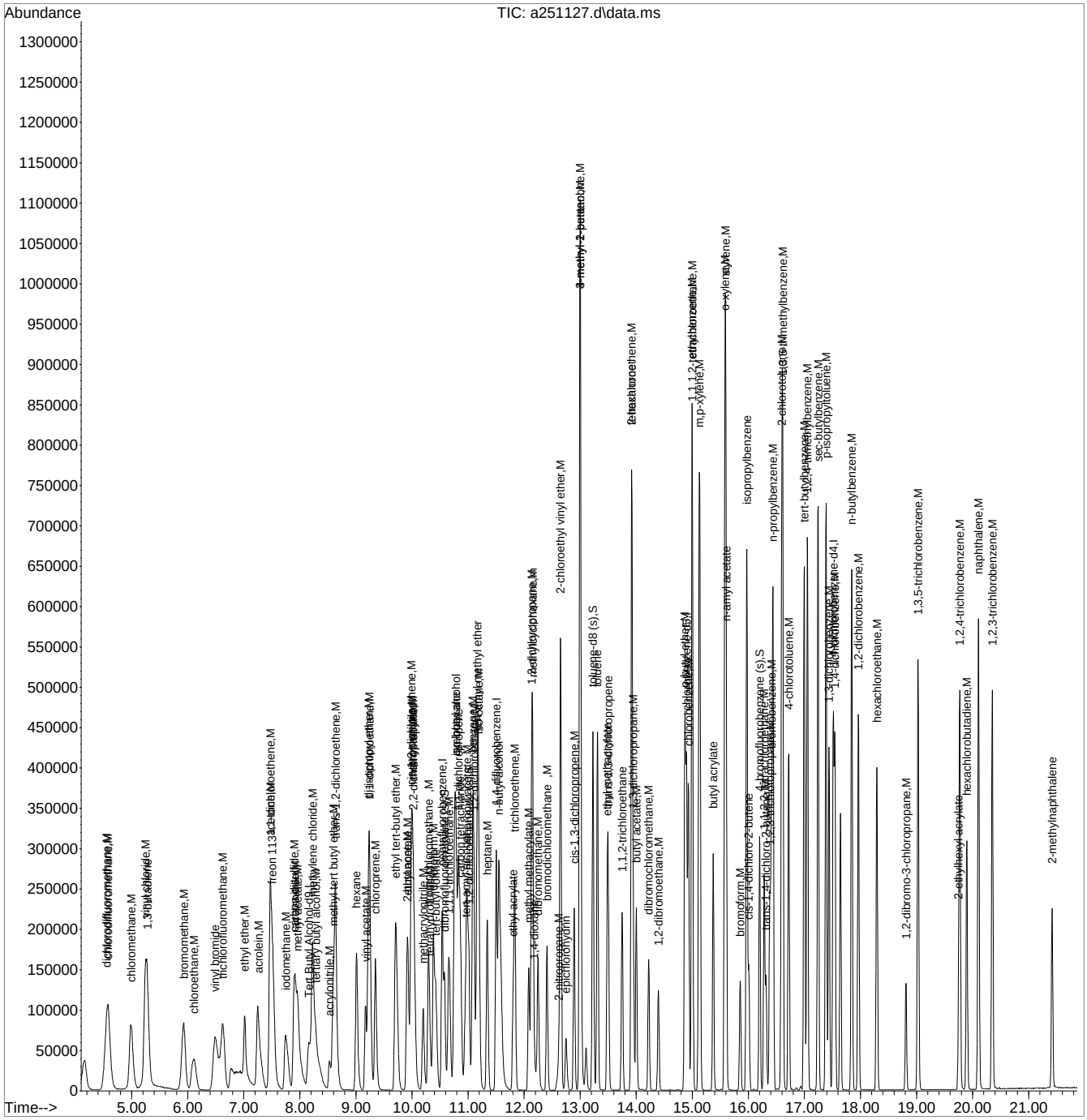
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.612	105	417126	54.96	ug/L	99
108) tert-butylbenzene	16.999	134	91979	52.32	ug/L	94
109) 1,2,4-trimethylbenzene	17.051	105	406800	54.17	ug/L	99
110) sec-butylbenzene	17.245	105	553898	53.46	ug/L	100
111) 1,3-dichlorobenzene	17.438	146	204100	51.04	ug/L	99
112) p-isopropyltoluene	17.386	119	469896	54.42	ug/L	98
113) 1,4-dichlorobenzene	17.543	146	201429	49.76	ug/L	99
114) 1,2-dichlorobenzene	17.961	146	221431	51.10	ug/L	99
115) n-butylbenzene	17.841	92	219328	51.95	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.814	157	48107	52.57	ug/L	95
117) 1,3,5-trichlorobenzene	19.028	180	208152	50.95	ug/L	98
118) 2-ethylhexyl acrylate	19.750	70	21828	9.69	ug/L	95
119) 1,2,4-trichlorobenzene	19.771	180	190530	51.84	ug/L	99
120) hexachlorobutadiene	19.897	225	77437	52.96	ug/L	99
121) naphthalene	20.106	128	536604	49.94	ug/L	99
122) 1,2,3-trichlorobenzene	20.352	180	193318	52.40	ug/L	98
123) hexachloroethane	18.291	201	82861	60.99	ug/L	98
124) 2-methylnaphthalene	21.419	142	134509	23.47	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251127.d
Acq On : 26 Jun 2019 7:36 pm
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:14:24 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182435.D
Acq On : 27 Jun 2019 9:25 am
Operator : jessicap
Sample : BS
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 27 14:45:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.41	65	123345	500.00	ug/L		0.00
5) pentafluorobenzene	10.19	168	181783	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.38	114	247483	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	256330	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.39	152	140703	50.00	ug/L		0.00
127) pentafluorobenzene(a)	10.19	168	181783	50.00	ug/L		-0.01
130) chlorobenzene-d5(a)	15.60	117	256330	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.21	113	81240	54.92	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.84%				
54) 1,2-dichloroethane-d4 (s)	10.74	65	76717	46.99	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 93.98%				
75) toluene-d8 (s)	13.56	98	298540	48.58	ug/L		-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.16%				
98) 4-bromofluorobenzene (s)	17.11	95	116641	50.60	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.20%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.53	59	65844	235.46	ug/L		94
4) 1,4-dioxane	12.24	88	33152	1437.82	ug/L		94
6) chlorodifluoromethane	3.92	51	258543	46.55	ug/L		97
7) dichlorodifluoromethane	3.88	85	343158	62.18	ug/L		99
8) chloromethane	4.29	50	328832	46.96	ug/L		99
9) vinyl chloride	4.53	62	291839	50.54	ug/L		97
10) bromomethane	5.15	96	162524	56.55	ug/L		99
11) chloroethane	5.32	64	104557	54.03	ug/L		98
12) vinyl bromide	5.67	106	123242	56.99	ug/L		93
13) trichlorofluoromethane	5.82	101	212122	60.28	ug/L		99
14) 1,3-butadiene	4.54	54	122776	49.78	ug/L		97
15) ethyl ether	6.22	74	39081	49.92	ug/L		91
16) acrolein	6.44	56	12103	33.23	ug/L		95
17) 1,1-dichloroethene	6.66	96	71320	54.41	ug/L		90
18) freon 113	6.71	101	119890	56.85	ug/L		97
19) acetone	6.66	43	84075	175.87	ug/L		92
20) acetonitrile	7.10	41	140386	443.17	ug/L		98
21) iodomethane	6.94	142	139272	55.21	ug/L		96
22) carbon disulfide	7.10	76	256525	55.04	ug/L		96
23) methylene chloride	7.46	84	89116	53.77	ug/L		89
24) methyl acetate	7.18	43	51457	40.73	ug/L		95
25) methyl tert butyl ether	7.89	73	271930	47.65	ug/L		97
26) trans-1,2-dichloroethene	7.92	96	77333	54.60	ug/L		96
27) hexane	8.36	57	98457	47.43	ug/L		92
28) di-isopropyl ether	8.62	45	288167	44.01	ug/L		96
29) 2-butanone	9.39	72	35115	214.46	ug/L	#	83
30) 1,1-dichloroethane	8.60	63	140642	51.80	ug/L		98
31) chloroprene	8.73	53	98175	48.52	ug/L		91
32) acrylonitrile	7.77	53	30262	51.17	ug/L		93
33) vinyl acetate	8.53	86	14585	52.59	ug/L	#	69
34) ethyl tert-butyl ether	9.18	59	299496	49.40	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182435.D
Acq On : 27 Jun 2019 9:25 am
Operator : jessicap
Sample : BS
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 27 14:45:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) ethyl acetate	9.44	45	10743	42.49	ug/L		71
36) 2,2-dichloropropane	9.52	77	152014	54.57	ug/L		95
37) cis-1,2-dichloroethene	9.48	96	87633	53.74	ug/L		97
38) methyl acrylate	9.54	85	10591	54.99	ug/L	#	65
39) propionitrile	9.47	54	114674	491.68	ug/L		100
40) tert-butyl formate	10.02	59	72894	47.87	ug/L		96
41) bromochloromethane	9.85	128	45880	55.22	ug/L		97
42) tetrahydrofuran	9.88	72	10118	50.96	ug/L		95
43) chloroform	9.97	83	134185	50.59	ug/L		96
45) methacrylonitrile	9.73	67	29293	48.86	ug/L		92
46) 1,1,1-trichloroethane	10.30	97	152651	56.07	ug/L		100
47) cyclohexane	10.45	84	165633	55.05	ug/L		81
48) tert amyl alcohol	10.69	55	22919	242.22	ug/L		87
49) 1,1-dichloropropene	10.52	75	92238	52.79	ug/L		96
51) carbon tetrachloride	10.55	117	126488	55.32	ug/L		96
52) isopropyl acetate	10.75	87	16168	51.43	ug/L	#	67
55) iso-octane	10.99	57	239114	54.39	ug/L		97
56) epichlorohydrin	12.96	57	39108	223.76	ug/L		97
57) n-butyl alcohol	11.46	56	148047	2622.83	ug/L		94
58) benzene	10.82	78	290727	50.62	ug/L		99
59) tert-amyl methyl ether	10.96	73	269686	48.35	ug/L		97
60) heptane	11.21	57	43597	49.78	ug/L		93
61) 1,2-dichloroethane	10.86	62	85792	44.29	ug/L		98
62) trichloroethene	11.79	130	82266	54.59	ug/L		98
63) ethyl acrylate	11.80	55	87914	46.49	ug/L		98
64) 2-nitropropane	12.79	41	16165	36.62	ug/L		98
65) 2-chloroethyl vinyl ether	12.87	63	266598	248.89	ug/L		98
66) methyl methacrylate	12.15	100	19812	49.55	ug/L	#	86
67) 1,2-dichloropropane	12.16	76	31218	49.30	ug/L		99
68) dibromomethane	12.30	93	49287	51.51	ug/L		98
69) methylcyclohexane	12.19	83	148656	56.39	ug/L		97
70) bromodichloromethane	12.53	83	106692	49.91	ug/L		96
71) cis-1,3-dichloropropene	13.15	75	128235	49.79	ug/L		91
72) 4-methyl-2-pentanone	13.30	58	132871	204.76	ug/L		88
73) 3-methyl-1-butanol	13.32	70	56211	1053.71	ug/L		95
76) toluene	13.67	92	183243	48.10	ug/L		98
77) trans-1,3-dichloropropene	13.93	75	114857	46.44	ug/L		97
78) ethyl methacrylate	13.95	69	96447	47.33	ug/L		90
79) 1,1,2-trichloroethane	14.22	83	63715	49.23	ug/L		97
80) tetrachloroethene	14.42	164	70624	50.80	ug/L		98
81) 1,3-dichloropropane	14.46	76	112499	46.35	ug/L		89
82) 2-hexanone	14.46	58	116180	188.54	ug/L		89
83) butyl acetate	14.60	56	55169	44.34	ug/L		90
84) dibromochloromethane	14.79	129	89131	49.42	ug/L		100
85) 1,2-dibromoethane	14.98	107	88534	51.22	ug/L		99
86) n-butyl ether	15.66	57	319102	46.43	ug/L		97
87) chlorobenzene	15.64	112	219042	50.34	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.74	131	94116	48.98	ug/L		97
89) ethylbenzene	15.74	91	337836	47.40	ug/L		99
90) m,p-xylene	15.90	106	272372	95.79	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182435.D
Acq On : 27 Jun 2019 9:25 am
Operator : jessicap
Sample : BS
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 27 14:45:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

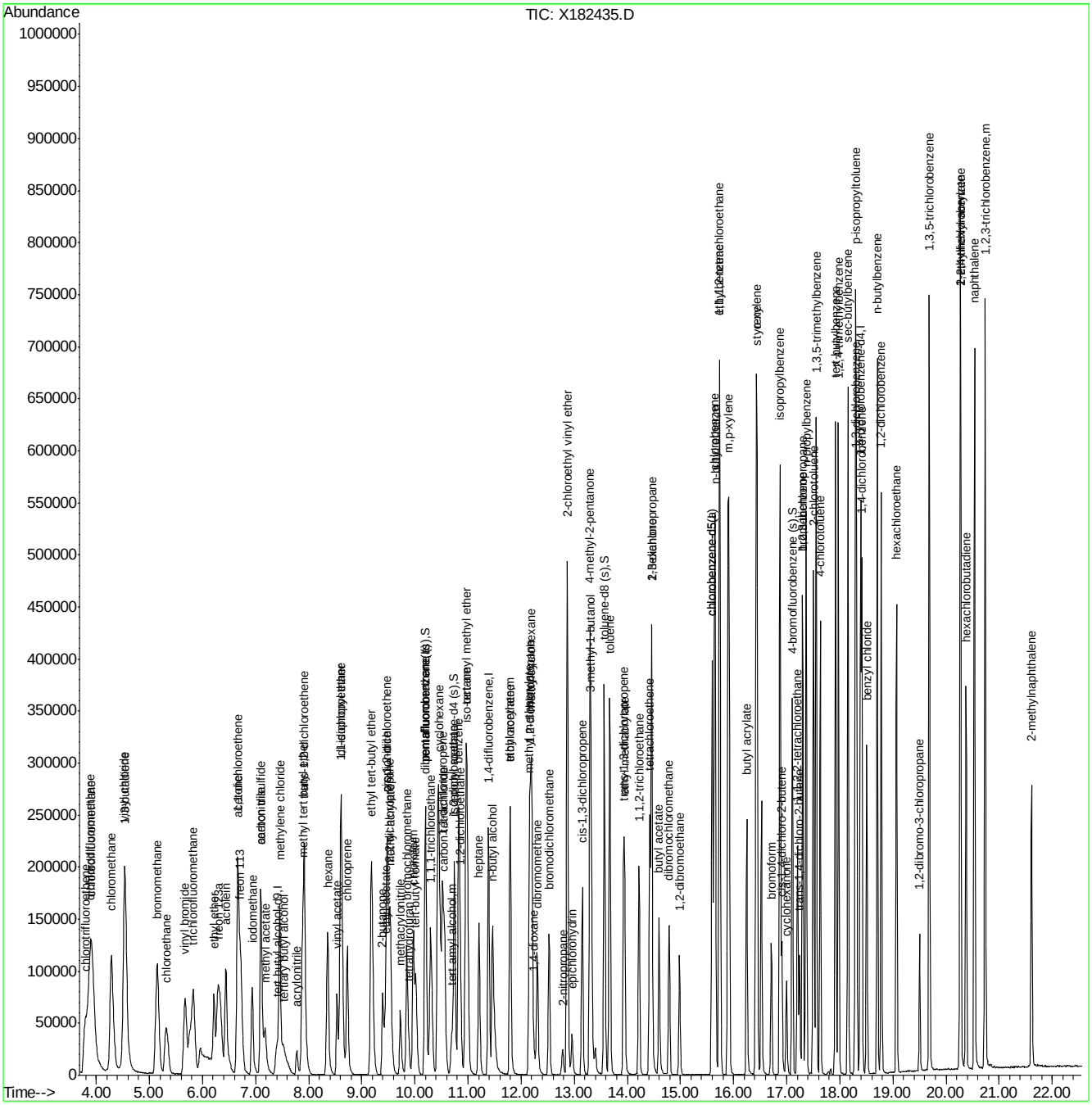
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
91) o-xylene	16.43	91	310431	47.52	ug/L		98
92) styrene	16.44	104	227854	48.33	ug/L		98
93) butyl acrylate	16.25	55	169494	42.66	ug/L		98
94) bromoform	16.71	173	64210	50.46	ug/L		97
95) isopropylbenzene	16.88	105	409488	48.90	ug/L		100
96) cis-1,4-dichloro-2-butene	16.91	88	29791	43.06	ug/L		93
99) bromobenzene	17.30	156	103923	50.97	ug/L		95
100) 1,1,2,2-tetrachloroethane	17.21	83	112514	51.01	ug/L		99
101) trans-1,4-dichloro-2-buten	17.24	53	21341	42.61	ug/L		86
102) 1,2,3-trichloropropane	17.29	110	27562	49.79	ug/L	#	70
103) n-propylbenzene	17.37	91	422375	49.67	ug/L		97
104) 2-chlorotoluene	17.50	126	99569	51.67	ug/L		94
105) 4-chlorotoluene	17.63	91	246152	47.54	ug/L		97
106) 1,3,5-trimethylbenzene	17.56	105	329064	50.92	ug/L		98
107) tert-butylbenzene	17.92	119	313253	53.35	ug/L		97
108) 1,2,4-trimethylbenzene	17.98	105	334106	49.56	ug/L		99
109) sec-butylbenzene	18.16	105	461645	51.90	ug/L		100
110) 1,3-dichlorobenzene	18.32	146	190033	48.35	ug/L		98
111) p-isopropyltoluene	18.30	119	388661	50.18	ug/L		98
112) 1,4-dichlorobenzene	18.42	146	192107	50.38	ug/L		98
113) 1,2-dichlorobenzene	18.78	146	217500	50.11	ug/L		98
114) benzyl chloride	18.51	91	208390	47.52	ug/L		100
115) n-butylbenzene	18.71	92	192638	52.18	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	38525	53.33	ug/L		96
117) 1,3,5-trichlorobenzene	19.68	180	234497	53.86	ug/L		99
118) hexachlorobutadiene	20.38	225	79181	53.42	ug/L		97
119) naphthalene	20.54	128	556128	54.03	ug/L		100
120) 2-ethylhexyl acrylate	20.27	70	21950	11.72	ug/L		96
121) 1,2,4-trichlorobenzene	20.27	180	243434	58.32	ug/L		99
122) 1,2,3-trichlorobenzene	20.74	180	249308	58.93	ug/L		99
123) hexachloroethane	19.07	201	77976	56.91	ug/L		99
124) 2-methylnaphthalene	21.61	142	142857	20.82	ug/L		97
128) chlorotrifluoroethene	3.80	116	122039	77.97	ug/L		94
129) freon 123a	6.30	67	144624	62.33	ug/L		97
131) cyclohexanone	17.00	55	42087	501.51	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182435.D
Acq On : 27 Jun 2019 9:25 am
Operator : jessicap
Sample : BS
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 27 14:45:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.409	65	116734	500.00	ug/L		0.00
5) pentafluorobenzene	10.196	168	186221	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.389	114	257095	50.00	ug/L		0.00
74) chlorobenzene-d5	15.605	117	260327	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.392	152	142889	50.00	ug/L		0.00
127) pentafluorobenzene(a)	10.196	168	186221	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.212	113	82701	54.58	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.16%				
54) 1,2-dichloroethane-d4 (s)	10.746	65	80207	47.29	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 94.58%				
75) toluene-d8 (s)	13.575	98	310002	49.67	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.34%				
98) 4-bromofluorobenzene (s)	17.111	95	122080	52.15	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.30%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.539	59	59576	225.11	ug/L		93
4) 1,4-dioxane	12.241	88	27182	1245.66	ug/L	#	78
6) chlorodifluoromethane	3.910	51	177527	31.20	ug/L		99
7) dichlorodifluoromethane	3.878	85	286617	50.70	ug/L		97
8) chloromethane	4.286	50	317213	44.22	ug/L		99
9) vinyl chloride	4.527	62	302309	51.11	ug/L		100
10) bromomethane	5.149	96	168892	57.37	ug/L		99
11) chloroethane	5.317	64	111961	56.47	ug/L		97
12) vinyl bromide	5.672	106	143432	64.74	ug/L		94
13) trichlorofluoromethane	5.829	101	237661	65.93	ug/L		98
14) 1,3-butadiene	4.537	54	130534	51.66	ug/L		95
15) ethyl ether	6.216	74	34336	42.82	ug/L		88
16) acrolein	6.446	56	12241	32.81	ug/L		94
17) 1,1-dichloroethene	6.666	96	70310	52.36	ug/L		95
18) freon 113	6.713	101	124725	57.73	ug/L		97
19) acetone	6.661	43	71271	145.53	ug/L		92
20) acetonitrile	7.105	41	122054	376.12	ug/L		96
21) iodomethane	6.938	142	126725	49.04	ug/L		98
22) carbon disulfide	7.100	76	247153	51.76	ug/L		97
23) methylene chloride	7.461	84	82073	48.34	ug/L		91
24) methyl acetate	7.184	43	46262	35.75	ug/L		93
25) methyl tert butyl ether	7.895	73	243927	41.73	ug/L		99
26) trans-1,2-dichloroethene	7.921	96	73320	50.54	ug/L		98
27) hexane	8.361	57	108375	50.97	ug/L		95
28) di-isopropyl ether	8.617	45	274896	40.98	ug/L		97
29) 2-butanone	9.396	72	34010	202.76	ug/L		89
30) 1,1-dichloroethane	8.601	63	134511	48.36	ug/L		98
31) chloroprene	8.727	53	99143	47.84	ug/L		95
32) acrylonitrile	7.780	53	26759	44.17	ug/L		96
33) vinyl acetate	8.538	86	13234	46.58	ug/L	#	70
34) ethyl tert-butyl ether	9.187	59	279176	44.96	ug/L		98
35) ethyl acetate	9.443	45	10513	40.59	ug/L		83
36) 2,2-dichloropropane	9.527	77	156168	54.72	ug/L		97
37) cis-1,2-dichloroethene	9.485	96	81286	48.66	ug/L		99
38) methyl acrylate	9.537	85	9048	45.86	ug/L	#	86
39) propionitrile	9.469	54	102277	428.08	ug/L		99
40) tert-butyl formate	10.024	59	50063	32.09	ug/L		94
41) bromochloromethane	9.856	128	41944	49.28	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.888	72	8904	43.77	ug/L		99
43) chloroform	9.972	83	130111	47.89	ug/L		96
45) methacrylonitrile	9.731	67	26397	42.98	ug/L		93
46) 1,1,1-trichloroethane	10.301	97	146742	52.61	ug/L		98
47) cyclohexane	10.453	84	170836	55.43	ug/L		89
48) tert amyl alcohol	10.699	55	22314	230.21	ug/L	#	80
49) 1,1-dichloropropene	10.526	75	91592	51.17	ug/L		96
51) carbon tetrachloride	10.557	117	119313	50.94	ug/L		96
52) isopropyl acetate	10.756	87	15233	47.30	ug/L	#	70
55) iso-octane	10.991	57	250633	54.88	ug/L		97
56) epichlorohydrin	12.968	57	36838	202.89	ug/L		96
57) n-butyl alcohol	11.467	56	140528	2396.54	ug/L		92
58) benzene	10.829	78	281667	47.21	ug/L		99
59) tert-amyl methyl ether	10.965	73	249689	43.09	ug/L		98
60) heptane	11.211	57	49688	54.62	ug/L		95
61) 1,2-dichloroethane	10.861	62	82063	40.79	ug/L		99
62) trichloroethene	11.797	130	78944	50.43	ug/L		98
63) ethyl acrylate	11.802	55	85124	43.33	ug/L		99
64) 2-nitropropane	12.791	41	14693	32.04	ug/L		98
66) methyl methacrylate	12.158	100	17364	41.80	ug/L	#	73
67) 1,2-dichloropropane	12.173	76	28349	43.09	ug/L		96
68) dibromomethane	12.309	93	44649	44.91	ug/L		96
69) methylcyclohexane	12.200	83	145312	53.06	ug/L		99
70) bromodichloromethane	12.534	83	103509	46.61	ug/L		99
71) cis-1,3-dichloropropene	13.157	75	128211	47.92	ug/L		92
72) 4-methyl-2-pentanone	13.303	58	131563	195.17	ug/L		93
73) 3-methyl-1-butanol	13.324	70	57826	1043.46	ug/L		92
76) toluene	13.675	92	180736	46.72	ug/L		99
77) trans-1,3-dichloropropene	13.936	75	109433	43.57	ug/L		100
78) ethyl methacrylate	13.952	69	95466	46.13	ug/L		91
79) 1,1,2-trichloroethane	14.224	83	60207	45.81	ug/L		96
80) tetrachloroethene	14.428	164	69093	48.94	ug/L		95
81) 1,3-dichloropropane	14.464	76	109012	44.22	ug/L		92
82) 2-hexanone	14.464	58	119887	191.56	ug/L		88
83) butyl acetate	14.637	56	599434	474.34	ug/L	#	1
84) dibromochloromethane	14.794	129	78144	42.66	ug/L		99
85) 1,2-dibromoethane	14.987	107	81036	46.16	ug/L		96
86) n-butyl ether	15.662	57	315441	45.19	ug/L		97
87) chlorobenzene	15.646	112	211479	47.85	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.740	131	89350	45.78	ug/L		96
89) ethylbenzene	15.746	91	333680	46.10	ug/L		99
90) m,p-xylene	15.913	106	265861	92.06	ug/L		97
91) o-xylene	16.431	91	297317	44.82	ug/L		99
92) styrene	16.447	104	221047	46.17	ug/L		98
93) butyl acrylate	16.248	55	172737	42.81	ug/L		99
94) bromoform	16.719	173	58117	44.97	ug/L		96
95) isopropylbenzene	16.881	105	397740	46.77	ug/L		99
96) cis-1,4-dichloro-2-butene	16.917	88	14802	21.07	ug/L		92
99) bromobenzene	17.310	156	99404	48.01	ug/L		99
100) 1,1,2,2-tetrachloroethane	17.210	83	105466	47.08	ug/L		100
101) trans-1,4-dichloro-2-b...	17.247	53	11529	22.67	ug/L		86
102) 1,2,3-trichloropropane	17.299	110	25638	45.61	ug/L	#	76
103) n-propylbenzene	17.372	91	414431	47.99	ug/L		99
104) 2-chlorotoluene	17.508	126	93997	48.03	ug/L		99
105) 4-chlorotoluene	17.639	91	243916	46.39	ug/L		98
106) 1,3,5-trimethylbenzene	17.561	105	314548	47.93	ug/L		99
107) tert-butylbenzene	17.927	119	291813	48.94	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

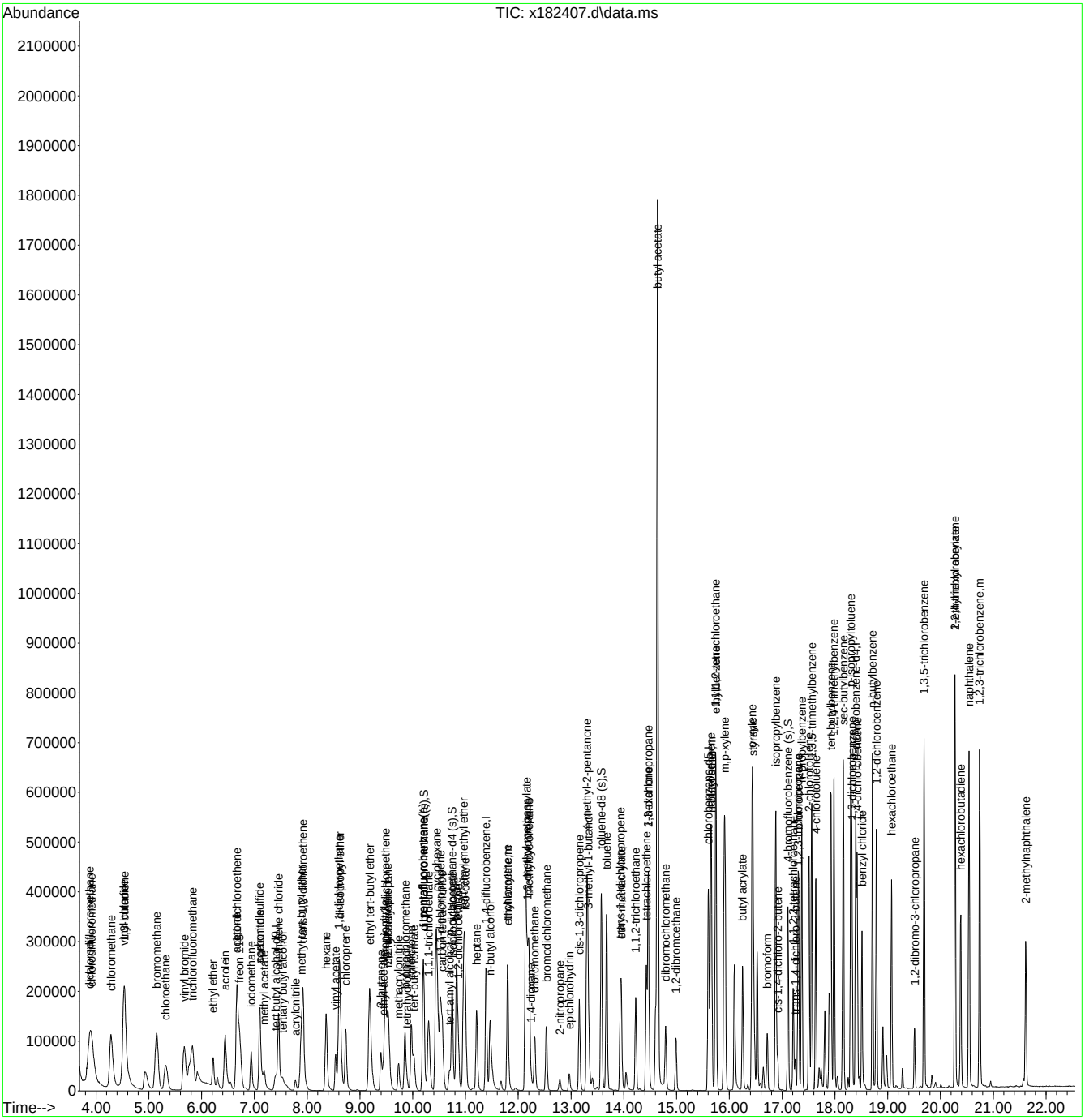
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	17.979	105	313417	45.78	ug/L	100
109) sec-butylbenzene	18.162	105	443372	49.09	ug/L	99
110) 1,3-dichlorobenzene	18.324	146	179672	45.02	ug/L	98
111) p-isopropyltoluene	18.303	119	372594	47.37	ug/L	97
112) 1,4-dichlorobenzene	18.424	146	182180	47.05	ug/L	98
113) 1,2-dichlorobenzene	18.784	146	202086	45.85	ug/L	99
114) benzyl chloride	18.513	91	214514	48.17	ug/L	100
115) n-butylbenzene	18.711	92	186949	49.87	ug/L	99
116) 1,2-dibromo-3-chloropr...	19.511	157	34831	47.48	ug/L	96
117) 1,3,5-trichlorobenzene	19.689	180	214753	48.57	ug/L	98
118) hexachlorobutadiene	20.385	225	74626	49.58	ug/L	96
119) naphthalene	20.542	128	530324	50.73	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	28628	15.05	ug/L	91
121) 1,2,4-trichlorobenzene	20.275	180	227010	53.55	ug/L	98
122) 1,2,3-trichlorobenzene	20.741	180	230363	53.62	ug/L	97
123) hexachloroethane	19.072	201	70381	50.58	ug/L	99
124) 2-methylnaphthalene	21.619	142	151692	21.62	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182407.d
Acq On : 26 Jun 2019 2:16 pm
Operator : jessicap
Sample : JC90273-6MS Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:13:03 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	115566	500.00	ug/L	0.00
5) pentafluorobenzene	10.197	168	191547	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.394	114	263658	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	268048	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.398	152	141930	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.197	168	191547	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	82495	52.93	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.86%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	80776	46.44	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 92.88%			
75) toluene-d8 (s)	13.575	98	318414	49.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.10%			
98) 4-bromofluorobenzene (s)	17.111	95	124105	53.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.74%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.545	59	62459	238.39	ug/L	94
4) 1,4-dioxane	12.242	88	26506	1226.96	ug/L #	75
6) chlorodifluoromethane	3.905	51	163393	27.92	ug/L	99
7) dichlorodifluoromethane	3.878	85	276896	47.62	ug/L	98
8) chloromethane	4.281	50	332535	45.07	ug/L	99
9) vinyl chloride	4.522	62	316300	51.99	ug/L	98
10) bromomethane	5.144	96	173296	57.23	ug/L	99
11) chloroethane	5.322	64	116604	57.18	ug/L	97
12) vinyl bromide	5.672	106	149079	65.42	ug/L	95
13) trichlorofluoromethane	5.829	101	237006	63.92	ug/L	100
14) 1,3-butadiene	4.537	54	134931	51.92	ug/L	95
15) ethyl ether	6.222	74	35551	43.10	ug/L	91
16) acrolein	6.441	56	12681	33.04	ug/L	89
17) 1,1-dichloroethene	6.671	96	70991	51.40	ug/L	93
18) freon 113	6.708	101	124723	56.13	ug/L	98
19) acetone	6.656	43	69388	137.75	ug/L	95
20) acetonitrile	7.105	41	122022	365.57	ug/L	97
21) iodomethane	6.938	142	128170	48.22	ug/L	99
22) carbon disulfide	7.105	76	249738	50.85	ug/L	95
23) methylene chloride	7.461	84	82868	47.45	ug/L	89
24) methyl acetate	7.184	43	45645	34.29	ug/L	92
25) methyl tert butyl ether	7.895	73	253460	42.15	ug/L	99
26) trans-1,2-dichloroethene	7.921	96	74564	49.96	ug/L	95
27) hexane	8.361	57	109160	49.91	ug/L	93
28) di-isopropyl ether	8.617	45	282976	41.01	ug/L	97
29) 2-butanone	9.396	72	35314	204.68	ug/L #	82
30) 1,1-dichloroethane	8.601	63	137882	48.19	ug/L	99
31) chloroprene	8.732	53	100101	46.95	ug/L	92
32) acrylonitrile	7.780	53	26714	42.87	ug/L	94
33) vinyl acetate	8.533	86	13018	44.54	ug/L #	68
34) ethyl tert-butyl ether	9.187	59	284154	44.48	ug/L	97
35) ethyl acetate	9.443	45	9520	35.73	ug/L	74
36) 2,2-dichloropropane	9.527	77	155268	52.89	ug/L	95
37) cis-1,2-dichloroethene	9.485	96	82505	48.01	ug/L	98
38) methyl acrylate	9.543	85	9913	48.84	ug/L #	69
39) propionitrile	9.470	54	104794	426.41	ug/L	99
40) tert-butyl formate	10.024	59	39996	24.93	ug/L	95
41) bromochloromethane	9.851	128	42700	48.78	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.883	72	9386	44.86	ug/L		92
43) chloroform	9.977	83	132460	47.40	ug/L		98
45) methacrylonitrile	9.736	67	27486	43.51	ug/L		91
46) 1,1,1-trichloroethane	10.301	97	146986	51.24	ug/L		99
47) cyclohexane	10.453	84	189383	59.74	ug/L		90
48) tert amyl alcohol	10.699	55	22110	221.76	ug/L	#	74
49) 1,1-dichloropropene	10.526	75	93245	50.65	ug/L		97
51) carbon tetrachloride	10.557	117	120758	50.13	ug/L		95
52) isopropyl acetate	10.751	87	15872	47.91	ug/L	#	71
55) iso-octane	10.992	57	244071	52.11	ug/L		96
56) epichlorohydrin	12.969	57	36016	193.43	ug/L		95
57) n-butyl alcohol	11.467	56	139173	2314.35	ug/L		93
58) benzene	10.829	78	286843	46.88	ug/L		99
59) tert-amyl methyl ether	10.965	73	255881	43.06	ug/L		99
60) heptane	11.211	57	49255	52.79	ug/L		93
61) 1,2-dichloroethane	10.861	62	83448	40.44	ug/L		100
62) trichloroethene	11.797	130	81579	50.82	ug/L		96
63) ethyl acrylate	11.802	55	88847	44.10	ug/L		97
64) 2-nitropropane	12.791	41	14876	31.63	ug/L		98
66) methyl methacrylate	12.153	100	18747	44.01	ug/L	#	56
67) 1,2-dichloropropane	12.174	76	28373	42.06	ug/L	#	85
68) dibromomethane	12.310	93	45332	44.47	ug/L		96
69) methylcyclohexane	12.200	83	144257	51.37	ug/L		97
70) bromodichloromethane	12.529	83	104067	45.69	ug/L		99
71) cis-1,3-dichloropropene	13.157	75	131544	47.94	ug/L		93
72) 4-methyl-2-pentanone	13.303	58	135991	196.71	ug/L		90
73) 3-methyl-1-butanol	13.324	70	57441	1010.71	ug/L		92
76) toluene	13.675	92	185297	46.52	ug/L		99
77) trans-1,3-dichloropropene	13.936	75	111470	43.10	ug/L		99
78) ethyl methacrylate	13.952	69	100454	47.14	ug/L		90
79) 1,1,2-trichloroethane	14.229	83	61722	45.61	ug/L		96
80) tetrachloroethene	14.428	164	70908	48.77	ug/L		96
81) 1,3-dichloropropane	14.464	76	110501	43.54	ug/L		92
82) 2-hexanone	14.464	58	124483	193.18	ug/L		92
83) butyl acetate	14.637	56	617227	474.35	ug/L	#	1
84) dibromochloromethane	14.794	129	80602	42.74	ug/L		97
85) 1,2-dibromoethane	14.987	107	84416	46.70	ug/L		95
86) n-butyl ether	15.662	57	326441	45.42	ug/L		97
87) chlorobenzene	15.646	112	216362	47.55	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.741	131	90886	45.23	ug/L		99
89) ethylbenzene	15.746	91	340066	45.63	ug/L		98
90) m,p-xylene	15.913	106	270658	91.02	ug/L		97
91) o-xylene	16.431	91	304140	44.52	ug/L		99
92) styrene	16.447	104	223701	45.38	ug/L		98
93) butyl acrylate	16.248	55	177168	42.64	ug/L		98
94) bromoform	16.719	173	59445	44.67	ug/L		96
95) isopropylbenzene	16.881	105	401342	45.83	ug/L		100
96) cis-1,4-dichloro-2-butene	16.917	88	12800	17.69	ug/L		94
99) bromobenzene	17.310	156	100280	48.76	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.210	83	105074	47.22	ug/L		97
101) trans-1,4-dichloro-2-b...	17.247	53	10209	20.21	ug/L		90
102) 1,2,3-trichloropropane	17.299	110	26147	46.83	ug/L	#	72
103) n-propylbenzene	17.372	91	417427	48.66	ug/L		99
104) 2-chlorotoluene	17.508	126	95477	49.12	ug/L		99
105) 4-chlorotoluene	17.639	91	242806	46.49	ug/L		98
106) 1,3,5-trimethylbenzene	17.561	105	316074	48.48	ug/L		99
107) tert-butylbenzene	17.927	119	290073	48.97	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

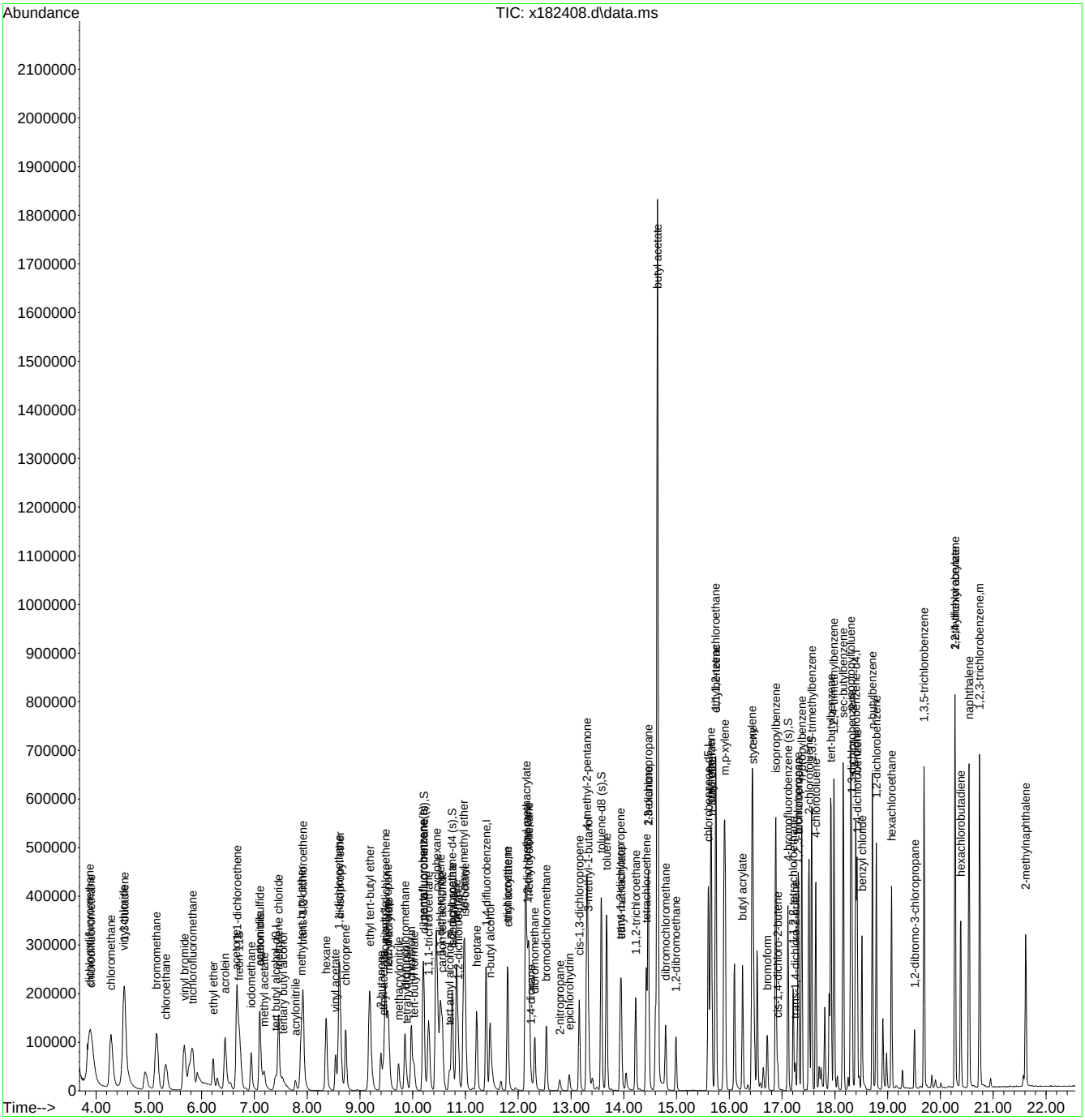
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	17.979	105	316093	46.48	ug/L	100
109) sec-butylbenzene	18.157	105	442315	49.30	ug/L	99
110) 1,3-dichlorobenzene	18.319	146	177432	44.75	ug/L	100
111) p-isopropyltoluene	18.298	119	369982	47.36	ug/L	99
112) 1,4-dichlorobenzene	18.424	146	179373	46.64	ug/L	98
113) 1,2-dichlorobenzene	18.785	146	199943	45.67	ug/L	98
114) benzyl chloride	18.513	91	209090	47.27	ug/L	99
115) n-butylbenzene	18.711	92	182244	48.94	ug/L	99
116) 1,2-dibromo-3-chloropr...	19.512	157	34101	46.80	ug/L	93
117) 1,3,5-trichlorobenzene	19.689	180	205751	46.85	ug/L	99
118) hexachlorobutadiene	20.385	225	73773	49.35	ug/L	99
119) naphthalene	20.542	128	522986	50.37	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	29029	15.37	ug/L	98
121) 1,2,4-trichlorobenzene	20.275	180	218184	51.82	ug/L	99
122) 1,2,3-trichlorobenzene	20.741	180	227609	53.34	ug/L	100
123) hexachloroethane	19.072	201	69585	50.35	ug/L	98
124) 2-methylnaphthalene	21.614	142	165088	23.37	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182408.d
Acq On : 26 Jun 2019 2:45 pm
Operator : jessicap
Sample : JC90273-6MSD Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:14:16 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251140.d
Acq On : 27 Jun 2019 2:03 am
Operator : deving
Sample : JC90525-1ms Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:14 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.158	65	261712	500.00	ug/L	0.00
5) pentafluorobenzene	10.538	168	184048	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	273677	50.00	ug/L	0.00
74) chlorobenzene-d5	14.895	117	233808	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.515	152	123387	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.580	113	96044	52.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.88%			
53) 1,2-dichloroethane-d4 (s)	11.014	65	100899	51.32	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.64%			
75) toluene-d8 (s)	13.226	98	312316	50.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.46%			
99) 4-bromofluorobenzene (s)	16.197	95	101040	52.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.14%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.289	59	141162	261.16	ug/L	97
4) 1,4-dioxane	12.175	88	47601	1359.71	ug/L	98
6) chlorodifluoromethane	4.581	51	170824	47.79	ug/L	95
7) dichlorodifluoromethane	4.560	85	216689	49.84	ug/L	96
8) chloromethane	4.989	50	204312	43.26	ug/L	97
9) vinyl chloride	5.261	62	194942	48.72	ug/L	99
10) 1,3-butadiene	5.266	54	156090	40.94	ug/L	95
11) bromomethane	5.935	94	127477	45.36	ug/L	96
12) chloroethane	6.113	64	97189	47.79	ug/L	97
13) vinyl bromide	6.490	106	130830	48.80	ug/L	98
14) trichlorofluoromethane	6.626	101	210218	50.78	ug/L	99
15) ethyl ether	7.013	74	46384	50.08	ug/L	92
16) acrolein	7.264	56	22802	54.13	ug/L	90
17) freon 113	7.510	151	98116	48.77	ug/L	98
18) 1,1-dichloroethene	7.483	96	98557	49.53	ug/L	89
19) acetone	7.468	58	55716	208.21	ug/L	97
20) acetonitrile	7.918	41	226497	534.65	ug/L	99
21) iodomethane	7.750	142	178587	50.52	ug/L	98
22) carbon disulfide	7.902	76	300700	45.42	ug/L	99
23) methylene chloride	8.226	84	106154	51.22	ug/L	96
24) methyl acetate	7.959	43	91856	49.01	ug/L	100
25) methyl tert butyl ether	8.597	73	319967	54.55	ug/L	100
26) trans-1,2-dichloroethene	8.634	96	84696	49.00	ug/L	96
27) hexane	9.011	57	116425	46.58	ug/L	99
28) di-isopropyl ether	9.225	45	297942	49.60	ug/L	98
29) ethyl tert-butyl ether	9.711	59	297029	51.69	ug/L	99
30) 2-butanone	9.910	72	65986	213.71	ug/L #	83
31) 1,1-dichloroethane	9.241	63	150372	48.39	ug/L	98
32) chloroprene	9.351	53	118009	46.86	ug/L	96
33) acrylonitrile	8.524	53	49356	51.68	ug/L	99
34) vinyl acetate	9.168	86	19796	49.88	ug/L	97
35) ethyl acetate	9.926	45	19000	55.06	ug/L #	69
36) 2,2-dichloropropane	10.025	77	152418	50.33	ug/L	97
37) cis-1,2-dichloroethene	9.983	96	131671	66.09	ug/L	98
38) methyl acrylate	10.015	85	17423	50.62	ug/L #	76
39) propionitrile	9.994	54	214116	524.88	ug/L	84
40) bromochloromethane	10.297	128	52298	51.45	ug/L	96
41) tetrahydrofuran	10.318	42	41744	47.13	ug/L	99
42) chloroform	10.381	83	151974	47.06	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251140.d
Acq On : 27 Jun 2019 2:03 am
Operator : deving
Sample : JC90525-1ms Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:14 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.423	59	64734	39.45	ug/L		98
45) methacrylonitrile	10.193	67	46174	52.30	ug/L		94
46) cyclohexane	10.778	84	161729	48.18	ug/L		99
47) 1,1,1-trichloroethane	10.663	97	159888	50.52	ug/L		96
48) iso-butyl alcohol	10.778	43	157295	515.99	ug/L		85
49) 1,1-dichloropropene	10.825	75	111155	47.01	ug/L		98
50) carbon tetrachloride	10.862	117	145458	51.42	ug/L		100
51) tert-amyl alcohol	10.956	73	70106	247.39	ug/L		92
54) benzene	11.087	78	327486	46.88	ug/L		99
55) iso-octane	11.181	57	328656	50.13	ug/L		96
56) tert-amyl methyl ether	11.165	73	303803	51.06	ug/L		98
57) heptane	11.343	71	61052	47.00	ug/L		96
58) isopropyl acetate	10.977	87	27092	52.85	ug/L	#	92
59) 1,2-dichloroethane	11.108	62	117028	46.68	ug/L		97
60) n-butyl alcohol	11.547	56	316267	2633.19	ug/L		97
61) ethyl acrylate	11.804	55	117171	51.42	ug/L		97
62) trichloroethene	11.830	95	293326	164.86	ug/L		97
63) 2-nitropropane	12.614	41	28219	37.38	ug/L	#	73
64) methylcyclohexane	12.149	83	168318	45.84	ug/L		98
66) methyl methacrylate	12.081	100	26624	52.87	ug/L		96
67) 1,2-dichloropropane	12.133	63	86846	51.51	ug/L		95
68) dibromomethane	12.248	93	59691	52.60	ug/L		98
69) bromodichloromethane	12.405	83	119537	51.32	ug/L		97
70) epichlorohydrin	12.750	57	65383	258.22	ug/L		99
71) cis-1,3-dichloropropene	12.891	75	130916	52.59	ug/L		97
72) 4-methyl-2-pentanone	12.996	58	211663	203.17	ug/L		99
73) 3-methyl-1-butanol	12.996	55	198955	1017.54	ug/L		99
76) toluene	13.305	92	196797	47.63	ug/L		97
77) trans-1,3-dichloropropene	13.498	75	112635	52.99	ug/L		96
78) ethyl methacrylate	13.482	69	109343	50.84	ug/L		95
79) 1,1,2-trichloroethane	13.744	83	62208	52.69	ug/L		98
80) 2-hexanone	13.916	58	173522	198.85	ug/L		99
81) tetrachloroethene	13.916	166	97055	47.98	ug/L		98
82) 1,3-dichloropropane	13.948	76	115834	50.98	ug/L		99
83) butyl acetate	14.000	56	64718	49.85	ug/L		97
84) dibromochloromethane	14.220	129	92165	52.12	ug/L		95
85) 1,2-dibromoethane	14.392	107	87746	54.27	ug/L		99
86) n-butyl ether	14.863	57	314184	46.31	ug/L		99
87) chlorobenzene	14.926	112	207772	48.36	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.999	131	108339	50.33	ug/L		97
89) ethylbenzene	14.994	91	357846	46.62	ug/L		100
90) m,p-xylene	15.125	106	281038	94.17	ug/L		97
91) o-xylene	15.580	106	160255	48.53	ug/L		99
92) styrene	15.590	104	221017	46.56	ug/L		99
93) butyl acrylate	15.370	55	168388	49.76	ug/L		98
94) n-amyl acetate	15.606	70	74152	48.74	ug/L		97
95) bromoform	15.852	173	65425	53.14	ug/L		98
96) isopropylbenzene	15.972	105	432525	48.43	ug/L		99
97) cis-1,4-dichloro-2-butene	16.009	75	25866	97.36	ug/L		97
100) bromobenzene	16.411	156	93322	51.43	ug/L		94
101) 1,1,2,2-tetrachloroethane	16.281	83	133844	56.79	ug/L		99
102) trans-1,4-dichloro-2-b...	16.317	53	15867	86.83	ug/L		91
103) 1,2,3-trichloropropane	16.380	110	37078	54.94	ug/L		98
104) n-propylbenzene	16.437	91	437754	49.45	ug/L		100
105) 2-chlorotoluene	16.594	126	100246	50.84	ug/L		96
106) 4-chlorotoluene	16.720	91	232078	50.36	ug/L		100
107) 1,3,5-trimethylbenzene	16.610	105	359781	52.70	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251140.d
Acq On : 27 Jun 2019 2:03 am
Operator : deving
Sample : JC90525-1ms Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:14 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

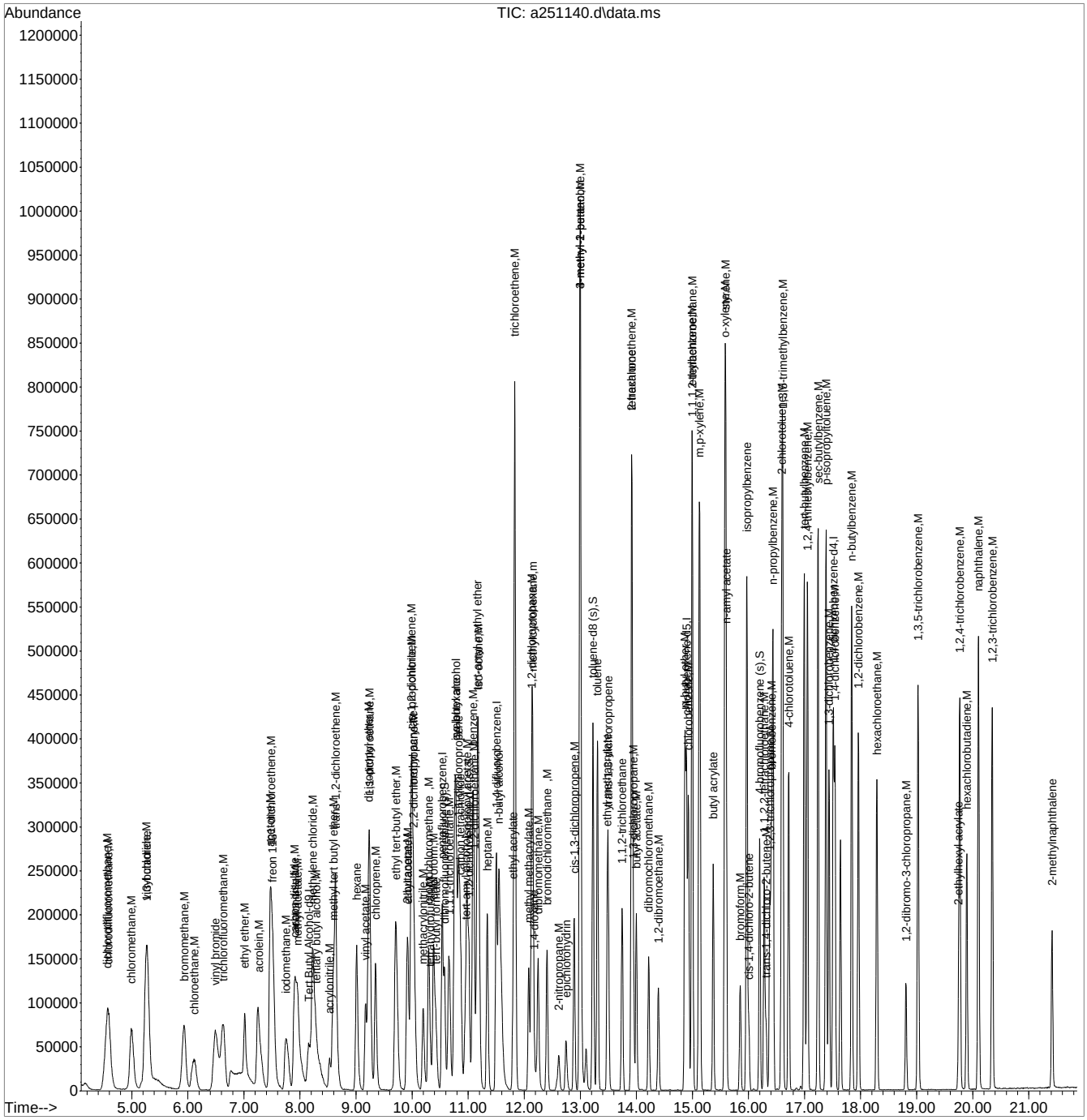
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.997	134	81692	51.66	ug/L	95
109) 1,2,4-trimethylbenzene	17.055	105	346282	51.26	ug/L	98
110) sec-butylbenzene	17.243	105	484706	52.01	ug/L	100
111) 1,3-dichlorobenzene	17.436	146	175575	48.81	ug/L	99
112) p-isopropyltoluene	17.384	119	406286	52.31	ug/L	99
113) 1,4-dichlorobenzene	17.541	146	174225	47.85	ug/L	99
114) 1,2-dichlorobenzene	17.959	146	192100	49.28	ug/L	100
115) n-butylbenzene	17.839	92	185971	48.98	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.812	157	44423	53.97	ug/L	90
117) 1,3,5-trichlorobenzene	19.026	180	177184	48.22	ug/L	98
118) 2-ethylhexyl acrylate	19.748	70	19123	9.46	ug/L	96
119) 1,2,4-trichlorobenzene	19.769	180	166797	50.46	ug/L	99
120) hexachlorobutadiene	19.895	225	66422	50.50	ug/L	97
121) naphthalene	20.104	128	475760	49.22	ug/L	99
122) 1,2,3-trichlorobenzene	20.350	180	169366	51.04	ug/L	97
123) hexachloroethane	18.294	201	72874	59.63	ug/L	98
124) 2-methylnaphthalene	21.416	142	109294	21.21	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251140.d
Acq On : 27 Jun 2019 2:03 am
Operator : deving
Sample : JC90525-1ms Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:14 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251141.d
Acq On : 27 Jun 2019 2:32 am
Operator : deving
Sample : JC90525-1msd Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:54 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.163	65	272670	500.00	ug/L	0.00
5) pentafluorobenzene	10.537	168	190203	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	282302	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	246301	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	134312	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	96180	51.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.60%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	103176	50.87	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.74%			
75) toluene-d8 (s)	13.225	98	321824	49.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.26%			
99) 4-bromofluorobenzene (s)	16.201	95	107570	51.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.84%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.278	59	150209	266.73	ug/L	96
4) 1,4-dioxane	12.174	88	48694	1335.03	ug/L	100
6) chlorodifluoromethane	4.580	51	176061	47.66	ug/L	95
7) dichlorodifluoromethane	4.554	85	221109	49.21	ug/L	99
8) chloromethane	4.988	50	206643	42.34	ug/L	100
9) vinyl chloride	5.255	62	198389	47.98	ug/L	100
10) 1,3-butadiene	5.270	54	152362	38.67	ug/L	98
11) bromomethane	5.924	94	129034	44.43	ug/L	99
12) chloroethane	6.091	64	96303	45.82	ug/L	97
13) vinyl bromide	6.484	106	130888	47.24	ug/L	99
14) trichlorofluoromethane	6.625	101	210931	49.30	ug/L	99
15) ethyl ether	7.017	74	47673	49.81	ug/L	97
16) acrolein	7.253	56	22716	52.18	ug/L	97
17) freon 113	7.498	151	98288	47.28	ug/L	99
18) 1,1-dichloroethene	7.472	96	95506	46.44	ug/L	99
19) acetone	7.477	58	57211	206.88	ug/L	96
20) acetonitrile	7.917	41	232116	530.18	ug/L	95
21) iodomethane	7.749	142	177989	48.72	ug/L	99
22) carbon disulfide	7.901	76	298461	43.62	ug/L	99
23) methylene chloride	8.225	84	103921	48.52	ug/L	99
24) methyl acetate	7.959	43	97166	50.16	ug/L	99
25) methyl tert butyl ether	8.597	73	319875	52.77	ug/L	99
26) trans-1,2-dichloroethene	8.633	96	84681	47.41	ug/L	98
27) hexane	9.010	57	113278	43.85	ug/L	98
28) di-isopropyl ether	9.224	45	301326	48.54	ug/L	98
29) ethyl tert-butyl ether	9.711	59	298976	50.34	ug/L	94
30) 2-butanone	9.904	72	69938	219.18	ug/L #	69
31) 1,1-dichloroethane	9.240	63	150306	46.81	ug/L	99
32) chloroprene	9.345	53	117876	45.29	ug/L	99
33) acrylonitrile	8.524	53	51456	52.14	ug/L	93
34) vinyl acetate	9.172	86	20862	50.86	ug/L #	81
35) ethyl acetate	9.925	45	19444	54.53	ug/L #	74
36) 2,2-dichloropropane	10.025	77	149878	47.89	ug/L	99
37) cis-1,2-dichloroethene	9.988	96	135903	66.01	ug/L	97
38) methyl acrylate	10.019	85	17907	50.34	ug/L #	91
39) propionitrile	9.993	54	224851	533.36	ug/L #	73
40) bromochloromethane	10.291	128	52910	50.37	ug/L	99
41) tetrahydrofuran	10.312	42	43939	48.01	ug/L	98
42) chloroform	10.380	83	154275	46.22	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251141.d
Acq On : 27 Jun 2019 2:32 am
Operator : deving
Sample : JC90525-1msd Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:54 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.422	59	64298	37.92	ug/L		99
45) methacrylonitrile	10.202	67	47920	52.52	ug/L		91
46) cyclohexane	10.778	84	162391	46.81	ug/L		98
47) 1,1,1-trichloroethane	10.657	97	163133	49.88	ug/L		96
48) iso-butyl alcohol	10.778	43	160673	510.01	ug/L		89
49) 1,1-dichloropropene	10.830	75	114006	46.66	ug/L		97
50) carbon tetrachloride	10.867	117	144637	49.48	ug/L		99
51) tert-amyl alcohol	10.961	73	75729	258.58	ug/L		98
54) benzene	11.086	78	334248	46.38	ug/L		100
55) iso-octane	11.180	57	321017	47.47	ug/L		97
56) tert-amyl methyl ether	11.165	73	308497	50.27	ug/L		98
57) heptane	11.343	71	61897	46.19	ug/L		98
58) isopropyl acetate	10.982	87	27559	52.12	ug/L		97
59) 1,2-dichloroethane	11.107	62	118041	45.64	ug/L		99
60) n-butyl alcohol	11.547	56	334177	2697.30	ug/L		96
61) ethyl acrylate	11.803	55	121602	51.74	ug/L		97
62) trichloroethene	11.834	95	300026	163.48	ug/L		96
63) 2-nitropropane	12.619	41	28815	37.01	ug/L	#	77
64) methylcyclohexane	12.148	83	171978	45.40	ug/L		99
66) methyl methacrylate	12.080	100	28150	54.19	ug/L		93
67) 1,2-dichloropropane	12.132	63	86937	49.99	ug/L		96
68) dibromomethane	12.247	93	62505	53.40	ug/L		96
69) bromodichloromethane	12.404	83	123155	51.26	ug/L		99
70) epichlorohydrin	12.744	57	66877	256.05	ug/L		99
71) cis-1,3-dichloropropene	12.891	75	134991	52.57	ug/L		94
72) 4-methyl-2-pentanone	12.995	58	223593	208.06	ug/L		99
73) 3-methyl-1-butanol	12.995	55	211380	1048.05	ug/L		98
76) toluene	13.309	92	201118	46.20	ug/L		100
77) trans-1,3-dichloropropene	13.503	75	116529	52.04	ug/L		97
78) ethyl methacrylate	13.482	69	117208	51.74	ug/L		95
79) 1,1,2-trichloroethane	13.748	83	64926	52.21	ug/L		97
80) 2-hexanone	13.916	58	186036	202.37	ug/L		98
81) tetrachloroethene	13.916	166	100372	47.10	ug/L		98
82) 1,3-dichloropropane	13.947	76	121592	50.80	ug/L		95
83) butyl acetate	13.999	56	69310	50.68	ug/L		100
84) dibromochloromethane	14.219	129	95234	51.12	ug/L		96
85) 1,2-dibromoethane	14.397	107	93450	54.87	ug/L		99
86) n-butyl ether	14.868	57	338815	47.41	ug/L		99
87) chlorobenzene	14.930	112	218213	48.22	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.998	131	112171	49.46	ug/L		98
89) ethylbenzene	14.993	91	375394	46.42	ug/L		99
90) m,p-xylene	15.129	106	297096	94.50	ug/L		99
91) o-xylene	15.579	106	166918	47.99	ug/L		96
92) styrene	15.589	104	236210	47.23	ug/L		99
93) butyl acrylate	15.370	55	181728	50.98	ug/L		97
94) n-amyl acetate	15.605	70	78343	48.88	ug/L		98
95) bromoform	15.851	173	70937	54.69	ug/L		98
96) isopropylbenzene	15.971	105	454253	48.29	ug/L		99
97) cis-1,4-dichloro-2-butene	16.003	75	27395	97.89	ug/L		96
100) bromobenzene	16.411	156	101231	51.25	ug/L		93
101) 1,1,2,2-tetrachloroethane	16.280	83	140192	54.65	ug/L		98
102) trans-1,4-dichloro-2-b...	16.316	53	17681	88.88	ug/L		94
103) 1,2,3-trichloropropane	16.379	110	39462	53.72	ug/L		95
104) n-propylbenzene	16.437	91	468349	48.60	ug/L		100
105) 2-chlorotoluene	16.594	126	106446	49.59	ug/L		98
106) 4-chlorotoluene	16.719	91	244049	48.65	ug/L		99
107) 1,3,5-trimethylbenzene	16.609	105	380126	51.15	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251141.d
Acq On : 27 Jun 2019 2:32 am
Operator : deving
Sample : JC90525-1msd Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:54 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

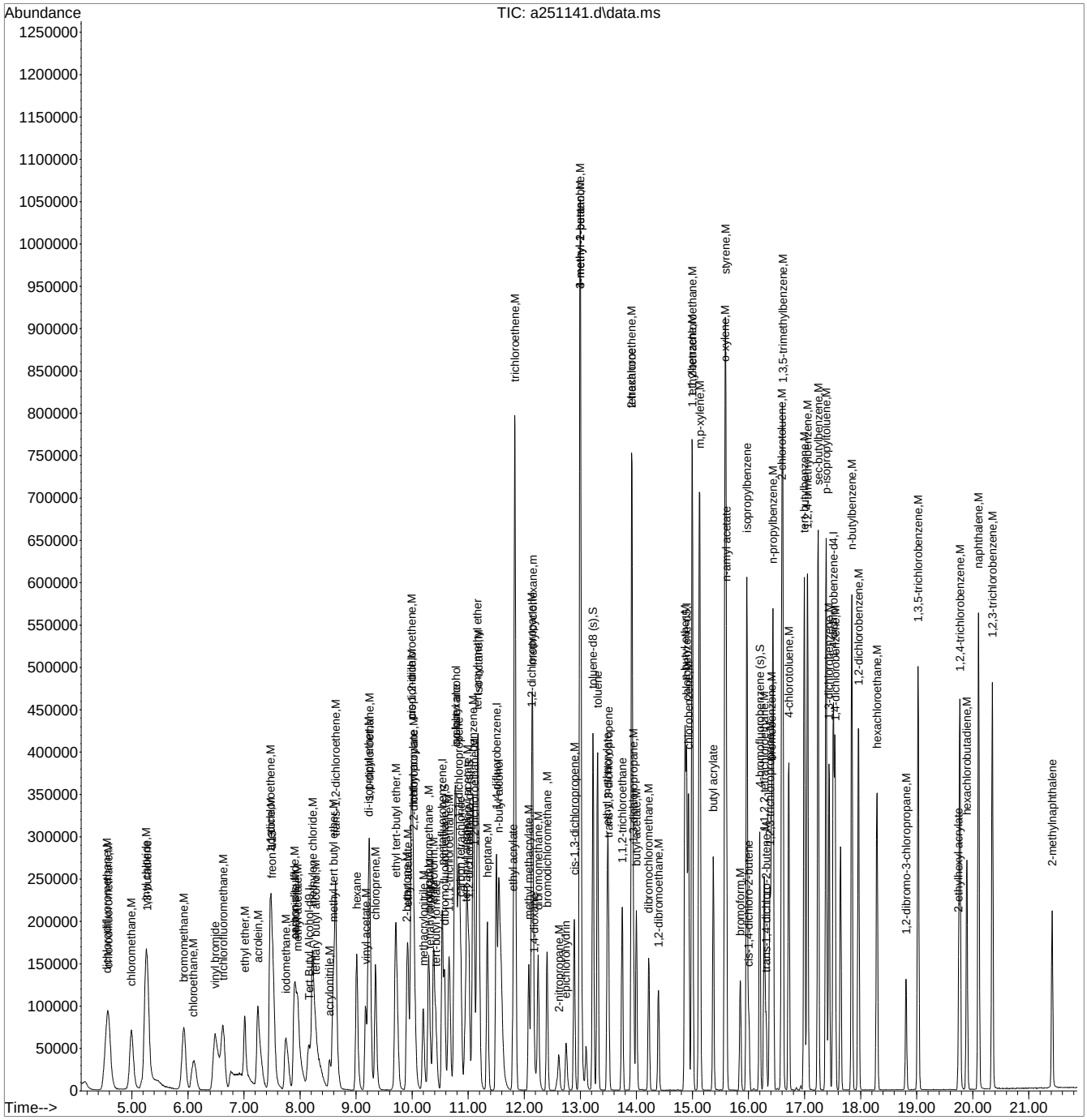
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.996	134	83324	48.40	ug/L	97
109) 1,2,4-trimethylbenzene	17.054	105	370017	50.32	ug/L	98
110) sec-butylbenzene	17.242	105	505758	49.85	ug/L	99
111) 1,3-dichlorobenzene	17.436	146	185467	47.37	ug/L	98
112) p-isopropyltoluene	17.383	119	425734	50.36	ug/L	97
113) 1,4-dichlorobenzene	17.545	146	187278	47.26	ug/L	98
114) 1,2-dichlorobenzene	17.964	146	205684	48.48	ug/L	98
115) n-butylbenzene	17.844	92	195534	47.31	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.811	157	46818	52.25	ug/L	96
117) 1,3,5-trichlorobenzene	19.026	180	191068	47.77	ug/L	99
118) 2-ethylhexyl acrylate	19.747	70	20257	9.23	ug/L	96
119) 1,2,4-trichlorobenzene	19.774	180	177979	49.46	ug/L	98
120) hexachlorobutadiene	19.894	225	68578	47.90	ug/L	98
121) naphthalene	20.103	128	517495	49.19	ug/L	99
122) 1,2,3-trichlorobenzene	20.349	180	183939	50.93	ug/L	97
123) hexachloroethane	18.293	201	74435	55.95	ug/L	98
124) 2-methylnaphthalene	21.416	142	123891	22.08	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251141.d
Acq On : 27 Jun 2019 2:32 am
Operator : deving
Sample : JC90525-1msd Inst : MSA
Misc : MS35779,VA9712,5,,,,5
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:36:54 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 06/29/19 05:20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182443.d
Acq On : 27 Jun 2019 1:39 pm
Operator : jessicap
Sample : JC90379-1ms Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:35:18 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	121757	500.00	ug/L	0.00
5) pentafluorobenzene	10.191	168	185733	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.384	114	257577	50.00	ug/L	0.00
74) chlorobenzene-d5	15.594	117	261650	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	18.387	152	141957	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.191	168	185733	50.00	ug/L	-0.01
130) chlorobenzene-d5(a)	15.594	117	261650	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.207	113	83065	54.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.92%			
54) 1,2-dichloroethane-d4 (s)	10.740	65	80144	47.17	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 94.34%			
75) toluene-d8 (s)	13.565	98	310188	49.45	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.90%			
98) 4-bromofluorobenzene (s)	17.106	95	119474	51.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.74%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.539	59	61691	223.48	ug/L	57
4) 1,4-dioxane	12.236	88	28945	1271.73	ug/L	95
6) chlorodifluoromethane	3.910	51	215057	37.90	ug/L	98
7) dichlorodifluoromethane	3.889	85	379304	67.27	ug/L	97
8) chloromethane	4.286	50	327935	45.83	ug/L	100
9) vinyl chloride	4.522	62	305368	51.76	ug/L	99
10) bromomethane	5.144	96	163607	55.72	ug/L	98
11) chloroethane	5.317	64	108178	54.71	ug/L	96
12) vinyl bromide	5.667	106	142381	64.44	ug/L	96
13) trichlorofluoromethane	5.829	101	228098	63.44	ug/L	98
14) 1,3-butadiene	4.542	54	117391	46.58	ug/L	98
15) ethyl ether	6.216	74	33622	42.04	ug/L	89
16) acrolein	6.446	56	11312	30.40	ug/L	98
17) 1,1-dichloroethene	6.666	96	72132	53.86	ug/L	90
18) freon 113	6.708	101	121782	56.52	ug/L	97
19) acetone	6.656	43	66990	137.15	ug/L	93
20) acetonitrile	7.105	41	119209	368.32	ug/L	98
21) iodomethane	6.938	142	126926	49.24	ug/L	96
22) carbon disulfide	7.100	76	240736	50.55	ug/L	95
23) methylene chloride	7.456	84	82971	49.00	ug/L	95
24) methyl acetate	7.184	43	45134	34.97	ug/L	95
25) methyl tert butyl ether	7.890	73	243151	41.70	ug/L	98
26) trans-1,2-dichloroethene	7.921	96	72477	50.09	ug/L	94
27) hexane	8.355	57	89789	42.34	ug/L	93
28) di-isopropyl ether	8.612	45	272923	40.80	ug/L	97
29) 2-butanone	9.391	72	30261	180.89	ug/L	90
30) 1,1-dichloroethane	8.596	63	133769	48.22	ug/L	99
31) chloroprene	8.727	53	97048	46.95	ug/L	94
32) acrylonitrile	7.775	53	25696	42.53	ug/L	97
33) vinyl acetate	8.533	86	12492	44.08	ug/L #	73
34) ethyl tert-butyl ether	9.182	59	275168	44.43	ug/L	97
35) ethyl acetate	9.438	45	10676	41.33	ug/L	81
36) 2,2-dichloropropane	9.522	77	154139	54.15	ug/L	95
37) cis-1,2-dichloroethene	9.480	96	81932	49.17	ug/L	96
38) methyl acrylate	9.532	85	9303	47.27	ug/L #	81
39) propionitrile	9.469	54	100979	423.75	ug/L	98
40) tert-butyl formate	10.019	59	46996	30.21	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182443.d
Acq On : 27 Jun 2019 1:39 pm
Operator : jessicap
Sample : JC90379-1ms Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:35:18 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) bromochloromethane	9.851	128	41969	49.44	ug/L		95
42) tetrahydrofuran	9.877	72	8818	43.46	ug/L		93
43) chloroform	9.966	83	130089	48.01	ug/L		98
45) methacrylonitrile	9.726	67	26840	43.81	ug/L		97
46) 1,1,1-trichloroethane	10.296	97	144589	51.98	ug/L		97
47) cyclohexane	10.453	84	178982	58.23	ug/L	#	77
48) tert amyl alcohol	10.693	55	25430	263.04	ug/L	#	81
49) 1,1-dichloropropene	10.515	75	90298	50.58	ug/L		99
51) carbon tetrachloride	10.552	117	120577	51.62	ug/L		99
52) isopropyl acetate	10.746	87	15284	47.58	ug/L	#	83
55) iso-octane	10.981	57	190743	41.69	ug/L		97
56) epichlorohydrin	12.958	57	35017	192.50	ug/L		97
57) n-butyl alcohol	11.462	56	139388	2372.65	ug/L		93
58) benzene	10.829	78	344464	57.63	ug/L		98
59) tert-amyl methyl ether	10.960	73	249975	43.06	ug/L		98
60) heptane	11.206	57	36139	39.65	ug/L		93
61) 1,2-dichloroethane	10.861	62	80576	39.97	ug/L		98
62) trichloroethene	11.792	130	79402	50.63	ug/L		99
63) ethyl acrylate	11.797	55	84819	43.10	ug/L		99
64) 2-nitropropane	12.780	41	14674	31.94	ug/L		99
66) methyl methacrylate	12.152	100	18061	43.40	ug/L		98
67) 1,2-dichloropropane	12.168	76	30194	45.81	ug/L		91
68) dibromomethane	12.304	93	46084	46.27	ug/L		97
69) methylcyclohexane	12.200	83	133994	48.84	ug/L		95
70) bromodichloromethane	12.524	83	102237	45.95	ug/L		97
71) cis-1,3-dichloropropene	13.151	75	127636	47.62	ug/L		93
72) 4-methyl-2-pentanone	13.293	58	140030	207.34	ug/L		93
73) 3-methyl-1-butanol	13.319	70	64154	1155.48	ug/L		94
76) toluene	13.664	92	179874	46.26	ug/L		96
77) trans-1,3-dichloropropene	13.931	75	109910	43.54	ug/L		98
78) ethyl methacrylate	13.946	69	96317	46.31	ug/L		90
79) 1,1,2-trichloroethane	14.218	83	58753	44.48	ug/L		94
80) tetrachloroethene	14.422	164	66836	47.10	ug/L		99
81) 1,3-dichloropropane	14.459	76	105838	42.72	ug/L		90
82) 2-hexanone	14.459	58	122380m	194.56	ug/L		
83) butyl acetate	14.595	56	59512	46.85	ug/L		91
84) dibromochloromethane	14.789	129	82721	44.93	ug/L		98
85) 1,2-dibromoethane	14.982	107	82620	46.83	ug/L		100
86) n-butyl ether	15.657	57	306948	43.75	ug/L		100
87) chlorobenzene	15.641	112	205473	46.26	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.735	131	89758	45.76	ug/L		98
89) ethylbenzene	15.740	91	321731	44.23	ug/L		99
90) m,p-xylene	15.913	106	363737	125.32	ug/L		98
91) o-xylene	16.426	91	972084	145.79	ug/L		98
92) styrene	16.441	104	212501	44.16	ug/L		88
93) butyl acrylate	16.243	55	176236	43.45	ug/L		99
94) bromoform	16.713	173	56360	43.39	ug/L		96
95) isopropylbenzene	16.875	105	468742	54.84	ug/L		99
96) cis-1,4-dichloro-2-butene	16.912	88	24880	35.23	ug/L		94
99) bromobenzene	17.304	156	95485	46.42	ug/L		97
100) 1,1,2,2-tetrachloroethane	17.205	83	101739	45.72	ug/L		99
101) trans-1,4-dichloro-2-b...	17.241	53	18485	36.58	ug/L		88
102) 1,2,3-trichloropropane	17.294	110	24633	44.11	ug/L	#	72
103) n-propylbenzene	17.367	91	379186	44.20	ug/L		99
104) 2-chlorotoluene	17.503	126	90011	46.30	ug/L		98
105) 4-chlorotoluene	17.634	91	230013	44.03	ug/L		99
106) 1,3,5-trimethylbenzene	17.555	105	338164	51.86	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182443.d
Acq On : 27 Jun 2019 1:39 pm
Operator : jessicap
Sample : JC90379-1ms Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:35:18 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

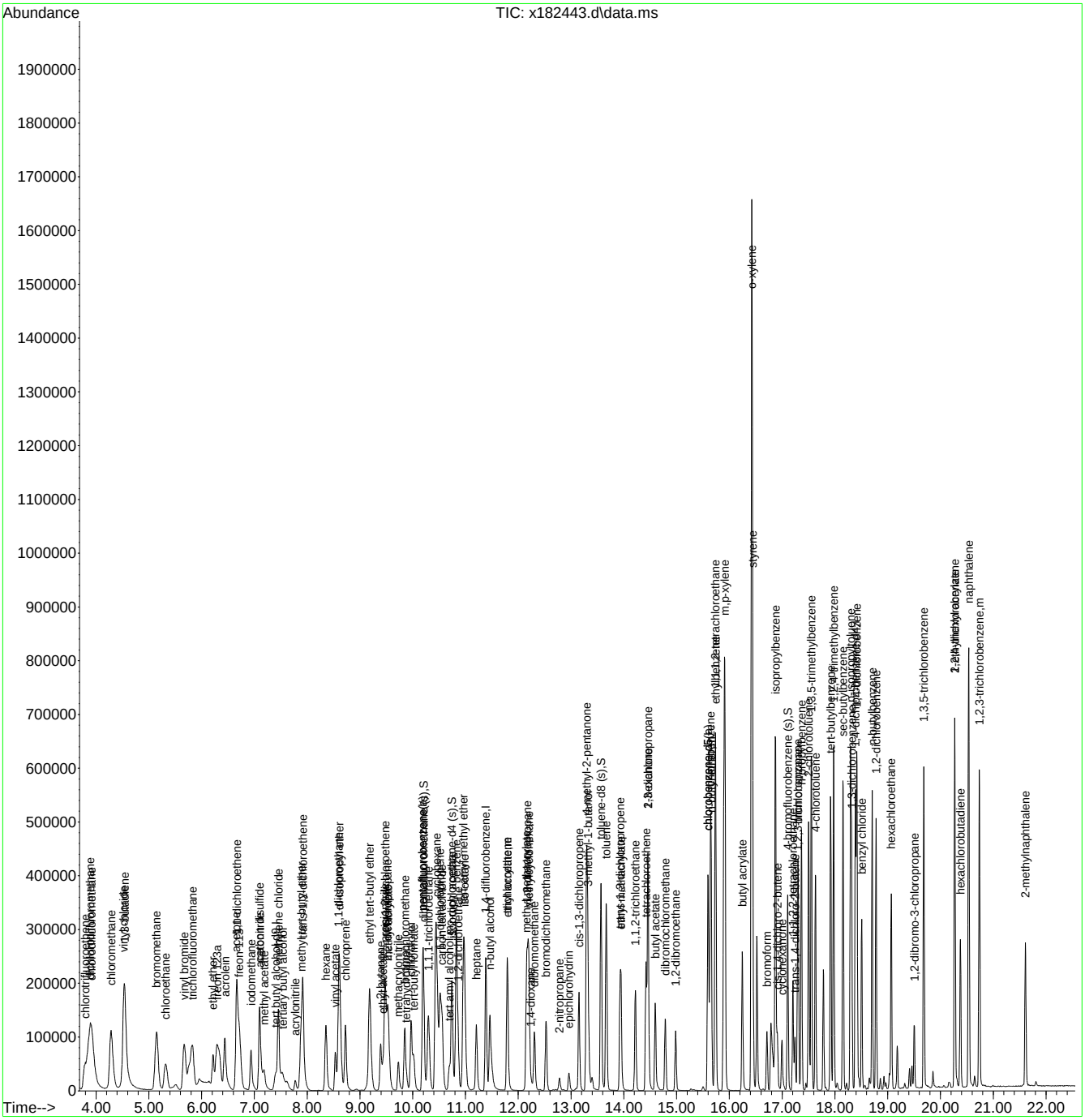
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	17.921	119	268392	45.30	ug/L	98
108) 1,2,4-trimethylbenzene	17.974	105	331120	48.68	ug/L	100
109) sec-butylbenzene	18.152	105	388666	43.31	ug/L	99
110) 1,3-dichlorobenzene	18.319	146	173624	43.79	ug/L	98
111) p-isopropyltoluene	18.298	119	324035	41.47	ug/L	98
112) 1,4-dichlorobenzene	18.413	146	173153	45.01	ug/L	98
113) 1,2-dichlorobenzene	18.779	146	194456	44.41	ug/L	99
114) benzyl chloride	18.507	91	210507	47.58	ug/L	99
115) n-butylbenzene	18.706	92	155278	41.69	ug/L	100
116) 1,2-dibromo-3-chloropr...	19.506	157	34045	46.71	ug/L	95
117) 1,3,5-trichlorobenzene	19.684	180	181194	41.25	ug/L	98
118) hexachlorobutadiene	20.380	225	58719	39.27	ug/L	98
119) naphthalene	20.537	128	656436	63.21	ug/L	99
120) 2-ethylhexyl acrylate	20.270	70	20424	10.81	ug/L	88
121) 1,2,4-trichlorobenzene	20.270	180	195616	46.45	ug/L	98
122) 1,2,3-trichlorobenzene	20.735	180	200578	47.00	ug/L	98
123) hexachloroethane	19.067	201	63181	45.70	ug/L	98
124) 2-methylnaphthalene	21.609	142	138310	20.12	ug/L	98
128) chlorotrifluoroethene	3.795	116	113518	70.99	ug/L	93
129) freon 123a	6.295	67	142012	59.90	ug/L	97
131) cyclohexanone	16.996	55	43397	506.60	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182443.d
Acq On : 27 Jun 2019 1:39 pm
Operator : jessicap
Sample : JC90379-1ms Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:35:18 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration



Manual Integration Approval Summary

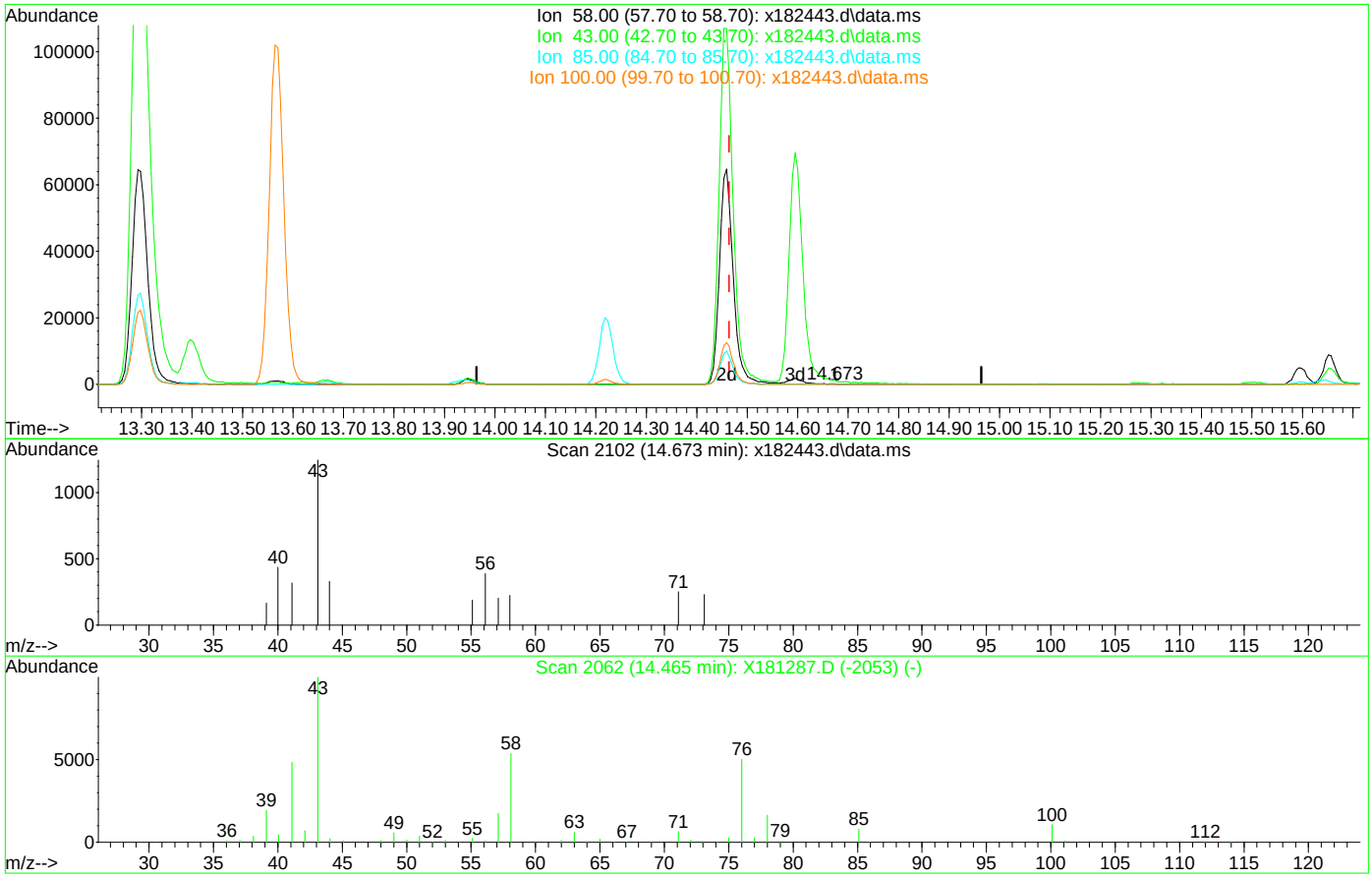
Sample Number:	JC90379-1MS	**Method:**	SW846 8260C
Lab FileID:	X182443.D	**Analyst approved:**	06/28/19 03:49 Dave Moriente
Injection Time:	06/27/19 13:39	**Supervisor approved:**	06/29/19 05:20 Kanya Veerawat

Parameter	CAS	Sig#	R.T. (min.)	Reason
2-Hexanone	591-78-6		14.46	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182443.d
Acq On : 27 Jun 2019 1:39 pm
Operator : jessicap
Sample : JC90379-1ms Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 27 14:42:35 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration



TIC: x182443.d\data.ms

(82) 2-hexanone

14.673min (+0.209) 0.31ug/L

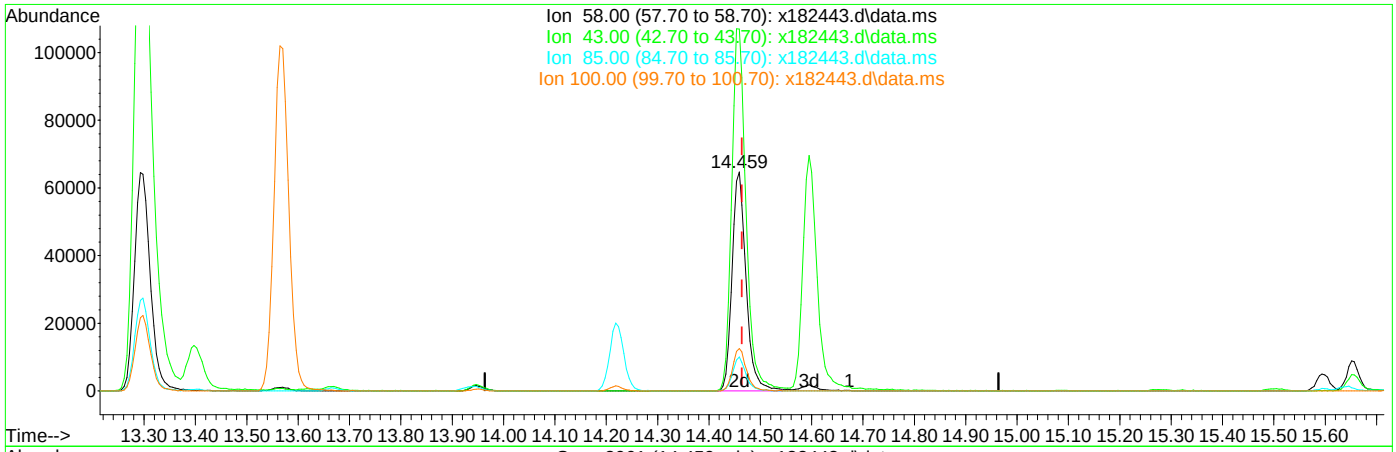
response 195

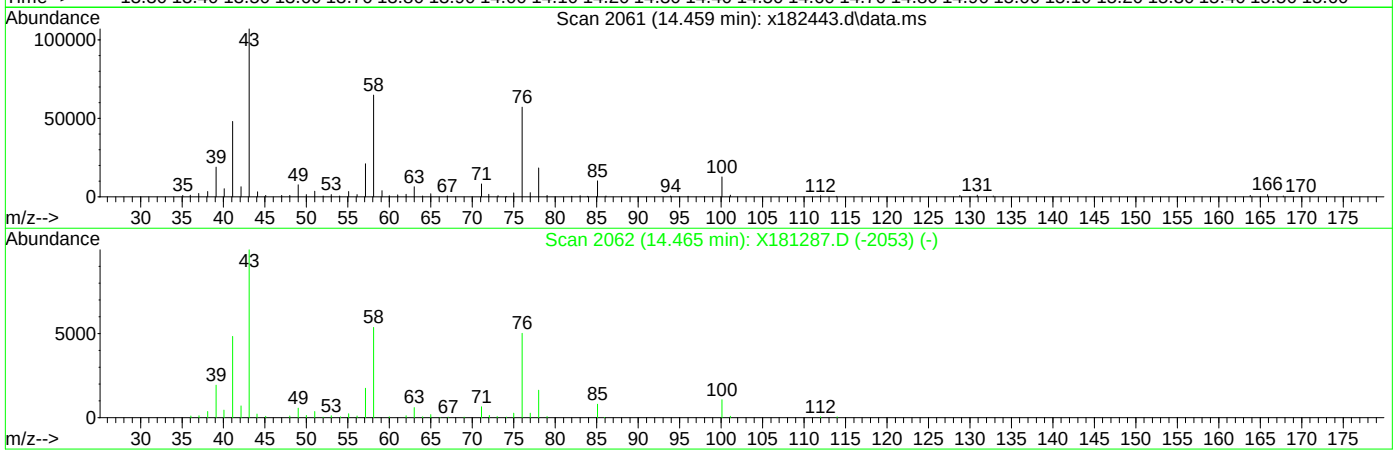
Ion	Exp%	Act%
58.00	100	100
43.00	186.20	190.63
85.00	14.90	0.00
100.00	19.60	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182443.d
Acq On : 27 Jun 2019 1:39 pm
Operator : jessicap
Sample : JC90379-1ms Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 27 14:42:35 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration





TIC: x182443.d\data.ms

(82) 2-hexanone

14.459min (-0.005) 194.56ug/L m

response 122380

Ion	Exp%	Act%
58.00	100	100
43.00	186.20	165.36#
85.00	14.90	15.52
100.00	19.60	19.42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182445.d
Acq On : 27 Jun 2019 2:37 pm
Operator : jessicap
Sample : JC90379-2dup Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:52:46 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

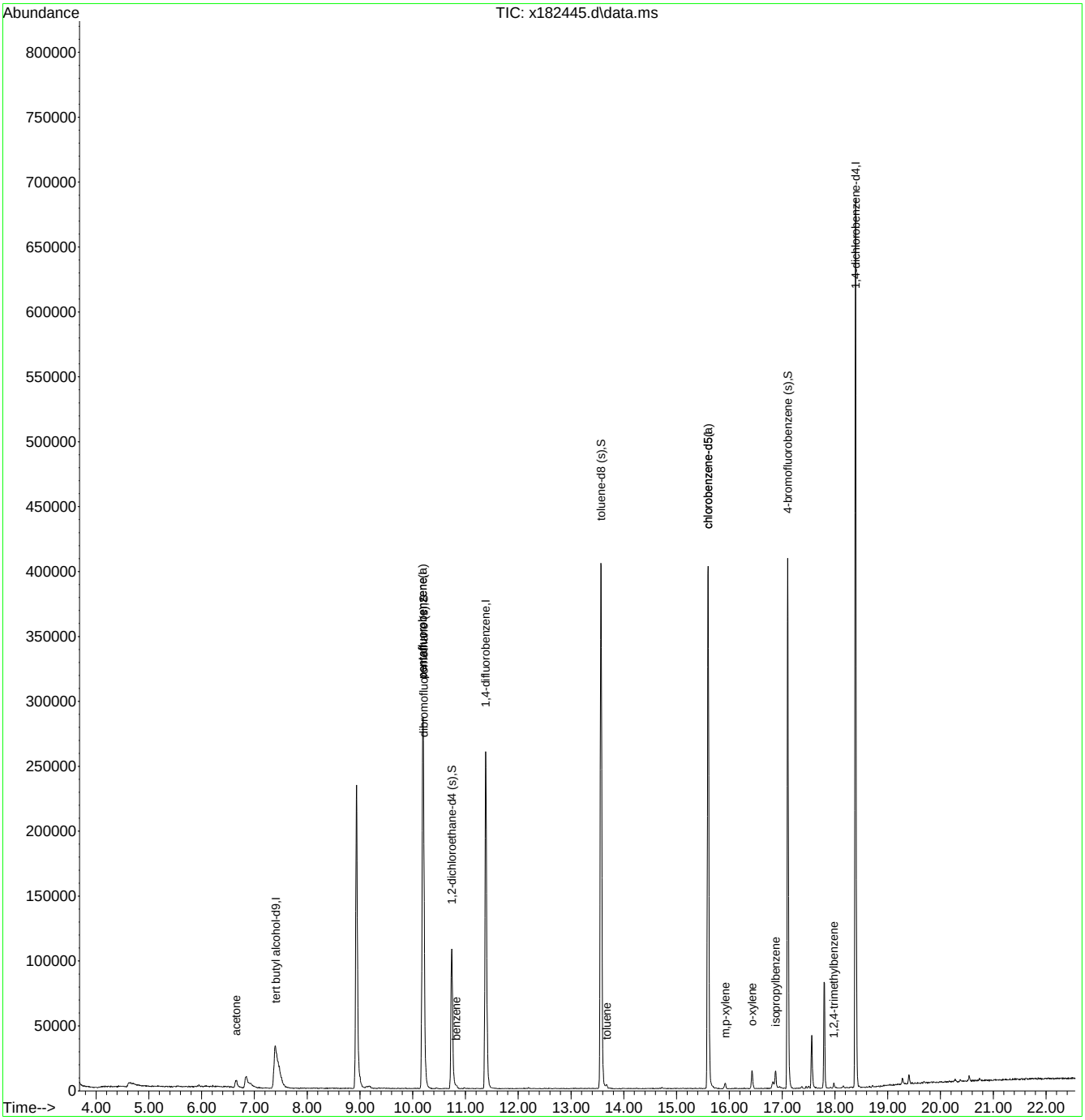
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.403	65	122897	500.00	ug/L	0.00
5) pentafluorobenzene	10.191	168	199582	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.384	114	271666	50.00	ug/L	0.00
74) chlorobenzene-d5	15.594	117	271170	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	18.392	152	177920	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.191	168	199582	50.00	ug/L	-0.01
130) chlorobenzene-d5(a)	15.594	117	271170	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.207	113	89757	55.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.54%			
54) 1,2-dichloroethane-d4 (s)	10.740	65	91668	51.15	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.30%			
75) toluene-d8 (s)	13.570	98	331006	50.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.84%			
98) 4-bromofluorobenzene (s)	17.106	95	136064	46.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.36%			
Target Compounds						Qvalue
19) acetone	6.656	43	13219	25.19	ug/L	99
58) benzene	10.824	78	2300	0.36	ug/L	100
76) toluene	13.675	92	1472	0.37	ug/L #	77
90) m,p-xylene	15.924	106	1985	0.66	ug/L #	68
91) o-xylene	16.431	91	9009	1.30	ug/L	95
95) isopropylbenzene	16.875	105	8976	1.01	ug/L	97
108) 1,2,4-trimethylbenzene	17.979	105	2858	0.34	ug/L	81

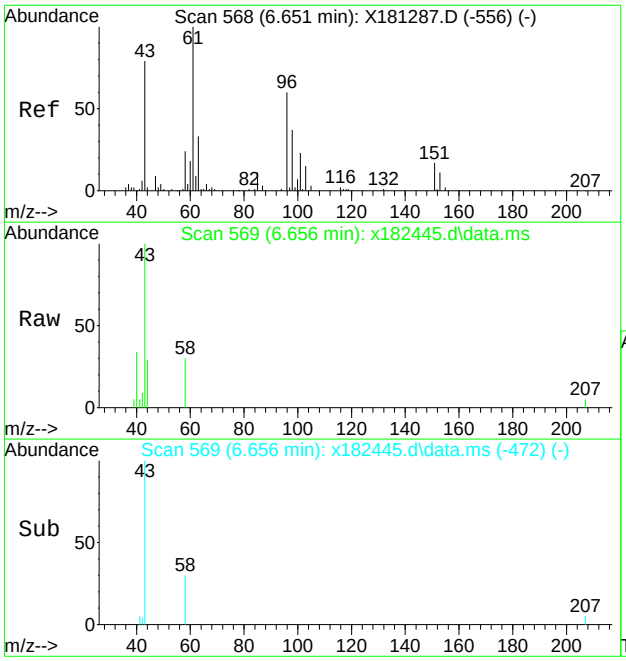
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182445.d
Acq On : 27 Jun 2019 2:37 pm
Operator : jessicap
Sample : JC90379-2dup Inst : ACC-VOA-MSX
Misc : MS35746,VX7809,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 02:52:46 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

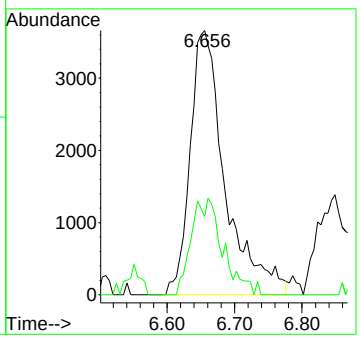


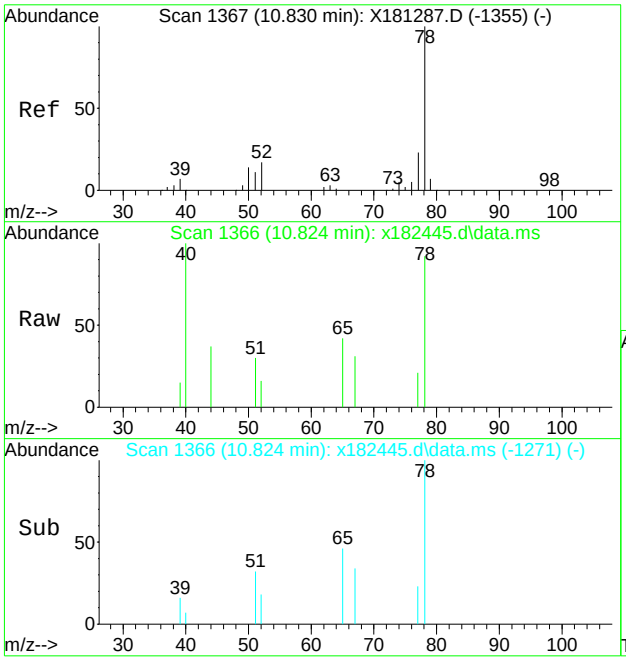


#19
acetone
Concen: 25.19 ug/L
RT: 6.656 min Scan# 569
Delta R.T. 0.005 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion: 43 Resp: 13219

Ion	Ratio	Lower	Upper
43	100		
58	29.6	0.3	60.3

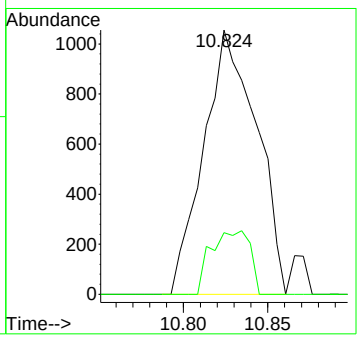


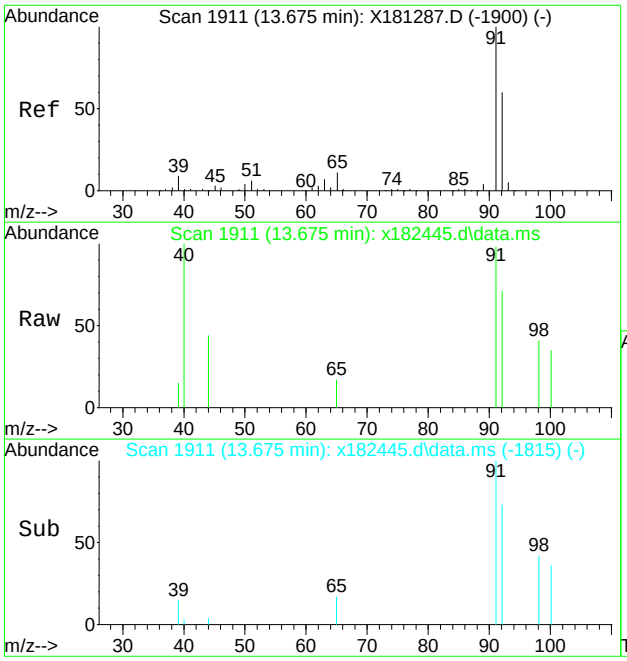


#58
benzene
Concen: 0.36 ug/L
RT: 10.824 min Scan# 1366
Delta R.T. -0.005 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion: 78 Resp: 2300

Ion	Ratio	Lower	Upper
78	100		
77	23.3	0.0	53.2

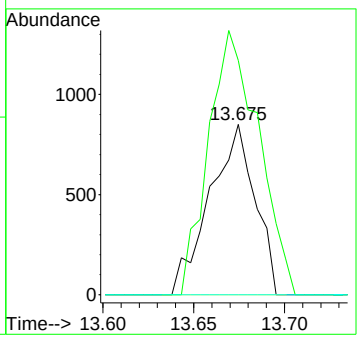


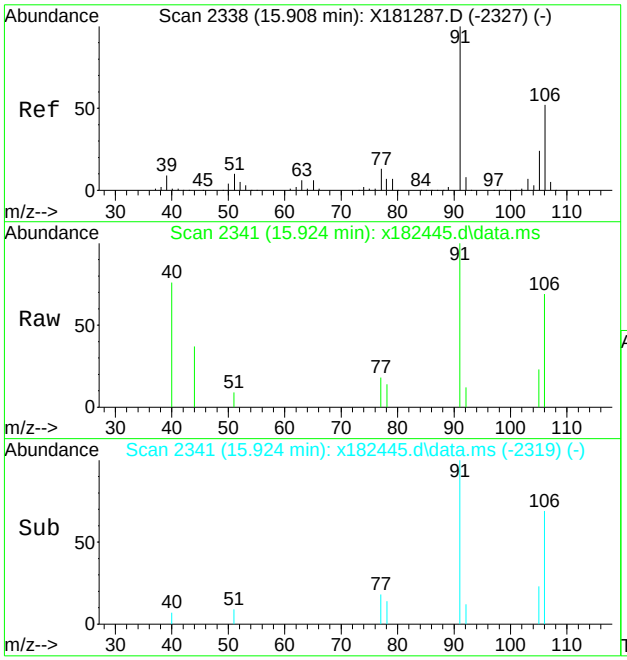


#76
toluene
Concen: 0.37 ug/L
RT: 13.675 min Scan# 1911
Delta R.T. -0.000 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion: 92 Resp: 1472

Ion	Ratio	Lower	Upper
92	100		
91	137.4	147.8	187.8#
51	0.0	0.0	30.8

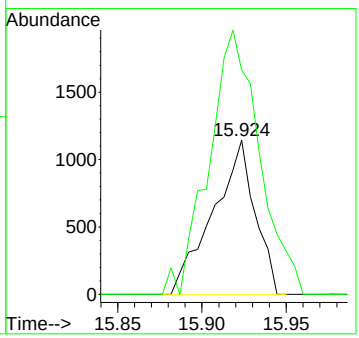


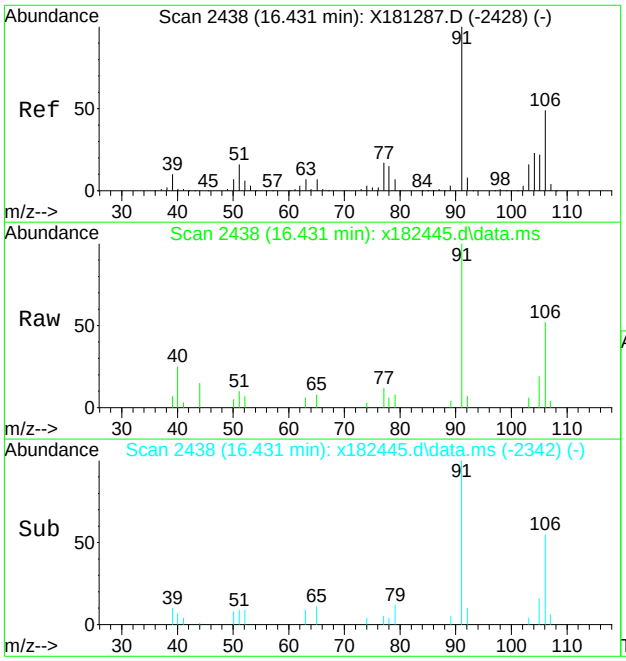


#90
m,p-xylene
Concen: 0.66 ug/L
RT: 15.924 min Scan# 2341
Delta R.T. 0.016 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion:106 Resp: 1985

Ion	Ratio	Lower	Upper
106	100		
91	145.5	163.1	223.1#

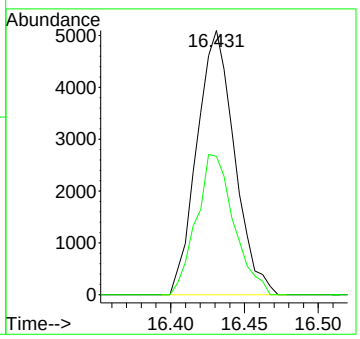


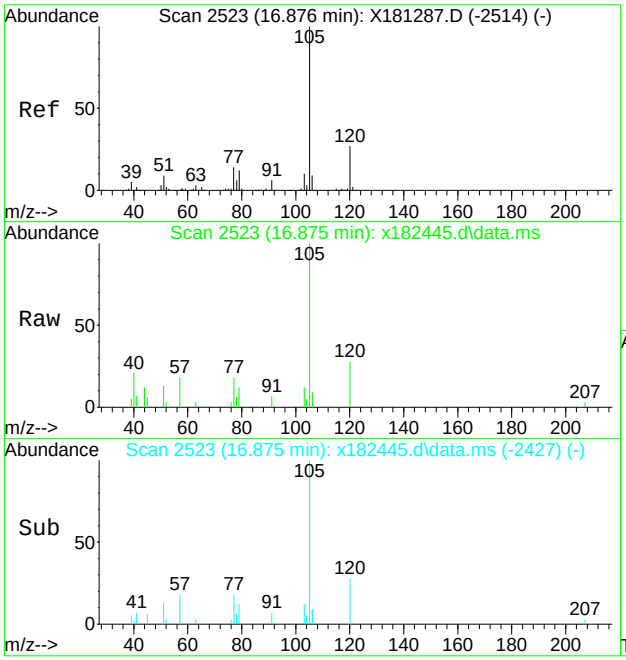


#91
o-xylene
Concen: 1.30 ug/L
RT: 16.431 min Scan# 2438
Delta R.T. -0.000 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion: 91 Resp: 9009

Ion	Ratio	Lower	Upper
91	100		
106	52.3	18.9	78.9

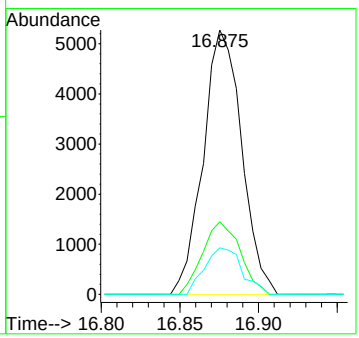


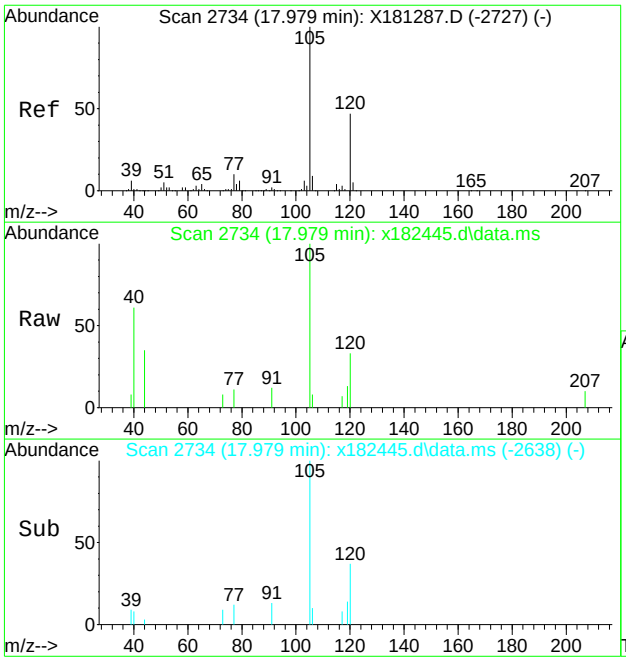


#95
isopropylbenzene
Concen: 1.01 ug/L
RT: 16.875 min Scan# 2523
Delta R.T. 0.000 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion:105 Resp: 8976

Ion	Ratio	Lower	Upper
105	100		
120	27.5	6.9	46.9
77	17.6	0.0	34.4

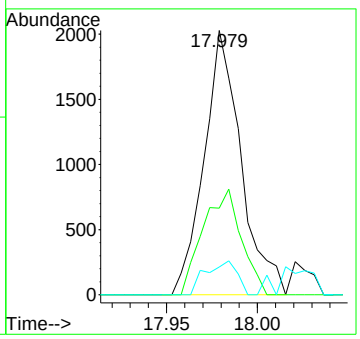




#108
1,2,4-trimethylbenzene
Concen: 0.34 ug/L
RT: 17.979 min Scan# 2734
Delta R.T. 0.000 min
Lab File: x182445.d
Acq: 27 Jun 2019 2:37 pm

Tgt Ion:105 Resp: 2858

Ion	Ratio	Lower	Upper
105	100		
120	32.8	18.0	78.0
77	10.5	0.0	41.6



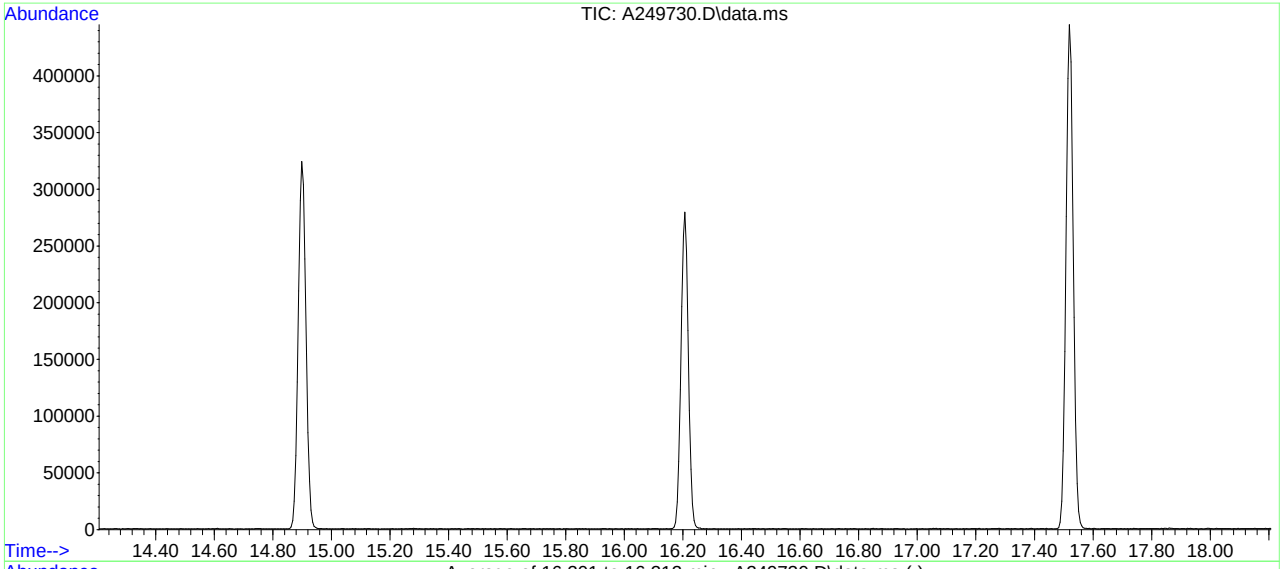
7.5.1

7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9645\A249730.D Vial: 1
Acq On : 11 May 2019 2:52 pm Operator: PrashanS
Sample : BFB Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019



AutoFind: Scans 2316, 2317, 2318; Background Corrected with Scan 2307

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	8968	PASS
75	95	30	60	47.2	24730	PASS
95	95	100	100	100.0	52402	PASS
96	95	5	9	6.7	3491	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.1	49818	PASS
175	174	5	9	8.1	4035	PASS
176	174	95	101	97.5	48597	PASS
177	176	5	9	6.8	3296	PASS

A249730.D MA9645.M Tue May 14 14:01:29 2019 RPT1

Average of 16.201 to 16.212 min.: A249730.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	435	52.00	60	69.95	342	80.90	1231
37.10	2409	56.00	704	72.05	388	81.95	303
38.10	2281	57.10	1127	73.00	2203	87.00	2321
39.10	829	60.00	464	74.05	8060	88.00	2105
44.00	331	61.00	2273	75.00	24730	90.90	204
45.00	450	62.00	2162	76.00	1930	91.10	59
47.05	674	63.00	1760	77.00	327	92.00	1245
48.05	305	64.10	69	77.95	160	93.00	1937
49.00	2029	67.10	71	78.20	82	94.00	6272
50.05	8968	68.00	4803	78.95	1202	95.00	52402
51.05	2980	69.00	5104	79.95	477	96.00	3491

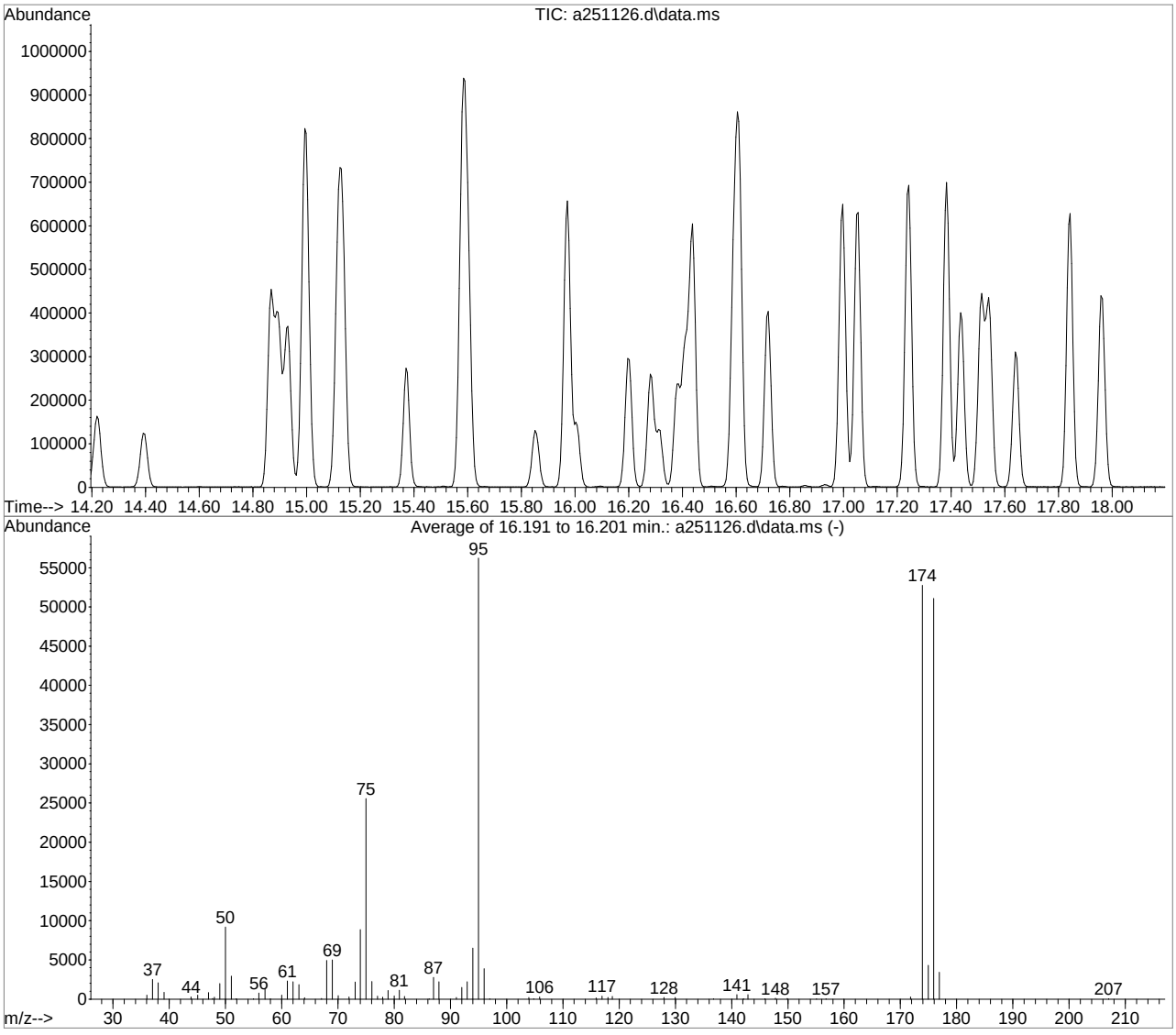
Average of 16.201 to 16.212 min.: A249730.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.10	56	140.90	498				
103.95	213	142.90	400				
105.80	166	148.00	57				
115.10	56	172.30	87				
115.90	138	173.90	49818				
116.95	252	175.00	4035				
117.90	237	175.95	48597				
118.90	314	176.90	3296				
127.90	117						
128.90	52						
129.85	188						

SW-846 Method 8260

Data File : C:\msdchem\1\data\jonkm\va9712\a251126.d Vial: 27
Acq On : 26 Jun 2019 7:02 pm Operator: edwardd
Sample : bfb Inst : MSA
Misc : MS35609,VA9712,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019



AutoFind: Scans 2314, 2315, 2316; Background Corrected with Scan 2305

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.3	9184	PASS
75	95	30	60	45.5	25563	PASS
95	95	100	100	100.0	56219	PASS
96	95	5	9	6.9	3877	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.8	52755	PASS
175	174	5	9	8.1	4299	PASS
176	174	95	101	96.8	51083	PASS
177	176	5	9	6.7	3408	PASS

a251126.d MA9645.M Thu Jun 27 11:07:39 2019

Average of 16.191 to 16.201 min.: a251126.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	517	51.05	2941	67.10	78	78.90	1099
37.05	2508	51.90	52	68.00	4935	80.00	405
38.05	2069	55.00	59	69.00	4996	80.90	1136
39.10	879	55.95	760	70.05	432	81.85	341
43.90	285	57.05	1248	71.95	284	86.20	50
45.05	495	58.00	55	73.05	2187	87.00	2757
47.00	825	60.00	501	74.00	8846	87.95	2228
47.70	72	61.00	2314	75.00	25563	91.05	203
48.05	258	62.00	2229	76.05	2247	92.00	1506
49.00	1983	63.05	1836	77.05	362	93.00	2223
50.00	9184	64.05	186	77.95	243	94.00	6519

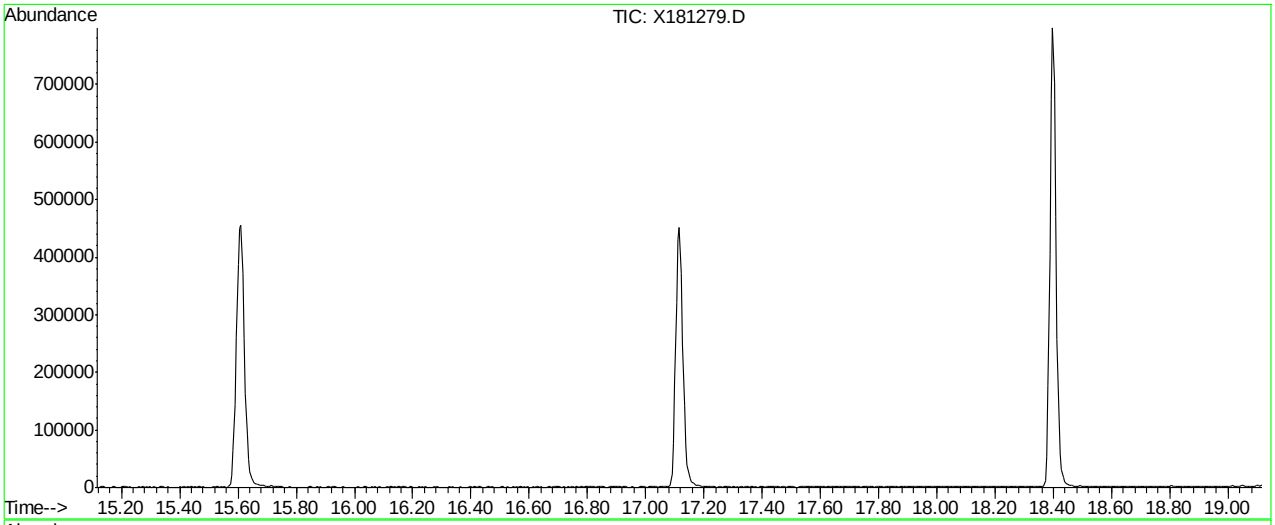
Average of 16.191 to 16.201 min.: a251126.d\data.ms
bfb
Modified:subtracted

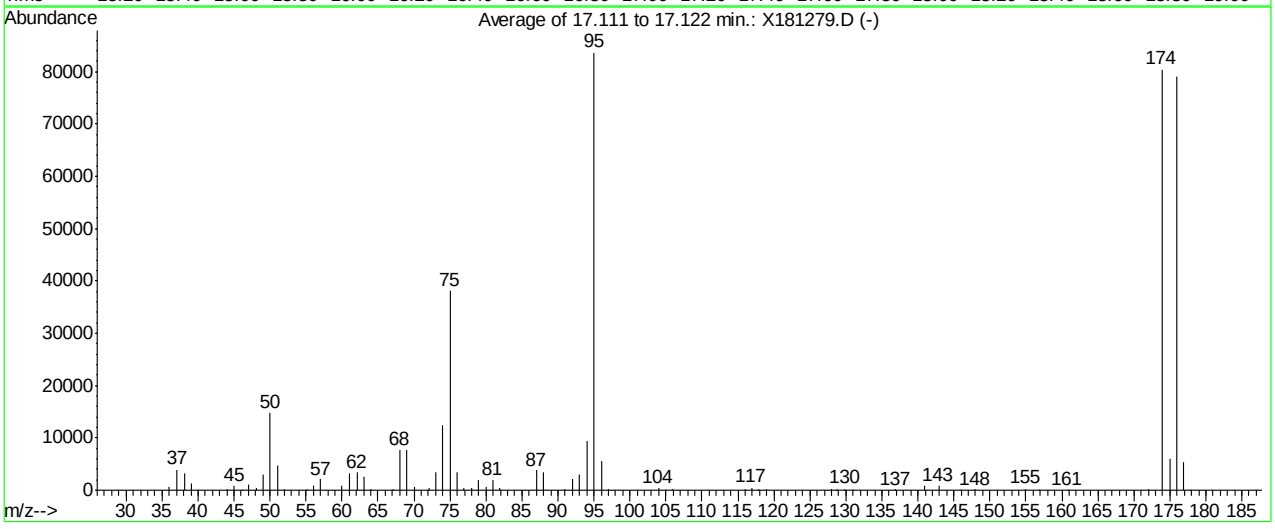
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	56219	129.95	212	173.90	52755		
96.00	3877	136.80	52	174.95	4299		
97.00	51	140.95	577	175.90	51083		
103.95	227	142.10	64	176.90	3408		
104.80	64	142.90	559	207.00	58		
105.85	274	145.90	56				
115.90	140	147.80	108				
116.95	393	149.90	75				
118.00	212	155.10	53				
118.80	340	156.80	56				
127.95	220	171.80	284				

BFB

Data File : C:\msdchem\1\data\VX7749\X181279.D Vial: 1
Acq On : 2 May 2019 4:28 pm Operator: juntaep
Sample : bfb Inst : ACC-VOA-M
Misc : MS34046,VX7749,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)





AutoFind: Scans 2568, 2569, 2570; Background Corrected with Scan 2559

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	14769	PASS
75	95	30	60	45.6	38133	PASS
95	95	100	100	100.0	83690	PASS
96	95	5	9	6.6	5531	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.1	80445	PASS
175	174	5	9	7.5	6070	PASS
176	174	95	101	98.4	79192	PASS
177	176	5	9	6.8	5418	PASS

X181279.D MX7749.M Thu May 09 14:29:09 2019 GCMSX

Average of 17.111 to 17.122 min.: X181279.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	700	50.05	14769	67.05	176	78.95	1869
37.10	3885	51.05	4651	68.00	7681	80.00	553
38.10	3296	52.05	142	69.00	7640	80.90	1971
39.10	1282	55.05	303	70.00	664	81.95	424
39.95	40	56.10	918	72.05	460	87.00	3794
44.00	275	57.05	2119	73.00	3444	88.00	3484
45.05	769	60.00	761	74.00	12373	90.95	273
46.10	52	61.00	3260	75.00	38133	92.00	2062
47.05	1053	62.05	3428	76.00	3411	93.00	3068
48.10	449	63.05	2500	76.95	411	94.00	9437
49.05	3104	64.00	270	77.95	429	95.00	83690

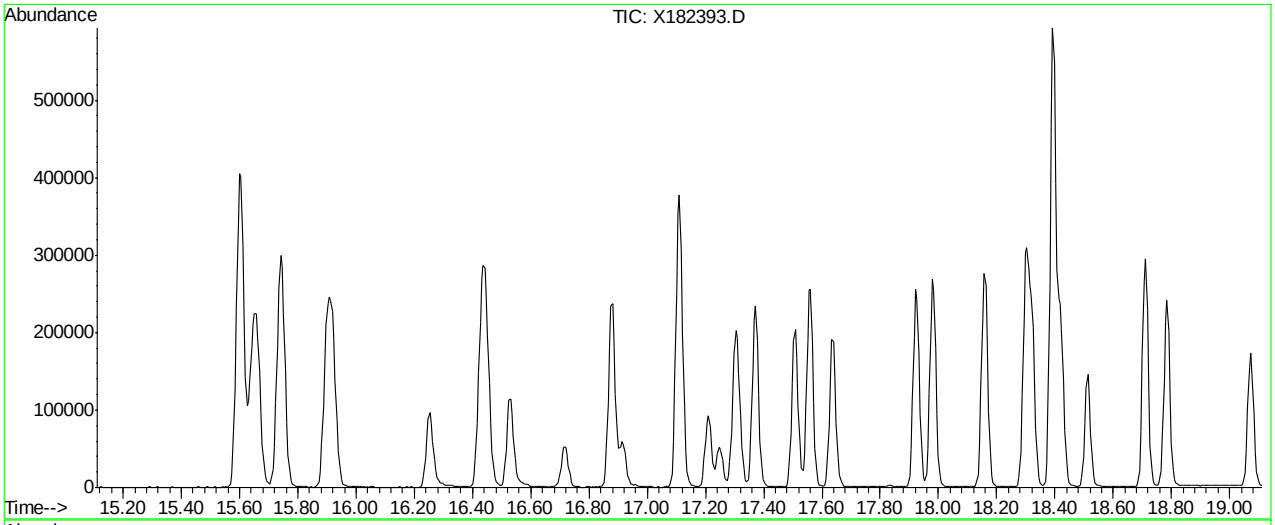
Average of 17.111 to 17.122 min.: X181279.D
bfb
Modified:subtracted

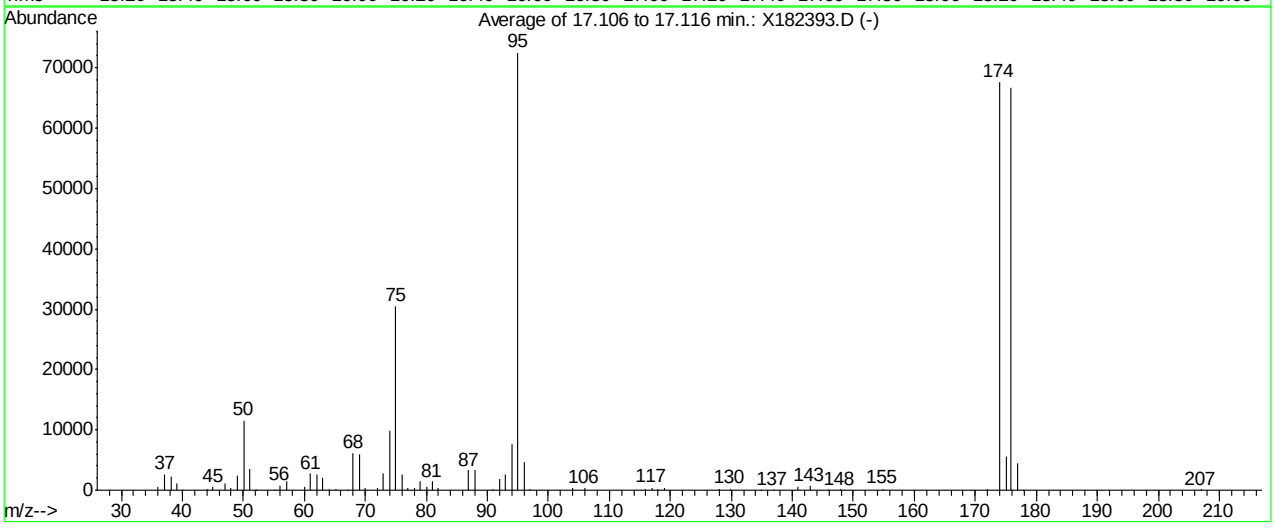
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.05	5531	129.90	311	173.90	80445		
97.00	210	130.90	54	174.95	6070		
103.95	381	136.95	183	175.90	79192		
104.90	105	140.90	806	176.95	5418		
105.95	325	142.95	858	177.80	101		
115.95	293	145.90	64				
116.90	536	147.95	116				
117.95	328	154.95	245				
118.90	320	156.80	69				
127.95	274	160.80	50				
128.85	190	172.10	120				

BFB

Data File : C:\MSDCHEM\1\DATA\VX7807\X182393.D Vial: 2
Acq On : 26 Jun 2019 6:55 am Operator: deving
Sample : bfb Inst : ACC-VOA-M
Misc : MS35756,VX7807,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)





AutoFind: Scans 2567, 2568, 2569; Background Corrected with Scan 2558

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	11533	PASS
75	95	30	60	42.1	30520	PASS
95	95	100	100	100.0	72544	PASS
96	95	5	9	6.4	4626	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.3	67712	PASS
175	174	5	9	8.1	5506	PASS
176	174	95	101	98.5	66677	PASS
177	176	5	9	6.6	4392	PASS

X182393.D MX7749.M Wed Jun 26 14:44:41 2019 GCMSX

Average of 17.106 to 17.116 min.: X182393.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	555	51.05	3447	65.10	120	78.05	365
37.10	2643	52.00	50	67.00	68	78.90	1455
38.10	2325	52.20	52	68.00	6227	80.00	481
39.05	1063	55.00	83	69.00	5917	80.95	1485
40.05	40	56.00	753	70.00	427	81.85	331
44.00	122	57.05	1435	72.00	291	86.95	3336
45.05	510	60.00	472	73.00	2830	87.95	3301
47.05	1063	61.05	2726	74.00	9813	90.95	234
48.00	313	62.00	2540	75.00	30520	91.95	1796
49.05	2485	63.05	2008	76.00	2649	93.00	2604
50.05	11533	64.05	178	77.00	418	94.00	7680

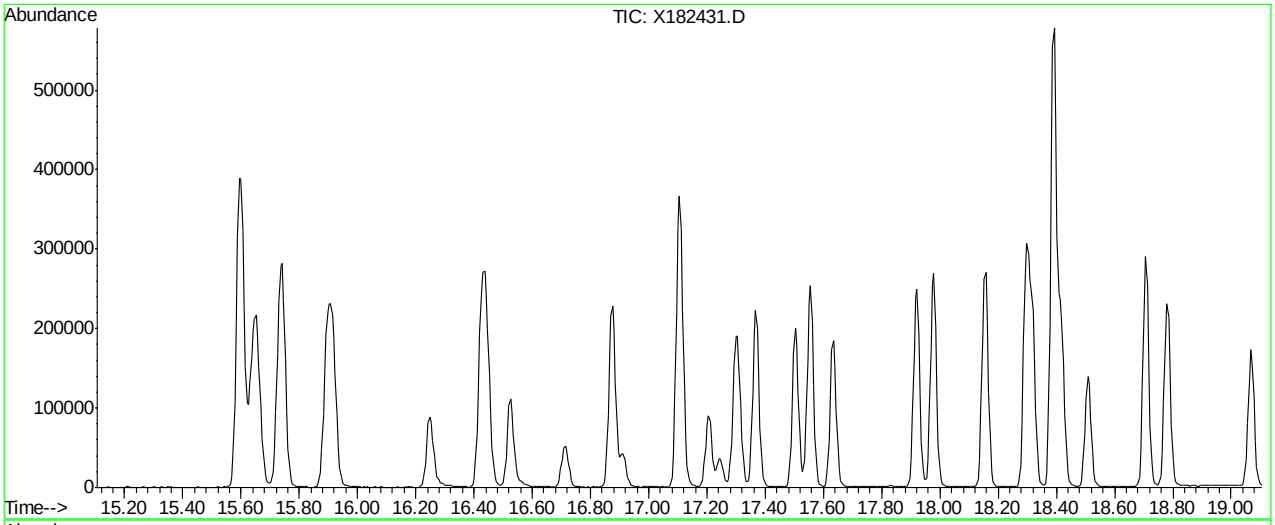
Average of 17.106 to 17.116 min.: X182393.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	72544	129.85	234	175.90	66677		
96.00	4626	134.90	50	176.90	4392		
97.00	106	136.80	58	177.90	70		
103.90	297	140.95	616	207.00	126		
105.90	300	142.90	676				
115.85	214	145.90	50				
116.95	412	147.85	177				
117.95	181	154.85	214				
118.95	342	171.95	269				
127.80	75	173.90	67712				
128.00	162	175.00	5506				

BFB

Data File : C:\MSDCHEM\1\DATA\VX7809\X182431.D Vial: 2
Acq On : 27 Jun 2019 6:24 am Operator: brittank
Sample : bfb Inst : ACC-VOA-M
Misc : MS35702,VX7809,5,,,,1 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : C:\MSDCHEM\1\METHODS\MX7749.M (RTE Integrator)
Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)



AutoFind: Scans 2566, 2567, 2568; Background Corrected with Scan 2557

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	10732	PASS
75	95	30	60	43.4	30584	PASS
95	95	100	100	100.0	70530	PASS
96	95	5	9	6.8	4779	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.2	67133	PASS
175	174	5	9	7.4	4998	PASS
176	174	95	101	98.7	66272	PASS
177	176	5	9	6.6	4349	PASS

X182431.D MX7749.M Thu Jun 27 14:44:05 2019 GCMSX

Average of 17.101 to 17.111 min.: X182431.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	558	52.00	161	69.05	6101	80.95	1494
37.10	2596	55.05	148	70.00	462	81.95	348
38.10	2254	56.05	787	71.95	315	86.95	3524
39.10	991	57.00	1434	73.05	2738	88.00	3261
44.05	329	60.00	411	74.00	9517	90.95	201
45.05	523	61.05	2544	75.00	30584	92.00	1615
47.05	912	62.00	2554	76.00	2548	93.00	2537
48.00	343	63.05	2031	76.95	421	94.00	7313
49.05	2131	64.05	133	77.95	287	95.00	70530
50.05	10732	65.00	56	78.90	1281	96.00	4779
51.05	3309	68.00	6203	79.90	434	97.00	60

Average of 17.101 to 17.111 min.: X182431.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.90	282	142.90	682	178.00	59		
105.90	317	146.00	55	207.00	56		
115.90	234	148.00	58				
116.95	395	155.00	152				
117.90	273	156.80	54				
118.90	334	161.00	50				
127.90	226	172.00	297				
129.90	267	173.90	67133				
137.10	51	174.90	4998				
140.90	470	175.90	66272				
142.00	50	176.90	4349				

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249731.D
Acq On : 11 May 2019 3:31 pm
Operator : PrashanS
Sample : IC9645-0.2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 14:03:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

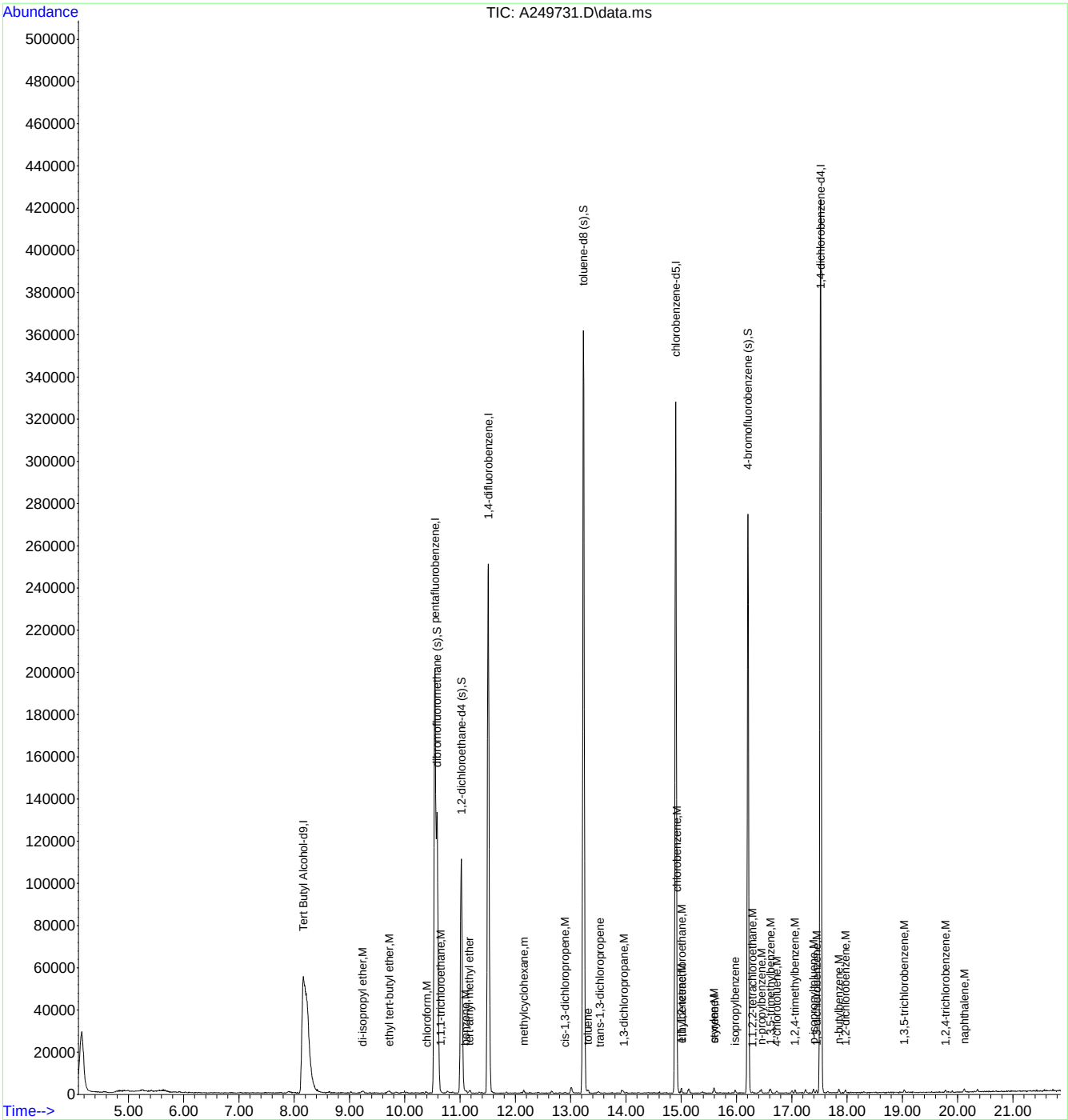
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.169	65	258313	500.00	ug/L		0.00
5) pentafluorobenzene	10.544	168	184209	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	255179	50.00	ug/L		0.00
74) chlorobenzene-d5	14.901	117	210166	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.521	152	127254	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.586	113	87809	48.32	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.64%				
53) 1,2-dichloroethane-d4 (s)	11.025	65	93358	52.21	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.42%				
75) toluene-d8 (s)	13.232	98	280449	50.99	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.98%				
99) 4-bromofluorobenzene (s)	16.208	95	97089	47.70	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.40%				
Target Compounds							Qvalue
28) di-isopropyl ether	9.231	45	1039	0.17	ug/L		63
29) ethyl tert-butyl ether	9.717	59	1001	0.17	ug/L	#	71
42) chloroform	10.392	83	728	0.24	ug/L	#	28
47) 1,1,1-trichloroethane	10.654	97	521	0.16	ug/L	#	69
54) benzene	11.093	78	1164	0.18	ug/L		55
56) tert-amyl methyl ether	11.166	73	989	0.18	ug/L	#	63
64) methylcyclohexane	12.155	83	624	0.18	ug/L	#	71
71) cis-1,3-dichloropropene	12.892	75	387	0.16	ug/L	#	35
76) toluene	13.311	92	674	0.19	ug/L		92
77) trans-1,3-dichloropropene	13.525	75	340	0.17	ug/L	#	49
82) 1,3-dichloropropane	13.959	76	348	0.17	ug/L	#	48
87) chlorobenzene	14.927	112	683	0.18	ug/L	#	42
88) 1,1,1,2-tetrachloroethane	15.005	131	382	0.21	ug/L		82
89) ethylbenzene	15.000	91	1410	0.21	ug/L		92
91) o-xylene	15.586	106	577	0.20	ug/L	#	69
92) styrene	15.601	104	896	0.22	ug/L		93
96) isopropylbenzene	15.978	105	1475	0.19	ug/L		90
101) 1,1,2,2-tetrachloroethane	16.292	83	485	0.19	ug/L		90
104) n-propylbenzene	16.443	91	2041	0.22	ug/L		81
106) 4-chlorotoluene	16.731	91	969	0.21	ug/L		88
107) 1,3,5-trimethylbenzene	16.621	105	1273	0.17	ug/L		80
109) 1,2,4-trimethylbenzene	17.055	105	1444	0.20	ug/L		81
111) 1,3-dichlorobenzene	17.448	146	833	0.23	ug/L		83
112) p-isopropyltoluene	17.390	119	1507	0.18	ug/L		87
114) 1,2-dichlorobenzene	17.976	146	957	0.25	ug/L		99
115) n-butylbenzene	17.850	92	763	0.20	ug/L	#	77
117) 1,3,5-trichlorobenzene	19.032	180	868	0.24	ug/L		86
119) 1,2,4-trichlorobenzene	19.775	180	706	0.21	ug/L	#	65
121) naphthalene	20.120	128	2426	0.24	ug/L		68

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249731.D
Acq On : 11 May 2019 3:31 pm
Operator : PrashanS
Sample : IC9645-0.2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 14:03:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 05/14/19 19:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.164	65	260411	500.00	ug/L		0.00
5) pentafluorobenzene	10.544	168	186658	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	265769	50.00	ug/L		0.00
74) chlorobenzene-d5	14.900	117	208332	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.521	152	132792	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.586	113	92857	50.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%				
53) 1,2-dichloroethane-d4 (s)	11.020	65	96739	51.95	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.90%				
75) toluene-d8 (s)	13.232	98	285534	52.37	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.74%				
99) 4-bromofluorobenzene (s)	16.203	95	98894	46.56	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.12%				
Target Compounds							Qvalue
7) dichlorodifluoromethane	4.545	85	1804	0.39	ug/L	#	49
8) chloromethane	5.005	50	2265	0.51	ug/L		91
9) vinyl chloride	5.261	62	1831m	0.44	ug/L		
11) bromomethane	5.936	94	1460	0.52	ug/L		89
12) chloroethane	6.119	64	957	0.45	ug/L	#	46
13) vinyl bromide	6.501	106	1026	0.37	ug/L	#	81
21) iodomethane	7.751	142	1522	0.42	ug/L	#	46
22) carbon disulfide	7.918	76	3722	0.59	ug/L		85
23) methylene chloride	8.227	84	846	0.40	ug/L	#	54
25) methyl tert butyl ether	8.609	73	2591	0.43	ug/L	#	53
26) trans-1,2-dichloroethene	8.640	96	773	0.43	ug/L		88
27) hexane	9.006	57	1113	0.44	ug/L	#	86
28) di-isopropyl ether	9.226	45	2944	0.48	ug/L		88
29) ethyl tert-butyl ether	9.712	59	2594	0.44	ug/L		88
31) 1,1-dichloroethane	9.252	63	1370	0.44	ug/L		89
32) chloroprene	9.372	53	1212	0.46	ug/L		69
36) 2,2-dichloropropane	10.036	77	1253	0.41	ug/L	#	48
37) cis-1,2-dichloroethene	10.000	96	858	0.42	ug/L		91
39) propionitrile	10.005	54	1543	3.49	ug/L	#	68
40) bromochloromethane	10.293	128	379	0.36	ug/L	#	42
42) chloroform	10.382	83	1761	0.57	ug/L		77
46) cyclohexane	10.784	84	1533	0.44	ug/L		90
47) 1,1,1-trichloroethane	10.675	97	1522	0.46	ug/L		87
49) 1,1-dichloropropene	10.831	75	1066	0.44	ug/L	#	63
50) carbon tetrachloride	10.868	117	1219	0.42	ug/L	#	76
54) benzene	11.098	78	3410	0.52	ug/L		91
55) iso-octane	11.187	57	2771	0.41	ug/L		89
56) tert-amyl methyl ether	11.161	73	2762	0.48	ug/L	#	71
57) heptane	11.349	71	488	0.38	ug/L	#	85
59) 1,2-dichloroethane	11.109	62	1505	0.67	ug/L		90
62) trichloroethene	11.830	95	821	0.50	ug/L		85
64) methylcyclohexane	12.149	83	1699	0.48	ug/L		92
67) 1,2-dichloropropane	12.144	63	716	0.44	ug/L		64
69) bromodichloromethane	12.411	83	1082	0.48	ug/L		73
71) cis-1,3-dichloropropene	12.892	75	995	0.39	ug/L		94
72) 4-methyl-2-pentanone	13.007	58	1643	1.57	ug/L		90
76) toluene	13.310	92	2007	0.56	ug/L	#	72
77) trans-1,3-dichloropropene	13.514	75	882	0.44	ug/L	#	66
78) ethyl methacrylate	13.499	69	803	0.41	ug/L		76
79) 1,1,2-trichloroethane	13.755	83	456	0.42	ug/L	#	73
80) 2-hexanone	13.933	58	1454	1.88	ug/L	#	81

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

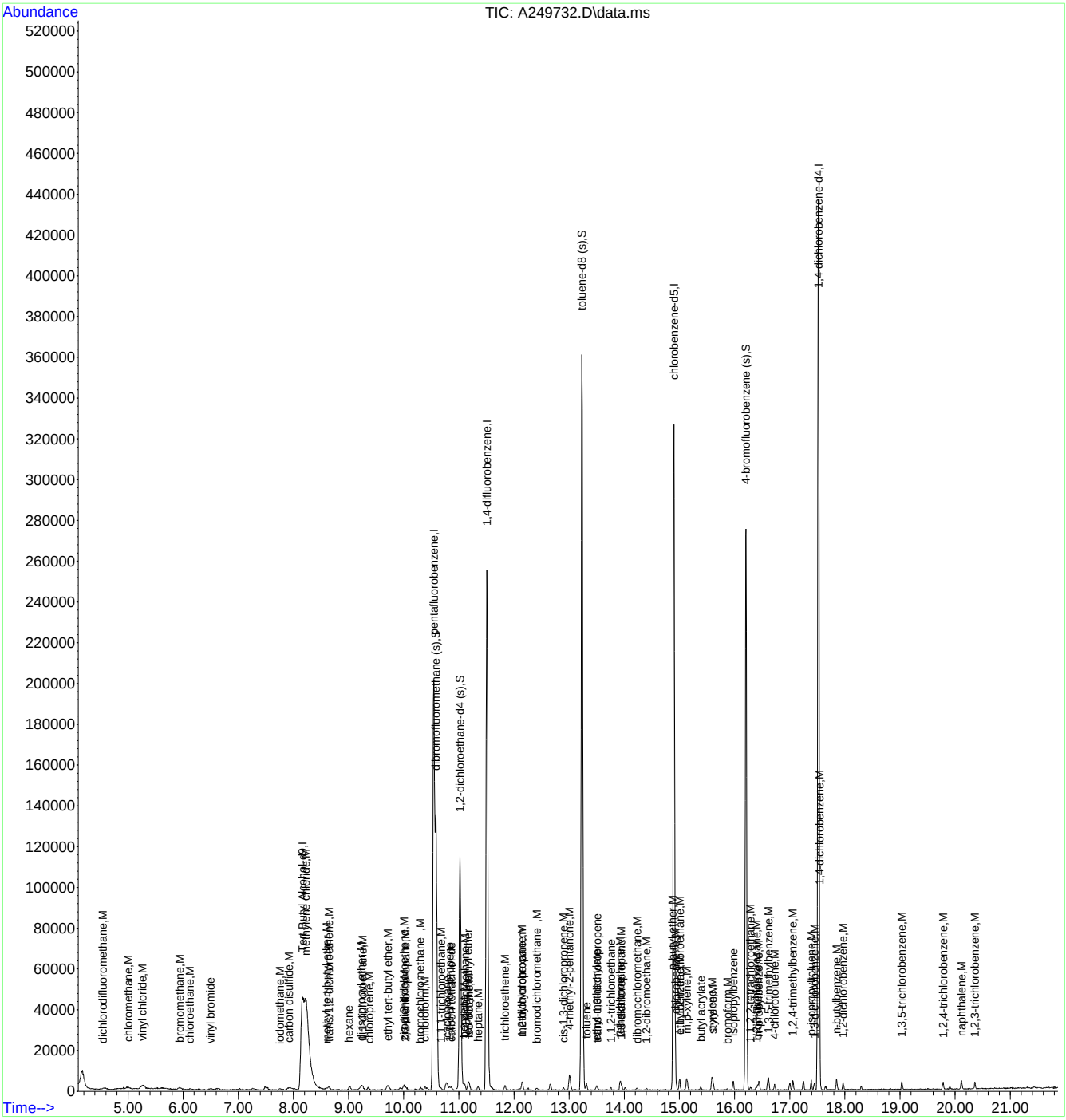
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
81) tetrachloroethene	13.917	166	927	0.53 ug/L	78
82) 1,3-dichloropropane	13.949	76	947	0.46 ug/L	88
84) dibromochloromethane	14.226	129	824	0.52 ug/L	74
85) 1,2-dibromoethane	14.398	107	536	0.36 ug/L	97
86) n-butyl ether	14.869	57	3042	0.52 ug/L #	65
87) chlorobenzene	14.937	112	1877	0.49 ug/L	96
88) 1,1,1,2-tetrachloroethane	15.010	131	905	0.49 ug/L	86
89) ethylbenzene	15.005	91	3569	0.54 ug/L	94
90) m,p-xylene	15.131	106	2589	0.99 ug/L	87
91) o-xylene	15.586	106	1442	0.50 ug/L #	76
92) styrene	15.601	104	2145	0.53 ug/L	96
93) butyl acrylate	15.382	55	1311	0.45 ug/L	81
95) bromoform	15.873	173	461	0.42 ug/L	86
96) isopropylbenzene	15.978	105	3927	0.50 ug/L	96
100) bromobenzene	16.417	156	888	0.45 ug/L	86
101) 1,1,2,2-tetrachloroethane	16.286	83	1132	0.43 ug/L	86
103) 1,2,3-trichloropropane	16.391	110	349	0.47 ug/L #	22
104) n-propylbenzene	16.443	91	4164	0.43 ug/L	98
106) 4-chlorotoluene	16.731	91	2347	0.48 ug/L	80
107) 1,3,5-trimethylbenzene	16.616	105	3257	0.41 ug/L	88
109) 1,2,4-trimethylbenzene	17.055	105	3324	0.44 ug/L	89
111) 1,3-dichlorobenzene	17.448	146	1819	0.48 ug/L	98
112) p-isopropyltoluene	17.390	119	3730	0.42 ug/L	91
113) 1,4-dichlorobenzene	17.547	146	2066	0.55 ug/L	81
114) 1,2-dichlorobenzene	17.965	146	1879	0.46 ug/L	92
115) n-butylbenzene	17.850	92	1924	0.47 ug/L	96
117) 1,3,5-trichlorobenzene	19.038	180	1905	0.50 ug/L	88
119) 1,2,4-trichlorobenzene	19.785	180	1671	0.47 ug/L	94
121) naphthalene	20.115	128	4580	0.44 ug/L	95
122) 1,2,3-trichlorobenzene	20.361	180	1617	0.45 ug/L	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration



Manual Integration Approval Summary

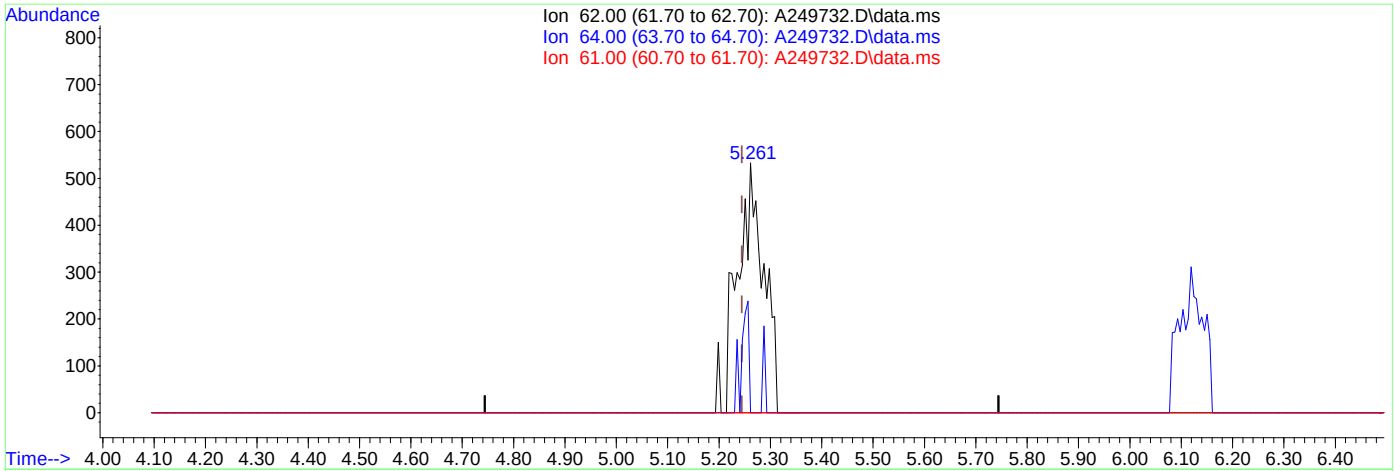
Sample Number:	VA9645-IC9645	**Method:**	SW846 8260C
Lab FileID:	A249732.D	**Analyst approved:**	05/14/19 14:16 Bridget Kelly
Injection Time:	05/11/19 16:00	**Supervisor approved:**	05/14/19 19:25 Kanya Veerawat

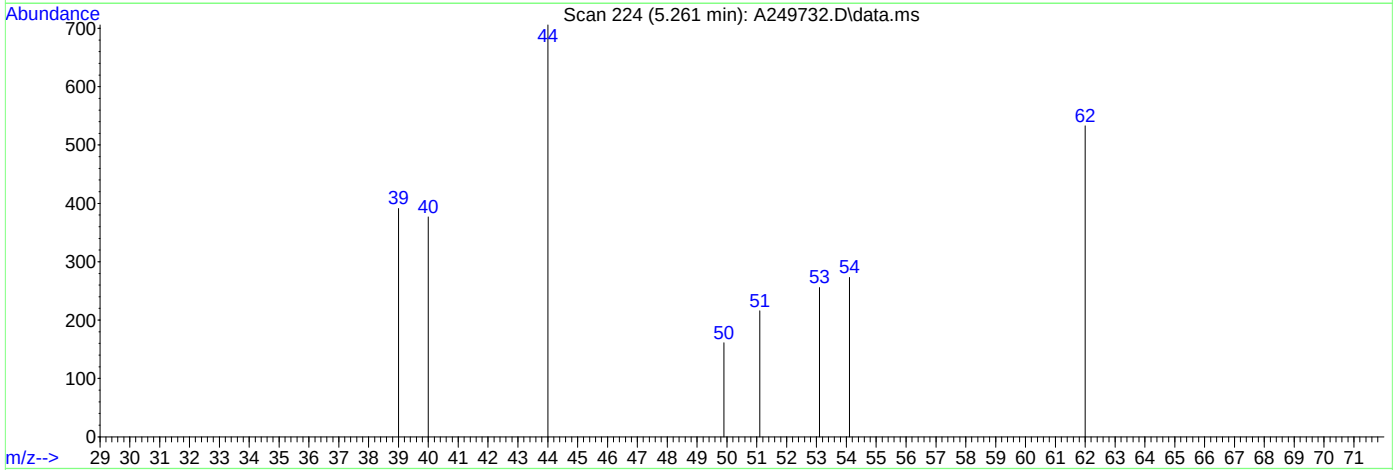
Parameter	CAS	Sig#	R.T. (min.)	Reason
Vinyl chloride	75-01-4		5.26	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 15:54:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration





TIC: A249732.D\data.ms

(9) vinyl chloride (M)

5.261min (+0.017) 0.44ug/L m

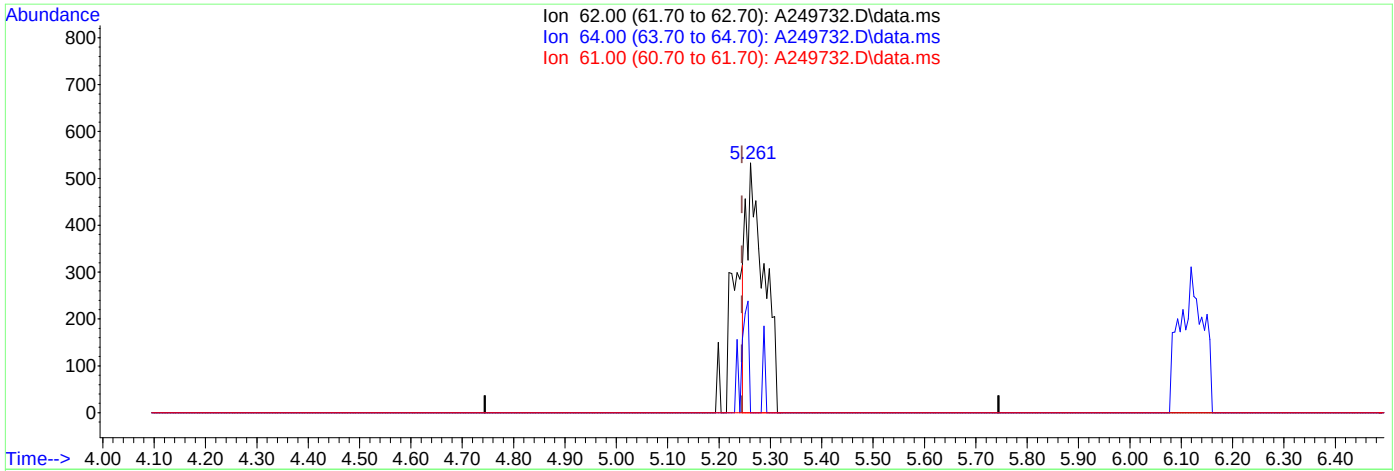
response 1831

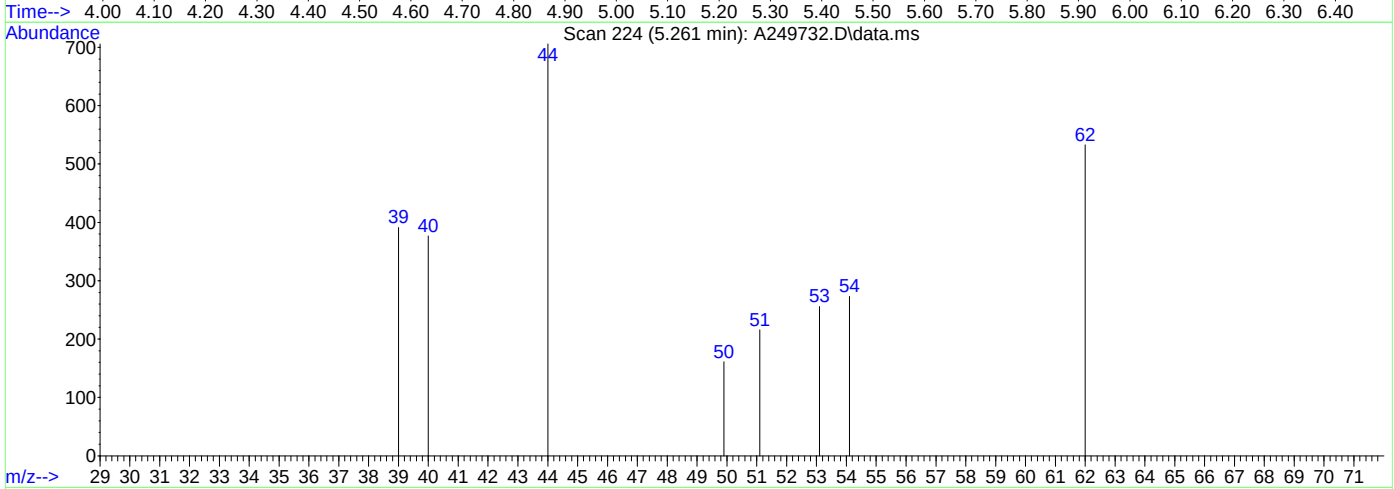
Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
61.00	7.60	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:41:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration





TIC: A249732.D\data.ms

(9) vinyl chloride (M)

5.261min (+0.017) 0.32ug/L

response 1280

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
61.00	7.60	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.158	65	254718	500.00	ug/L	-0.01
5) pentafluorobenzene	10.543	168	177591	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	252192	50.00	ug/L	0.00
74) chlorobenzene-d5	14.899	117	201715	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.520	152	126829	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.585	113	87984	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.44%			
53) 1,2-dichloroethane-d4 (s)	11.019	65	93065	52.66	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.32%			
75) toluene-d8 (s)	13.231	98	275679	52.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.44%			
99) 4-bromofluorobenzene (s)	16.207	95	95526	47.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.18%			
Target Compounds						Qvalue
6) chlorodifluoromethane	4.586	51	3254	0.95	ug/L	70
7) dichlorodifluoromethane	4.533	85	3822	0.88	ug/L	89
8) chloromethane	4.988	50	4042	0.96	ug/L	85
9) vinyl chloride	5.250	62	3832	0.96	ug/L	95
10) 1,3-butadiene	5.266	54	3814	1.11	ug/L #	85
11) bromomethane	5.919	94	2771	1.03	ug/L	77
12) chloroethane	6.087	64	1682	0.83	ug/L #	46
13) vinyl bromide	6.479	106	2466	0.92	ug/L #	81
14) trichlorofluoromethane	6.615	101	3743	0.93	ug/L	96
15) ethyl ether	7.028	74	721	0.77	ug/L	86
17) freon 113	7.499	151	1783	0.91	ug/L #	92
18) 1,1-dichloroethene	7.478	96	1658	0.88	ug/L	92
20) acetonitrile	7.949	41	3805	9.16	ug/L	78
21) iodomethane	7.755	142	3369	0.99	ug/L	81
22) carbon disulfide	7.907	76	6483	1.08	ug/L	87
23) methylene chloride	8.226	84	1912	0.96	ug/L	81
25) methyl tert butyl ether	8.602	73	5367	0.94	ug/L	75
26) trans-1,2-dichloroethene	8.639	96	1527	0.89	ug/L #	70
27) hexane	9.010	57	2466	1.02	ug/L #	92
28) di-isopropyl ether	9.235	45	5771	0.99	ug/L	79
29) ethyl tert-butyl ether	9.711	59	5569	0.98	ug/L	96
30) 2-butanone	9.920	72	862	2.70	ug/L #	14
31) 1,1-dichloroethane	9.246	63	3162	1.07	ug/L	88
32) chloroprene	9.350	53	2153	0.87	ug/L	86
36) 2,2-dichloropropane	10.020	77	3063	1.06	ug/L	80
37) cis-1,2-dichloroethene	9.988	96	1806	0.93	ug/L	85
39) propionitrile	10.004	54	3467	8.23	ug/L	81
40) bromochloromethane	10.297	128	914	0.90	ug/L	88
41) tetrahydrofuran	10.328	42	853	1.01	ug/L #	33
42) chloroform	10.391	83	2928	1.00	ug/L	74
43) tert-butyl formate	10.433	59	1200	0.73	ug/L	88
46) cyclohexane	10.783	84	2922	0.89	ug/L	96
47) 1,1,1-trichloroethane	10.668	97	3009	0.96	ug/L	98
48) iso-butyl alcohol	10.789	43	2472	8.06	ug/L #	59
49) 1,1-dichloropropene	10.830	75	2115	0.93	ug/L #	73
50) carbon tetrachloride	10.862	117	2514	0.92	ug/L	89
54) benzene	11.097	78	6672	1.06	ug/L	94
55) iso-octane	11.181	57	5346	0.84	ug/L	93
56) tert-amyl methyl ether	11.160	73	5522	1.01	ug/L	87
57) heptane	11.343	71	1182	0.98	ug/L	92
59) 1,2-dichloroethane	11.113	62	2491	1.17	ug/L	74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

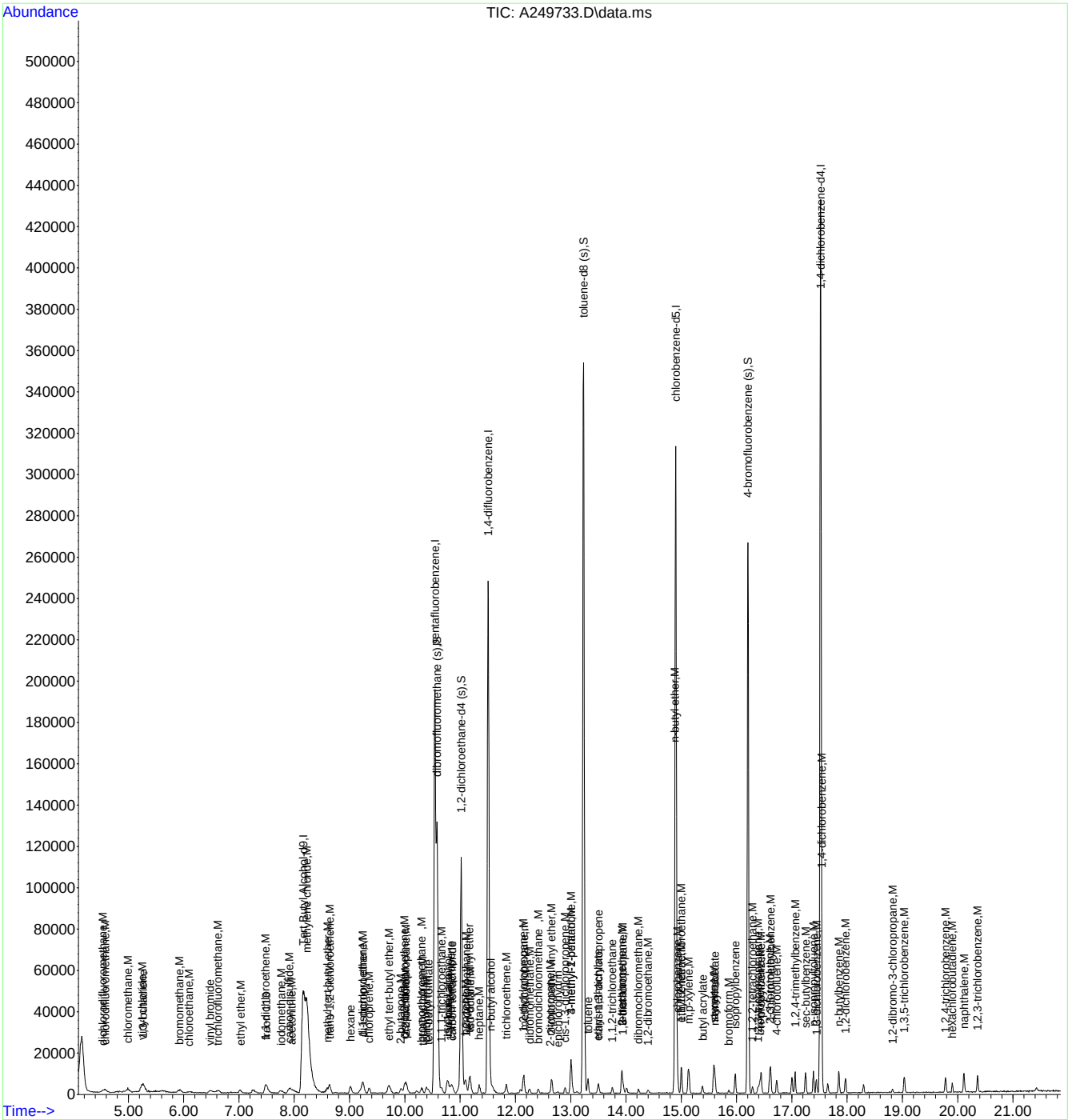
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
60) n-butyl alcohol	11.557	56	4631	38.95	ug/L	#	62
62) trichloroethene	11.835	95	1668	1.07	ug/L		86
63) 2-nitropropane	12.624	41	547	0.74	ug/L	#	59
64) methylcyclohexane	12.154	83	3248	0.96	ug/L		97
65) 2-chloroethyl vinyl ether	12.656	63	3586	3.84	ug/L		87
67) 1,2-dichloropropane	12.138	63	1460	0.94	ug/L		94
68) dibromomethane	12.258	93	844	0.81	ug/L		91
69) bromodichloromethane	12.410	83	1965	0.92	ug/L		86
70) epichlorohydrin	12.771	57	850	3.37	ug/L	#	56
71) cis-1,3-dichloropropene	12.902	75	2161	0.89	ug/L		95
72) 4-methyl-2-pentanone	13.001	58	3438	3.46	ug/L		94
73) 3-methyl-1-butanol	13.006	55	2922	15.24	ug/L		98
76) toluene	13.309	92	3469	0.99	ug/L	#	83
77) trans-1,3-dichloropropene	13.508	75	1719	0.89	ug/L		83
78) ethyl methacrylate	13.487	69	1790	0.94	ug/L		78
79) 1,1,2-trichloroethane	13.749	83	910	0.87	ug/L		87
80) 2-hexanone	13.927	58	2783	3.72	ug/L		92
81) tetrachloroethene	13.921	166	1738	1.03	ug/L		91
82) 1,3-dichloropropane	13.948	76	2039	1.01	ug/L		86
84) dibromochloromethane	14.225	129	1417	0.93	ug/L		82
85) 1,2-dibromoethane	14.397	107	1306	0.91	ug/L		98
86) n-butyl ether	14.879	57	5881	1.04	ug/L		66
87) chlorobenzene	14.936	112	3621	0.97	ug/L		92
88) 1,1,1,2-tetrachloroethane	15.004	131	1895	1.06	ug/L		76
89) ethylbenzene	14.999	91	6507	1.01	ug/L		98
90) m,p-xylene	15.130	106	5022	1.98	ug/L		85
91) o-xylene	15.585	106	2745	0.98	ug/L	#	79
92) styrene	15.600	104	3952	1.00	ug/L		94
93) butyl acrylate	15.381	55	2895	1.03	ug/L		92
94) n-amyl acetate	15.611	70	1288	1.05	ug/L	#	72
95) bromoform	15.857	173	961	0.90	ug/L		92
96) isopropylbenzene	15.977	105	7520	0.98	ug/L		99
100) bromobenzene	16.421	156	1717	0.90	ug/L		93
101) 1,1,2,2-tetrachloroethane	16.285	83	2295	0.92	ug/L		98
103) 1,2,3-trichloropropane	16.385	110	632	0.89	ug/L		91
104) n-propylbenzene	16.442	91	8552	0.93	ug/L		93
105) 2-chlorotoluene	16.599	126	1764	0.85	ug/L		88
106) 4-chlorotoluene	16.725	91	4496	0.95	ug/L		96
107) 1,3,5-trimethylbenzene	16.615	105	6363	0.84	ug/L		92
109) 1,2,4-trimethylbenzene	17.059	105	5909	0.83	ug/L		98
110) sec-butylbenzene	17.248	105	8259	0.81	ug/L		96
111) 1,3-dichlorobenzene	17.447	146	3640	1.01	ug/L		95
112) p-isopropyltoluene	17.389	119	6931	0.82	ug/L		98
113) 1,4-dichlorobenzene	17.546	146	3925	1.10	ug/L		96
114) 1,2-dichlorobenzene	17.970	146	3858	1.00	ug/L		96
115) n-butylbenzene	17.849	92	3621	0.93	ug/L	#	81
116) 1,2-dibromo-3-chloropr...	18.822	157	755	0.86	ug/L		73
117) 1,3,5-trichlorobenzene	19.031	180	3760	1.04	ug/L		91
119) 1,2,4-trichlorobenzene	19.774	180	3303	0.97	ug/L		90
120) hexachlorobutadiene	19.905	225	1309	0.98	ug/L		92
121) naphthalene	20.119	128	9095	0.90	ug/L		90
122) 1,2,3-trichlorobenzene	20.354	180	3317	0.96	ug/L		89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	263274	500.00	ug/L		0.00
5) pentafluorobenzene	10.545	168	178613	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.508	114	253312	50.00	ug/L		0.00
74) chlorobenzene-d5	14.902	117	204829	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.522	152	129955	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.587	113	88656	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
53) 1,2-dichloroethane-d4 (s)	11.021	65	93088	52.44	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.88%				
75) toluene-d8 (s)	13.234	98	279012	52.05	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.10%				
99) 4-bromofluorobenzene (s)	16.204	95	96249	46.30	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.60%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.354	59	5287	9.88	ug/L		84
4) 1,4-dioxane	12.172	88	1437	38.25	ug/L	#	65
6) chlorodifluoromethane	4.588	51	7286	2.11	ug/L		90
7) dichlorodifluoromethane	4.573	85	8956	2.04	ug/L		91
8) chloromethane	5.002	50	8925	2.11	ug/L		90
9) vinyl chloride	5.263	62	7903	1.97	ug/L		82
10) 1,3-butadiene	5.253	54	8326	2.41	ug/L	#	79
11) bromomethane	5.938	94	5585	2.07	ug/L		82
12) chloroethane	6.121	64	3942	1.94	ug/L		75
13) vinyl bromide	6.476	106	5500	2.05	ug/L	#	91
14) trichlorofluoromethane	6.623	101	8171	2.02	ug/L		73
15) ethyl ether	7.026	74	1692	1.79	ug/L	#	68
17) freon 113	7.491	151	3899	1.98	ug/L	#	91
18) 1,1-dichloroethene	7.486	96	3961	2.10	ug/L		89
19) acetone	7.486	58	1984	7.29	ug/L		89
20) acetonitrile	7.962	41	8577	20.52	ug/L		88
21) iodomethane	7.753	142	6780	1.97	ug/L		90
22) carbon disulfide	7.904	76	13281	2.21	ug/L		93
23) methylene chloride	8.229	84	4129	2.05	ug/L		85
24) methyl acetate	7.977	43	3331	1.76	ug/L	#	60
25) methyl tert butyl ether	8.605	73	11769	2.05	ug/L		92
26) trans-1,2-dichloroethene	8.647	96	3339	1.94	ug/L		90
27) hexane	9.018	57	5260	2.17	ug/L		97
28) di-isopropyl ether	9.227	45	12247	2.09	ug/L		89
29) ethyl tert-butyl ether	9.703	59	11504	2.02	ug/L		99
30) 2-butanone	9.918	72	2243	6.99	ug/L	#	40
31) 1,1-dichloroethane	9.254	63	6217	2.09	ug/L		90
32) chloroprene	9.358	53	5027	2.01	ug/L		86
36) 2,2-dichloropropane	10.033	77	6264	2.15	ug/L		94
37) cis-1,2-dichloroethene	9.991	96	3913	2.00	ug/L		78
39) propionitrile	10.012	54	7799	18.41	ug/L		80
40) bromochloromethane	10.300	128	1994	1.96	ug/L		88
41) tetrahydrofuran	10.326	42	1846	2.17	ug/L		80
42) chloroform	10.389	83	6550	2.23	ug/L		98
43) tert-butyl formate	10.425	59	3330	2.02	ug/L		88
45) methacrylonitrile	10.211	67	1434	1.62	ug/L	#	67
46) cyclohexane	10.781	84	6780	2.05	ug/L		97
47) 1,1,1-trichloroethane	10.655	97	6435	2.05	ug/L		98
48) iso-butyl alcohol	10.776	43	5695	18.46	ug/L		94
49) 1,1-dichloropropene	10.838	75	4648	2.02	ug/L		95
50) carbon tetrachloride	10.859	117	5976	2.16	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
54) benzene	11.095	78	13725	2.18	ug/L		93
55) iso-octane	11.184	57	11607	1.82	ug/L		95
56) tert-amyl methyl ether	11.168	73	11276	2.06	ug/L		95
57) heptane	11.351	71	2389	1.97	ug/L		91
58) isopropyl acetate	10.990	87	895	1.86	ug/L	#	58
59) 1,2-dichloroethane	11.116	62	4631	2.17	ug/L		91
60) n-butyl alcohol	11.555	56	10881	91.10	ug/L		97
61) ethyl acrylate	11.816	55	3558	1.61	ug/L		78
62) trichloroethene	11.837	95	3546	2.26	ug/L		93
63) 2-nitropropane	12.627	41	1436	1.93	ug/L		94
64) methylcyclohexane	12.151	83	7441	2.19	ug/L		98
65) 2-chloroethyl vinyl ether	12.653	63	7885	8.41	ug/L		95
66) methyl methacrylate	12.078	100	788	1.56	ug/L	#	29
67) 1,2-dichloropropane	12.141	63	3129	2.01	ug/L		92
68) dibromomethane	12.256	93	2210	2.12	ug/L		95
69) bromodichloromethane	12.407	83	4411	2.06	ug/L		84
70) epichlorohydrin	12.763	57	2352	9.28	ug/L	#	56
71) cis-1,3-dichloropropene	12.899	75	4790	1.96	ug/L		96
72) 4-methyl-2-pentanone	13.004	58	7889	7.90	ug/L		98
73) 3-methyl-1-butanol	13.009	55	7207	37.43	ug/L		98
76) toluene	13.317	92	7848	2.21	ug/L		94
77) trans-1,3-dichloropropene	13.511	75	3473	1.77	ug/L		90
78) ethyl methacrylate	13.490	69	3894	2.02	ug/L		96
79) 1,1,2-trichloroethane	13.752	83	2224	2.10	ug/L		91
80) 2-hexanone	13.929	58	6377	8.38	ug/L		93
81) tetrachloroethene	13.924	166	3744	2.19	ug/L		87
82) 1,3-dichloropropane	13.950	76	3941	1.93	ug/L		96
83) butyl acetate	14.018	56	2320	2.08	ug/L	#	71
84) dibromochloromethane	14.227	129	3032	1.96	ug/L		96
85) 1,2-dibromoethane	14.405	107	2964	2.04	ug/L		77
86) n-butyl ether	14.871	57	12462	2.16	ug/L		84
87) chlorobenzene	14.934	112	7571	2.00	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.007	131	4079	2.26	ug/L		87
89) ethylbenzene	14.996	91	14013	2.14	ug/L		98
90) m,p-xylene	15.132	106	10485	4.07	ug/L		86
91) o-xylene	15.587	106	6045	2.13	ug/L		99
92) styrene	15.598	104	8134	2.03	ug/L		94
93) butyl acrylate	15.378	55	6600	2.32	ug/L		97
94) n-amyl acetate	15.613	70	2963	2.38	ug/L		95
95) bromoform	15.859	173	2304	2.13	ug/L		92
96) isopropylbenzene	15.980	105	16596	2.14	ug/L		97
100) bromobenzene	16.424	156	3489	1.79	ug/L	#	79
101) 1,1,2,2-tetrachloroethane	16.288	83	4862	1.90	ug/L		97
103) 1,2,3-trichloropropane	16.393	110	1297	1.79	ug/L		90
104) n-propylbenzene	16.445	91	17799	1.89	ug/L		100
105) 2-chlorotoluene	16.602	126	3809	1.79	ug/L		93
106) 4-chlorotoluene	16.722	91	9516	1.97	ug/L		92
107) 1,3,5-trimethylbenzene	16.618	105	13458	1.74	ug/L		94
108) tert-butylbenzene	16.999	134	2680	1.54	ug/L	#	81
109) 1,2,4-trimethylbenzene	17.057	105	13657	1.87	ug/L		97
110) sec-butylbenzene	17.245	105	18033	1.73	ug/L		98
111) 1,3-dichlorobenzene	17.449	146	7401	2.01	ug/L		89
112) p-isopropyltoluene	17.392	119	15472	1.79	ug/L		95
113) 1,4-dichlorobenzene	17.554	146	7650	2.09	ug/L		94
114) 1,2-dichlorobenzene	17.967	146	8133	2.05	ug/L		88
115) n-butylbenzene	17.852	92	8232	2.07	ug/L		95
116) 1,2-dibromo-3-chloropr...	18.814	157	1683	1.87	ug/L		89
117) 1,3,5-trichlorobenzene	19.029	180	7521	2.03	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

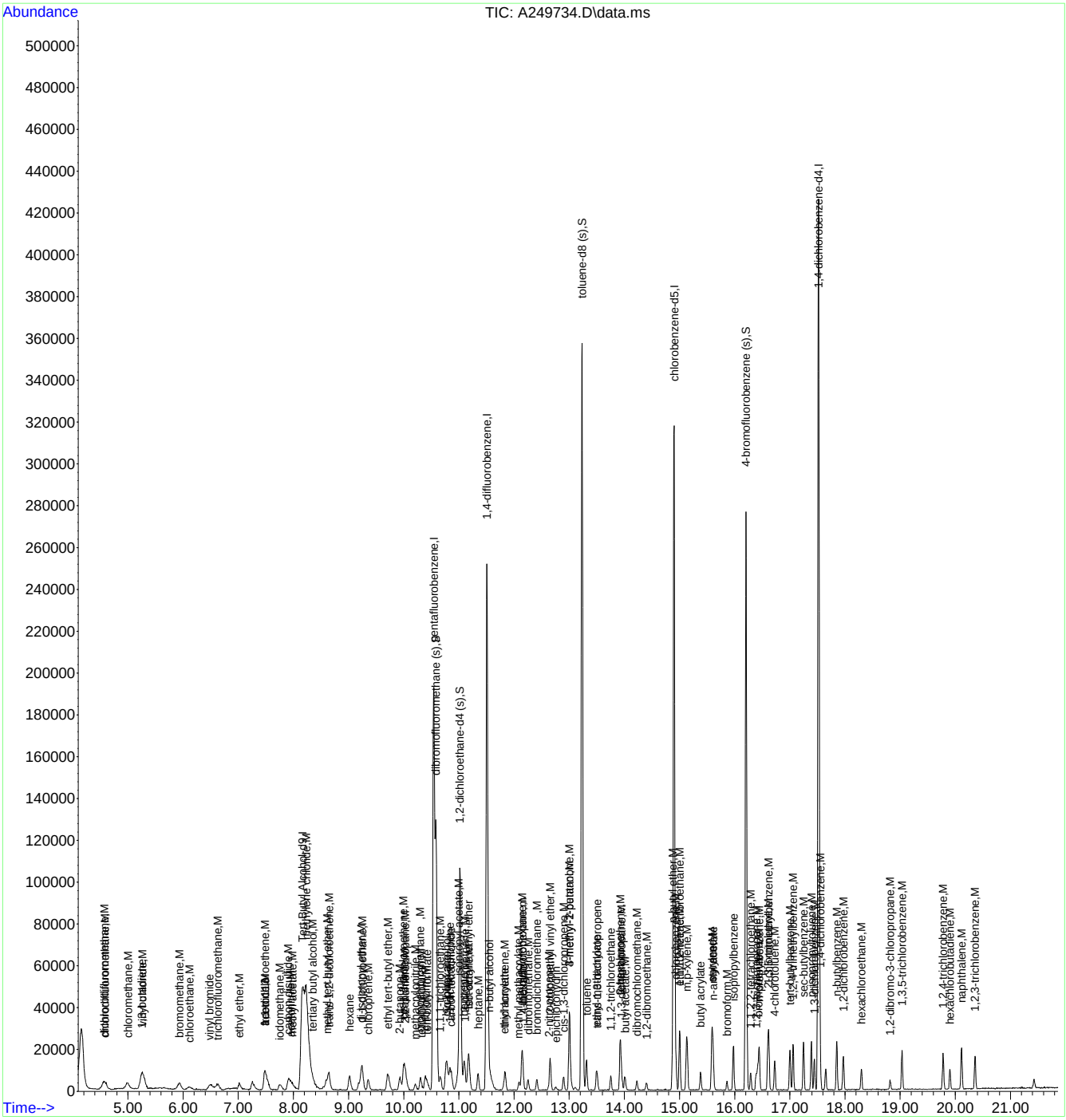
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
119) 1,2,4-trichlorobenzene	19.782	180	6756	1.94	ug/L	97
120) hexachlorobutadiene	19.907	225	2487	1.82	ug/L	97
121) naphthalene	20.117	128	18951	1.84	ug/L	98
122) 1,2,3-trichlorobenzene	20.357	180	6366	1.79	ug/L	89
123) hexachloroethane	18.297	201	2002	1.47	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.162	65	262607	500.00	ug/L		0.00
5) pentafluorobenzene	10.547	168	179352	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.510	114	255002	50.00	ug/L		0.00
74) chlorobenzene-d5	14.899	117	207144	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	127381	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.584	113	88881	50.23	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.46%				
53) 1,2-dichloroethane-d4 (s)	11.023	65	93774	52.48	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.96%				
75) toluene-d8 (s)	13.230	98	282363	52.09	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.18%				
99) 4-bromofluorobenzene (s)	16.206	95	93999	46.14	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.28%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.314	59	11581	21.69	ug/L		93
4) 1,4-dioxane	12.184	88	3536	94.35	ug/L		77
6) chlorodifluoromethane	4.574	51	14920	4.31	ug/L		98
7) dichlorodifluoromethane	4.553	85	16860	3.83	ug/L		98
8) chloromethane	4.998	50	16045	3.77	ug/L		98
9) vinyl chloride	5.265	62	14568	3.61	ug/L		90
10) 1,3-butadiene	5.280	54	17120	4.94	ug/L		95
11) bromomethane	5.934	94	10642	3.92	ug/L		97
12) chloroethane	6.112	64	8071	3.95	ug/L		95
13) vinyl bromide	6.483	106	10169	3.77	ug/L	#	11
14) trichlorofluoromethane	6.640	101	15668	3.86	ug/L		94
15) ethyl ether	7.017	74	3919	4.12	ug/L	#	82
17) freon 113	7.503	151	8224	4.17	ug/L	#	92
18) 1,1-dichloroethene	7.482	96	8473	4.47	ug/L		84
19) acetone	7.493	58	4107	15.02	ug/L	#	78
20) acetonitrile	7.927	41	17304	41.23	ug/L		97
21) iodomethane	7.754	142	14557	4.22	ug/L		95
22) carbon disulfide	7.906	76	27998	4.63	ug/L		95
23) methylene chloride	8.230	84	9039	4.48	ug/L		95
24) methyl acetate	7.969	43	8359	4.41	ug/L	#	85
25) methyl tert butyl ether	8.602	73	24603	4.27	ug/L		100
26) trans-1,2-dichloroethene	8.638	96	7426	4.29	ug/L		92
27) hexane	9.025	57	10235	4.20	ug/L		98
28) di-isopropyl ether	9.234	45	25512	4.33	ug/L		91
29) ethyl tert-butyl ether	9.710	59	24166	4.23	ug/L		97
30) 2-butanone	9.925	72	5063	15.71	ug/L	#	87
31) 1,1-dichloroethane	9.245	63	13422	4.48	ug/L		92
32) chloroprene	9.350	53	10540	4.20	ug/L		95
33) acrylonitrile	8.539	53	4158	4.46	ug/L		87
34) vinyl acetate	9.187	86	1579	4.12	ug/L	#	32
35) ethyl acetate	9.930	45	1243	3.41	ug/L	#	2
36) 2,2-dichloropropane	10.029	77	13071	4.46	ug/L		98
37) cis-1,2-dichloroethene	9.998	96	8632	4.38	ug/L		88
38) methyl acrylate	10.024	85	1136	3.21	ug/L	#	25
39) propionitrile	10.009	54	17736	41.70	ug/L		88
40) bromochloromethane	10.301	128	4460	4.37	ug/L		96
41) tetrahydrofuran	10.328	42	3717	4.36	ug/L		93
42) chloroform	10.385	83	13570	4.59	ug/L		99
43) tert-butyl formate	10.427	59	6899	4.16	ug/L		94
45) methacrylonitrile	10.202	67	3513	3.95	ug/L	#	75
46) cyclohexane	10.777	84	13089	3.93	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) 1,1,1-trichloroethane	10.668	97	13445	4.26	ug/L		96
48) iso-butyl alcohol	10.777	43	12726	41.07	ug/L		99
49) 1,1-dichloropropene	10.840	75	10518	4.56	ug/L		91
50) carbon tetrachloride	10.866	117	12087	4.36	ug/L		99
51) tert-amyl alcohol	10.971	73	5732	20.11	ug/L		90
54) benzene	11.091	78	28322	4.46	ug/L		97
55) iso-octane	11.180	57	26062	4.05	ug/L		93
56) tert-amyl methyl ether	11.164	73	24597	4.46	ug/L		99
57) heptane	11.342	71	5592	4.59	ug/L		96
58) isopropyl acetate	10.987	87	1967	4.07	ug/L	#	71
59) 1,2-dichloroethane	11.112	62	9786	4.55	ug/L		96
60) n-butyl alcohol	11.557	56	23844	198.31	ug/L		97
61) ethyl acrylate	11.813	55	8455	3.81	ug/L		96
62) trichloroethene	11.834	95	7151	4.53	ug/L		83
63) 2-nitropropane	12.629	41	3029	4.04	ug/L		86
64) methylcyclohexane	12.158	83	14625	4.28	ug/L		95
65) 2-chloroethyl vinyl ether	12.655	63	17243	18.27	ug/L		96
66) methyl methacrylate	12.085	100	1802	3.54	ug/L	#	83
67) 1,2-dichloropropane	12.137	63	6831	4.35	ug/L		94
68) dibromomethane	12.257	93	4623	4.40	ug/L		92
69) bromodichloromethane	12.414	83	9376	4.35	ug/L		93
70) epichlorohydrin	12.754	57	4898	19.19	ug/L	#	92
71) cis-1,3-dichloropropene	12.901	75	9792	3.99	ug/L		93
72) 4-methyl-2-pentanone	13.005	58	17967	17.88	ug/L		92
73) 3-methyl-1-butanol	13.000	55	15638	80.67	ug/L		100
76) toluene	13.314	92	16213	4.52	ug/L		93
77) trans-1,3-dichloropropene	13.507	75	8252	4.17	ug/L		100
78) ethyl methacrylate	13.492	69	8358	4.28	ug/L		95
79) 1,1,2-trichloroethane	13.748	83	4620	4.31	ug/L		92
80) 2-hexanone	13.921	58	14021	18.23	ug/L		92
81) tetrachloroethene	13.921	166	8074	4.67	ug/L		92
82) 1,3-dichloropropane	13.952	76	8767	4.25	ug/L		93
83) butyl acetate	14.004	56	5124	4.55	ug/L		82
84) dibromochloromethane	14.224	129	6734	4.30	ug/L		97
85) 1,2-dibromoethane	14.402	107	6246	4.26	ug/L		99
86) n-butyl ether	14.873	57	26897	4.61	ug/L		93
87) chlorobenzene	14.935	112	17077	4.46	ug/L		92
88) 1,1,1,2-tetrachloroethane	15.009	131	8640	4.73	ug/L		97
89) ethylbenzene	14.998	91	29448	4.45	ug/L		97
90) m,p-xylene	15.134	106	22802	8.76	ug/L		91
91) o-xylene	15.589	106	12891	4.48	ug/L		98
92) styrene	15.600	104	18911	4.67	ug/L		89
93) butyl acrylate	15.380	55	13688	4.76	ug/L		95
94) n-amyl acetate	15.615	70	6310	5.01	ug/L		91
95) bromoform	15.856	173	5079	4.65	ug/L		96
96) isopropylbenzene	15.976	105	35397	4.51	ug/L		97
97) cis-1,4-dichloro-2-butene	16.013	75	460	1.73	ug/L		89
100) bromobenzene	16.415	156	7876	4.12	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.290	83	10043	4.00	ug/L		99
102) trans-1,4-dichloro-2-b...	16.332	53	260	1.12	ug/L		82
103) 1,2,3-trichloropropane	16.389	110	2833	3.99	ug/L		91
104) n-propylbenzene	16.447	91	37539	4.06	ug/L		97
105) 2-chlorotoluene	16.598	126	8244	3.96	ug/L		98
106) 4-chlorotoluene	16.724	91	19623	4.15	ug/L		99
107) 1,3,5-trimethylbenzene	16.619	105	28604	3.77	ug/L		99
108) tert-butylbenzene	17.006	134	6119	3.60	ug/L		92
109) 1,2,4-trimethylbenzene	17.059	105	29062	4.05	ug/L		94
110) sec-butylbenzene	17.247	105	37122	3.63	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

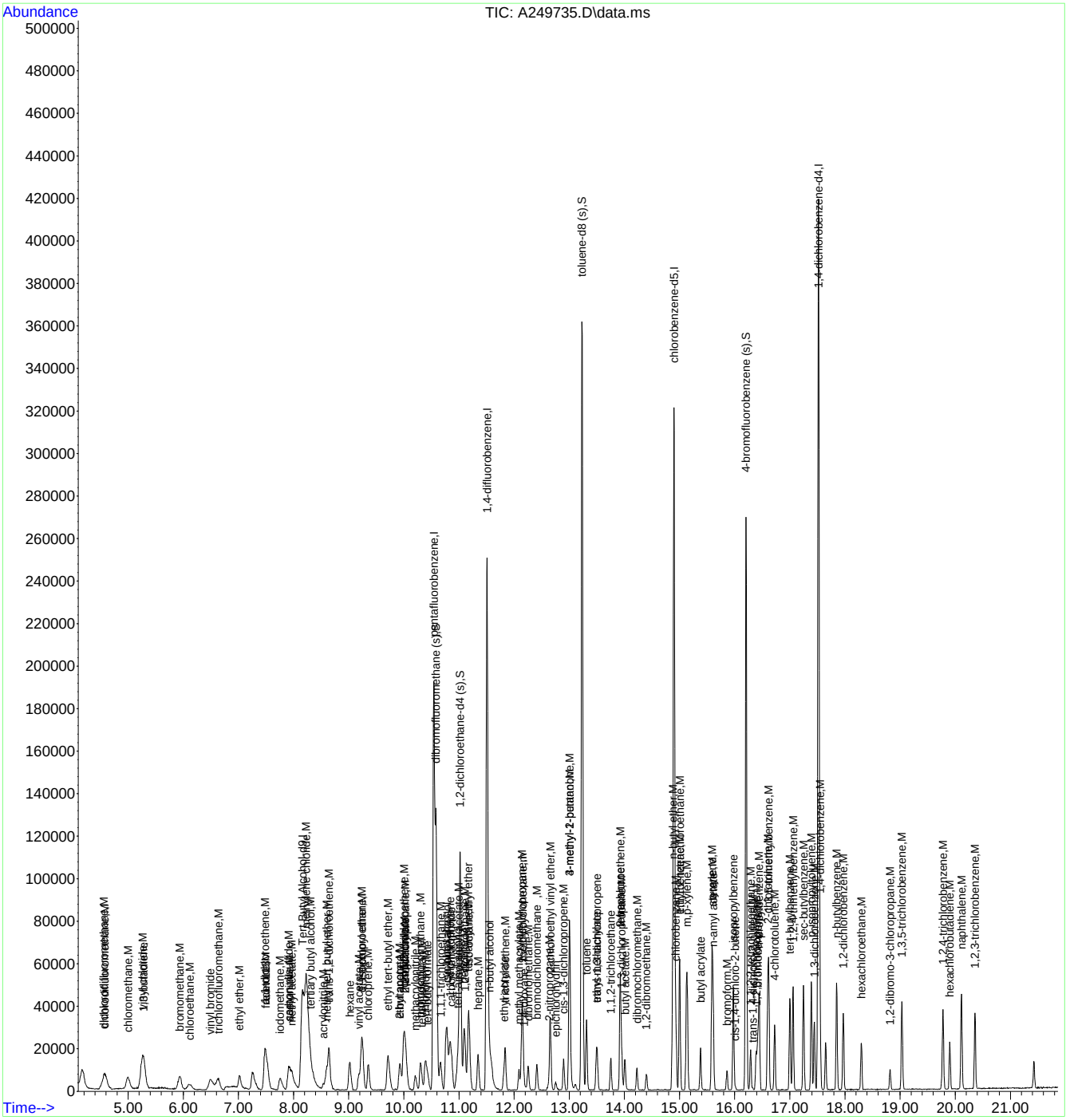
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	17.446	146	16264	4.51	ug/L	96
112) p-isopropyltoluene	17.393	119	33232	3.93	ug/L	99
113) 1,4-dichlorobenzene	17.550	146	16140	4.49	ug/L	97
114) 1,2-dichlorobenzene	17.969	146	17160	4.41	ug/L	96
115) n-butylbenzene	17.848	92	16779	4.30	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.821	157	3306	3.75	ug/L	92
117) 1,3,5-trichlorobenzene	19.031	180	16266	4.48	ug/L	98
119) 1,2,4-trichlorobenzene	19.778	180	14363	4.20	ug/L	92
120) hexachlorobutadiene	19.899	225	5578	4.17	ug/L	96
121) naphthalene	20.113	128	40791	4.04	ug/L	98
122) 1,2,3-trichlorobenzene	20.359	180	14531	4.18	ug/L	93
123) hexachloroethane	18.298	201	4494	3.38	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.163	65	253775	500.00	ug/L		0.00
5) pentafluorobenzene	10.548	168	176294	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	251469	50.00	ug/L		0.00
74) chlorobenzene-d5	14.900	117	202169	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.520	152	120535	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.585	113	87033	50.04	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%				
53) 1,2-dichloroethane-d4 (s)	11.019	65	92853	52.69	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.38%				
75) toluene-d8 (s)	13.231	98	276784	52.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.62%				
99) 4-bromofluorobenzene (s)	16.207	95	91098	47.25	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.50%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.278	59	20122	39.01	ug/L		93
4) 1,4-dioxane	12.185	88	6626	182.95	ug/L		98
6) chlorodifluoromethane	4.581	51	27077	7.96	ug/L		95
7) dichlorodifluoromethane	4.555	85	34296	7.92	ug/L		97
8) chloromethane	4.994	50	33254	7.95	ug/L		93
9) vinyl chloride	5.250	62	30748	7.76	ug/L		95
10) 1,3-butadiene	5.271	54	29441	8.64	ug/L		94
11) bromomethane	5.935	94	21267	7.97	ug/L		94
12) chloroethane	6.124	64	16491	8.21	ug/L		97
13) vinyl bromide	6.495	106	21603	8.16	ug/L		98
14) trichlorofluoromethane	6.626	101	32253	8.08	ug/L		93
15) ethyl ether	7.018	74	7092	7.59	ug/L		87
16) acrolein	7.274	56	2784	6.70	ug/L		95
17) freon 113	7.504	151	15187	7.82	ug/L		98
18) 1,1-dichloroethene	7.483	96	14820	7.95	ug/L		87
19) acetone	7.483	58	7764	28.89	ug/L		97
20) acetonitrile	7.928	41	31747	76.95	ug/L		91
21) iodomethane	7.750	142	27384	8.07	ug/L		93
22) carbon disulfide	7.907	76	47587	8.01	ug/L		98
23) methylene chloride	8.237	84	16161	8.14	ug/L		95
24) methyl acetate	7.970	43	13499	7.24	ug/L		98
25) methyl tert butyl ether	8.613	73	43853	7.75	ug/L		98
26) trans-1,2-dichloroethene	8.639	96	12962	7.61	ug/L		98
27) hexane	9.016	57	18717	7.82	ug/L		99
28) di-isopropyl ether	9.230	45	45415	7.84	ug/L		96
29) ethyl tert-butyl ether	9.717	59	43480	7.74	ug/L		92
30) 2-butanone	9.926	72	8725	27.54	ug/L		96
31) 1,1-dichloroethane	9.251	63	23108	7.85	ug/L		92
32) chloroprene	9.356	53	19302	7.83	ug/L		98
33) acrylonitrile	8.540	53	6389	6.97	ug/L		94
34) vinyl acetate	9.188	86	2795	7.42	ug/L	#	38
35) ethyl acetate	9.931	45	2243	6.26	ug/L	#	60
36) 2,2-dichloropropane	10.030	77	23064	8.01	ug/L		95
37) cis-1,2-dichloroethene	9.994	96	15265	7.89	ug/L		93
38) methyl acrylate	10.025	85	2396	6.89	ug/L	#	71
39) propionitrile	10.010	54	31047	74.26	ug/L		86
40) bromochloromethane	10.297	128	7883	7.85	ug/L		96
41) tetrahydrofuran	10.323	42	6146	7.33	ug/L		97
42) chloroform	10.391	83	23863	8.22	ug/L		96
43) tert-butyl formate	10.428	59	11854	7.27	ug/L		95
45) methacrylonitrile	10.208	67	6357	7.28	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.778	84	25835	7.90	ug/L		97
47) 1,1,1-trichloroethane	10.663	97	23760	7.65	ug/L		99
48) iso-butyl alcohol	10.784	43	22312	73.26	ug/L		98
49) 1,1-dichloropropene	10.836	75	17759	7.83	ug/L		98
50) carbon tetrachloride	10.867	117	21090	7.74	ug/L		98
51) tert-amyl alcohol	10.951	73	9985	35.65	ug/L	#	86
54) benzene	11.092	78	50233	8.03	ug/L		98
55) iso-octane	11.186	57	46702	7.37	ug/L		96
56) tert-amyl methyl ether	11.165	73	44004	8.08	ug/L		97
57) heptane	11.348	71	9705	8.08	ug/L		91
58) isopropyl acetate	10.982	87	3413	7.15	ug/L	#	80
59) 1,2-dichloroethane	11.118	62	17408	8.20	ug/L		98
60) n-butyl alcohol	11.558	56	41583	350.71	ug/L		98
61) ethyl acrylate	11.809	55	15733	7.19	ug/L		99
62) trichloroethene	11.840	95	12646	8.13	ug/L		92
63) 2-nitropropane	12.619	41	5212	7.05	ug/L	#	66
64) methylcyclohexane	12.154	83	26342	7.82	ug/L		99
65) 2-chloroethyl vinyl ether	12.656	63	32026	34.42	ug/L		95
66) methyl methacrylate	12.091	100	3228	6.43	ug/L	#	87
67) 1,2-dichloropropane	12.143	63	12280	7.93	ug/L		98
68) dibromomethane	12.253	93	8280	7.99	ug/L		87
69) bromodichloromethane	12.415	83	16614	7.82	ug/L		93
70) epichlorohydrin	12.750	57	8836	35.11	ug/L		99
71) cis-1,3-dichloropropene	12.902	75	18072	7.46	ug/L		96
72) 4-methyl-2-pentanone	13.006	58	29525	29.79	ug/L		98
73) 3-methyl-1-butanol	13.001	55	27218	142.38	ug/L		99
76) toluene	13.315	92	27510	7.86	ug/L		96
77) trans-1,3-dichloropropene	13.508	75	14984	7.75	ug/L		95
78) ethyl methacrylate	13.493	69	14729	7.73	ug/L		95
79) 1,1,2-trichloroethane	13.749	83	8077	7.73	ug/L		95
80) 2-hexanone	13.922	58	24000	31.97	ug/L		99
81) tetrachloroethene	13.922	166	13425	7.96	ug/L		96
82) 1,3-dichloropropane	13.953	76	15735	7.81	ug/L		98
83) butyl acetate	14.011	56	8719	7.93	ug/L		89
84) dibromochloromethane	14.230	129	11584	7.58	ug/L		93
85) 1,2-dibromoethane	14.403	107	11466	8.01	ug/L		94
86) n-butyl ether	14.874	57	44948	7.90	ug/L		95
87) chlorobenzene	14.931	112	28905	7.74	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.010	131	14820	8.31	ug/L		97
89) ethylbenzene	14.999	91	50408	7.80	ug/L		97
90) m,p-xylene	15.130	106	40452	15.92	ug/L		96
91) o-xylene	15.585	106	21694	7.73	ug/L		98
92) styrene	15.595	104	31119	7.88	ug/L		97
93) butyl acrylate	15.381	55	24416	8.69	ug/L		97
94) n-amyl acetate	15.611	70	10693	8.70	ug/L		88
95) bromoform	15.857	173	8444	7.92	ug/L		98
96) isopropylbenzene	15.977	105	60966	7.95	ug/L		97
97) cis-1,4-dichloro-2-butene	16.014	75	952	3.67	ug/L	#	83
100) bromobenzene	16.416	156	13438	7.43	ug/L		97
101) 1,1,2,2-tetrachloroethane	16.291	83	17066	7.18	ug/L		95
102) trans-1,4-dichloro-2-b...	16.317	53	778	3.54	ug/L		92
103) 1,2,3-trichloropropane	16.390	110	5171	7.70	ug/L		88
104) n-propylbenzene	16.443	91	64088	7.33	ug/L		99
105) 2-chlorotoluene	16.599	126	13911	7.07	ug/L		96
106) 4-chlorotoluene	16.725	91	33793	7.55	ug/L		95
107) 1,3,5-trimethylbenzene	16.615	105	49455	6.88	ug/L		98
108) tert-butylbenzene	17.002	134	10986	6.82	ug/L		97
109) 1,2,4-trimethylbenzene	17.060	105	48932	7.21	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

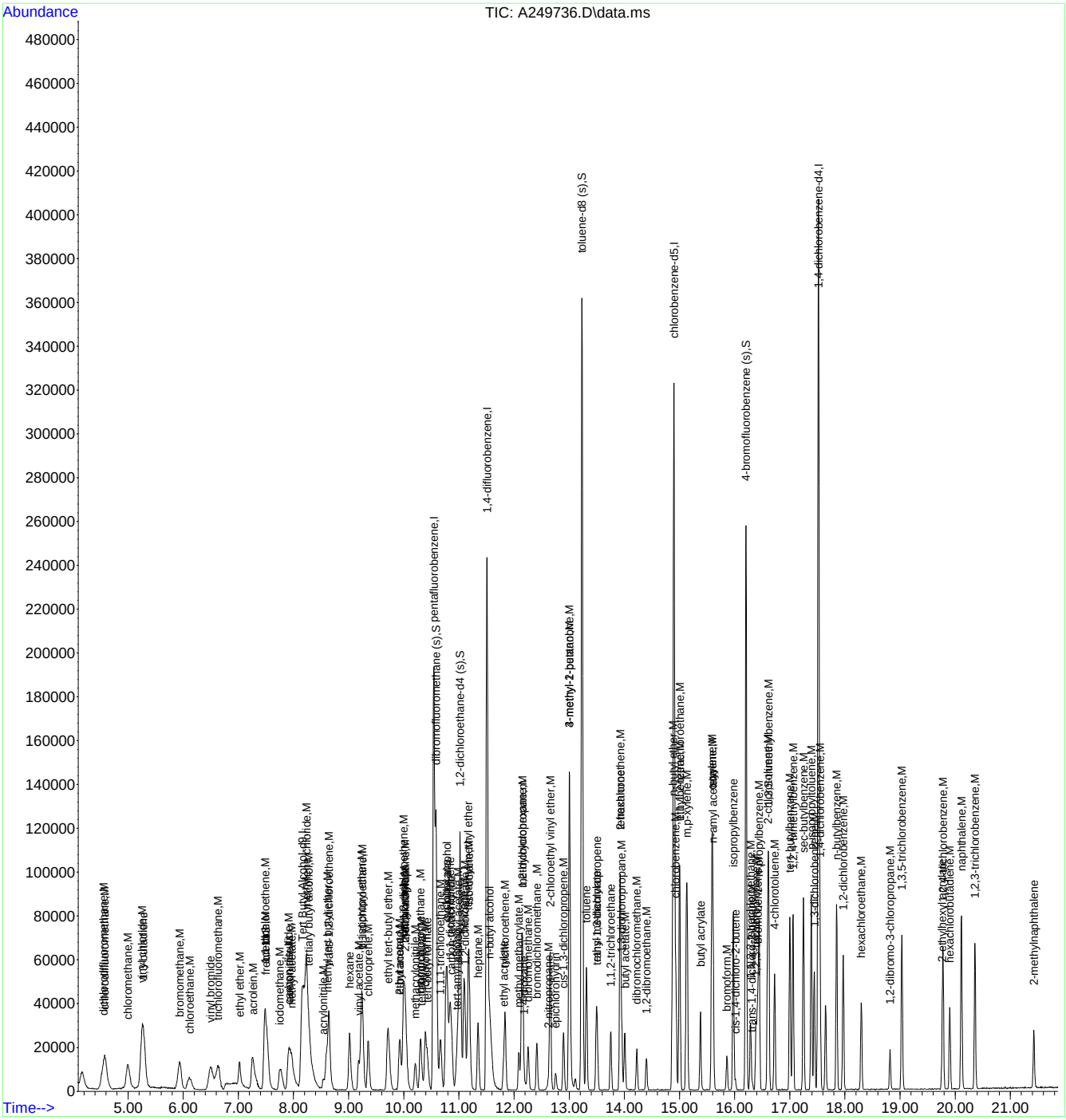
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.248	105	66872	6.92	ug/L	99
111) 1,3-dichlorobenzene	17.447	146	25845	7.57	ug/L	99
112) p-isopropyltoluene	17.389	119	56453	7.05	ug/L	99
113) 1,4-dichlorobenzene	17.551	146	26505	7.80	ug/L	98
114) 1,2-dichlorobenzene	17.970	146	28094	7.63	ug/L	96
115) n-butylbenzene	17.849	92	27811	7.54	ug/L	94
116) 1,2-dibromo-3-chloropr...	18.817	157	6539	7.84	ug/L	95
117) 1,3,5-trichlorobenzene	19.037	180	26724	7.78	ug/L	94
118) 2-ethylhexyl acrylate	19.758	70	2085	1.17	ug/L	92
119) 1,2,4-trichlorobenzene	19.779	180	24795	7.67	ug/L	97
120) hexachlorobutadiene	19.905	225	9689	7.66	ug/L	96
121) naphthalene	20.114	128	72877	7.63	ug/L	99
122) 1,2,3-trichlorobenzene	20.355	180	25408	7.72	ug/L	89
123) hexachloroethane	18.294	201	7933	6.30	ug/L	98
124) 2-methylnaphthalene	21.427	142	15451	2.99	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.165	65	261175	500.00	ug/L	0.00
5) pentafluorobenzene	10.544	168	179570	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.507	114	258618	50.00	ug/L	0.00
74) chlorobenzene-d5	14.901	117	218814	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.521	152	124956	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.586	113	89318	50.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
53) 1,2-dichloroethane-d4 (s)	11.020	65	92568	51.08	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.16%			
75) toluene-d8 (s)	13.233	98	295711	51.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.28%			
99) 4-bromofluorobenzene (s)	16.203	95	95886	47.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.96%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.290	59	54540	102.73	ug/L	93
4) 1,4-dioxane	12.181	88	18238	489.31	ug/L	97
6) chlorodifluoromethane	4.582	51	69080	19.94	ug/L	94
7) dichlorodifluoromethane	4.540	85	86905	19.69	ug/L	92
8) chloromethane	4.985	50	81843	19.21	ug/L	97
9) vinyl chloride	5.251	62	78233	19.39	ug/L	96
10) 1,3-butadiene	5.278	54	72739	20.97	ug/L	96
11) bromomethane	5.926	94	53027	19.52	ug/L	97
12) chloroethane	6.104	64	39155	19.13	ug/L	97
13) vinyl bromide	6.496	106	53133	19.70	ug/L	99
14) trichlorofluoromethane	6.622	101	79625	19.57	ug/L	93
15) ethyl ether	7.024	74	19029	20.00	ug/L	93
16) acrolein	7.265	56	7836	18.50	ug/L	94
17) freon 113	7.511	151	39212	19.83	ug/L	99
18) 1,1-dichloroethene	7.474	96	38010	20.02	ug/L	96
19) acetone	7.479	58	21108	77.10	ug/L	91
20) acetonitrile	7.924	41	84342	200.71	ug/L	97
21) iodomethane	7.762	142	68179	19.73	ug/L	98
22) carbon disulfide	7.903	76	120774	19.95	ug/L	98
23) methylene chloride	8.227	84	39875	19.73	ug/L	95
24) methyl acetate	7.966	43	35941	18.92	ug/L	99
25) methyl tert butyl ether	8.604	73	115022	19.96	ug/L	99
26) trans-1,2-dichloroethene	8.640	96	34867	20.10	ug/L	98
27) hexane	9.012	57	47953	19.66	ug/L	98
28) di-isopropyl ether	9.237	45	118138	20.01	ug/L	100
29) ethyl tert-butyl ether	9.713	59	114572	20.01	ug/L	94
30) 2-butanone	9.922	72	24919	77.21	ug/L	98
31) 1,1-dichloroethane	9.247	63	61286	20.45	ug/L	99
32) chloroprene	9.352	53	49943	19.90	ug/L	97
33) acrylonitrile	8.536	53	18423	19.74	ug/L	94
34) vinyl acetate	9.179	86	7602	19.82	ug/L	98
35) ethyl acetate	9.938	45	6366	17.43	ug/L #	40
36) 2,2-dichloropropane	10.037	77	58867	20.06	ug/L	93
37) cis-1,2-dichloroethene	9.995	96	40005	20.29	ug/L	95
38) methyl acrylate	10.021	85	6432	18.16	ug/L	96
39) propionitrile	10.006	54	83191	195.36	ug/L	92
40) bromochloromethane	10.298	128	20739	20.28	ug/L	98
41) tetrahydrofuran	10.319	42	16949	19.85	ug/L	99
42) chloroform	10.387	83	60191	20.35	ug/L	93
43) tert-butyl formate	10.429	59	32831	19.76	ug/L	97
45) methacrylonitrile	10.204	67	17345	19.50	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.780	84	63628	19.09	ug/L		97
47) 1,1,1-trichloroethane	10.665	97	62736	19.84	ug/L		98
48) iso-butyl alcohol	10.790	43	60001	193.42	ug/L		84
49) 1,1-dichloropropene	10.837	75	45407	19.66	ug/L		99
50) carbon tetrachloride	10.863	117	55438	19.97	ug/L		99
51) tert-amyl alcohol	10.957	73	28305	99.20	ug/L		94
54) benzene	11.093	78	132749	20.63	ug/L		100
55) iso-octane	11.188	57	127685	19.58	ug/L		97
56) tert-amyl methyl ether	11.167	73	116532	20.82	ug/L		98
57) heptane	11.344	71	25479	20.63	ug/L		98
58) isopropyl acetate	10.984	87	10103	20.59	ug/L		98
59) 1,2-dichloroethane	11.114	62	45414	20.81	ug/L		99
60) n-butyl alcohol	11.554	56	120066	984.64	ug/L		99
61) ethyl acrylate	11.810	55	44173	19.62	ug/L		98
62) trichloroethene	11.836	95	32601	20.38	ug/L		98
63) 2-nitropropane	12.626	41	14211	18.69	ug/L		97
64) methylcyclohexane	12.150	83	71060	20.51	ug/L		99
65) 2-chloroethyl vinyl ether	12.652	63	90162	94.21	ug/L		97
66) methyl methacrylate	12.092	100	9602	18.60	ug/L		93
67) 1,2-dichloropropane	12.139	63	32696	20.53	ug/L		98
68) dibromomethane	12.255	93	21421	20.09	ug/L		95
69) bromodichloromethane	12.411	83	44309	20.29	ug/L		95
70) epichlorohydrin	12.757	57	24951	96.40	ug/L		97
71) cis-1,3-dichloropropene	12.903	75	48750	19.58	ug/L		99
72) 4-methyl-2-pentanone	13.002	58	82617	81.05	ug/L		100
73) 3-methyl-1-butanol	13.002	55	79596	404.87	ug/L		98
76) toluene	13.311	92	77020	20.34	ug/L		98
77) trans-1,3-dichloropropene	13.510	75	41606	19.89	ug/L		96
78) ethyl methacrylate	13.489	69	41755	20.25	ug/L		96
79) 1,1,2-trichloroethane	13.750	83	22906	20.25	ug/L		96
80) 2-hexanone	13.923	58	67258	82.77	ug/L		97
81) tetrachloroethene	13.923	166	37699	20.66	ug/L		99
82) 1,3-dichloropropane	13.954	76	43784	20.08	ug/L		94
83) butyl acetate	14.007	56	24577	20.66	ug/L		96
84) dibromochloromethane	14.226	129	33288	20.11	ug/L		99
85) 1,2-dibromoethane	14.399	107	31063	20.05	ug/L		97
86) n-butyl ether	14.870	57	127932	20.77	ug/L		98
87) chlorobenzene	14.938	112	80339	19.87	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.006	131	40337	20.90	ug/L		97
89) ethylbenzene	15.000	91	141457	20.23	ug/L		98
90) m,p-xylene	15.136	106	113198	41.17	ug/L		99
91) o-xylene	15.586	106	63318	20.84	ug/L		97
92) styrene	15.597	104	86845	20.31	ug/L		99
93) butyl acrylate	15.377	55	67118	22.08	ug/L		97
94) n-amyl acetate	15.612	70	29735	22.36	ug/L		93
95) bromoform	15.858	173	23848	20.66	ug/L		99
96) isopropylbenzene	15.978	105	174418	21.02	ug/L		98
97) cis-1,4-dichloro-2-butene	16.020	75	3971	14.15	ug/L	#	83
100) bromobenzene	16.418	156	36006	19.20	ug/L		98
101) 1,1,2,2-tetrachloroethane	16.287	83	47993	19.49	ug/L		96
102) trans-1,4-dichloro-2-b...	16.324	53	3116	13.68	ug/L		92
103) 1,2,3-trichloropropane	16.392	110	14068	20.21	ug/L		98
104) n-propylbenzene	16.444	91	178458	19.68	ug/L		99
105) 2-chlorotoluene	16.596	126	39663	19.44	ug/L		94
106) 4-chlorotoluene	16.726	91	91682	19.76	ug/L		98
107) 1,3,5-trimethylbenzene	16.616	105	141795	19.03	ug/L		97
108) tert-butylbenzene	17.003	134	32032	19.19	ug/L		98
109) 1,2,4-trimethylbenzene	17.056	105	137638	19.55	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

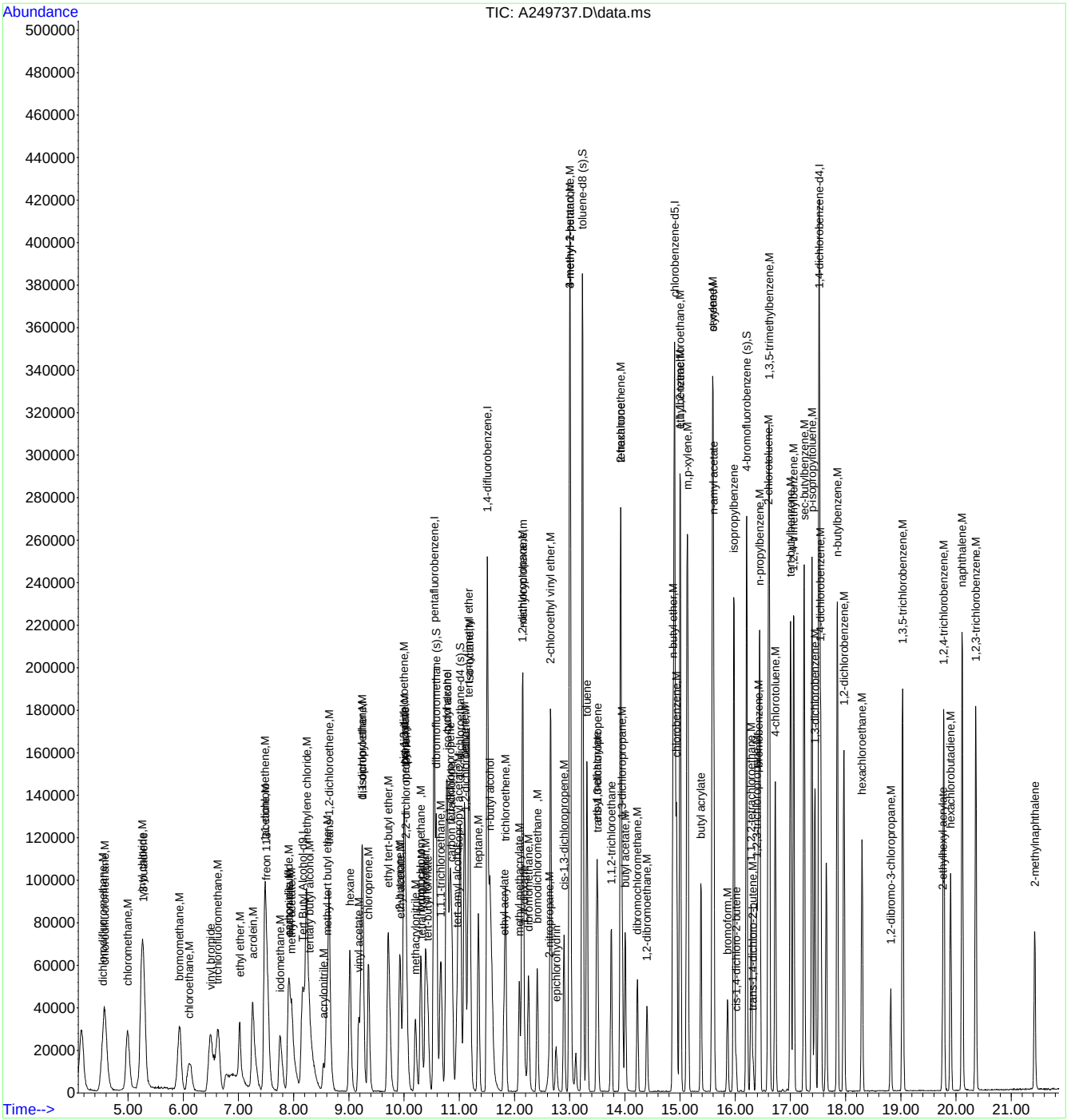
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
110) sec-butylbenzene	17.249	105	191349	19.09 ug/L	99
111) 1,3-dichlorobenzene	17.443	146	70836	20.03 ug/L	98
112) p-isopropyltoluene	17.391	119	162010	19.51 ug/L	99
113) 1,4-dichlorobenzene	17.547	146	70967	20.14 ug/L	99
114) 1,2-dichlorobenzene	17.971	146	76100	19.93 ug/L	99
115) n-butylbenzene	17.851	92	77776	20.34 ug/L	95
116) 1,2-dibromo-3-chloropr...	18.818	157	16903	19.56 ug/L	98
117) 1,3,5-trichlorobenzene	19.033	180	71235	20.02 ug/L	97
118) 2-ethylhexyl acrylate	19.755	70	5742	3.11 ug/L	85
119) 1,2,4-trichlorobenzene	19.775	180	67071	20.00 ug/L	99
120) hexachlorobutadiene	19.901	225	25494	19.44 ug/L	96
121) naphthalene	20.110	128	196661	19.86 ug/L	99
122) 1,2,3-trichlorobenzene	20.356	180	68363	20.05 ug/L	96
123) hexachloroethane	18.301	201	23961	18.35 ug/L	99
124) 2-methylnaphthalene	21.423	142	47795	8.93 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.168	65	265515	500.00	ug/L	0.00
5) pentafluorobenzene	10.542	168	180291	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	268324	50.00	ug/L	0.00
74) chlorobenzene-d5	14.899	117	234769	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.519	152	124467	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.584	113	88935	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
53) 1,2-dichloroethane-d4 (s)	11.018	65	94010	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
75) toluene-d8 (s)	13.231	98	307195	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
99) 4-bromofluorobenzene (s)	16.201	95	99542	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.288	59	135198	250.49	ug/L	100
4) 1,4-dioxane	12.185	88	47365	1250.00	ug/L	100
6) chlorodifluoromethane	4.575	51	173885	50.00	ug/L	100
7) dichlorodifluoromethane	4.538	85	221531	50.00	ug/L	100
8) chloromethane	4.983	50	271106	63.39	ug/L	100
9) vinyl chloride	5.244	62	202575	50.00	ug/L	100
10) 1,3-butadiene	5.265	54	174152	50.00	ug/L	100
11) bromomethane	5.924	94	136363	50.00	ug/L	100
12) chloroethane	6.102	64	102771	50.00	ug/L	100
13) vinyl bromide	6.479	106	135407	50.00	ug/L	100
14) trichlorofluoromethane	6.625	101	204235	50.00	ug/L	100
15) ethyl ether	7.012	74	47757	50.00	ug/L	100
16) acrolein	7.263	56	21263	50.00	ug/L	100
17) freon 113	7.504	151	99243	50.00	ug/L	100
18) 1,1-dichloroethene	7.472	96	95332	50.00	ug/L	100
19) acetone	7.478	58	54972	200.00	ug/L	100
20) acetonitrile	7.927	41	210071	497.92	ug/L	100
21) iodomethane	7.755	142	173503	50.00	ug/L	100
22) carbon disulfide	7.906	76	303955	50.00	ug/L	100
23) methylene chloride	8.225	84	101460	50.00	ug/L	100
24) methyl acetate	7.964	43	95367	50.00	ug/L	100
25) methyl tert butyl ether	8.602	73	289278	50.00	ug/L	100
26) trans-1,2-dichloroethene	8.639	96	87063	50.00	ug/L	100
27) hexane	9.015	57	122450	50.00	ug/L	100
28) di-isopropyl ether	9.230	45	296328	50.00	ug/L	100
29) ethyl tert-butyl ether	9.716	59	287428	50.00	ug/L	100
30) 2-butanone	9.915	72	64807	200.00	ug/L	100
31) 1,1-dichloroethane	9.245	63	150460	50.00	ug/L	100
32) chloroprene	9.350	53	126005	50.00	ug/L	100
33) acrylonitrile	8.529	53	46843	50.00	ug/L	100
34) vinyl acetate	9.172	86	19253	50.00	ug/L	100
35) ethyl acetate	9.925	45	18332	50.00	ug/L	100
36) 2,2-dichloropropane	10.030	77	147291	50.00	ug/L	100
37) cis-1,2-dichloroethene	9.993	96	98957	50.00	ug/L	100
38) methyl acrylate	10.025	85	17781	50.00	ug/L	100
39) propionitrile	9.998	54	213771	500.00	ug/L	100
40) bromochloromethane	10.297	128	51335	50.00	ug/L	100
41) tetrahydrofuran	10.318	42	42873	50.00	ug/L	100
42) chloroform	10.386	83	148452	50.00	ug/L	100
43) tert-butyl formate	10.427	59	83397	50.00	ug/L	100
45) methacrylonitrile	10.202	67	44661	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.783	84	167308	50.00	ug/L	100
47) 1,1,1-trichloroethane	10.663	97	158732	50.00	ug/L	100
48) iso-butyl alcohol	10.778	43	155729	500.00	ug/L	100
49) 1,1-dichloropropene	10.830	75	115916	50.00	ug/L	100
50) carbon tetrachloride	10.867	117	139352	50.00	ug/L	100
51) tert-amyl alcohol	10.961	73	71616	250.00	ug/L	100
54) benzene	11.092	78	333746	50.00	ug/L	100
55) iso-octane	11.191	57	338231	50.00	ug/L	100
56) tert-amyl methyl ether	11.165	73	290423	50.00	ug/L	100
57) heptane	11.343	71	64085	50.00	ug/L	100
58) isopropyl acetate	10.982	87	25458	50.00	ug/L	100
59) 1,2-dichloroethane	11.113	62	113202	50.00	ug/L	100
60) n-butyl alcohol	11.557	56	316287	2500.00	ug/L	100
61) ethyl acrylate	11.808	55	116817	50.00	ug/L	100
62) trichloroethene	11.834	95	82972	50.00	ug/L	100
63) 2-nitropropane	12.624	41	39451	50.00	ug/L	100
64) methylcyclohexane	12.153	83	179728	50.00	ug/L	100
65) 2-chloroethyl vinyl ether	12.655	63	248228	250.00	ug/L	100
66) methyl methacrylate	12.085	100	26784	50.00	ug/L	100
67) 1,2-dichloropropane	12.138	63	82624	50.00	ug/L	100
68) dibromomethane	12.253	93	55306	50.00	ug/L	100
69) bromodichloromethane	12.415	83	113298	50.00	ug/L	100
70) epichlorohydrin	12.750	57	67136	250.00	ug/L	100
71) cis-1,3-dichloropropene	12.896	75	129193	50.00	ug/L	100
72) 4-methyl-2-pentanone	13.006	58	211513	200.00	ug/L	100
73) 3-methyl-1-butanol	13.001	55	203975	1000.00	ug/L	100
76) toluene	13.314	92	203166	50.00	ug/L	100
77) trans-1,3-dichloropropene	13.508	75	112228	50.00	ug/L	100
78) ethyl methacrylate	13.487	69	110593	50.00	ug/L	100
79) 1,1,2-trichloroethane	13.754	83	60685	50.00	ug/L	100
80) 2-hexanone	13.926	58	174374	200.00	ug/L	100
81) tetrachloroethene	13.921	166	97882	50.00	ug/L	100
82) 1,3-dichloropropane	13.952	76	116985	50.00	ug/L	100
83) butyl acetate	14.005	56	63825	50.00	ug/L	100
84) dibromochloromethane	14.224	129	88791	50.00	ug/L	100
85) 1,2-dibromoethane	14.397	107	83114	50.00	ug/L	100
86) n-butyl ether	14.873	57	330359	50.00	ug/L	100
87) chlorobenzene	14.936	112	216853	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	15.004	131	103547	50.00	ug/L	100
89) ethylbenzene	14.999	91	375116	50.00	ug/L	100
90) m,p-xylene	15.134	106	295033	100.00	ug/L	100
91) o-xylene	15.584	106	163011	50.00	ug/L	100
92) styrene	15.595	104	229388	50.00	ug/L	100
93) butyl acrylate	15.375	55	163103	50.00	ug/L	100
94) n-amyl acetate	15.610	70	71331	50.00	ug/L	100
95) bromoform	15.861	173	61911	50.00	ug/L	100
96) isopropylbenzene	15.977	105	445077	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	16.013	75	15057	50.00	ug/L	100
100) bromobenzene	16.416	156	93377	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	16.290	83	122654	50.00	ug/L	100
102) trans-1,4-dichloro-2-b...	16.322	53	11343	50.00	ug/L	100
103) 1,2,3-trichloropropane	16.390	110	34676	50.00	ug/L	100
104) n-propylbenzene	16.442	91	451714	50.00	ug/L	100
105) 2-chlorotoluene	16.599	126	101639	50.00	ug/L	100
106) 4-chlorotoluene	16.724	91	231027	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	16.615	105	371131	50.00	ug/L	100
108) tert-butylbenzene	17.002	134	83150	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	17.059	105	350556	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

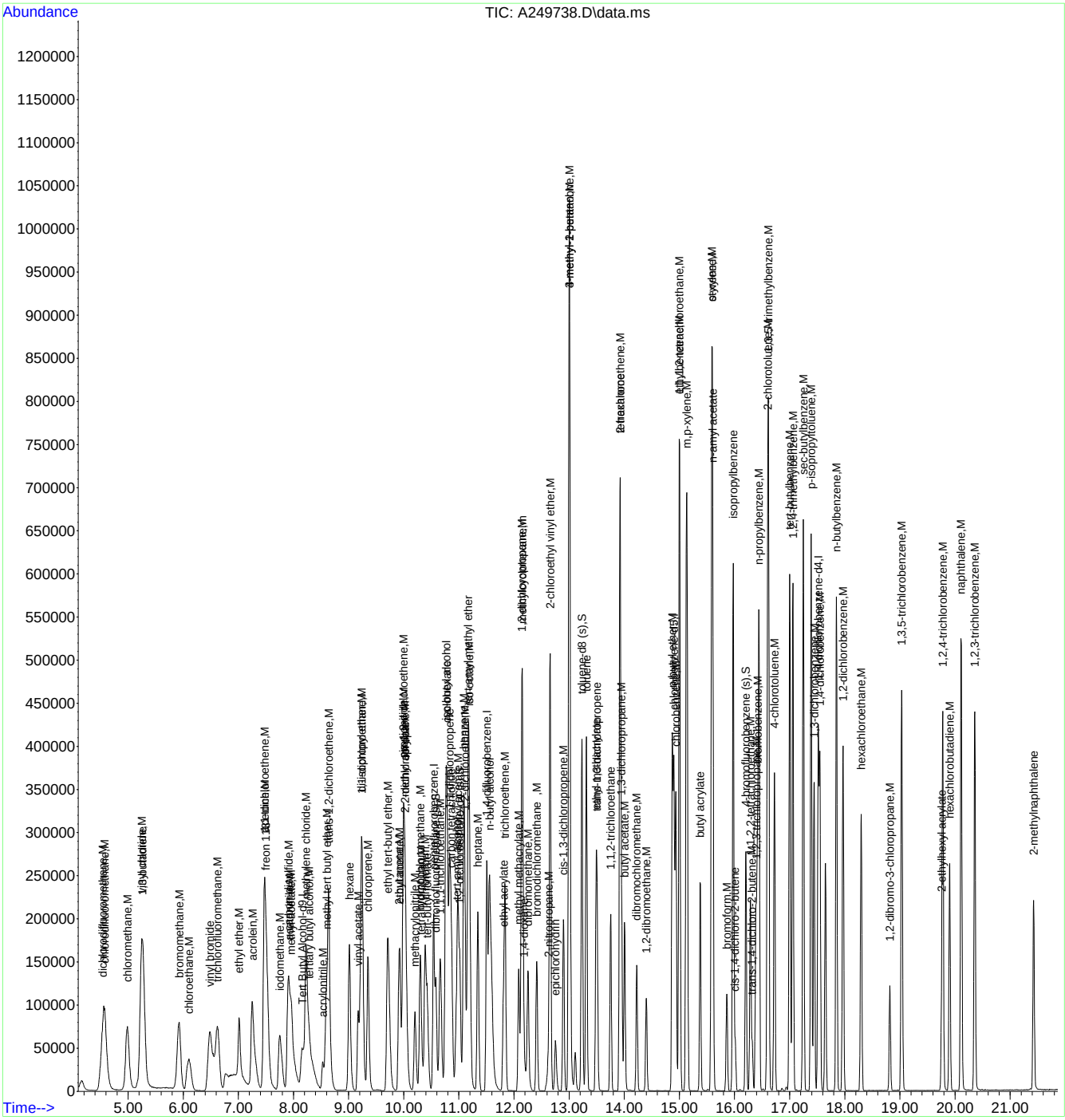
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	499103	50.00	ug/L	100
111) 1,3-dichlorobenzene	17.446	146	176170	50.00	ug/L	100
112) p-isopropyltoluene	17.389	119	413493	50.00	ug/L	100
113) 1,4-dichlorobenzene	17.551	146	175529	50.00	ug/L	100
114) 1,2-dichlorobenzene	17.969	146	190207	50.00	ug/L	100
115) n-butylbenzene	17.849	92	190429	50.00	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.817	157	43041	50.00	ug/L	100
117) 1,3,5-trichlorobenzene	19.031	180	177255	50.00	ug/L	100
118) 2-ethylhexyl acrylate	19.753	70	18405	10.00	ug/L	100
119) 1,2,4-trichlorobenzene	19.779	180	166997	50.00	ug/L	100
120) hexachlorobutadiene	19.904	225	65310	50.00	ug/L	100
121) naphthalene	20.114	128	493153	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	20.359	180	169845	50.00	ug/L	100
123) hexachloroethane	18.299	201	65036	50.00	ug/L	100
124) 2-methylnaphthalene	21.426	142	133281	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.172	65	266712	500.00	ug/L		0.00
5) pentafluorobenzene	10.542	168	185896	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.509	114	282488	50.00	ug/L		0.00
74) chlorobenzene-d5	14.898	117	259855	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	125619	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.589	113	91982	50.15	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.30%				
53) 1,2-dichloroethane-d4 (s)	11.023	65	97445	49.23	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.46%				
75) toluene-d8 (s)	13.230	98	325098	47.81	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.62%				
99) 4-bromofluorobenzene (s)	16.206	95	107484	53.49	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.98%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.293	59	282948	521.89	ug/L		96
4) 1,4-dioxane	12.179	88	100368	2636.90	ug/L		100
6) chlorodifluoromethane	4.584	51	364779	101.73	ug/L		97
7) dichlorodifluoromethane	4.548	85	489915	107.24	ug/L		98
8) chloromethane	4.987	50	583507	132.31	ug/L		96
9) vinyl chloride	5.243	62	446566	106.90	ug/L		99
10) 1,3-butadiene	5.275	54	354023	98.58	ug/L		99
11) bromomethane	5.923	94	299424	106.48	ug/L		99
12) chloroethane	6.112	64	228079	107.62	ug/L		98
13) vinyl bromide	6.478	106	305350	109.35	ug/L		100
14) trichlorofluoromethane	6.619	101	450874	107.05	ug/L		99
15) ethyl ether	7.022	74	97917	99.42	ug/L		97
16) acrolein	7.268	56	46438	105.91	ug/L		96
17) freon 113	7.508	151	212777	103.97	ug/L		99
18) 1,1-dichloroethene	7.477	96	210328	106.99	ug/L		100
19) acetone	7.477	58	114928	405.53	ug/L		97
20) acetonitrile	7.927	41	442507	1017.22	ug/L		99
21) iodomethane	7.759	142	380358	106.31	ug/L		99
22) carbon disulfide	7.911	76	656775	104.78	ug/L		99
23) methylene chloride	8.230	84	219461	104.89	ug/L		99
24) methyl acetate	7.963	43	191835	97.54	ug/L		99
25) methyl tert butyl ether	8.606	73	625971	104.93	ug/L		99
26) trans-1,2-dichloroethene	8.638	96	182109	101.43	ug/L		96
27) hexane	9.014	57	258839	102.50	ug/L		100
28) di-isopropyl ether	9.234	45	629934	103.09	ug/L		99
29) ethyl tert-butyl ether	9.720	59	620417	104.67	ug/L		98
30) 2-butanone	9.919	72	141373	423.13	ug/L		95
31) 1,1-dichloroethane	9.245	63	314904	101.49	ug/L		97
32) chloroprene	9.354	53	263935	101.57	ug/L		99
33) acrylonitrile	8.533	53	99080	102.57	ug/L		92
34) vinyl acetate	9.177	86	41857	105.43	ug/L		98
35) ethyl acetate	9.935	45	39797	105.27	ug/L	#	64
36) 2,2-dichloropropane	10.034	77	309707	101.96	ug/L		97
37) cis-1,2-dichloroethene	9.992	96	208610	102.23	ug/L		97
38) methyl acrylate	10.019	85	38723	105.61	ug/L	#	79
39) propionitrile	10.003	54	453565	1028.88	ug/L		90
40) bromochloromethane	10.301	128	110378	104.27	ug/L		98
41) tetrahydrofuran	10.317	42	90086	101.89	ug/L		100
42) chloroform	10.390	83	313179	102.30	ug/L		97
43) tert-butyl formate	10.427	59	178804	103.97	ug/L		98
45) methacrylonitrile	10.207	67	97104	105.43	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.782	84	378542	109.72	ug/L		96
47) 1,1,1-trichloroethane	10.662	97	338960	103.55	ug/L		99
48) iso-butyl alcohol	10.782	43	337885	1052.14	ug/L		94
49) 1,1-dichloropropene	10.834	75	251340	105.15	ug/L		97
50) carbon tetrachloride	10.866	117	299581	104.25	ug/L		99
51) tert-amyl alcohol	10.960	73	147878	500.65	ug/L		99
54) benzene	11.091	78	726284	103.35	ug/L		100
55) iso-octane	11.190	57	760095	106.73	ug/L		97
56) tert-amyl methyl ether	11.169	73	625081	102.22	ug/L		99
57) heptane	11.342	71	141528	104.89	ug/L		97
58) isopropyl acetate	10.981	87	56615	105.62	ug/L	#	91
59) 1,2-dichloroethane	11.112	62	242192	101.61	ug/L		98
60) n-butyl alcohol	11.556	56	668277	5017.35	ug/L		100
61) ethyl acrylate	11.807	55	258017	104.90	ug/L		99
62) trichloroethene	11.839	95	186784	106.91	ug/L		98
63) 2-nitropropane	12.623	41	83834	100.92	ug/L		90
64) methylcyclohexane	12.152	83	392005	103.59	ug/L		99
65) 2-chloroethyl vinyl ether	12.655	63	566372	541.81	ug/L		99
66) methyl methacrylate	12.090	100	58535	103.79	ug/L		92
67) 1,2-dichloropropane	12.137	63	183737	105.61	ug/L		100
68) dibromomethane	12.252	93	122911	105.55	ug/L		98
69) bromodichloromethane	12.414	83	249825	104.72	ug/L		99
70) epichlorohydrin	12.754	57	143515	507.62	ug/L		99
71) cis-1,3-dichloropropene	12.900	75	289565	106.45	ug/L		97
72) 4-methyl-2-pentanone	13.005	58	456174	409.72	ug/L		96
73) 3-methyl-1-butanol	13.005	55	430217	2003.41	ug/L		98
76) toluene	13.314	92	448283	99.67	ug/L		99
77) trans-1,3-dichloropropene	13.507	75	255043	102.66	ug/L		98
78) ethyl methacrylate	13.491	69	247587	101.13	ug/L		98
79) 1,1,2-trichloroethane	13.753	83	135915	101.17	ug/L		97
80) 2-hexanone	13.926	58	387541	401.58	ug/L		97
81) tetrachloroethene	13.920	166	217425	100.34	ug/L		98
82) 1,3-dichloropropane	13.952	76	263008	101.56	ug/L		97
83) butyl acetate	14.004	56	140998	99.79	ug/L		99
84) dibromochloromethane	14.229	129	202551	103.05	ug/L		97
85) 1,2-dibromoethane	14.401	107	192775	104.77	ug/L		100
86) n-butyl ether	14.872	57	736189	100.67	ug/L		99
87) chlorobenzene	14.935	112	497877	103.71	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.008	131	230579	100.59	ug/L		99
89) ethylbenzene	14.998	91	841371	101.32	ug/L		98
90) m,p-xylene	15.134	106	675538	206.87	ug/L		99
91) o-xylene	15.589	106	370543	102.68	ug/L		97
92) styrene	15.594	104	523372	103.07	ug/L		98
93) butyl acrylate	15.379	55	353807	97.99	ug/L		99
94) n-amyl acetate	15.610	70	151408	95.88	ug/L		98
95) bromoform	15.861	173	138280	100.90	ug/L		99
96) isopropylbenzene	15.976	105	987071	100.18	ug/L		100
97) cis-1,4-dichloro-2-butene	16.012	75	39593	118.78	ug/L		93
100) bromobenzene	16.420	156	209539	111.17	ug/L		94
101) 1,1,2,2-tetrachloroethane	16.290	83	268271	108.36	ug/L		99
102) trans-1,4-dichloro-2-b...	16.321	53	27906	121.88	ug/L		97
103) 1,2,3-trichloropropane	16.389	110	76242	108.93	ug/L		99
104) n-propylbenzene	16.441	91	998292	109.49	ug/L		98
105) 2-chlorotoluene	16.598	126	231248	112.72	ug/L		95
106) 4-chlorotoluene	16.724	91	512969	110.00	ug/L		99
107) 1,3,5-trimethylbenzene	16.619	105	829816	110.77	ug/L		98
108) tert-butylbenzene	17.001	134	189604	112.97	ug/L		99
109) 1,2,4-trimethylbenzene	17.058	105	787781	111.33	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

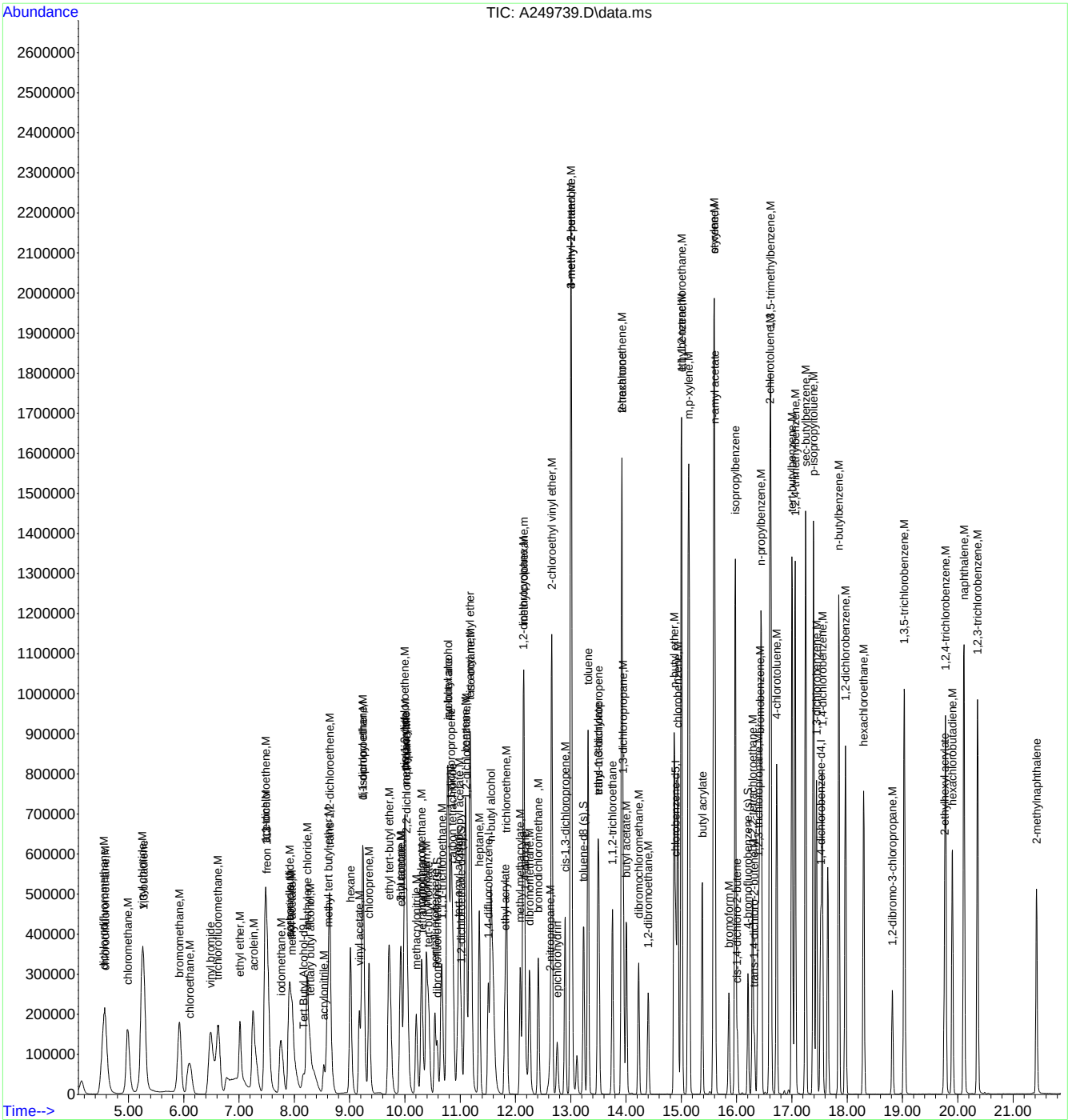
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
110) sec-butylbenzene	17.247	105	1113971	110.57 ug/L	99
111) 1,3-dichlorobenzene	17.445	146	377615	106.19 ug/L	99
112) p-isopropyltoluene	17.388	119	940249	112.65 ug/L	99
113) 1,4-dichlorobenzene	17.550	146	374743	105.77 ug/L	99
114) 1,2-dichlorobenzene	17.968	146	412603	107.47 ug/L	99
115) n-butylbenzene	17.848	92	416580	108.38 ug/L	100
116) 1,2-dibromo-3-chloropr...	18.816	157	90790	104.50 ug/L	96
117) 1,3,5-trichlorobenzene	19.035	180	384365	107.43 ug/L	97
118) 2-ethylhexyl acrylate	19.757	70	45578	24.54 ug/L	96
119) 1,2,4-trichlorobenzene	19.778	180	358670	106.40 ug/L	98
120) hexachlorobutadiene	19.904	225	151592	114.99 ug/L	99
121) naphthalene	20.113	128	1052500	105.73 ug/L	99
122) 1,2,3-trichlorobenzene	20.359	180	373638	108.99 ug/L	97
123) hexachloroethane	18.298	201	154937	118.02 ug/L	98
124) 2-methylnaphthalene	21.426	142	309744	57.57 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.173	65	263697	500.00	ug/L		0.00
5) pentafluorobenzene	10.542	168	191958	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.509	114	301221	50.00	ug/L		0.00
74) chlorobenzene-d5	14.904	117	283024	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	136920	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.589	113	93593	49.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%				
53) 1,2-dichloroethane-d4 (s)	11.018	65	101031	47.87	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 95.74%				
75) toluene-d8 (s)	13.235	98	345375	46.63	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.26%				
99) 4-bromofluorobenzene (s)	16.206	95	119187	54.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.84%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.293	59	531294	991.15	ug/L		90
4) 1,4-dioxane	12.184	88	170220	4523.21	ug/L		99
6) chlorodifluoromethane	4.580	51	710498	191.88	ug/L		97
7) dichlorodifluoromethane	4.543	85	911081	193.13	ug/L		99
8) chloromethane	4.982	50	1102514	242.10	ug/L		97
9) vinyl chloride	5.244	62	842561	195.32	ug/L		98
10) 1,3-butadiene	5.265	54	675662	182.20	ug/L		97
11) bromomethane	5.924	94	561489	193.37	ug/L		97
12) chloroethane	6.107	64	428874	195.97	ug/L		98
13) vinyl bromide	6.494	106	579303	200.91	ug/L		100
14) trichlorofluoromethane	6.619	101	852468	196.01	ug/L		99
15) ethyl ether	7.017	74	195988	192.72	ug/L		95
16) acrolein	7.268	56	93306	206.07	ug/L		95
17) freon 113	7.508	151	417880	197.74	ug/L		99
18) 1,1-dichloroethene	7.482	96	433010	213.30	ug/L		96
19) acetone	7.477	58	221447	756.70	ug/L		100
20) acetonitrile	7.927	41	824825	1836.21	ug/L		98
21) iodomethane	7.754	142	775886	210.00	ug/L		99
22) carbon disulfide	7.911	76	1333356	206.00	ug/L		98
23) methylene chloride	8.230	84	450761	208.64	ug/L		96
24) methyl acetate	7.963	43	377629	185.95	ug/L		98
25) methyl tert butyl ether	8.607	73	1255601	203.83	ug/L		97
26) trans-1,2-dichloroethene	8.638	96	368074	198.54	ug/L		98
27) hexane	9.015	57	510753	195.88	ug/L		99
28) di-isopropyl ether	9.234	45	1245940	197.45	ug/L		100
29) ethyl tert-butyl ether	9.716	59	1229912	200.95	ug/L		96
30) 2-butanone	9.925	72	290773	842.81	ug/L		98
31) 1,1-dichloroethane	9.245	63	624569	194.94	ug/L		98
32) chloroprene	9.355	53	518510	193.24	ug/L		97
33) acrylonitrile	8.534	53	197731	198.23	ug/L		93
34) vinyl acetate	9.177	86	86447	210.86	ug/L		99
35) ethyl acetate	9.935	45	75986	194.65	ug/L	#	73
36) 2,2-dichloropropane	10.035	77	611474	194.96	ug/L		99
37) cis-1,2-dichloroethene	9.993	96	418743	198.72	ug/L		97
38) methyl acrylate	10.024	85	80350	212.21	ug/L	#	83
39) propionitrile	10.003	54	905278	1988.71	ug/L		90
40) bromochloromethane	10.301	128	218861	200.21	ug/L		98
41) tetrahydrofuran	10.322	42	179160	196.24	ug/L		98
42) chloroform	10.390	83	618767	195.74	ug/L		97
43) tert-butyl formate	10.427	59	353413	199.01	ug/L		97
45) methacrylonitrile	10.207	67	197815	208.00	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.788	84	733174	205.79	ug/L		96
47) 1,1,1-trichloroethane	10.667	97	677875	200.55	ug/L		98
48) iso-butyl alcohol	10.788	43	649845	1959.65	ug/L		89
49) 1,1-dichloropropene	10.835	75	499367	202.31	ug/L		96
50) carbon tetrachloride	10.866	117	597791	201.45	ug/L		99
51) tert-amyl alcohol	10.960	73	281874	924.17	ug/L		96
54) benzene	11.091	78	1461544	195.05	ug/L		99
55) iso-octane	11.196	57	1511231	199.00	ug/L		98
56) tert-amyl methyl ether	11.170	73	1252842	192.14	ug/L		99
57) heptane	11.347	71	278811	193.78	ug/L		97
58) isopropyl acetate	10.986	87	112349	196.56	ug/L	#	92
59) 1,2-dichloroethane	11.112	62	485931	191.19	ug/L		99
60) n-butyl alcohol	11.557	56	1278121	8999.22	ug/L		98
61) ethyl acrylate	11.808	55	528115	201.36	ug/L		100
62) trichloroethene	11.839	95	380915	204.48	ug/L		97
63) 2-nitropropane	12.629	41	171466	193.58	ug/L		90
64) methylcyclohexane	12.153	83	792062	196.29	ug/L		99
65) 2-chloroethyl vinyl ether	12.660	63	1178174	1057.00	ug/L		99
66) methyl methacrylate	12.090	100	122261	203.31	ug/L		94
67) 1,2-dichloropropane	12.142	63	379705	204.68	ug/L		100
68) dibromomethane	12.252	93	253088	203.82	ug/L		98
69) bromodichloromethane	12.414	83	521464	205.00	ug/L		99
70) epichlorohydrin	12.759	57	294720	977.62	ug/L		100
71) cis-1,3-dichloropropene	12.901	75	600947	207.18	ug/L		97
72) 4-methyl-2-pentanone	13.005	58	921420	776.11	ug/L		90
73) 3-methyl-1-butanol	13.005	55	832326	3634.89	ug/L		97
76) toluene	13.314	92	924949	188.82	ug/L		98
77) trans-1,3-dichloropropene	13.507	75	523775	193.57	ug/L		99
78) ethyl methacrylate	13.492	69	509973	191.25	ug/L		97
79) 1,1,2-trichloroethane	13.753	83	278615	190.42	ug/L		98
80) 2-hexanone	13.926	58	800607	761.70	ug/L		96
81) tetrachloroethene	13.926	166	444070	188.16	ug/L		99
82) 1,3-dichloropropane	13.952	76	548088	194.32	ug/L		97
83) butyl acetate	14.004	56	291702	189.56	ug/L		97
84) dibromochloromethane	14.229	129	423368	197.76	ug/L		98
85) 1,2-dibromoethane	14.402	107	404905	202.05	ug/L		99
86) n-butyl ether	14.872	57	1495434	187.75	ug/L		100
87) chlorobenzene	14.935	112	1051588	201.13	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.008	131	477888	191.42	ug/L		99
89) ethylbenzene	14.998	91	1735733	191.91	ug/L		97
90) m,p-xylene	15.134	106	1408230	395.93	ug/L		96
91) o-xylene	15.589	106	775864	197.40	ug/L		95
92) styrene	15.599	104	1137035	205.58	ug/L		98
93) butyl acrylate	15.380	55	721095	183.37	ug/L		97
94) n-amyl acetate	15.610	70	311942	181.38	ug/L		95
95) bromoform	15.861	173	293535	196.64	ug/L		100
96) isopropylbenzene	15.976	105	1992241	185.65	ug/L		98
97) cis-1,4-dichloro-2-butene	16.013	75	110938	305.58	ug/L		97
100) bromobenzene	16.421	156	452616	220.32	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.290	83	559173	207.22	ug/L		99
102) trans-1,4-dichloro-2-b...	16.326	53	62387	249.99	ug/L		90
103) 1,2,3-trichloropropane	16.389	110	158963	208.36	ug/L		97
104) n-propylbenzene	16.447	91	2056679	206.95	ug/L		96
105) 2-chlorotoluene	16.604	126	494853	221.30	ug/L		95
106) 4-chlorotoluene	16.724	91	1089773	214.40	ug/L		100
107) 1,3,5-trimethylbenzene	16.619	105	1708628	209.26	ug/L		97
108) tert-butylbenzene	17.001	134	403354	220.49	ug/L		96
109) 1,2,4-trimethylbenzene	17.059	105	1632372	211.65	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

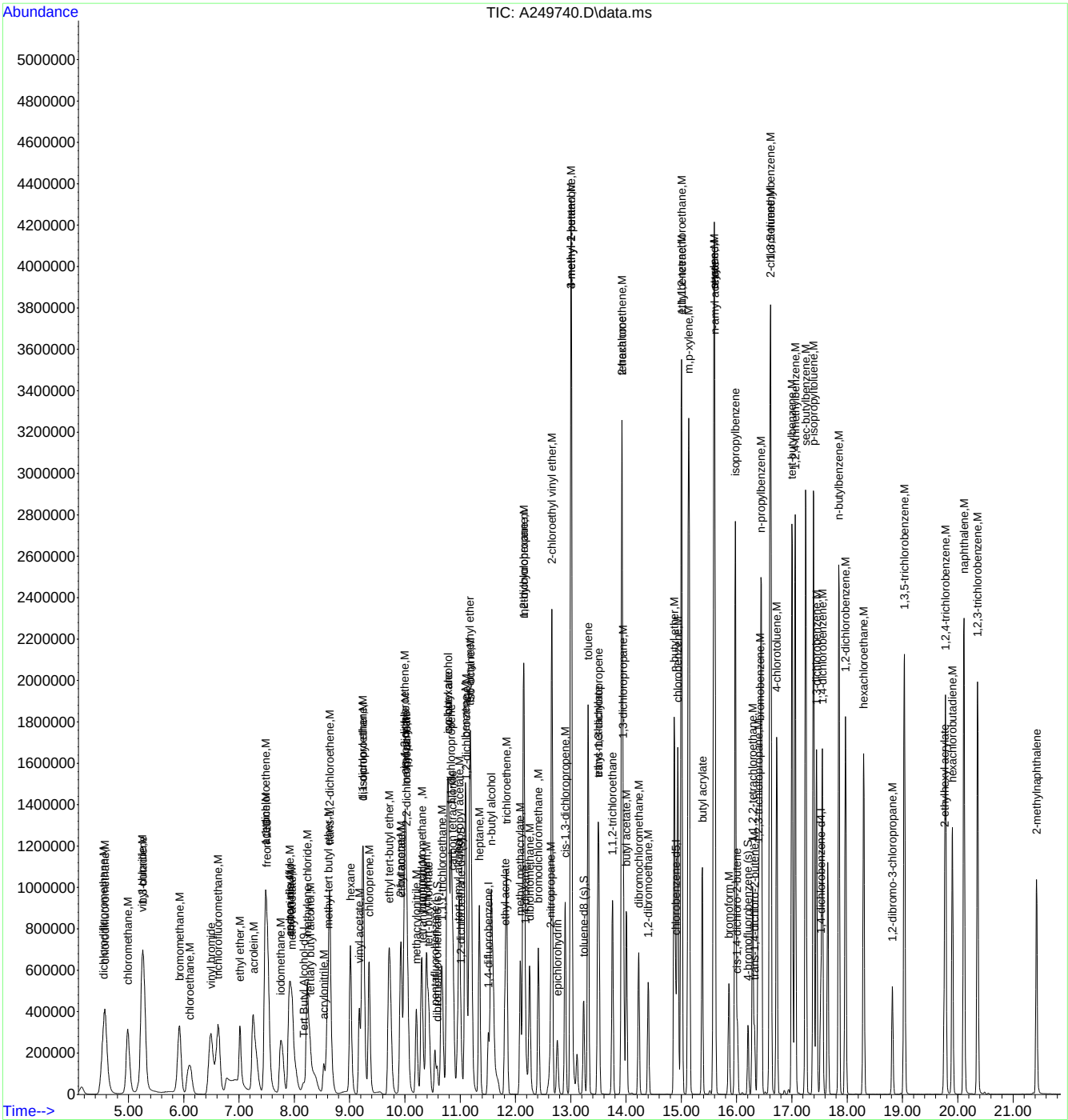
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	2248694	204.78	ug/L	98
111) 1,3-dichlorobenzene	17.446	146	788132	203.34	ug/L	98
112) p-isopropyltoluene	17.393	119	1917115	210.74	ug/L	97
113) 1,4-dichlorobenzene	17.550	146	779510	201.85	ug/L	99
114) 1,2-dichlorobenzene	17.969	146	865684	206.87	ug/L	99
115) n-butylbenzene	17.848	92	873916	208.59	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.821	157	185176	195.55	ug/L	95
117) 1,3,5-trichlorobenzene	19.036	180	800123	205.17	ug/L	98
118) 2-ethylhexyl acrylate	19.757	70	97946	48.38	ug/L	95
119) 1,2,4-trichlorobenzene	19.778	180	735266	200.12	ug/L	98
120) hexachlorobutadiene	19.904	225	318355	221.56	ug/L	99
121) naphthalene	20.113	128	2109560	194.43	ug/L	98
122) 1,2,3-trichlorobenzene	20.359	180	760347	203.48	ug/L	98
123) hexachloroethane	18.298	201	334325	233.65	ug/L	98
124) 2-methylnaphthalene	21.426	142	635435	108.35	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.171	65	278791	500.00	ug/L	0.00
5) pentafluorobenzene	10.545	168	190481	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.508	114	276478	50.00	ug/L	0.00
74) chlorobenzene-d5	14.902	117	241043	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.517	152	126057	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.587	113	92745	49.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%			
53) 1,2-dichloroethane-d4 (s)	11.021	65	96906	48.79	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.58%			
75) toluene-d8 (s)	13.234	98	317279	49.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.98%			
99) 4-bromofluorobenzene (s)	16.204	95	99698	50.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.54%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.286	59	145195	252.17	ug/L	98
4) 1,4-dioxane	12.182	88	51091	1369.99	ug/L	98
6) chlorodifluoromethane	4.578	51	209275	56.57	ug/L	96
7) dichlorodifluoromethane	4.552	85	229431	50.99	ug/L	97
8) chloromethane	4.986	50	278388	56.96	ug/L	96
9) vinyl chloride	5.252	62	201394	48.64	ug/L	98
10) 1,3-butadiene	5.268	54	221038	56.01	ug/L	97
11) bromomethane	5.922	94	136591	46.96	ug/L	96
12) chloroethane	6.110	64	103425	49.14	ug/L	96
13) vinyl bromide	6.492	106	140950	50.80	ug/L	100
14) trichlorofluoromethane	6.628	101	206096	48.10	ug/L	100
15) ethyl ether	7.015	74	49963	52.13	ug/L	96
16) acrolein	7.266	56	22951	52.65	ug/L	98
17) freon 113	7.507	151	119419	57.36	ug/L	98
18) 1,1-dichloroethene	7.475	96	99339	48.24	ug/L	99
19) acetone	7.475	58	57108	206.21	ug/L	87
20) acetonitrile	7.925	41	156922	357.91	ug/L	97
21) iodomethane	7.747	142	216694	59.23	ug/L	98
22) carbon disulfide	7.904	76	362128	52.85	ug/L	99
23) methylene chloride	8.228	84	109225	50.92	ug/L	97
24) methyl acetate	7.967	43	98042	50.54	ug/L	99
25) methyl tert butyl ether	8.605	73	627854	103.43	ug/L	88
26) trans-1,2-dichloroethene	8.642	96	91110	50.93	ug/L	94
27) hexane	9.013	57	135078	52.21	ug/L	99
28) di-isopropyl ether	9.227	45	301081	48.43	ug/L	96
29) ethyl tert-butyl ether	9.714	59	299303	50.32	ug/L	99
30) 2-butanone	9.918	72	69110	216.27	ug/L	97
31) 1,1-dichloroethane	9.248	63	161624	50.26	ug/L	98
32) chloroprene	9.353	53	138984	53.32	ug/L	97
33) acrylonitrile	8.532	53	54501	55.14	ug/L	96
34) vinyl acetate	9.180	86	19196	46.73	ug/L	94
35) ethyl acetate	9.928	45	17665	49.46	ug/L	96
36) 2,2-dichloropropane	10.033	77	151859	48.45	ug/L	99
37) cis-1,2-dichloroethene	9.991	96	101579	49.27	ug/L	97
38) methyl acrylate	10.022	85	18989	53.30	ug/L #	87
39) propionitrile	10.001	54	231885	549.24	ug/L	87
40) bromochloromethane	10.300	128	56364	53.58	ug/L	96
41) tetrahydrofuran	10.315	42	46505	50.73	ug/L	99
42) chloroform	10.388	83	159958	47.86	ug/L	97
43) tert-butyl formate	10.430	59	80795	47.58	ug/L	99
45) methacrylonitrile	10.200	67	48162	52.71	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.781	84	182903	52.64	ug/L		99
47) 1,1,1-trichloroethane	10.660	97	167826	51.24	ug/L		98
48) iso-butyl alcohol	10.781	43	166270	527.01	ug/L		91
49) 1,1-dichloropropene	10.833	75	123493	50.46	ug/L		96
50) carbon tetrachloride	10.864	117	151125	51.62	ug/L		99
51) tert-amyl alcohol	10.959	73	78985	269.30	ug/L		95
54) benzene	11.089	78	356262	50.48	ug/L		99
55) iso-octane	11.189	57	361996	54.65	ug/L		97
56) tert-amyl methyl ether	11.168	73	301671	50.19	ug/L		100
57) heptane	11.346	71	78545	59.85	ug/L		97
58) isopropyl acetate	10.979	87	25540	49.32	ug/L		96
59) 1,2-dichloroethane	11.110	62	117856	46.53	ug/L		100
60) n-butyl alcohol	11.555	56	336110	2770.04	ug/L		99
61) ethyl acrylate	11.806	55	125478	54.51	ug/L		99
62) trichloroethene	11.837	95	90919	50.58	ug/L		98
63) 2-nitropropane	12.627	41	43598	57.17	ug/L		85
64) methylcyclohexane	12.151	83	191579	51.65	ug/L		98
65) 2-chloroethyl vinyl ether	12.653	63	275734	288.77	ug/L		98
66) methyl methacrylate	12.088	100	28657	56.33	ug/L	#	79
67) 1,2-dichloropropane	12.135	63	89190	52.37	ug/L		96
68) dibromomethane	12.256	93	59227	51.66	ug/L		96
69) bromodichloromethane	12.413	83	117147	49.78	ug/L		98
70) epichlorohydrin	12.752	57	72425	283.14	ug/L		99
71) cis-1,3-dichloropropene	12.899	75	136850	54.42	ug/L		99
72) 4-methyl-2-pentanone	13.004	58	223650	212.50	ug/L		100
73) 3-methyl-1-butanol	13.004	55	223762	1132.82	ug/L		98
76) toluene	13.312	92	213443	50.10	ug/L		99
77) trans-1,3-dichloropropene	13.511	75	122253	55.79	ug/L		99
78) ethyl methacrylate	13.490	69	119191	53.76	ug/L		97
79) 1,1,2-trichloroethane	13.751	83	64357	52.88	ug/L		98
80) 2-hexanone	13.924	58	182459	202.81	ug/L		99
81) tetrachloroethene	13.924	166	110934	53.19	ug/L		98
82) 1,3-dichloropropane	13.950	76	125801	53.70	ug/L		95
83) butyl acetate	14.002	56	66879	49.97	ug/L		96
84) dibromochloromethane	14.227	129	97488	53.47	ug/L		94
85) 1,2-dibromoethane	14.400	107	88205	52.92	ug/L		99
86) n-butyl ether	14.871	57	360955	51.61	ug/L		100
87) chlorobenzene	14.933	112	231421	52.25	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.007	131	110887	49.96	ug/L		97
89) ethylbenzene	15.001	91	391290	49.45	ug/L		100
90) m,p-xylene	15.132	106	309651	100.64	ug/L		97
91) o-xylene	15.587	106	173058	50.84	ug/L		98
92) styrene	15.598	104	239009	48.84	ug/L		98
93) butyl acrylate	15.378	55	166333	47.68	ug/L		96
94) n-amyl acetate	15.608	70	68678	43.79	ug/L		94
95) bromoform	15.859	173	69347	54.63	ug/L		98
96) isopropylbenzene	15.974	105	473054	51.38	ug/L		98
97) cis-1,4-dichloro-2-butene	16.016	75	14580	53.23	ug/L		94
100) bromobenzene	16.419	156	98274	53.01	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.288	83	127755	53.06	ug/L		99
102) trans-1,4-dichloro-2-b...	16.319	53	12481	66.85	ug/L		92
103) 1,2,3-trichloropropane	16.387	110	35816	51.95	ug/L		96
104) n-propylbenzene	16.445	91	473850	52.39	ug/L		99
105) 2-chlorotoluene	16.597	126	105193	52.22	ug/L		99
106) 4-chlorotoluene	16.722	91	244789	51.99	ug/L		99
107) 1,3,5-trimethylbenzene	16.618	105	389512	55.85	ug/L		100
108) tert-butylbenzene	17.005	134	89380	55.32	ug/L		98
109) 1,2,4-trimethylbenzene	17.057	105	376465	54.55	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

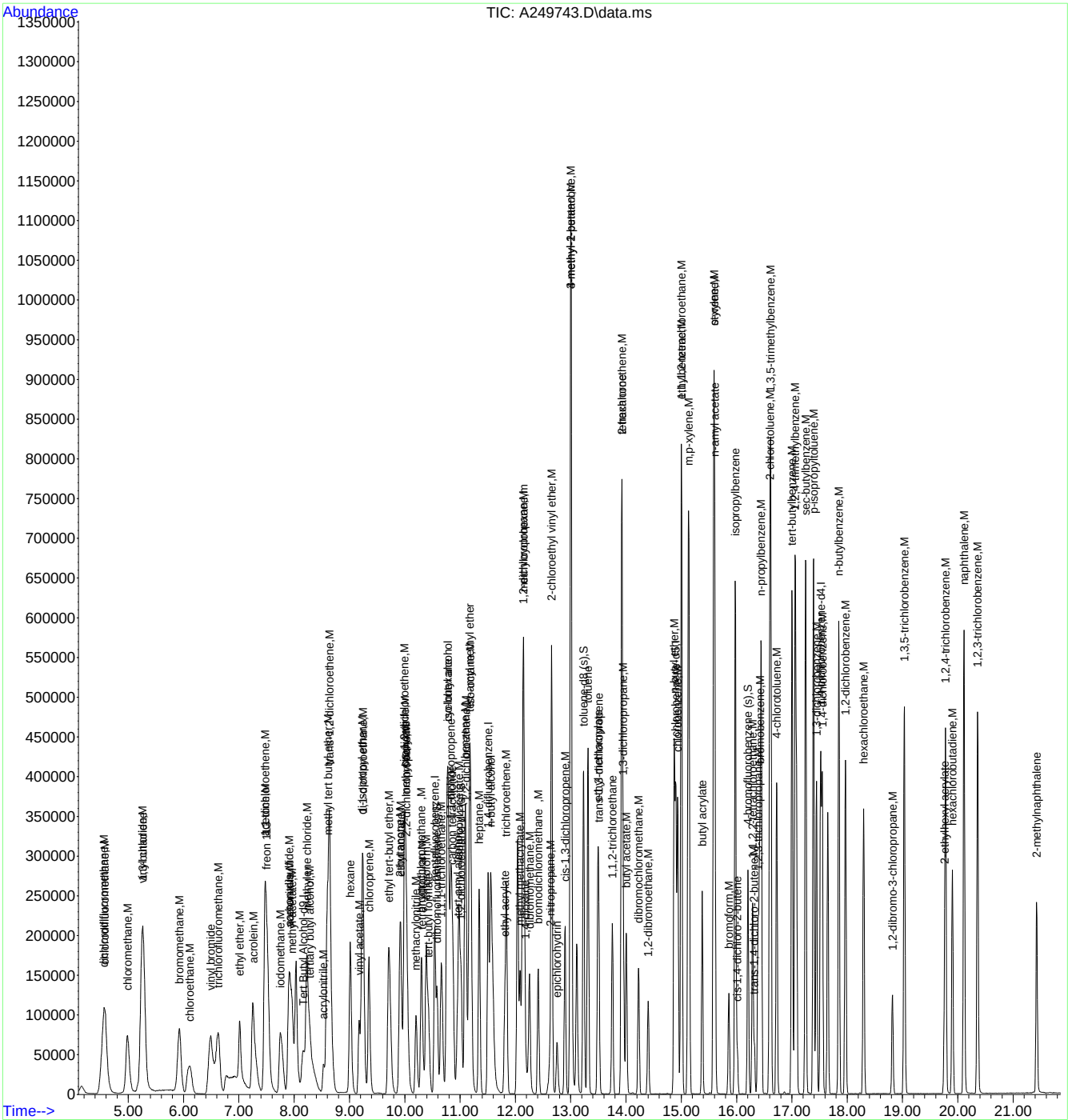
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.245	105	528954	55.55	ug/L	99
111) 1,3-dichlorobenzene	17.444	146	186510	50.75	ug/L	99
112) p-isopropyltoluene	17.392	119	447060	56.34	ug/L	100
113) 1,4-dichlorobenzene	17.549	146	185211	49.79	ug/L	98
114) 1,2-dichlorobenzene	17.967	146	200439	50.33	ug/L	98
115) n-butylbenzene	17.847	92	196700	50.70	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.819	157	43427	51.64	ug/L	96
117) 1,3,5-trichlorobenzene	19.034	180	184013	49.01	ug/L	99
118) 2-ethylhexyl acrylate	19.756	70	21343	10.25	ug/L	98
119) 1,2,4-trichlorobenzene	19.777	180	171800	50.87	ug/L	96
120) hexachlorobutadiene	19.902	225	67354	50.13	ug/L	96
121) naphthalene	20.111	128	529233	53.60	ug/L	100
122) 1,2,3-trichlorobenzene	20.357	180	179369	52.91	ug/L	99
123) hexachloroethane	18.302	201	73164	58.60	ug/L	99
124) 2-methylnaphthalene	21.424	142	143472	27.25	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249744.D
Acq On : 11 May 2019 9:46 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 14 14:00:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

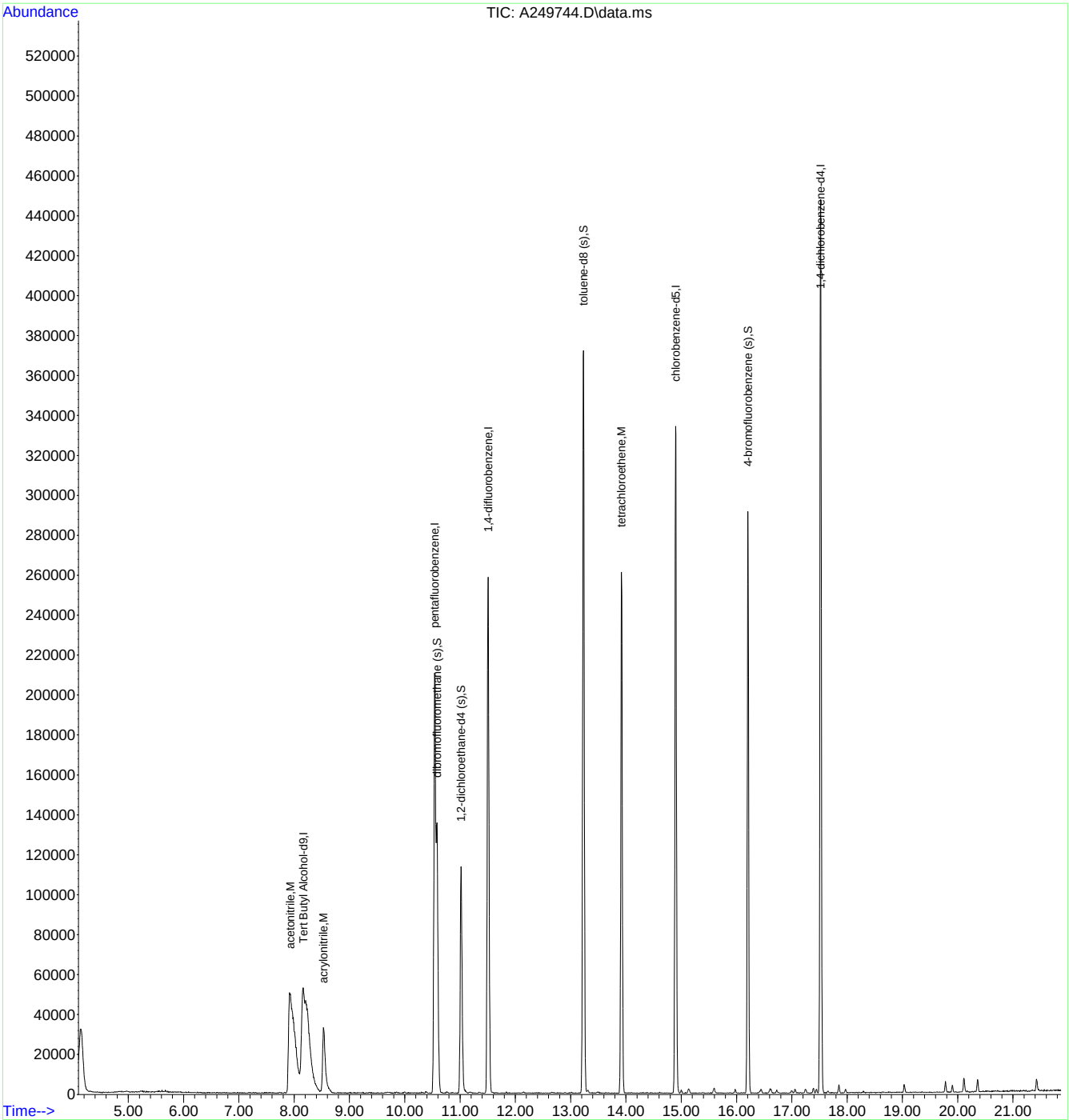
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	274172	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	192266	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.508	114	267622	50.00	ug/L	0.00
74) chlorobenzene-d5	14.897	117	214926	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.522	152	136580	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.582	113	92465	48.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.58%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	96913	50.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.82%			
75) toluene-d8 (s)	13.234	98	293064	51.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.54%			
99) 4-bromofluorobenzene (s)	16.204	95	103621	48.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.42%			
Target Compounds						Qvalue
20) acetonitrile	7.930	41	219958	497.02	ug/L	99
33) acrylonitrile	8.532	53	45221	45.33	ug/L	96
81) tetrachloroethene	13.919	166	90735	48.80	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249744.D
Acq On : 11 May 2019 9:46 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 14 14:00:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251126.d
Acq On : 26 Jun 2019 7:02 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9712,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:08:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.168	65	264932	500.00	ug/L	0.00
5) pentafluorobenzene	10.537	168	196459	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	287923	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	243654	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	129600	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	99099	51.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.36%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	107322	51.89	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.78%			
75) toluene-d8 (s)	13.226	98	328421	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.36%			
99) 4-bromofluorobenzene (s)	16.196	95	106063	52.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.288	59	139489	254.93	ug/L	99
4) 1,4-dioxane	12.174	88	49298	1391.07	ug/L	99
6) chlorodifluoromethane	4.591	51	177607	46.55	ug/L	95
7) dichlorodifluoromethane	4.564	85	220057	47.42	ug/L	97
8) chloromethane	5.004	50	221818	44.00	ug/L	97
9) vinyl chloride	5.265	62	204211	47.82	ug/L	99
10) 1,3-butadiene	5.286	54	133225	32.73	ug/L	98
11) bromomethane	5.935	94	135781	45.27	ug/L	99
12) chloroethane	6.113	64	105430	48.57	ug/L	98
13) vinyl bromide	6.500	106	121154	42.34	ug/L	98
14) trichlorofluoromethane	6.636	101	215541	48.78	ug/L	98
15) ethyl ether	7.017	74	50781	51.37	ug/L	94
16) acrolein	7.263	56	24055	53.50	ug/L	97
17) freon 113	7.509	151	100023	46.58	ug/L	98
18) 1,1-dichloroethene	7.472	96	106729	50.25	ug/L	96
19) acetone	7.472	58	58147	203.57	ug/L	92
20) acetonitrile	7.927	41	231428	511.78	ug/L	98
21) iodomethane	7.760	142	197475	52.33	ug/L	99
22) carbon disulfide	7.917	76	335353	47.45	ug/L	99
23) methylene chloride	8.231	84	116349	52.59	ug/L	99
24) methyl acetate	7.959	43	102659	51.31	ug/L	100
25) methyl tert butyl ether	8.607	73	319233	50.99	ug/L	99
26) trans-1,2-dichloroethene	8.639	96	92758	50.28	ug/L	96
27) hexane	9.010	57	119699	44.86	ug/L	100
28) di-isopropyl ether	9.230	45	325032	50.69	ug/L	100
29) ethyl tert-butyl ether	9.716	59	315814	51.48	ug/L	95
30) 2-butanone	9.910	72	68347	207.38	ug/L #	88
31) 1,1-dichloroethane	9.240	63	163071	49.17	ug/L	97
32) chloroprene	9.345	53	129845	48.30	ug/L	98
33) acrylonitrile	8.529	53	52062	51.07	ug/L	94
34) vinyl acetate	9.172	86	21866	51.61	ug/L	99
35) ethyl acetate	9.920	45	19563	53.11	ug/L	96
36) 2,2-dichloropropane	10.019	77	168415	52.10	ug/L	99
37) cis-1,2-dichloroethene	9.988	96	107568	50.58	ug/L	99
38) methyl acrylate	10.019	85	19065	51.89	ug/L	96
39) propionitrile	9.993	54	225669	518.25	ug/L	97
40) bromochloromethane	10.291	128	57087	52.62	ug/L	98
41) tetrahydrofuran	10.312	42	44498	47.07	ug/L	99
42) chloroform	10.380	83	168505	48.88	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251126.d
Acq On : 26 Jun 2019 7:02 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9712,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:08:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	10.422	59	100305	57.27	ug/L		98
45)	methacrylonitrile	10.197	67	49902	52.95	ug/L		80
46)	cyclohexane	10.783	84	162763	45.42	ug/L		95
47)	1,1,1-trichloroethane	10.663	97	174335	51.60	ug/L		95
48)	iso-butyl alcohol	10.778	43	159695	490.77	ug/L		87
49)	1,1-dichloropropene	10.830	75	122506	48.54	ug/L		99
50)	carbon tetrachloride	10.861	117	156006	51.67	ug/L		99
51)	tert-amyl alcohol	10.950	73	72699	240.33	ug/L	#	87
54)	benzene	11.086	78	364249	49.56	ug/L		98
55)	iso-octane	11.181	57	348899	50.58	ug/L		99
56)	tert-amyl methyl ether	11.165	73	324443	51.83	ug/L		97
57)	heptane	11.343	71	63146	46.20	ug/L		96
58)	isopropyl acetate	10.982	87	27869	51.68	ug/L		97
59)	1,2-dichloroethane	11.107	62	125554	47.60	ug/L		98
60)	n-butyl alcohol	11.552	56	324299	2566.46	ug/L		98
61)	ethyl acrylate	11.803	55	124747	52.04	ug/L		99
62)	trichloroethene	11.829	95	92161	49.24	ug/L		93
63)	2-nitropropane	12.619	41	40421	50.90	ug/L		99
64)	methylcyclohexane	12.148	83	176052	45.57	ug/L		97
65)	2-chloroethyl vinyl ether	12.645	63	279888	281.47	ug/L		97
66)	methyl methacrylate	12.080	100	29508	55.69	ug/L		94
67)	1,2-dichloropropane	12.132	63	93954	52.97	ug/L		98
68)	dibromomethane	12.247	93	65033	54.47	ug/L		99
69)	bromodichloromethane	12.404	83	133573	54.51	ug/L		98
70)	epichlorohydrin	12.744	57	71036	266.67	ug/L		100
71)	cis-1,3-dichloropropene	12.891	75	148258	56.61	ug/L		97
72)	4-methyl-2-pentanone	12.995	58	226075	206.27	ug/L		97
73)	3-methyl-1-butanol	12.995	55	207210	1007.32	ug/L		97
76)	toluene	13.309	92	217516	50.51	ug/L		100
77)	trans-1,3-dichloropropene	13.503	75	123495	55.75	ug/L		98
78)	ethyl methacrylate	13.482	69	118587	52.91	ug/L		96
79)	1,1,2-trichloroethane	13.743	83	68674	55.82	ug/L		96
80)	2-hexanone	13.921	58	181464	199.54	ug/L		98
81)	tetrachloroethene	13.916	166	99640	47.27	ug/L		100
82)	1,3-dichloropropane	13.942	76	126885	53.59	ug/L		96
83)	butyl acetate	14.000	56	69232	51.17	ug/L		97
84)	dibromochloromethane	14.219	129	99758	54.13	ug/L		96
85)	1,2-dibromoethane	14.397	107	93986	55.78	ug/L		96
86)	n-butyl ether	14.868	57	351028	49.65	ug/L		99
87)	chlorobenzene	14.931	112	229932	51.36	ug/L		99
88)	1,1,1,2-tetrachloroethane	14.999	131	116334	51.86	ug/L		99
89)	ethylbenzene	14.993	91	398447	49.81	ug/L		99
90)	m,p-xylene	15.129	106	312503	100.48	ug/L		98
91)	o-xylene	15.579	106	176444	51.28	ug/L		98
92)	styrene	15.590	104	243396	49.20	ug/L		100
93)	butyl acrylate	15.370	55	179148	50.80	ug/L		97
94)	n-amyl acetate	15.605	70	78028	49.22	ug/L		99
95)	bromoform	15.851	173	71254	55.53	ug/L		97
96)	isopropylbenzene	15.971	105	479129	51.48	ug/L		98
97)	cis-1,4-dichloro-2-butene	16.008	75	42784	154.54	ug/L		96
100)	bromobenzene	16.411	156	104269	54.71	ug/L		96
101)	1,1,2,2-tetrachloroethane	16.280	83	143344	57.91	ug/L		98
102)	trans-1,4-dichloro-2-b...	16.317	53	26049	135.71	ug/L		89
103)	1,2,3-trichloropropane	16.379	110	39641	55.92	ug/L		98
104)	n-propylbenzene	16.437	91	496653	53.41	ug/L		100
105)	2-chlorotoluene	16.594	126	110127	53.17	ug/L		99
106)	4-chlorotoluene	16.719	91	255198	52.72	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251126.d
Acq On : 26 Jun 2019 7:02 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9712,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:08:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.609	105	402632	56.15	ug/L	99
108) tert-butylbenzene	16.996	134	91299	54.97	ug/L	95
109) 1,2,4-trimethylbenzene	17.054	105	384459	54.19	ug/L	99
110) sec-butylbenzene	17.242	105	538411	55.00	ug/L	99
111) 1,3-dichlorobenzene	17.441	146	190664	50.47	ug/L	99
112) p-isopropyltoluene	17.383	119	451532	55.35	ug/L	99
113) 1,4-dichlorobenzene	17.540	146	193812	50.68	ug/L	98
114) 1,2-dichlorobenzene	17.964	146	213345	52.11	ug/L	99
115) n-butylbenzene	17.844	92	209665	52.57	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.811	157	45037	52.09	ug/L	98
117) 1,3,5-trichlorobenzene	19.026	180	197842	51.26	ug/L	99
118) 2-ethylhexyl acrylate	19.747	70	20651	9.70	ug/L	99
119) 1,2,4-trichlorobenzene	19.768	180	185051	53.29	ug/L	98
120) hexachlorobutadiene	19.894	225	74496	53.93	ug/L	95
121) naphthalene	20.103	128	511756	50.41	ug/L	99
122) 1,2,3-trichlorobenzene	20.349	180	189151	54.27	ug/L	93
123) hexachloroethane	18.294	201	83258	64.86	ug/L	98
124) 2-methylnaphthalene	21.416	142	120502	22.26	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

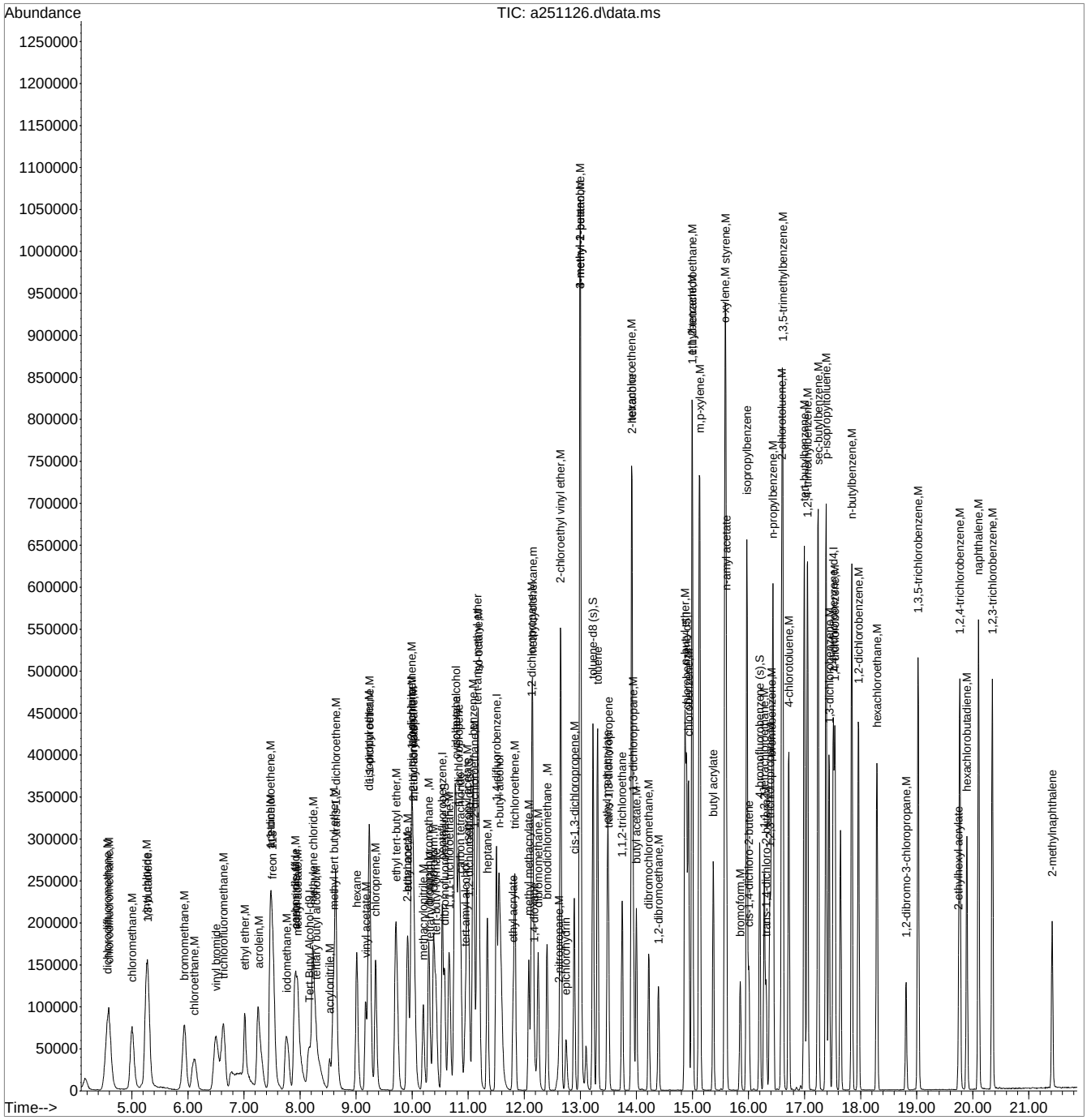
7.7.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251126.d
Acq On : 26 Jun 2019 7:02 pm
Operator : edwardd
Sample : cc9645-50 Inst : MSA
Misc : MS35609,VA9712,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:08:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251148.d
Acq On : 27 Jun 2019 5:53 am
Operator : deving
Sample : ecc9645-50 Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 49 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:10:58 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.149	65	257586	500.00	ug/L	-0.02
5) pentafluorobenzene	10.539	168	183055	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	267382	50.00	ug/L	0.00
74) chlorobenzene-d5	14.896	117	236438	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.511	152	124182	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.576	113	93626	51.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.78%			
53) 1,2-dichloroethane-d4 (s)	11.015	65	99955	52.04	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.08%			
75) toluene-d8 (s)	13.227	98	310688	49.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.82%			
99) 4-bromofluorobenzene (s)	16.198	95	103097	53.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.60%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.290	59	138325	260.01	ug/L	97
4) 1,4-dioxane	12.181	88	48585	1410.05	ug/L	99
6) chlorodifluoromethane	4.577	51	176692	49.70	ug/L	96
7) dichlorodifluoromethane	4.556	85	218692	50.57	ug/L	99
8) chloromethane	4.995	50	218813	46.59	ug/L	98
9) vinyl chloride	5.257	62	204604	51.42	ug/L	97
10) 1,3-butadiene	5.278	54	171437	45.21	ug/L	96
11) bromomethane	5.937	94	134979	48.29	ug/L	98
12) chloroethane	6.114	64	100570	49.72	ug/L	97
13) vinyl bromide	6.491	106	120207	45.08	ug/L	100
14) trichlorofluoromethane	6.627	101	211298	51.32	ug/L	97
15) ethyl ether	7.014	74	45684	49.60	ug/L	94
16) acrolein	7.249	56	20933	49.97	ug/L	87
17) freon 113	7.511	151	98086	49.02	ug/L	100
18) 1,1-dichloroethene	7.469	96	99992	50.52	ug/L	99
19) acetone	7.469	58	56104	210.80	ug/L	92
20) acetonitrile	7.919	41	227436	539.78	ug/L	98
21) iodomethane	7.751	142	187378	53.29	ug/L	97
22) carbon disulfide	7.898	76	317485	48.22	ug/L	99
23) methylene chloride	8.222	84	108162	52.47	ug/L	98
24) methyl acetate	7.966	43	96001	51.49	ug/L	100
25) methyl tert butyl ether	8.599	73	310173	53.17	ug/L	100
26) trans-1,2-dichloroethene	8.630	96	88885	51.70	ug/L	98
27) hexane	9.012	57	110340	44.38	ug/L	98
28) di-isopropyl ether	9.226	45	311260	52.10	ug/L	100
29) ethyl tert-butyl ether	9.713	59	305647	53.48	ug/L	96
30) 2-butanone	9.917	72	68347	222.56	ug/L	99
31) 1,1-dichloroethane	9.242	63	155585	50.34	ug/L	99
32) chloroprene	9.347	53	122854	49.05	ug/L	97
33) acrylonitrile	8.525	53	50786	53.47	ug/L	98
34) vinyl acetate	9.169	86	20116	50.96	ug/L	96
35) ethyl acetate	9.927	45	19155	55.81	ug/L #	82
36) 2,2-dichloropropane	10.032	77	139631	46.35	ug/L	99
37) cis-1,2-dichloroethene	9.985	96	100394	50.67	ug/L	94
38) methyl acrylate	10.016	85	17721	51.76	ug/L #	90
39) propionitrile	9.995	54	219474	540.93	ug/L	94
40) bromochloromethane	10.293	128	53791	53.21	ug/L	98
41) tetrahydrofuran	10.314	42	42861	48.66	ug/L	99
42) chloroform	10.382	83	157753	49.11	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251148.d
Acq On : 27 Jun 2019 5:53 am
Operator : deving
Sample : ecc9645-50 Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 49 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:10:58 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.419	59	94608	57.98	ug/L	99
45) methacrylonitrile	10.194	67	46056	52.45	ug/L	92
46) cyclohexane	10.774	84	158964	47.61	ug/L	96
47) 1,1,1-trichloroethane	10.654	97	170377	54.12	ug/L	95
48) iso-butyl alcohol	10.774	43	157662	520.00	ug/L	91
49) 1,1-dichloropropene	10.827	75	115884	49.28	ug/L	96
50) carbon tetrachloride	10.858	117	148862	52.91	ug/L	100
51) tert-amyl alcohol	10.957	73	71552	253.86	ug/L	99
54) benzene	11.083	78	346988	50.84	ug/L	99
55) iso-octane	11.182	57	320003	49.96	ug/L	98
56) tert-amyl methyl ether	11.161	73	311576	53.60	ug/L	99
57) heptane	11.339	71	56794	44.75	ug/L	97
58) isopropyl acetate	10.973	87	27698	55.31	ug/L	95
59) 1,2-dichloroethane	11.109	62	122085	49.84	ug/L	97
60) n-butyl alcohol	11.549	56	325856	2776.89	ug/L	97
61) ethyl acrylate	11.800	55	121496	54.58	ug/L	99
62) trichloroethene	11.831	95	88718	51.04	ug/L	94
63) 2-nitropropane	12.615	41	39511	53.57	ug/L	88
64) methylcyclohexane	12.150	83	168057	46.85	ug/L	97
65) 2-chloroethyl vinyl ether	12.647	63	269927	292.30	ug/L	98
66) methyl methacrylate	12.082	100	27867	56.64	ug/L	93
67) 1,2-dichloropropane	12.134	63	89038	54.06	ug/L	92
68) dibromomethane	12.249	93	62037	55.95	ug/L	99
69) bromodichloromethane	12.406	83	125666	55.22	ug/L	99
70) epichlorohydrin	12.746	57	67943	274.65	ug/L	100
71) cis-1,3-dichloropropene	12.887	75	135600	55.76	ug/L	95
72) 4-methyl-2-pentanone	12.997	58	221439	217.56	ug/L	97
73) 3-methyl-1-butanol	12.997	55	206067	1078.72	ug/L	97
76) toluene	13.306	92	206788	49.49	ug/L	97
77) trans-1,3-dichloropropene	13.499	75	115249	53.61	ug/L	97
78) ethyl methacrylate	13.484	69	115537	53.13	ug/L	95
79) 1,1,2-trichloroethane	13.745	83	66618	55.80	ug/L	97
80) 2-hexanone	13.918	58	181350	205.50	ug/L	98
81) tetrachloroethene	13.918	166	99330	48.56	ug/L	97
82) 1,3-dichloropropane	13.944	76	124007	53.97	ug/L	96
83) butyl acetate	13.996	56	69315	52.79	ug/L	97
84) dibromochloromethane	14.221	129	97401	54.47	ug/L	97
85) 1,2-dibromoethane	14.394	107	92274	56.44	ug/L	97
86) n-butyl ether	14.864	57	342667	49.95	ug/L	99
87) chlorobenzene	14.927	112	224418	51.65	ug/L	97
88) 1,1,1,2-tetrachloroethane	15.000	131	114647	52.66	ug/L	96
89) ethylbenzene	14.990	91	386536	49.80	ug/L	100
90) m,p-xylene	15.126	106	302002	100.07	ug/L	99
91) o-xylene	15.581	106	170674	51.11	ug/L	99
92) styrene	15.591	104	237330	49.44	ug/L	98
93) butyl acrylate	15.372	55	179934	52.58	ug/L	97
94) n-amyl acetate	15.602	70	78982	51.34	ug/L	93
95) bromoform	15.853	173	69945	56.18	ug/L	95
96) isopropylbenzene	15.968	105	463725	51.35	ug/L	99
97) cis-1,4-dichloro-2-butene	16.010	75	15854	59.01	ug/L	97
100) bromobenzene	16.407	156	101995	55.85	ug/L	98
101) 1,1,2,2-tetrachloroethane	16.282	83	139785	58.93	ug/L	98
102) trans-1,4-dichloro-2-b...	16.313	53	12089	65.73	ug/L	99
103) 1,2,3-trichloropropane	16.381	110	38820	57.15	ug/L	96
104) n-propylbenzene	16.439	91	480379	53.91	ug/L	100
105) 2-chlorotoluene	16.590	126	108010	54.42	ug/L	98
106) 4-chlorotoluene	16.716	91	249913	53.88	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251148.d
Acq On : 27 Jun 2019 5:53 am
Operator : deving
Sample : ecc9645-50 Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 49 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:10:58 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

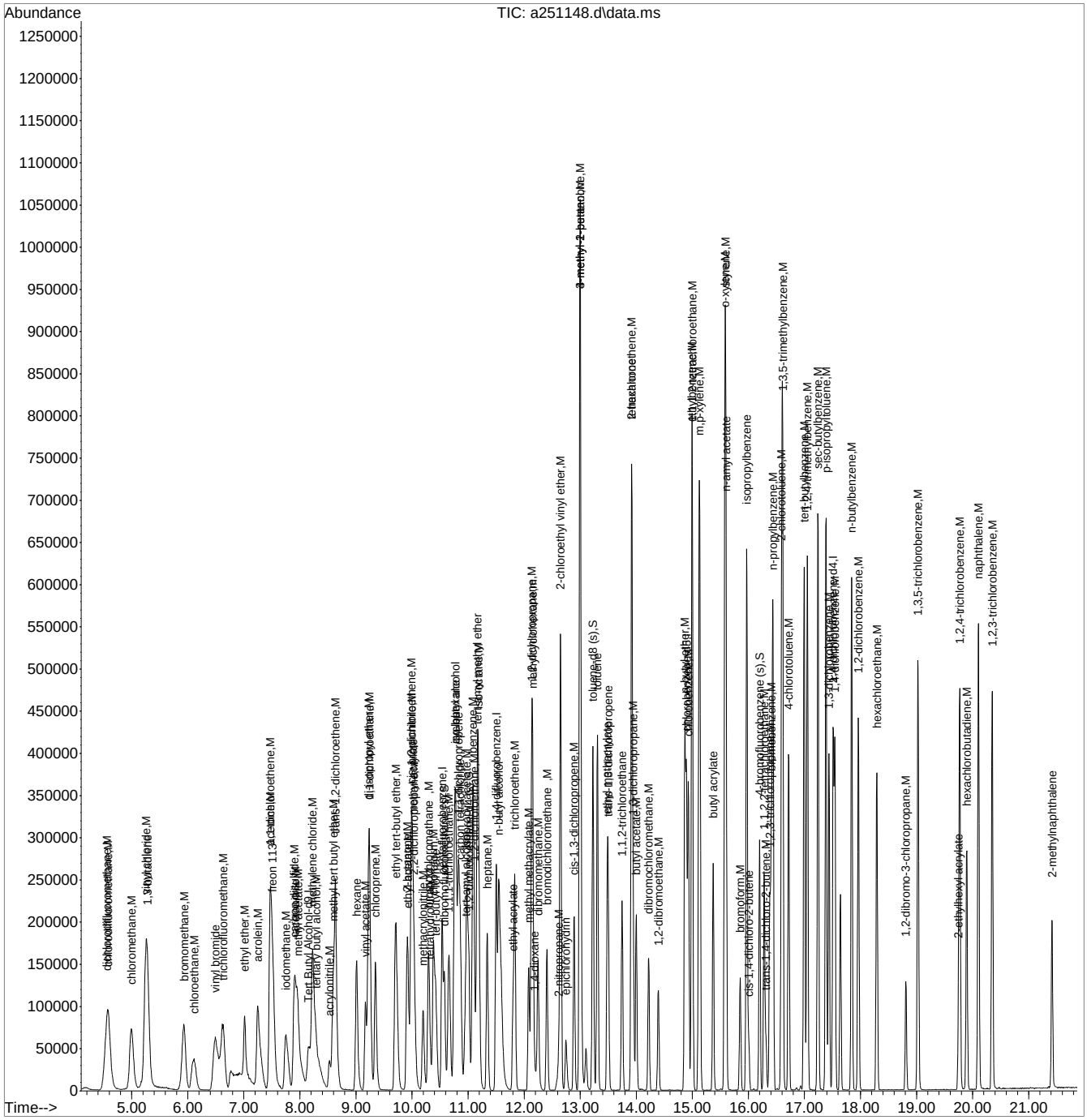
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.611	105	390606	56.85	ug/L	99
108) tert-butylbenzene	16.998	134	89058	55.96	ug/L	99
109) 1,2,4-trimethylbenzene	17.051	105	378359	55.66	ug/L	98
110) sec-butylbenzene	17.239	105	526428	56.12	ug/L	99
111) 1,3-dichlorobenzene	17.438	146	192114	53.07	ug/L	99
112) p-isopropyltoluene	17.385	119	439298	56.20	ug/L	99
113) 1,4-dichlorobenzene	17.542	146	189663	51.76	ug/L	98
114) 1,2-dichlorobenzene	17.961	146	208415	53.13	ug/L	98
115) n-butylbenzene	17.840	92	204016	53.38	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.808	157	46393	56.00	ug/L	92
117) 1,3,5-trichlorobenzene	19.022	180	192752	52.12	ug/L	99
118) 2-ethylhexyl acrylate	19.744	70	21405	10.42	ug/L	88
119) 1,2,4-trichlorobenzene	19.770	180	182369	54.81	ug/L	99
120) hexachlorobutadiene	19.896	225	72571	54.83	ug/L	98
121) naphthalene	20.105	128	511082	52.54	ug/L	99
122) 1,2,3-trichlorobenzene	20.351	180	184345	55.20	ug/L	97
123) hexachloroethane	18.290	201	78424	63.76	ug/L	98
124) 2-methylnaphthalene	21.418	142	119497	23.04	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\va9712\
Data File : a251148.d
Acq On : 27 Jun 2019 5:53 am
Operator : deving
Sample : ecc9645-50 Inst : MSA
Misc : MS35779,VA9712,5,,,,1
ALS Vial : 49 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jun 27 11:10:58 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181280.D
Acq On : 2 May 2019 5:02 pm
Operator : juntaep
Sample : ic7749-0.2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 14:45:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	176670	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	236470	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	310824	50.00	ug/L		0.00
74) chlorobenzene-d5	15.61	117	298750	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	193893	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	97731	51.44	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.88%				
54) 1,2-dichloroethane-d4 (s)	10.76	65	106663	53.60	ug/L		0.01
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.20%				
75) toluene-d8 (s)	13.58	98	363790	51.39	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.78%				
98) 4-bromofluorobenzene (s)	17.12	95	149482	44.02	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.04%				
Target Compounds							Qvalue
9) vinyl chloride	4.51	62	1774	0.24	ug/L	#	50
11) chloroethane	5.30	64	475	0.18	ug/L	#	45
14) 1,3-butadiene	4.52	54	579	0.18	ug/L	#	75
17) 1,1-dichloroethene	6.67	96	342	0.21	ug/L		88
21) iodomethane	6.94	142	710	0.22	ug/L		90
22) carbon disulfide	7.11	76	1391	0.23	ug/L		86
25) methyl tert butyl ether	7.90	73	1747	0.24	ug/L		78
26) trans-1,2-dichloroethene	7.94	96	377	0.21	ug/L	#	43
28) di-isopropyl ether	8.63	45	2043	0.25	ug/L		55
30) 1,1-dichloroethane	8.61	63	704	0.20	ug/L	#	49
31) chloroprene	8.74	53	488	0.18	ug/L	#	36
34) ethyl tert-butyl ether	9.18	59	1629	0.20	ug/L		94
46) 1,1,1-trichloroethane	10.31	97	628	0.17	ug/L	#	64
47) cyclohexane	10.46	84	804	0.19	ug/L	#	65
51) carbon tetrachloride	10.55	117	583	0.19	ug/L	#	53
55) iso-octane	10.99	57	1218	0.22	ug/L		79
59) tert-amyl methyl ether	10.97	73	1594	0.23	ug/L		71
62) trichloroethene	11.81	130	374	0.19	ug/L		92
65) 2-chloroethyl vinyl ether	12.90	63	1370	0.98	ug/L		77
70) bromodichloromethane	12.53	83	616	0.23	ug/L	#	26
71) cis-1,3-dichloropropene	13.17	75	757	0.23	ug/L		85
72) 4-methyl-2-pentanone	13.32	58	593	0.68	ug/L	#	32
76) toluene	13.68	92	1029	0.24	ug/L		94
77) trans-1,3-dichloropropene	13.95	75	634	0.22	ug/L	#	36
79) 1,1,2-trichloroethane	14.24	83	304	0.20	ug/L	#	52
81) 1,3-dichloropropane	14.48	76	620	0.23	ug/L	#	27
84) dibromochloromethane	14.81	129	409	0.19	ug/L		73
85) 1,2-dibromoethane	15.00	107	395	0.19	ug/L		81
87) chlorobenzene	15.65	112	1171	0.24	ug/L		89
92) styrene	16.46	104	1214	0.23	ug/L		96
93) butyl acrylate	16.30	55	1092	0.25	ug/L	#	70
94) bromoform	16.72	173	260	0.17	ug/L		67
99) bromobenzene	17.32	156	628	0.22	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181280.D
Acq On : 2 May 2019 5:02 pm
Operator : juntaep
Sample : ic7749-0.2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 14:45:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) 1,1,2,2-tetrachloroethane	17.22	83	692	0.21	ug/L		89
103) n-propylbenzene	17.38	91	2807	0.23	ug/L		96
104) 2-chlorotoluene	17.51	126	601	0.21	ug/L	#	68
105) 4-chlorotoluene	17.65	91	1740	0.25	ug/L		93
107) tert-butylbenzene	17.93	119	1690	0.19	ug/L		90
109) sec-butylbenzene	18.17	105	2858	0.22	ug/L		95
111) p-isopropyltoluene	18.31	119	2555	0.23	ug/L		96
115) n-butylbenzene	18.72	92	1120	0.20	ug/L		94
117) 1,3,5-trichlorobenzene	19.69	180	1224	0.19	ug/L		87
118) hexachlorobutadiene	20.39	225	496	0.23	ug/L		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

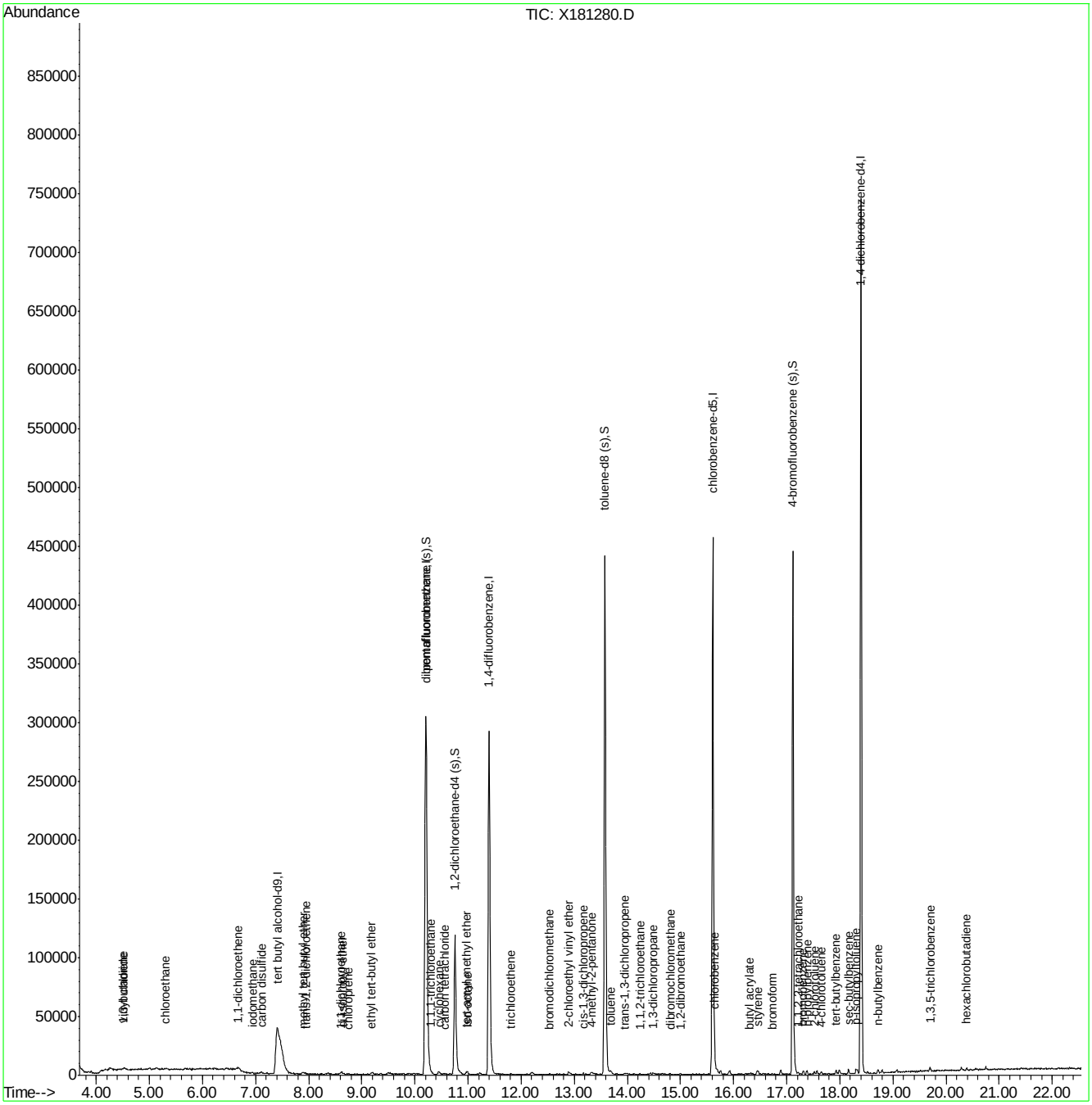
7.7.15

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181280.D
Acq On : 2 May 2019 5:02 pm
Operator : juntaep
Sample : ic7749-0.2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 14:45:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181281.D
Acq On : 2 May 2019 5:31 pm
Operator : juntaep
Sample : ic7749-0.5
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 14:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.41	65	161729	500.00	ug/L		0.01
5) pentafluorobenzene	10.20	168	233433	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	308156	50.00	ug/L		0.00
74) chlorobenzene-d5	15.61	117	294648	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	195360	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	94356	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	105639	53.54	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.08%				
75) toluene-d8 (s)	13.58	98	360262	51.61	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.22%				
98) 4-bromofluorobenzene (s)	17.12	95	149058	43.57	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.14%				
Target Compounds							Qvalue
6) chlorodifluoromethane	3.90	51	3655	0.51	ug/L		72
7) dichlorodifluoromethane	3.88	85	2753	0.36	ug/L		83
9) vinyl chloride	4.52	62	3801	0.52	ug/L		91
11) chloroethane	5.31	64	1321	0.51	ug/L	#	46
12) vinyl bromide	5.66	106	1318	0.44	ug/L		74
13) trichlorofluoromethane	5.80	101	1993	0.42	ug/L		87
14) 1,3-butadiene	4.54	54	1660	0.53	ug/L		80
17) 1,1-dichloroethene	6.67	96	849	0.52	ug/L	#	72
21) iodomethane	6.94	142	1574	0.49	ug/L		82
22) carbon disulfide	7.11	76	3007	0.51	ug/L		89
23) methylene chloride	7.47	84	1276	0.63	ug/L	#	60
25) methyl tert butyl ether	7.89	73	3719	0.52	ug/L		96
26) trans-1,2-dichloroethene	7.93	96	941	0.54	ug/L		77
28) di-isopropyl ether	8.62	45	4614	0.58	ug/L		81
30) 1,1-dichloroethane	8.60	63	1907	0.56	ug/L		87
31) chloroprene	8.74	53	1159	0.44	ug/L		63
34) ethyl tert-butyl ether	9.19	59	4038	0.51	ug/L		88
37) cis-1,2-dichloroethene	9.50	96	980	0.49	ug/L	#	85
40) tert-butyl formate	10.03	59	881	0.44	ug/L	#	59
41) bromochloromethane	9.87	128	527	0.48	ug/L	#	64
43) chloroform	9.98	83	1959	0.60	ug/L		99
46) 1,1,1-trichloroethane	10.32	97	1832	0.51	ug/L		84
47) cyclohexane	10.46	84	1793	0.43	ug/L	#	66
49) 1,1-dichloropropene	10.53	75	1051	0.47	ug/L		74
51) carbon tetrachloride	10.56	117	1313	0.44	ug/L	#	56
55) iso-octane	10.98	57	2257	0.41	ug/L		80
58) benzene	10.83	78	4064	0.59	ug/L		99
59) tert-amyl methyl ether	10.97	73	3579	0.53	ug/L		99
60) heptane	11.23	57	496	0.44	ug/L	#	67
62) trichloroethene	11.80	130	887	0.47	ug/L		90
65) 2-chloroethyl vinyl ether	12.90	63	3073	2.23	ug/L		91
68) dibromomethane	12.31	93	601	0.50	ug/L		89
70) bromodichloromethane	12.54	83	1375	0.53	ug/L		86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181281.D
Acq On : 2 May 2019 5:31 pm
Operator : juntaep
Sample : ic7749-0.5
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 14:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

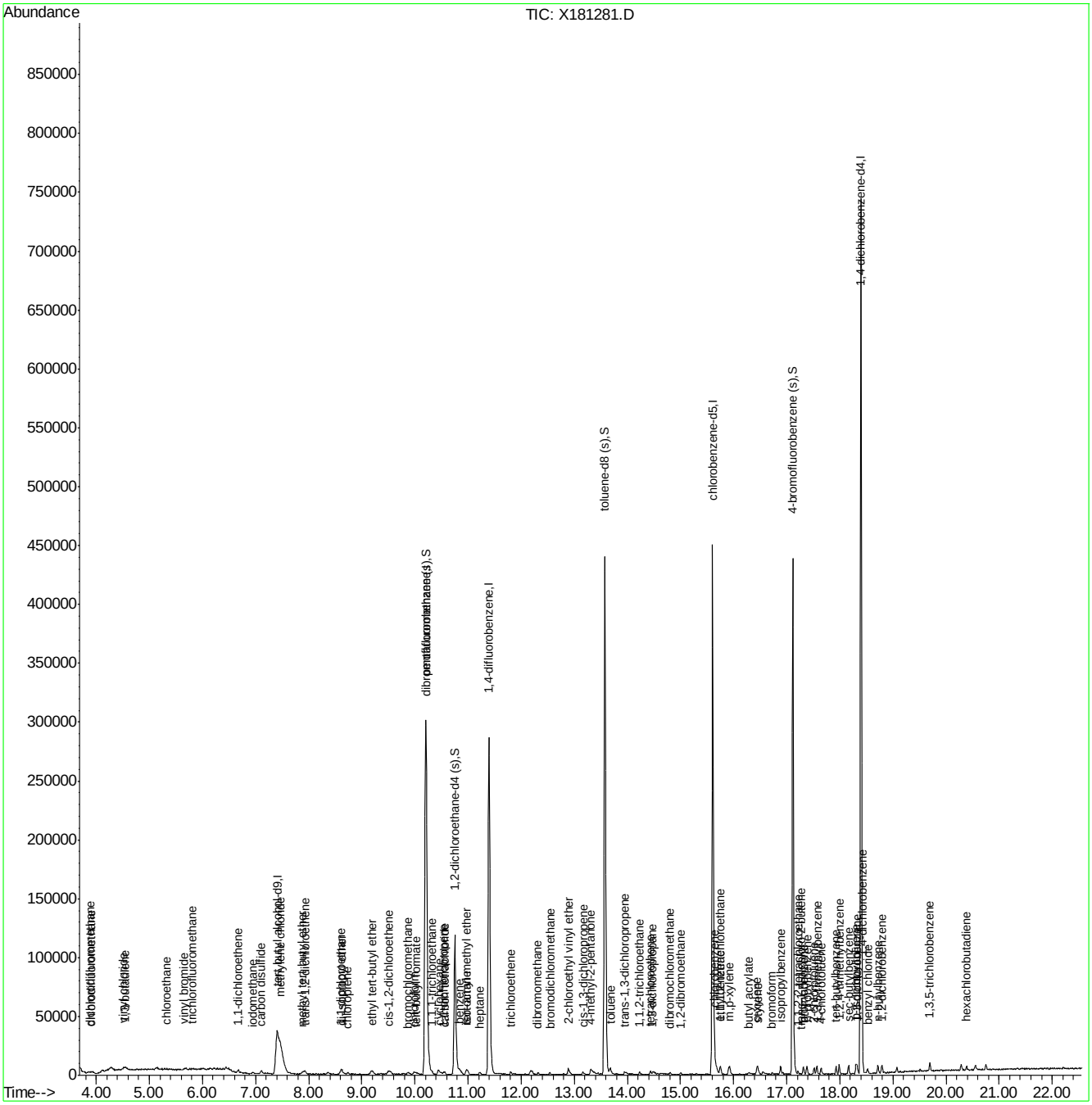
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
71) cis-1,3-dichloropropene	13.17	75	1457	0.45	ug/L		72
72) 4-methyl-2-pentanone	13.32	58	1285	1.48	ug/L	#	63
76) toluene	13.67	92	2179	0.51	ug/L		98
77) trans-1,3-dichloropropene	13.95	75	1271	0.45	ug/L	#	78
79) 1,1,2-trichloroethane	14.23	83	785	0.53	ug/L	#	70
80) tetrachloroethene	14.43	164	709	0.44	ug/L		85
81) 1,3-dichloropropane	14.47	76	1343	0.51	ug/L		75
84) dibromochloromethane	14.80	129	1046	0.50	ug/L		87
85) 1,2-dibromoethane	14.99	107	871	0.42	ug/L		92
87) chlorobenzene	15.65	112	2455	0.51	ug/L		90
88) 1,1,1,2-tetrachloroethane	15.75	131	1139	0.52	ug/L		94
89) ethylbenzene	15.75	91	4461	0.58	ug/L		95
90) m,p-xylene	15.92	106	3544	1.14	ug/L		87
91) o-xylene	16.44	91	4226	0.58	ug/L		92
92) styrene	16.46	104	2662	0.51	ug/L		91
93) butyl acrylate	16.29	55	2221	0.51	ug/L		91
94) bromoform	16.72	173	688	0.47	ug/L		74
95) isopropylbenzene	16.89	105	5241	0.54	ug/L		93
99) bromobenzene	17.32	156	1377	0.47	ug/L		91
100) 1,1,2,2-tetrachloroethane	17.22	83	1391	0.42	ug/L		90
101) trans-1,4-dichloro-2-buten	17.27	53	310	0.42	ug/L	#	70
103) n-propylbenzene	17.38	91	5692	0.47	ug/L		93
104) 2-chlorotoluene	17.52	126	1219	0.42	ug/L		88
105) 4-chlorotoluene	17.65	91	3649	0.51	ug/L		97
106) 1,3,5-trimethylbenzene	17.57	105	4198	0.44	ug/L		97
107) tert-butylbenzene	17.93	119	3784	0.41	ug/L		86
108) 1,2,4-trimethylbenzene	17.99	105	4867	0.50	ug/L		98
109) sec-butylbenzene	18.17	105	5485	0.41	ug/L		93
110) 1,3-dichlorobenzene	18.33	146	2932	0.56	ug/L		95
111) p-isopropyltoluene	18.30	119	5178	0.46	ug/L		96
112) 1,4-dichlorobenzene	18.43	146	2737	0.52	ug/L		93
113) 1,2-dichlorobenzene	18.80	146	3128	0.51	ug/L		92
114) benzyl chloride	18.52	91	3193	0.52	ug/L		95
115) n-butylbenzene	18.72	92	2409	0.44	ug/L		94
117) 1,3,5-trichlorobenzene	19.70	180	2836	0.44	ug/L		87
118) hexachlorobutadiene	20.39	225	891	0.41	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181281.D
Acq On : 2 May 2019 5:31 pm
Operator : juntaep
Sample : ic7749-0.5
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 14:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	163083	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	233883	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	307668	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	292122	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	190756	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	94094	50.08	ug/L		0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	104858	53.23	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 106.46%				
75) toluene-d8 (s)	13.58	98	360740	52.12	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.24%				
98) 4-bromofluorobenzene (s)	17.11	95	147976	44.29	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.58%				
Target Compounds							Qvalue
6) chlorodifluoromethane	3.92	51	7744	1.07	ug/L		93
7) dichlorodifluoromethane	3.88	85	6835	0.89	ug/L		79
8) chloromethane	4.28	50	10050	1.12	ug/L		94
9) vinyl chloride	4.52	62	7778	1.07	ug/L		93
10) bromomethane	5.13	96	4204	1.10	ug/L		86
11) chloroethane	5.32	64	2830	1.10	ug/L		91
12) vinyl bromide	5.68	106	2731	0.91	ug/L		78
13) trichlorofluoromethane	5.81	101	4561	0.97	ug/L		81
14) 1,3-butadiene	4.55	54	3599	1.15	ug/L		84
15) ethyl ether	6.23	74	948	0.92	ug/L	#	84
17) 1,1-dichloroethene	6.67	96	1744	1.06	ug/L	#	72
18) freon 113	6.71	101	2530	0.91	ug/L	#	81
21) iodomethane	6.94	142	3428	1.06	ug/L		85
22) carbon disulfide	7.11	76	6341	1.07	ug/L		97
23) methylene chloride	7.47	84	2204	1.09	ug/L	#	72
25) methyl tert butyl ether	7.89	73	7749	1.08	ug/L		89
26) trans-1,2-dichloroethene	7.93	96	2044	1.17	ug/L		95
27) hexane	8.36	57	2682	1.01	ug/L		85
28) di-isopropyl ether	8.62	45	8956	1.12	ug/L		87
30) 1,1-dichloroethane	8.61	63	3829	1.13	ug/L		92
31) chloroprene	8.74	53	2965	1.13	ug/L		93
34) ethyl tert-butyl ether	9.20	59	7807	0.98	ug/L		89
36) 2,2-dichloropropane	9.54	77	4342	1.27	ug/L		92
37) cis-1,2-dichloroethene	9.50	96	2462	1.23	ug/L		90
39) propionitrile	9.51	54	3061	9.85	ug/L		72
40) tert-butyl formate	10.03	59	2083	1.04	ug/L		90
41) bromochloromethane	9.87	128	1036	0.95	ug/L	#	78
43) chloroform	9.98	83	3767	1.16	ug/L		95
46) 1,1,1-trichloroethane	10.31	97	3822	1.06	ug/L		90
47) cyclohexane	10.46	84	4078	0.98	ug/L		97
49) 1,1-dichloropropene	10.53	75	2402	1.07	ug/L		85
51) carbon tetrachloride	10.56	117	3341	1.12	ug/L	#	82
55) iso-octane	10.99	57	5347	0.97	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
56) epichlorohydrin	12.98	57	1059	4.89	ug/L		55
57) n-butyl alcohol	11.54	56	3217	43.30	ug/L		90
58) benzene	10.83	78	7971	1.16	ug/L		90
59) tert-amyl methyl ether	10.98	73	7257	1.08	ug/L		94
60) heptane	11.21	57	1101	0.98	ug/L	#	81
61) 1,2-dichloroethane	10.88	62	2898	1.28	ug/L		91
62) trichloroethene	11.80	130	1865	0.98	ug/L		79
63) ethyl acrylate	11.85	55	1989	0.80	ug/L		59
65) 2-chloroethyl vinyl ether	12.89	63	6410	4.65	ug/L		97
67) 1,2-dichloropropane	12.18	76	769	0.96	ug/L		95
68) dibromomethane	12.32	93	1166	0.97	ug/L		87
69) methylcyclohexane	12.21	83	3397	1.04	ug/L		93
70) bromodichloromethane	12.55	83	2662	1.02	ug/L		90
71) cis-1,3-dichloropropene	13.17	75	3191	0.99	ug/L		92
72) 4-methyl-2-pentanone	13.32	58	3072	3.55	ug/L		88
73) 3-methyl-1-butanol	13.35	70	1007	14.11	ug/L	#	75
76) toluene	13.68	92	4730	1.11	ug/L		98
77) trans-1,3-dichloropropene	13.95	75	2984	1.07	ug/L		84
78) ethyl methacrylate	13.98	69	2057	0.83	ug/L		79
79) 1,1,2-trichloroethane	14.25	83	1493	1.02	ug/L	#	80
80) tetrachloroethene	14.43	164	1731	1.09	ug/L		92
81) 1,3-dichloropropane	14.48	76	3089	1.17	ug/L		87
82) 2-hexanone	14.49	58	2615	3.69	ug/L	#	65
83) butyl acetate	14.64	56	1401	0.99	ug/L	#	48
84) dibromochloromethane	14.80	129	2190	1.06	ug/L		95
85) 1,2-dibromoethane	14.99	107	1979	0.97	ug/L		81
86) n-butyl ether	15.67	57	9042	1.16	ug/L		97
87) chlorobenzene	15.65	112	5350	1.11	ug/L		93
88) 1,1,1,2-tetrachloroethane	15.75	131	2440	1.11	ug/L		97
89) ethylbenzene	15.75	91	9499	1.24	ug/L		97
90) m,p-xylene	15.92	106	7145	2.32	ug/L		99
91) o-xylene	16.44	91	8167	1.13	ug/L		87
92) styrene	16.46	104	5880	1.14	ug/L		94
93) butyl acrylate	16.28	55	5041	1.17	ug/L		91
94) bromoform	16.72	173	1659	1.14	ug/L		81
95) isopropylbenzene	16.88	105	10772	1.13	ug/L		98
96) cis-1,4-dichloro-2-butene	16.92	88	874	1.15	ug/L		92
99) bromobenzene	17.32	156	2694	0.94	ug/L		83
100) 1,1,2,2-tetrachloroethane	17.22	83	2882	0.90	ug/L		89
101) trans-1,4-dichloro-2-buten	17.26	53	723	1.01	ug/L	#	79
102) 1,2,3-trichloropropane	17.30	110	676	0.86	ug/L	#	43
103) n-propylbenzene	17.38	91	11486	0.96	ug/L		99
104) 2-chlorotoluene	17.51	126	2504	0.89	ug/L		95
105) 4-chlorotoluene	17.64	91	7343	1.06	ug/L		98
106) 1,3,5-trimethylbenzene	17.57	105	8590	0.91	ug/L		94
107) tert-butylbenzene	17.93	119	7374	0.83	ug/L		93
108) 1,2,4-trimethylbenzene	17.98	105	9261	0.97	ug/L		99
109) sec-butylbenzene	18.16	105	11536	0.88	ug/L		95
110) 1,3-dichlorobenzene	18.33	146	6009	1.17	ug/L		86
111) p-isopropyltoluene	18.31	119	10122	0.92	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration

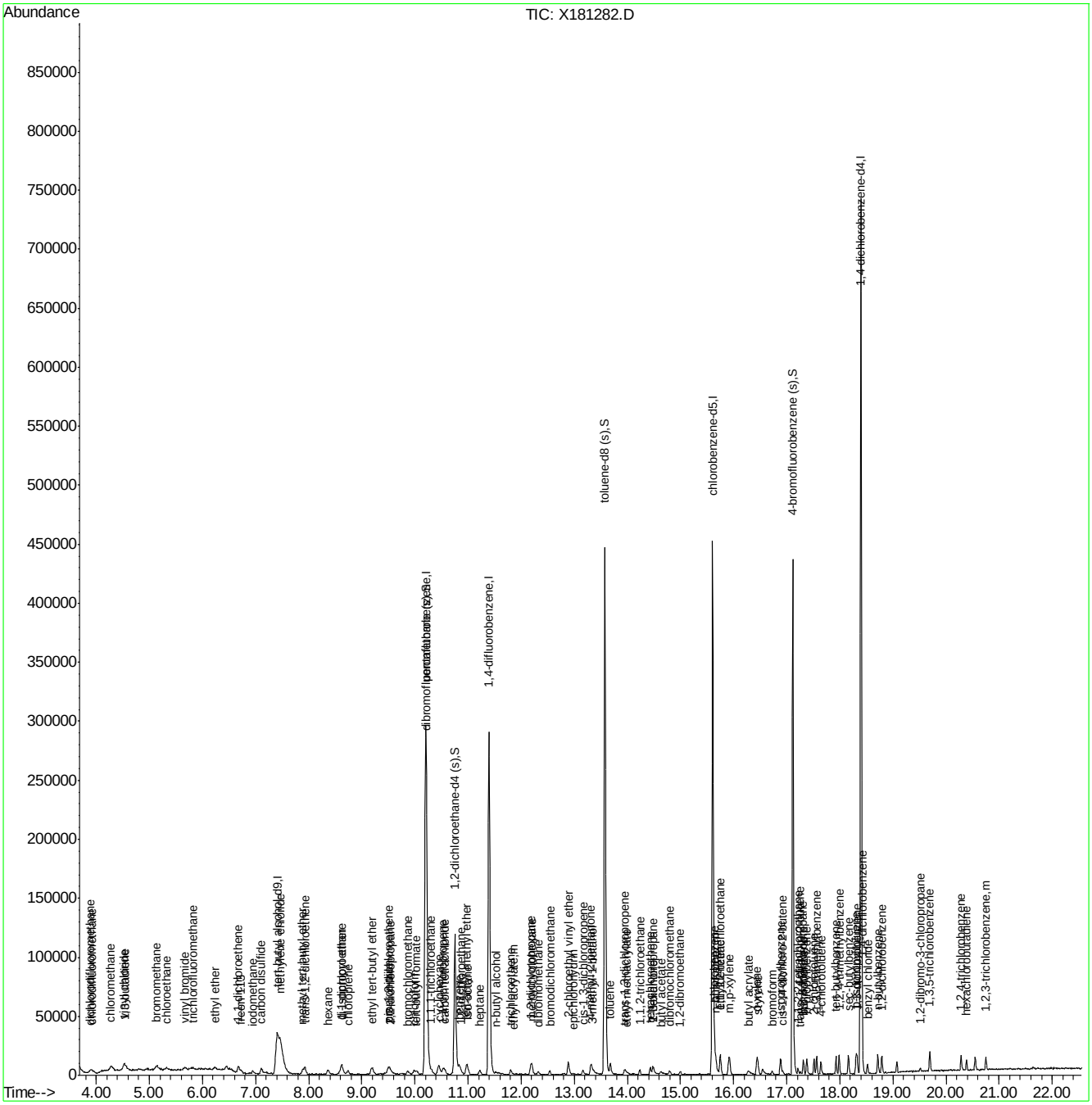
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
112) 1,4-dichlorobenzene	18.43	146	5590	1.09	ug/L	93
113) 1,2-dichlorobenzene	18.79	146	6099	1.03	ug/L	94
114) benzyl chloride	18.52	91	6338	1.06	ug/L	95
115) n-butylbenzene	18.72	92	5063	0.94	ug/L	88
116) 1,2-dibromo-3-chloropropan	19.52	157	846	0.78	ug/L	90
117) 1,3,5-trichlorobenzene	19.69	180	5929	0.95	ug/L	95
118) hexachlorobutadiene	20.39	225	1932	0.92	ug/L	93
121) 1,2,4-trichlorobenzene	20.28	180	4557	0.70	ug/L	100
122) 1,2,3-trichlorobenzene	20.75	180	4462	0.67	ug/L	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181282.D
Acq On : 2 May 2019 5:59 pm
Operator : juntaep
Sample : ic7749-1
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 09 14:48:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 11:50:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.41	65	164004	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	231037	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	305595	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	290219	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	185321	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	92565	49.24	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.48%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	103538	51.36	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.72%				
75) toluene-d8 (s)	13.58	98	357282	51.35	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.70%				
98) 4-bromofluorobenzene (s)	17.12	95	142961	47.09	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.18%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.54	59	3694	10.34	ug/L		48
6) chlorodifluoromethane	3.91	51	15013	2.13	ug/L		93
7) dichlorodifluoromethane	3.88	85	14818	2.11	ug/L		95
8) chloromethane	4.27	50	19355	2.11	ug/L		91
9) vinyl chloride	4.51	62	15344	2.09	ug/L		90
10) bromomethane	5.14	96	7826	1.98	ug/L		96
11) chloroethane	5.32	64	4975	2.02	ug/L		97
12) vinyl bromide	5.67	106	5876	2.14	ug/L		85
13) trichlorofluoromethane	5.80	101	9611	2.15	ug/L		85
14) 1,3-butadiene	4.52	54	7307	2.33	ug/L		92
15) ethyl ether	6.22	74	1998	2.01	ug/L	#	83
17) 1,1-dichloroethene	6.67	96	3625	2.18	ug/L		86
18) freon 113	6.70	101	6076	2.27	ug/L	#	79
19) acetone	6.67	43	5491	7.39	ug/L		81
21) iodomethane	6.94	142	6541	2.04	ug/L		99
22) carbon disulfide	7.10	76	12180	2.06	ug/L		97
23) methylene chloride	7.46	84	4387	1.98	ug/L		84
24) methyl acetate	7.19	43	3625	2.26	ug/L		89
25) methyl tert butyl ether	7.90	73	14927	2.06	ug/L		96
26) trans-1,2-dichloroethene	7.93	96	3819	2.12	ug/L		92
27) hexane	8.36	57	5972	2.34	ug/L		95
28) di-isopropyl ether	8.62	45	17597	2.11	ug/L		98
29) 2-butanone	9.42	72	1309	6.29	ug/L	#	35
30) 1,1-dichloroethane	8.61	63	7040	2.04	ug/L		96
31) chloroprene	8.74	53	5241	2.04	ug/L		97
34) ethyl tert-butyl ether	9.18	59	15498	2.01	ug/L		93
36) 2,2-dichloropropane	9.53	77	7801	2.09	ug/L		95
37) cis-1,2-dichloroethene	9.50	96	4672	2.30	ug/L		97
39) propionitrile	9.49	54	6065	20.46	ug/L		83
40) tert-butyl formate	10.03	59	4059	2.10	ug/L		94
41) bromochloromethane	9.86	128	2148	2.03	ug/L		86
43) chloroform	9.99	83	7008	2.00	ug/L		93
45) methacrylonitrile	9.76	67	1473	1.93	ug/L		83

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) 1,1,1-trichloroethane	10.31	97	6897	1.99	ug/L		95
47) cyclohexane	10.45	84	7410	1.94	ug/L		89
48) tert amyl alcohol	10.71	55	1389	11.55	ug/L	#	20
49) 1,1-dichloropropene	10.53	75	4833	2.18	ug/L		97
51) carbon tetrachloride	10.56	117	6343	2.18	ug/L		96
52) isopropyl acetate	10.76	87	687	1.72	ug/L	#	1
55) iso-octane	10.99	57	11644	2.15	ug/L		91
56) epichlorohydrin	12.98	57	2174	10.07	ug/L		93
57) n-butyl alcohol	11.51	56	6711	96.28	ug/L		95
58) benzene	10.84	78	14904	2.04	ug/L		97
59) tert-amyl methyl ether	10.97	73	14652	2.13	ug/L		95
60) heptane	11.22	57	2429	2.25	ug/L		93
61) 1,2-dichloroethane	10.87	62	5391	2.25	ug/L		90
62) trichloroethene	11.80	130	3959	2.13	ug/L		91
63) ethyl acrylate	11.82	55	4758	2.04	ug/L		86
65) 2-chloroethyl vinyl ether	12.89	63	14033	10.61	ug/L		96
67) 1,2-dichloropropane	12.18	76	1654	2.12	ug/L	#	74
68) dibromomethane	12.32	93	2459	2.08	ug/L		93
69) methylcyclohexane	12.20	83	7320	2.33	ug/L		90
70) bromodichloromethane	12.54	83	5254	1.99	ug/L		99
71) cis-1,3-dichloropropene	13.17	75	6378	2.01	ug/L		86
72) 4-methyl-2-pentanone	13.31	58	7149	8.92	ug/L		91
73) 3-methyl-1-butanol	13.34	70	2571	5.38	ug/L	#	62
76) toluene	13.68	92	8904	2.06	ug/L		99
77) trans-1,3-dichloropropene	13.94	75	6039	2.16	ug/L		95
78) ethyl methacrylate	13.96	69	4668	2.10	ug/L		86
79) 1,1,2-trichloroethane	14.24	83	3178	2.17	ug/L		93
80) tetrachloroethene	14.43	164	3485	2.21	ug/L		89
81) 1,3-dichloropropane	14.47	76	6161	2.24	ug/L		90
82) 2-hexanone	14.49	58	5927	8.92	ug/L		99
83) butyl acetate	14.62	56	2950	2.09	ug/L	#	71
84) dibromochloromethane	14.79	129	4482	2.19	ug/L		88
85) 1,2-dibromoethane	15.00	107	4267	2.18	ug/L		95
86) n-butyl ether	15.67	57	16715	2.06	ug/L		99
87) chlorobenzene	15.65	112	10504	2.13	ug/L		95
88) 1,1,1,2-tetrachloroethane	15.75	131	4613	2.06	ug/L		90
89) ethylbenzene	15.75	91	17806	2.13	ug/L		99
90) m,p-xylene	15.91	106	14109	4.26	ug/L		98
91) o-xylene	16.44	91	15809	2.06	ug/L		100
92) styrene	16.46	104	11652	2.18	ug/L		94
93) butyl acrylate	16.27	55	9431	2.10	ug/L		96
94) bromoform	16.72	173	3226	2.24	ug/L		92
95) isopropylbenzene	16.89	105	20000	2.04	ug/L		97
96) cis-1,4-dichloro-2-butene	16.92	88	1827	2.45	ug/L		93
99) bromobenzene	17.32	156	5453	2.03	ug/L	#	82
100) 1,1,2,2-tetrachloroethane	17.22	83	5632	1.94	ug/L		96
101) trans-1,4-dichloro-2-buten	17.26	53	1237	1.88	ug/L		90
102) 1,2,3-trichloropropane	17.30	110	1438	2.04	ug/L	#	78
103) n-propylbenzene	17.38	91	22490	2.01	ug/L		98
104) 2-chlorotoluene	17.51	126	5039	1.99	ug/L		87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

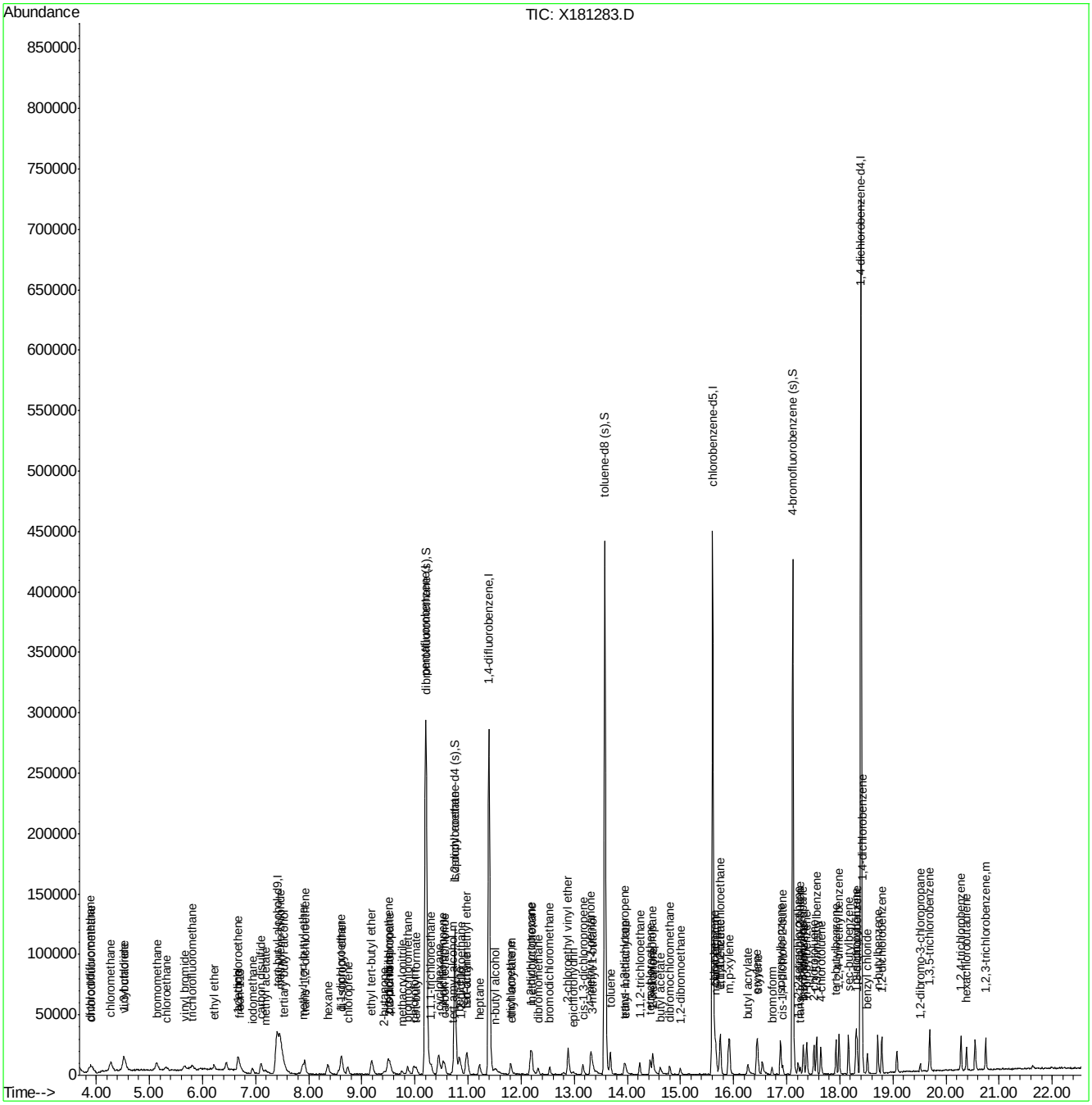
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
105) 4-chlorotoluene	17.64	91	13424	1.97	ug/L	91
106) 1,3,5-trimethylbenzene	17.56	105	17338	1.99	ug/L	97
107) tert-butylbenzene	17.93	119	14677	1.90	ug/L	96
108) 1,2,4-trimethylbenzene	17.99	105	18028	1.96	ug/L	94
109) sec-butylbenzene	18.16	105	22689	1.94	ug/L	99
110) 1,3-dichlorobenzene	18.32	146	11412	2.20	ug/L	96
111) p-isopropyltoluene	18.30	119	19944	1.96	ug/L	96
112) 1,4-dichlorobenzene	18.42	146	10321	2.00	ug/L	91
113) 1,2-dichlorobenzene	18.79	146	12123	2.06	ug/L	98
114) benzyl chloride	18.52	91	12124	2.03	ug/L	90
115) n-butylbenzene	18.72	92	9667	1.99	ug/L	96
116) 1,2-dibromo-3-chloropropan	19.51	157	1798	1.96	ug/L	88
117) 1,3,5-trichlorobenzene	19.69	180	11252	1.96	ug/L	98
118) hexachlorobutadiene	20.39	225	3895	2.00	ug/L	92
121) 1,2,4-trichlorobenzene	20.29	180	9492	1.80	ug/L	90
122) 1,2,3-trichlorobenzene	20.75	180	9274	1.73	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181283.D
Acq On : 2 May 2019 6:28 pm
Operator : juntaep
Sample : ic7749-2
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 09 14:49:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	158441	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	231866	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	308785	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	292169	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	180377	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	92953	49.27	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.54%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	103008	50.57	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.14%				
75) toluene-d8 (s)	13.58	98	357402	51.03	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%				
98) 4-bromofluorobenzene (s)	17.11	95	141365	47.84	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.68%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.55	59	6656	19.29	ug/L		82
4) 1,4-dioxane	12.26	88	2361	92.03	ug/L	#	83
6) chlorodifluoromethane	3.90	51	27201	3.84	ug/L		97
7) dichlorodifluoromethane	3.91	85	28482	4.05	ug/L		91
8) chloromethane	4.27	50	35984	3.91	ug/L		98
9) vinyl chloride	4.50	62	28691	3.90	ug/L		92
10) bromomethane	5.13	96	14500	3.65	ug/L		96
11) chloroethane	5.31	64	9560	3.87	ug/L		94
12) vinyl bromide	5.67	106	10233	3.71	ug/L		94
13) trichlorofluoromethane	5.81	101	17726	3.95	ug/L		97
14) 1,3-butadiene	4.54	54	12364	3.93	ug/L		91
15) ethyl ether	6.22	74	4067	4.07	ug/L	#	72
17) 1,1-dichloroethene	6.67	96	6708	4.01	ug/L		97
18) freon 113	6.70	101	10108	3.76	ug/L		94
19) acetone	6.66	43	9173	12.30	ug/L		99
20) acetonitrile	7.11	41	17728	41.04	ug/L		89
21) iodomethane	6.94	142	11954	3.72	ug/L		94
22) carbon disulfide	7.10	76	22571	3.80	ug/L		95
23) methylene chloride	7.46	84	8194	3.69	ug/L		97
24) methyl acetate	7.19	43	7748	4.81	ug/L		95
25) methyl tert butyl ether	7.90	73	27819	3.82	ug/L		91
26) trans-1,2-dichloroethene	7.93	96	7015	3.88	ug/L		96
27) hexane	8.36	57	10111	3.94	ug/L		94
28) di-isopropyl ether	8.62	45	32396	3.88	ug/L		99
29) 2-butanone	9.42	72	3154	15.10	ug/L	#	83
30) 1,1-dichloroethane	8.61	63	13378	3.86	ug/L		96
31) chloroprene	8.73	53	10686	4.14	ug/L		96
32) acrylonitrile	7.79	53	2388	3.30	ug/L		98
34) ethyl tert-butyl ether	9.18	59	29379	3.80	ug/L		95
35) ethyl acetate	9.46	45	1107	3.90	ug/L		85
36) 2,2-dichloropropane	9.52	77	14143	3.78	ug/L		94
37) cis-1,2-dichloroethene	9.49	96	8223	4.04	ug/L		99
38) methyl acrylate	9.57	85	632	2.57	ug/L	#	22

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
39) propionitrile	9.50	54	11601	39.00	ug/L		95
40) tert-butyl formate	10.02	59	8188	4.22	ug/L		91
41) bromochloromethane	9.86	128	4322	4.08	ug/L		94
42) tetrahydrofuran	9.90	72	891	3.67	ug/L	#	79
43) chloroform	9.98	83	13320	3.79	ug/L		98
45) methacrylonitrile	9.74	67	2764	3.61	ug/L		85
46) 1,1,1-trichloroethane	10.30	97	13143	3.78	ug/L		94
47) cyclohexane	10.46	84	14089	3.67	ug/L		97
48) tert amyl alcohol	10.71	55	2350	19.47	ug/L	#	55
49) 1,1-dichloropropene	10.52	75	8614	3.87	ug/L		94
51) carbon tetrachloride	10.56	117	11581	3.97	ug/L		98
52) isopropyl acetate	10.77	87	1468	3.66	ug/L	#	30
55) iso-octane	10.99	57	19948	3.64	ug/L		97
56) epichlorohydrin	12.97	57	4594	21.07	ug/L		97
57) n-butyl alcohol	11.49	56	13385	190.05	ug/L		97
58) benzene	10.83	78	28342	3.84	ug/L		97
59) tert-amyl methyl ether	10.97	73	26686	3.83	ug/L		97
60) heptane	11.21	57	4129	3.78	ug/L		93
61) 1,2-dichloroethane	10.87	62	9927	4.11	ug/L		96
62) trichloroethene	11.80	130	7475	3.98	ug/L		86
63) ethyl acrylate	11.81	55	9009	3.82	ug/L		88
64) 2-nitropropane	12.79	41	2597	4.47	ug/L		81
65) 2-chloroethyl vinyl ether	12.89	63	27117	20.29	ug/L		98
66) methyl methacrylate	12.16	100	1791	3.76	ug/L		94
67) 1,2-dichloropropane	12.18	76	3262	4.13	ug/L		91
68) dibromomethane	12.32	93	5017	4.20	ug/L		98
69) methylcyclohexane	12.20	83	12887	4.07	ug/L		97
70) bromodichloromethane	12.54	83	10433	3.91	ug/L		95
71) cis-1,3-dichloropropene	13.16	75	12892	4.01	ug/L		93
72) 4-methyl-2-pentanone	13.31	58	13621	16.82	ug/L		94
73) 3-methyl-1-butanol	13.35	70	5192	10.76	ug/L	#	72
76) toluene	13.68	92	17157	3.95	ug/L		97
77) trans-1,3-dichloropropene	13.94	75	11229	3.98	ug/L		95
78) ethyl methacrylate	13.97	69	9385	4.20	ug/L		86
79) 1,1,2-trichloroethane	14.23	83	6048	4.10	ug/L		93
80) tetrachloroethene	14.43	164	6700	4.23	ug/L		91
81) 1,3-dichloropropane	14.48	76	11657	4.21	ug/L		94
82) 2-hexanone	14.48	58	11620	17.37	ug/L		97
83) butyl acetate	14.62	56	5954	4.20	ug/L		87
84) dibromochloromethane	14.80	129	8321	4.05	ug/L		98
85) 1,2-dibromoethane	14.99	107	8312	4.22	ug/L		97
86) n-butyl ether	15.67	57	32022	3.92	ug/L		100
87) chlorobenzene	15.65	112	19240	3.88	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.75	131	8977	3.98	ug/L		95
89) ethylbenzene	15.75	91	33460	3.98	ug/L		100
90) m,p-xylene	15.92	106	26666	8.00	ug/L		95
91) o-xylene	16.44	91	30354	3.93	ug/L		95
92) styrene	16.45	104	22243	4.14	ug/L		98
93) butyl acrylate	16.26	55	17898	3.95	ug/L		97
94) bromoform	16.72	173	6081	4.19	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

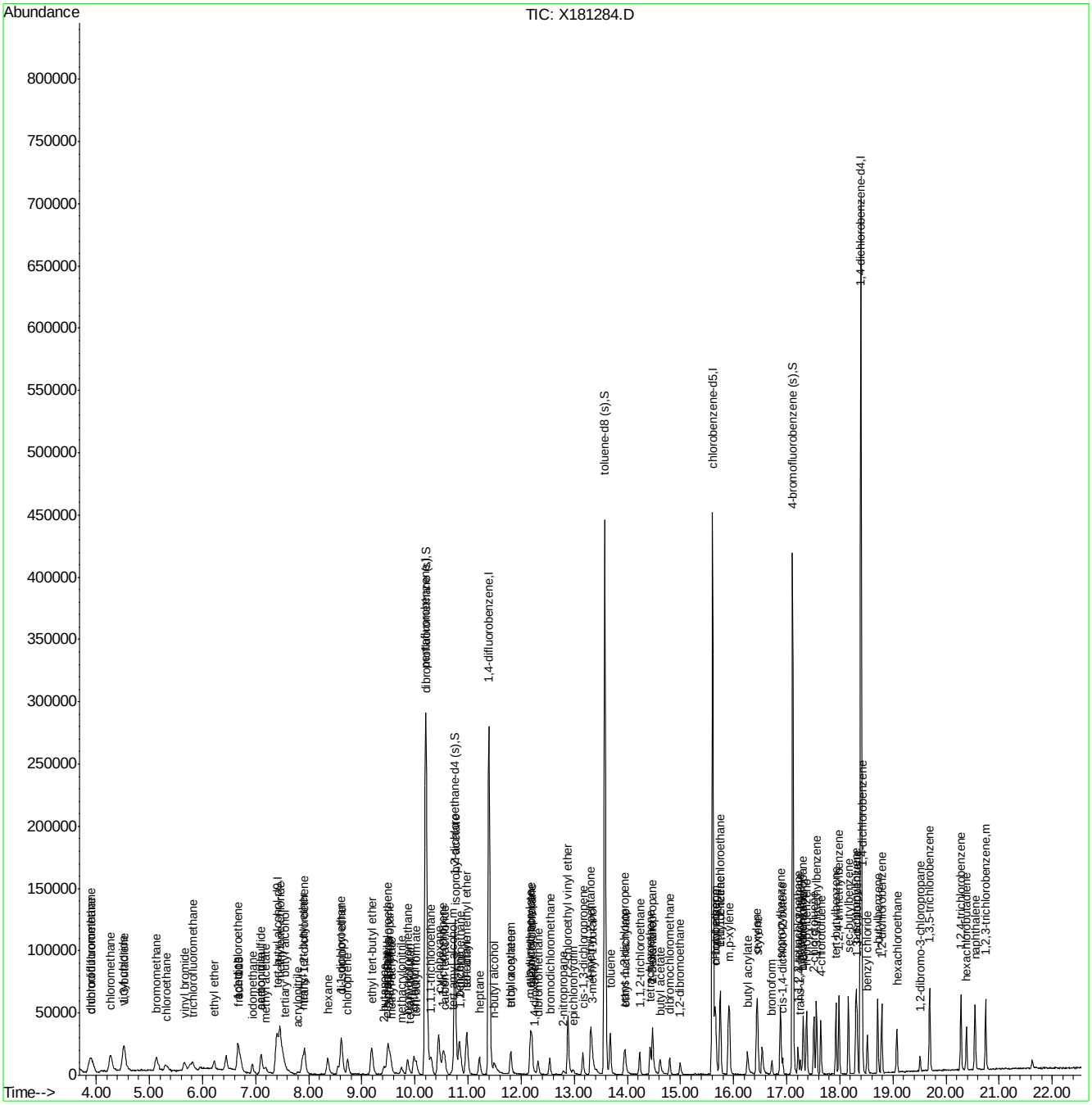
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
95) isopropylbenzene	16.88	105	38312	3.88	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	3024	4.02	ug/L		87
99) bromobenzene	17.32	156	10049	3.84	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.22	83	10631	3.76	ug/L		97
101) trans-1,4-dichloro-2-buten	17.26	53	2534	3.95	ug/L		90
102) 1,2,3-trichloropropane	17.30	110	2919	4.26	ug/L	#	67
103) n-propylbenzene	17.38	91	41611	3.82	ug/L		99
104) 2-chlorotoluene	17.51	126	9584	3.88	ug/L		90
105) 4-chlorotoluene	17.64	91	25320	3.81	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	32410	3.82	ug/L		97
107) tert-butylbenzene	17.93	119	27183	3.61	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	33451	3.74	ug/L		99
109) sec-butylbenzene	18.16	105	42285	3.71	ug/L		97
110) 1,3-dichlorobenzene	18.32	146	20297	4.03	ug/L		99
111) p-isopropyltoluene	18.30	119	36754	3.70	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	19234	3.82	ug/L		100
113) 1,2-dichlorobenzene	18.79	146	22234	3.89	ug/L		99
114) benzyl chloride	18.52	91	22022	3.80	ug/L		96
115) n-butylbenzene	18.72	92	17543	3.71	ug/L		97
116) 1,2-dibromo-3-chloropropan	19.51	157	3339	3.75	ug/L		94
117) 1,3,5-trichlorobenzene	19.69	180	21756	3.90	ug/L		97
118) hexachlorobutadiene	20.39	225	7174	3.78	ug/L		98
119) naphthalene	20.55	128	42667	3.64	ug/L		98
121) 1,2,4-trichlorobenzene	20.28	180	19326	3.77	ug/L		98
122) 1,2,3-trichlorobenzene	20.75	180	19156	3.68	ug/L		99
123) hexachloroethane	19.08	201	5806	3.50	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181284.D
Acq On : 2 May 2019 6:56 pm
Operator : juntaep
Sample : ic7749-4
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 09 14:50:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	149671	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	216474	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	291131	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	279242	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	167114	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.22	113	89476	50.80	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.60%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	99684	51.91	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.82%				
75) toluene-d8 (s)	13.58	98	334375	49.95	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.90%				
98) 4-bromofluorobenzene (s)	17.11	95	135055	49.33	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.66%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.55	59	13791	42.31	ug/L		81
4) 1,4-dioxane	12.25	88	5362	221.26	ug/L		94
6) chlorodifluoromethane	3.89	51	53111	8.03	ug/L		97
7) dichlorodifluoromethane	3.87	85	55644	8.47	ug/L		94
8) chloromethane	4.27	50	68867	8.02	ug/L		98
9) vinyl chloride	4.51	62	55846	8.12	ug/L		99
10) bromomethane	5.13	96	28138	7.59	ug/L		97
11) chloroethane	5.31	64	19135	8.30	ug/L		93
12) vinyl bromide	5.66	106	20701	8.04	ug/L		96
13) trichlorofluoromethane	5.81	101	35041	8.36	ug/L		99
14) 1,3-butadiene	4.53	54	24884	8.47	ug/L		98
15) ethyl ether	6.22	74	7665	8.22	ug/L	#	82
16) acrolein	6.45	56	4614	9.20	ug/L		73
17) 1,1-dichloroethene	6.66	96	13160	8.43	ug/L		92
18) freon 113	6.71	101	21540	8.58	ug/L		91
19) acetone	6.66	43	20411	29.32	ug/L		97
20) acetonitrile	7.11	41	34261	84.95	ug/L		94
21) iodomethane	6.94	142	24256	8.07	ug/L		98
22) carbon disulfide	7.10	76	44733	8.06	ug/L		99
23) methylene chloride	7.46	84	16045	7.74	ug/L		99
24) methyl acetate	7.19	43	12339	8.20	ug/L		95
25) methyl tert butyl ether	7.88	73	53499	7.87	ug/L		99
26) trans-1,2-dichloroethene	7.92	96	14071	8.34	ug/L		93
27) hexane	8.36	57	20033	8.36	ug/L		94
28) di-isopropyl ether	8.62	45	61310	7.86	ug/L		99
29) 2-butanone	9.41	72	6228	31.94	ug/L		88
30) 1,1-dichloroethane	8.61	63	27164	8.40	ug/L		99
31) chloroprene	8.73	53	19952	8.28	ug/L		99
32) acrylonitrile	7.79	53	5812	8.61	ug/L		95
33) vinyl acetate	8.54	86	2417	7.73	ug/L	#	63
34) ethyl tert-butyl ether	9.18	59	58017	8.04	ug/L		98
35) ethyl acetate	9.45	45	2314	8.73	ug/L		88
36) 2,2-dichloropropane	9.53	77	26858	7.68	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	16211	8.52	ug/L		99
38) methyl acrylate	9.56	85	1714	7.47	ug/L	#	37
39) propionitrile	9.49	54	22942	82.60	ug/L		89
40) tert-butyl formate	10.02	59	15301	8.44	ug/L		90
41) bromochloromethane	9.86	128	8021	8.11	ug/L		95
42) tetrahydrofuran	9.89	72	1825	8.06	ug/L	#	82
43) chloroform	9.97	83	25254	7.71	ug/L		99
45) methacrylonitrile	9.75	67	5819	8.15	ug/L		96
46) 1,1,1-trichloroethane	10.31	97	25174	7.76	ug/L		98
47) cyclohexane	10.45	84	26974	7.53	ug/L		98
48) tert amyl alcohol	10.70	55	4629	41.08	ug/L		87
49) 1,1-dichloropropene	10.53	75	17229	8.28	ug/L		95
51) carbon tetrachloride	10.55	117	21617	7.94	ug/L		97
52) isopropyl acetate	10.76	87	2923	7.81	ug/L	#	63
55) iso-octane	10.99	57	40079	7.75	ug/L		99
56) epichlorohydrin	12.97	57	8787	42.74	ug/L		94
57) n-butyl alcohol	11.48	56	25706	387.13	ug/L		95
58) benzene	10.83	78	53643	7.72	ug/L		98
59) tert-amyl methyl ether	10.97	73	51969	7.92	ug/L		98
60) heptane	11.22	57	8063	7.83	ug/L		97
61) 1,2-dichloroethane	10.87	62	18526	8.13	ug/L		94
62) trichloroethene	11.80	130	14698	8.29	ug/L		95
63) ethyl acrylate	11.81	55	18475	8.31	ug/L		96
64) 2-nitropropane	12.79	41	4221	7.70	ug/L		98
65) 2-chloroethyl vinyl ether	12.88	63	52415	41.60	ug/L		99
66) methyl methacrylate	12.17	100	3498	7.79	ug/L	#	75
67) 1,2-dichloropropane	12.18	76	6224	8.35	ug/L		91
68) dibromomethane	12.32	93	9345	8.30	ug/L		93
69) methylcyclohexane	12.19	83	24155	8.09	ug/L		98
70) bromodichloromethane	12.53	83	19774	7.86	ug/L		99
71) cis-1,3-dichloropropene	13.16	75	24026	7.93	ug/L		97
72) 4-methyl-2-pentanone	13.31	58	25693	33.66	ug/L		99
73) 3-methyl-1-butanol	13.33	70	10850	23.84	ug/L		93
76) toluene	13.67	92	32778	7.90	ug/L		93
77) trans-1,3-dichloropropene	13.94	75	22134	8.22	ug/L		93
78) ethyl methacrylate	13.96	69	18520	8.67	ug/L		95
79) 1,1,2-trichloroethane	14.23	83	11420	8.10	ug/L		94
80) tetrachloroethene	14.43	164	12485	8.24	ug/L		98
81) 1,3-dichloropropane	14.47	76	22111	8.36	ug/L		99
82) 2-hexanone	14.47	58	23898	37.39	ug/L		99
83) butyl acetate	14.61	56	11508	8.49	ug/L		95
84) dibromochloromethane	14.80	129	15267	7.77	ug/L		93
85) 1,2-dibromoethane	14.99	107	15469	8.21	ug/L		98
86) n-butyl ether	15.66	57	60295	7.72	ug/L		99
87) chlorobenzene	15.65	112	37956	8.01	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.74	131	17074	7.92	ug/L		95
89) ethylbenzene	15.75	91	62748	7.81	ug/L		97
90) m,p-xylene	15.91	106	50787	15.94	ug/L		98
91) o-xylene	16.44	91	57810	7.83	ug/L		96
92) styrene	16.45	104	42953	8.36	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

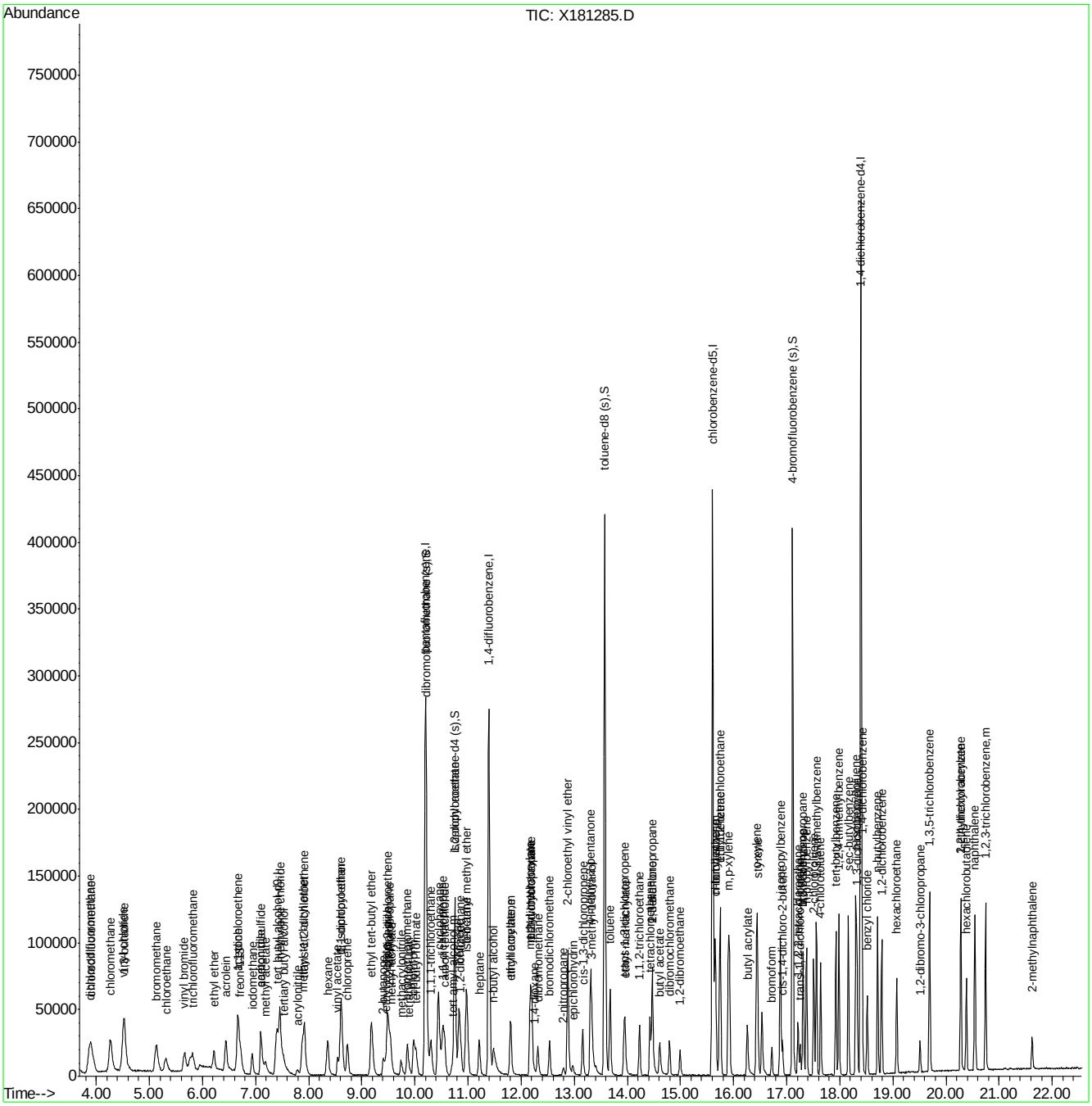
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.26	55	33740	7.79	ug/L		98
94) bromoform	16.72	173	10847	7.82	ug/L		95
95) isopropylbenzene	16.88	105	71703	7.60	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	6274	8.73	ug/L		96
99) bromobenzene	17.32	156	19384	8.00	ug/L		94
100) 1,1,2,2-tetrachloroethane	17.22	83	19828	7.57	ug/L		96
101) trans-1,4-dichloro-2-buten	17.25	53	4828	8.12	ug/L		88
102) 1,2,3-trichloropropane	17.30	110	5235	8.25	ug/L	#	75
103) n-propylbenzene	17.37	91	77509	7.67	ug/L		100
104) 2-chlorotoluene	17.51	126	16984	7.42	ug/L		89
105) 4-chlorotoluene	17.64	91	47467	7.72	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	59504	7.58	ug/L		99
107) tert-butylbenzene	17.93	119	51877	7.44	ug/L		97
108) 1,2,4-trimethylbenzene	17.98	105	62960	7.61	ug/L		98
109) sec-butylbenzene	18.16	105	78856	7.46	ug/L		98
110) 1,3-dichlorobenzene	18.32	146	37003	7.93	ug/L		100
111) p-isopropyltoluene	18.30	119	69618	7.57	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	35679	7.65	ug/L		97
113) 1,2-dichlorobenzene	18.79	146	41561	7.84	ug/L		99
114) benzyl chloride	18.52	91	41014	7.63	ug/L		100
115) n-butylbenzene	18.71	92	33288	7.59	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	6620	8.02	ug/L		96
117) 1,3,5-trichlorobenzene	19.69	180	41600	8.04	ug/L		98
118) hexachlorobutadiene	20.39	225	13649	7.75	ug/L		95
119) naphthalene	20.54	128	92691	8.53	ug/L		99
120) 2-ethylhexyl acrylate	20.29	70	1201	0.64	ug/L		84
121) 1,2,4-trichlorobenzene	20.28	180	40371	8.49	ug/L		98
122) 1,2,3-trichlorobenzene	20.75	180	40622	8.42	ug/L		97
123) hexachloroethane	19.07	201	11384	7.40	ug/L		95
124) 2-methylnaphthalene	21.62	142	13193	2.39	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181285.D
Acq On : 2 May 2019 7:25 pm
Operator : juntaep
Sample : ic7749-8
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 12:16:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.40	65	152100	500.00	ug/L		0.00
5) pentafluorobenzene	10.20	168	216897	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.39	114	290117	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	281247	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.40	152	155830	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.21	113	86852	49.21	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.42%				
54) 1,2-dichloroethane-d4 (s)	10.75	65	97657	51.03	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.06%				
75) toluene-d8 (s)	13.58	98	334406	49.60	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.20%				
98) 4-bromofluorobenzene (s)	17.11	95	131100	51.35	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.70%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.53	59	34135	103.04	ug/L		91
4) 1,4-dioxane	12.25	88	14671	595.74	ug/L		95
6) chlorodifluoromethane	3.89	51	131883	19.90	ug/L		96
7) dichlorodifluoromethane	3.86	85	135884	20.64	ug/L		98
8) chloromethane	4.26	50	165293	19.22	ug/L		98
9) vinyl chloride	4.50	62	134510	19.52	ug/L		99
10) bromomethane	5.13	96	66288	17.84	ug/L		98
11) chloroethane	5.31	64	43633	18.90	ug/L		97
12) vinyl bromide	5.65	106	49415	19.15	ug/L		97
13) trichlorofluoromethane	5.81	101	82688	19.69	ug/L		95
14) 1,3-butadiene	4.53	54	55743	18.94	ug/L		95
15) ethyl ether	6.22	74	18853	20.18	ug/L		94
16) acrolein	6.45	56	8940	17.78	ug/L		97
17) 1,1-dichloroethene	6.67	96	30704	19.63	ug/L		99
18) freon 113	6.70	101	49440	19.65	ug/L		97
19) acetone	6.66	43	47590	68.22	ug/L		97
20) acetonitrile	7.11	41	77275	191.23	ug/L		98
21) iodomethane	6.94	142	59277	19.69	ug/L		99
22) carbon disulfide	7.10	76	106687	19.18	ug/L		100
23) methylene chloride	7.46	84	37538	18.07	ug/L		99
24) methyl acetate	7.19	43	29411	19.51	ug/L		91
25) methyl tert butyl ether	7.89	73	130277	19.13	ug/L		99
26) trans-1,2-dichloroethene	7.92	96	33274	19.69	ug/L		96
27) hexane	8.36	57	48415	20.17	ug/L		99
28) di-isopropyl ether	8.61	45	147390	18.87	ug/L		100
29) 2-butanone	9.40	72	16644	85.20	ug/L		100
30) 1,1-dichloroethane	8.60	63	64371	19.87	ug/L		97
31) chloroprene	8.73	53	49613	20.55	ug/L		96
32) acrylonitrile	7.79	53	14731	21.78	ug/L		97
33) vinyl acetate	8.54	86	6730	21.48	ug/L	#	88
34) ethyl tert-butyl ether	9.18	59	141784	19.60	ug/L		97
35) ethyl acetate	9.44	45	6846	25.79	ug/L		80
36) 2,2-dichloropropane	9.52	77	62599	17.87	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	38434	20.17	ug/L		97
38) methyl acrylate	9.55	85	5184	22.56	ug/L	#	68
39) propionitrile	9.48	54	58250	209.32	ug/L		99
40) tert-butyl formate	10.02	59	36256	19.95	ug/L		98
41) bromochloromethane	9.85	128	20131	20.31	ug/L		93
42) tetrahydrofuran	9.89	72	5315	23.43	ug/L		94
43) chloroform	9.98	83	60671	18.48	ug/L		98
45) methacrylonitrile	9.74	67	14704	20.55	ug/L		98
46) 1,1,1-trichloroethane	10.30	97	62783	19.33	ug/L		97
47) cyclohexane	10.45	84	73501	20.48	ug/L		86
48) tert amyl alcohol	10.70	55	11184	99.06	ug/L		91
49) 1,1-dichloropropene	10.52	75	43086	20.67	ug/L		99
51) carbon tetrachloride	10.56	117	53274	19.53	ug/L		93
52) isopropyl acetate	10.75	87	7963	21.23	ug/L		95
55) iso-octane	10.98	57	96701	18.76	ug/L		96
56) epichlorohydrin	12.97	57	20419	99.66	ug/L		95
57) n-butyl alcohol	11.47	56	66679	1007.70	ug/L		98
58) benzene	10.83	78	131803	19.02	ug/L		98
59) tert-amyl methyl ether	10.97	73	126433	19.34	ug/L		98
60) heptane	11.21	57	20840	20.30	ug/L		94
61) 1,2-dichloroethane	10.87	62	43979	19.37	ug/L		99
62) trichloroethene	11.80	130	36084	20.43	ug/L		98
63) ethyl acrylate	11.80	55	47908	21.61	ug/L		95
64) 2-nitropropane	12.80	41	10134	18.54	ug/L		93
65) 2-chloroethyl vinyl ether	12.87	63	132938	105.87	ug/L		99
66) methyl methacrylate	12.16	100	9650	21.57	ug/L	#	80
67) 1,2-dichloropropane	12.17	76	15506	20.89	ug/L		98
68) dibromomethane	12.32	93	22797	20.32	ug/L		94
69) methylcyclohexane	12.20	83	59311	19.92	ug/L		100
70) bromodichloromethane	12.53	83	49460	19.74	ug/L		98
71) cis-1,3-dichloropropene	13.16	75	60106	19.91	ug/L		99
72) 4-methyl-2-pentanone	13.30	58	65089	85.57	ug/L		95
73) 3-methyl-1-butanol	13.33	70	27187	59.95	ug/L		97
76) toluene	13.67	92	82426	19.72	ug/L		99
77) trans-1,3-dichloropropene	13.94	75	55183	20.34	ug/L		96
78) ethyl methacrylate	13.96	69	47558	22.10	ug/L		96
79) 1,1,2-trichloroethane	14.22	83	28535	20.10	ug/L		93
80) tetrachloroethene	14.43	164	30917	20.27	ug/L		94
81) 1,3-dichloropropane	14.47	76	54274	20.38	ug/L		97
82) 2-hexanone	14.46	58	57434	89.21	ug/L		98
83) butyl acetate	14.61	56	27442	20.10	ug/L		90
84) dibromochloromethane	14.79	129	38840	19.63	ug/L		98
85) 1,2-dibromoethane	14.99	107	39545	20.85	ug/L		95
86) n-butyl ether	15.66	57	150518	19.14	ug/L		99
87) chlorobenzene	15.65	112	93850	19.66	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	42025	19.34	ug/L		99
89) ethylbenzene	15.75	91	154754	19.12	ug/L		100
90) m,p-xylene	15.91	106	123160	38.38	ug/L		96
91) o-xylene	16.43	91	140636	18.91	ug/L		98
92) styrene	16.45	104	103147	19.94	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

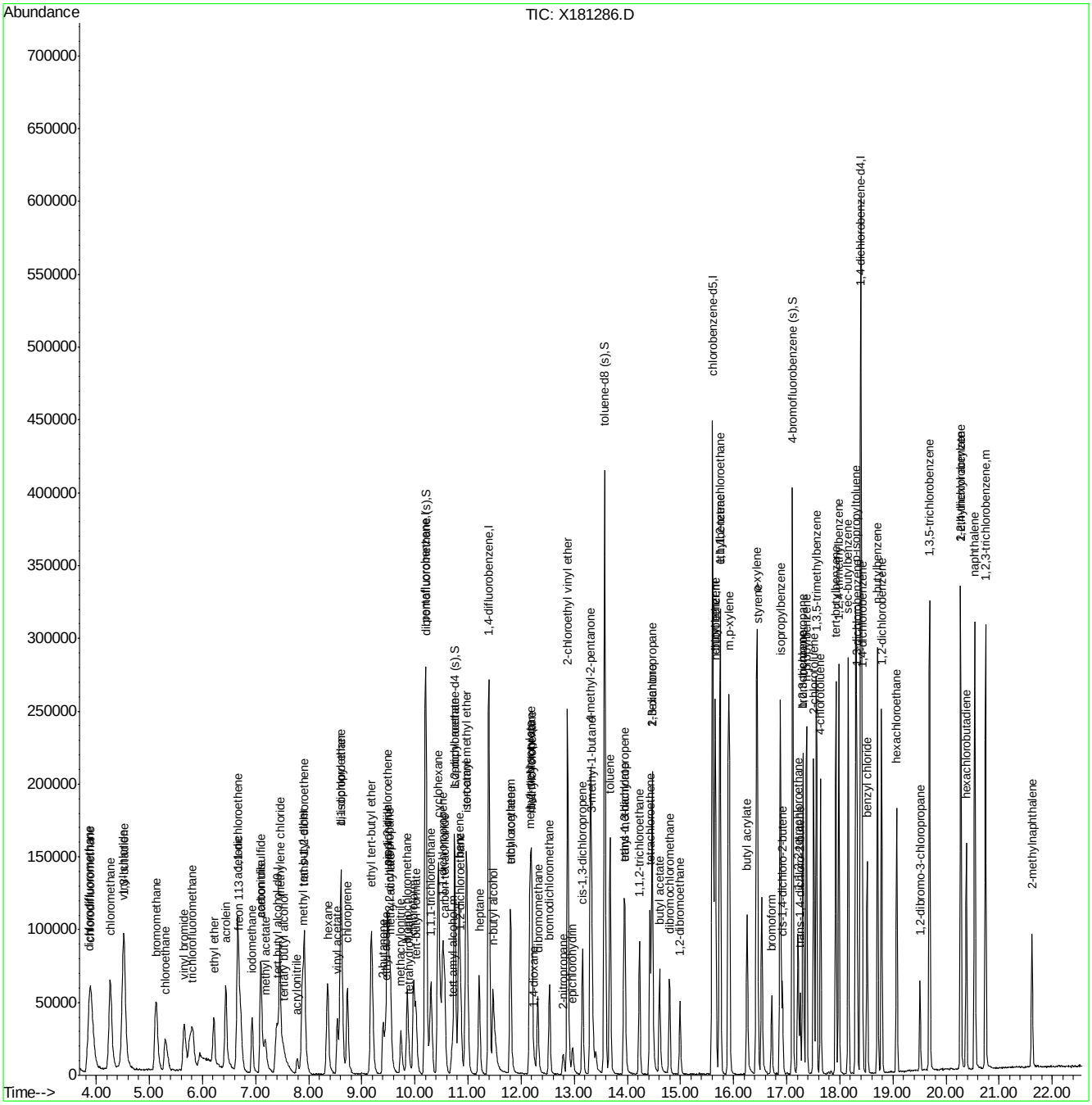
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	84855	19.46	ug/L		97
94) bromoform	16.72	173	27501	19.70	ug/L		98
95) isopropylbenzene	16.88	105	179084	18.84	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	15267	21.10	ug/L		97
99) bromobenzene	17.32	156	45538	20.17	ug/L		95
100) 1,1,2,2-tetrachloroethane	17.22	83	48735	19.95	ug/L		95
101) trans-1,4-dichloro-2-buten	17.25	53	11504	20.74	ug/L		90
102) 1,2,3-trichloropropane	17.30	110	12954	21.89	ug/L	#	78
103) n-propylbenzene	17.37	91	185284	19.67	ug/L		98
104) 2-chlorotoluene	17.51	126	42762	20.04	ug/L		99
105) 4-chlorotoluene	17.64	91	111510	19.45	ug/L		100
106) 1,3,5-trimethylbenzene	17.56	105	145074	19.81	ug/L		100
107) tert-butylbenzene	17.93	119	131279	20.19	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	148751	19.28	ug/L		99
109) sec-butylbenzene	18.16	105	193001	19.59	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	85670	19.68	ug/L		98
111) p-isopropyltoluene	18.30	119	166302	19.39	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	82911	19.06	ug/L		98
113) 1,2-dichlorobenzene	18.78	146	96223	19.48	ug/L		98
114) benzyl chloride	18.51	91	95969	19.15	ug/L		99
115) n-butylbenzene	18.71	92	81465	19.93	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	16657	21.63	ug/L		94
117) 1,3,5-trichlorobenzene	19.69	180	99249	20.58	ug/L		99
118) hexachlorobutadiene	20.39	225	31982	19.48	ug/L		98
119) naphthalene	20.54	128	238493	23.54	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	4968	2.82	ug/L		96
121) 1,2,4-trichlorobenzene	20.28	180	101465	22.89	ug/L		98
122) 1,2,3-trichlorobenzene	20.75	180	102731	22.85	ug/L		98
123) hexachloroethane	19.07	201	29579	20.62	ug/L		94
124) 2-methylnaphthalene	21.62	142	48993	9.51	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181286.D
Acq On : 2 May 2019 7:54 pm
Operator : juntaep
Sample : ic7749-20
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 09 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	145338	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	208943	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	284098	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	281371	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	146102	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	83930	49.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.74%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	90949	48.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.06%			
75) toluene-d8 (s)	13.58	98	333328	49.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%			
98) 4-bromofluorobenzene (s)	17.11	95	127939	53.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.90%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.55	59	84484	266.89	ug/L	100
4) 1,4-dioxane	12.24	88	36555	1553.43	ug/L	100
6) chlorodifluoromethane	3.90	51	322939	50.59	ug/L	100
7) dichlorodifluoromethane	3.88	85	342295	53.96	ug/L	100
8) chloromethane	4.27	50	401685	48.49	ug/L	100
9) vinyl chloride	4.51	62	325523	49.05	ug/L	100
10) bromomethane	5.13	96	170625	47.68	ug/L	100
11) chloroethane	5.31	64	115151	51.76	ug/L	100
12) vinyl bromide	5.66	106	134744	54.21	ug/L	100
13) trichlorofluoromethane	5.81	101	211086	52.19	ug/L	100
14) 1,3-butadiene	4.53	54	139870	49.34	ug/L	100
15) ethyl ether	6.22	74	46034	51.16	ug/L	100
16) acrolein	6.44	56	19411	40.08	ug/L	100
17) 1,1-dichloroethene	6.67	96	73482	48.77	ug/L	100
18) freon 113	6.70	101	123725	51.04	ug/L	100
19) acetone	6.65	43	104860	156.05	ug/L	99
20) acetonitrile	7.11	41	174586	448.48	ug/L	100
21) iodomethane	6.93	142	145135	50.05	ug/L	100
22) carbon disulfide	7.10	76	264625	49.39	ug/L	100
23) methylene chloride	7.46	84	89971	44.95	ug/L	100
24) methyl acetate	7.18	43	67760	46.66	ug/L	100
25) methyl tert butyl ether	7.89	73	320792	48.91	ug/L	100
26) trans-1,2-dichloroethene	7.92	96	78298	48.10	ug/L	100
27) hexane	8.36	57	118622	51.31	ug/L	100
28) di-isopropyl ether	8.61	45	355783	47.27	ug/L	100
29) 2-butanone	9.40	72	40992	217.81	ug/L	100
30) 1,1-dichloroethane	8.60	63	151937	48.68	ug/L	100
31) chloroprene	8.73	53	117437	50.50	ug/L	100
32) acrylonitrile	7.78	53	35901	55.10	ug/L	100
33) vinyl acetate	8.53	86	16321	54.07	ug/L	100
34) ethyl tert-butyl ether	9.18	59	356179	51.12	ug/L	100
35) ethyl acetate	9.43	45	15562	60.85	ug/L	100
36) 2,2-dichloropropane	9.53	77	152682	45.25	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	89745	48.88	ug/L	100
38) methyl acrylate	9.54	85	12651	57.14	ug/L	100
39) propionitrile	9.48	54	138742	517.55	ug/L	100
40) tert-butyl formate	10.02	59	89118	50.92	ug/L	100
41) bromochloromethane	9.86	128	48719	51.02	ug/L	100
42) tetrahydrofuran	9.89	72	12188	55.78	ug/L	100
43) chloroform	9.97	83	145147	45.89	ug/L	100
45) methacrylonitrile	9.73	67	36008	52.25	ug/L	100
46) 1,1,1-trichloroethane	10.30	97	161653	51.66	ug/L	100
47) cyclohexane	10.45	84	185862	53.75	ug/L	100
48) tert amyl alcohol	10.70	55	26431	243.03	ug/L	100
49) 1,1-dichloropropene	10.52	75	100608	50.10	ug/L	100
51) carbon tetrachloride	10.56	117	133037	50.62	ug/L	100
52) isopropyl acetate	10.75	87	19575	54.17	ug/L	100
55) iso-octane	10.99	57	254028	50.34	ug/L	100
56) epichlorohydrin	12.97	57	49960	249.01	ug/L	100
57) n-butyl alcohol	11.47	56	171520	2647.05	ug/L	100
58) benzene	10.83	78	317096	46.74	ug/L	100
59) tert-amyl methyl ether	10.97	73	310360	48.47	ug/L	100
60) heptane	11.21	57	51617	51.34	ug/L	100
61) 1,2-dichloroethane	10.87	62	104191	46.86	ug/L	100
62) trichloroethene	11.80	130	87744	50.72	ug/L	100
63) ethyl acrylate	11.80	55	114701	52.84	ug/L	100
64) 2-nitropropane	12.79	41	24514	45.81	ug/L	100
65) 2-chloroethyl vinyl ether	12.87	63	318055	258.66	ug/L	100
66) methyl methacrylate	12.15	100	24130	55.07	ug/L	100
67) 1,2-dichloropropane	12.17	76	36833	50.67	ug/L	100
68) dibromomethane	12.31	93	55365	50.40	ug/L	100
69) methylcyclohexane	12.20	83	150445	51.60	ug/L	100
70) bromodichloromethane	12.53	83	120661	49.17	ug/L	100
71) cis-1,3-dichloropropene	13.16	75	148426	50.20	ug/L	100
72) 4-methyl-2-pentanone	13.30	58	159680	214.36	ug/L	100
73) 3-methyl-1-butanol	13.33	70	65895	148.38	ug/L	100
76) toluene	13.67	92	204440	48.89	ug/L	100
77) trans-1,3-dichloropropene	13.94	75	134822	49.66	ug/L	100
78) ethyl methacrylate	13.95	69	118709	55.14	ug/L	100
79) 1,1,2-trichloroethane	14.23	83	70774	49.82	ug/L	100
80) tetrachloroethene	14.42	164	76269	49.98	ug/L	100
81) 1,3-dichloropropane	14.46	76	126617	47.52	ug/L	100
82) 2-hexanone	14.46	58	136351	211.70	ug/L	100
83) butyl acetate	14.60	56	68357	50.05	ug/L	100
84) dibromochloromethane	14.79	129	99183	50.10	ug/L	100
85) 1,2-dibromoethane	14.99	107	98642	51.99	ug/L	100
86) n-butyl ether	15.66	57	375030	47.68	ug/L	100
87) chlorobenzene	15.65	112	231474	48.46	ug/L	100
88) 1,1,1,2-tetrachloroethane	15.74	131	105455	48.52	ug/L	100
89) ethylbenzene	15.74	91	370373	45.74	ug/L	100
90) m,p-xylene	15.91	106	297252	92.60	ug/L	100
91) o-xylene	16.43	91	348814	46.89	ug/L	100
92) styrene	16.45	104	248617	48.05	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

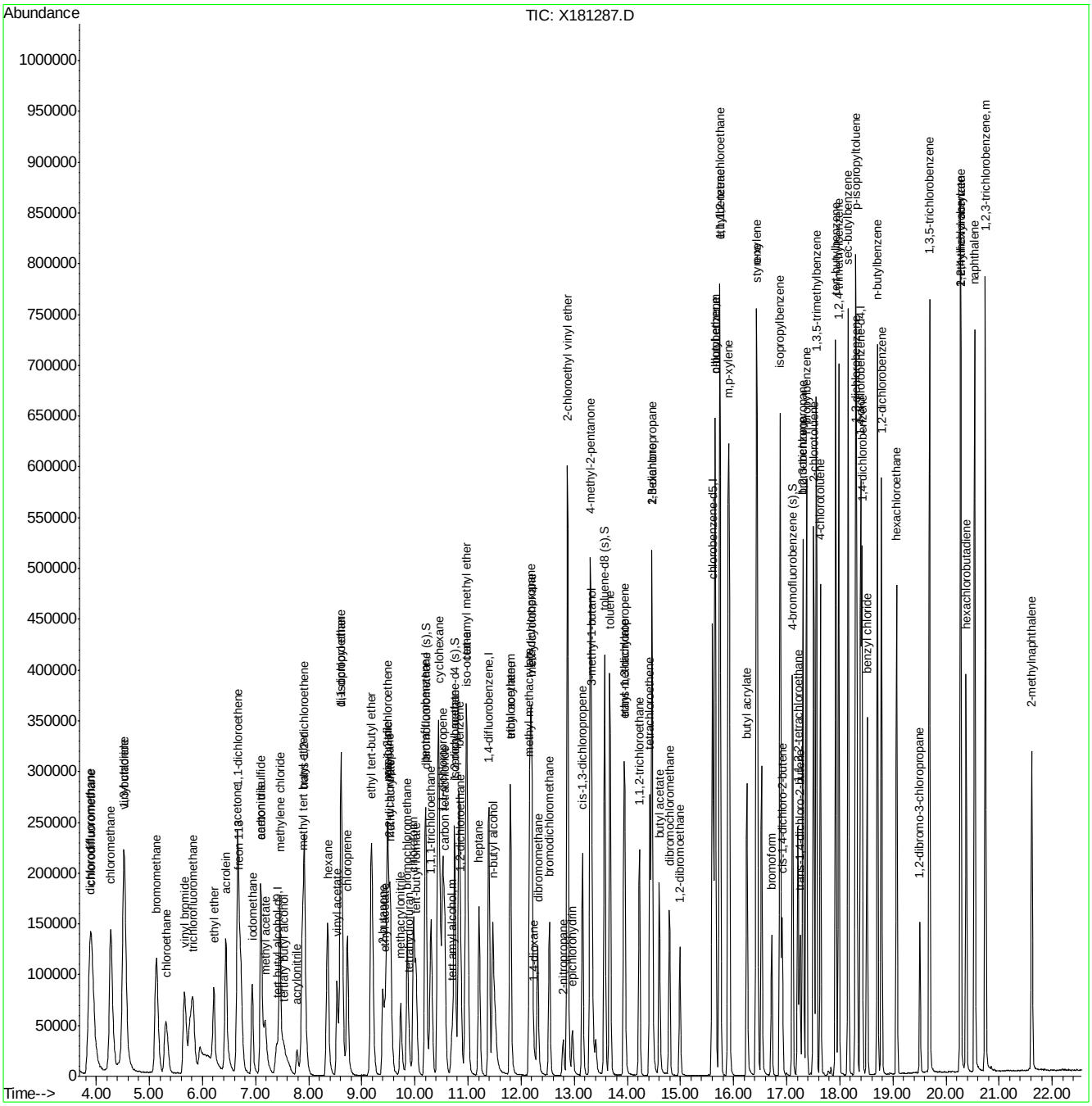
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) butyl acrylate	16.25	55	207991	47.69	ug/L	100
94) bromoform	16.72	173	70219	50.27	ug/L	100
95) isopropylbenzene	16.88	105	459654	48.34	ug/L	100
96) cis-1,4-dichloro-2-butene	16.92	88	36670	50.65	ug/L	100
99) bromobenzene	17.31	156	109689	51.81	ug/L	100
100) 1,1,2,2-tetrachloroethane	17.21	83	122507	53.49	ug/L	100
101) trans-1,4-dichloro-2-buten	17.25	53	27294	52.48	ug/L	100
102) 1,2,3-trichloropropane	17.30	110	30265	54.55	ug/L	100
103) n-propylbenzene	17.37	91	456470	51.69	ug/L	100
104) 2-chlorotoluene	17.51	126	107346	53.64	ug/L	100
105) 4-chlorotoluene	17.63	91	265371	49.36	ug/L	100
106) 1,3,5-trimethylbenzene	17.56	105	360771	52.55	ug/L	100
107) tert-butylbenzene	17.92	119	341343	55.98	ug/L	100
108) 1,2,4-trimethylbenzene	17.98	105	365961	50.58	ug/L	100
109) sec-butylbenzene	18.16	105	499786	54.12	ug/L	100
110) 1,3-dichlorobenzene	18.32	146	196651	48.19	ug/L	100
111) p-isopropyltoluene	18.30	119	422297	52.51	ug/L	100
112) 1,4-dichlorobenzene	18.42	146	197283	48.38	ug/L	100
113) 1,2-dichlorobenzene	18.78	146	227388	49.09	ug/L	100
114) benzyl chloride	18.51	91	229226	48.80	ug/L	100
115) n-butylbenzene	18.71	92	205949	53.73	ug/L	100
116) 1,2-dibromo-3-chloropropan	19.51	157	41289	57.19	ug/L	100
117) 1,3,5-trichlorobenzene	19.69	180	239887	53.06	ug/L	100
118) hexachlorobutadiene	20.38	225	80586	52.36	ug/L	100
119) naphthalene	20.54	128	586488	61.74	ug/L	100
120) 2-ethylhexyl acrylate	20.28	70	21439	12.97	ug/L	100
121) 1,2,4-trichlorobenzene	20.28	180	248362	59.76	ug/L	100
122) 1,2,3-trichlorobenzene	20.74	180	254569	60.39	ug/L	100
123) hexachloroethane	19.07	201	81327	60.46	ug/L	100
124) 2-methylnaphthalene	21.61	142	165754	34.32	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181287.D
Acq On : 2 May 2019 8:22 pm
Operator : juntaep
Sample : icc7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 09 12:17:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	136709	500.00	ug/L	0.00
5) pentafluorobenzene	10.19	168	195312	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	268801	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	274931	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	137319	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	81987	51.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.18%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	83104	46.87	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 93.74%			
75) toluene-d8 (s)	13.57	98	313590	47.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.16%			
98) 4-bromofluorobenzene (s)	17.11	95	123655	54.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.94%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.54	59	156671	526.18	ug/L	98
4) 1,4-dioxane	12.24	88	67566	3052.49	ug/L	96
6) chlorodifluoromethane	3.89	51	590274	98.92	ug/L	99
7) dichlorodifluoromethane	3.86	85	621630	104.84	ug/L	99
8) chloromethane	4.26	50	717941	92.72	ug/L	100
9) vinyl chloride	4.50	62	580982	93.65	ug/L	99
10) bromomethane	5.12	96	298438	89.21	ug/L	99
11) chloroethane	5.30	64	204730	98.46	ug/L	99
12) vinyl bromide	5.65	106	245149	105.51	ug/L	98
13) trichlorofluoromethane	5.81	101	385496	101.96	ug/L	100
14) 1,3-butadiene	4.53	54	244666	92.33	ug/L	98
15) ethyl ether	6.21	74	86556	102.91	ug/L	96
16) acrolein	6.44	56	35300	77.97	ug/L	95
17) 1,1-dichloroethene	6.66	96	137257	97.46	ug/L	99
18) freon 113	6.69	101	218136	96.27	ug/L	97
19) acetone	6.65	43	194510	309.66	ug/L	97
20) acetonitrile	7.10	41	313853	862.50	ug/L	97
21) iodomethane	6.93	142	274020	101.10	ug/L	99
22) carbon disulfide	7.10	76	485653	96.98	ug/L	99
23) methylene chloride	7.45	84	170666	91.21	ug/L	99
24) methyl acetate	7.18	43	121043	89.18	ug/L	99
25) methyl tert butyl ether	7.88	73	586357	95.63	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	145279	95.47	ug/L	99
27) hexane	8.35	57	210253	97.29	ug/L	99
28) di-isopropyl ether	8.61	45	631714	89.79	ug/L	97
29) 2-butanone	9.40	72	74828	425.35	ug/L	98
30) 1,1-dichloroethane	8.60	63	278015	95.29	ug/L	98
31) chloroprene	8.73	53	216516	99.60	ug/L	96
32) acrylonitrile	7.78	53	67555	110.91	ug/L	97
33) vinyl acetate	8.53	86	31011	109.90	ug/L	98
34) ethyl tert-butyl ether	9.18	59	656499	100.79	ug/L	99
35) ethyl acetate	9.44	45	27201	113.78	ug/L	88
36) 2,2-dichloropropane	9.52	77	272367	86.35	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.48	96	164293	95.74	ug/L		98
38) methyl acrylate	9.54	85	22640	109.40	ug/L	#	87
39) propionitrile	9.47	54	238764	952.82	ug/L		99
40) tert-butyl formate	10.02	59	157236	96.10	ug/L		98
41) bromochloromethane	9.85	128	90239	101.09	ug/L		97
42) tetrahydrofuran	9.88	72	21195	103.77	ug/L		88
43) chloroform	9.97	83	268717	90.89	ug/L		97
45) methacrylonitrile	9.73	67	66228	102.81	ug/L		95
46) 1,1,1-trichloroethane	10.30	97	302136	103.29	ug/L		99
47) cyclohexane	10.45	84	333188	103.08	ug/L		95
48) tert amyl alcohol	10.70	55	47704	469.24	ug/L		94
49) 1,1-dichloropropene	10.52	75	182898	97.43	ug/L		98
51) carbon tetrachloride	10.55	117	238524	97.10	ug/L		98
52) isopropyl acetate	10.75	87	35507	105.12	ug/L		96
55) iso-octane	10.99	57	499343	104.58	ug/L		99
56) epichlorohydrin	12.97	57	91234	480.60	ug/L		97
57) n-butyl alcohol	11.47	56	322086	5253.60	ug/L		100
58) benzene	10.83	78	571552	89.04	ug/L		99
59) tert-amyl methyl ether	10.97	73	570742	94.22	ug/L		99
60) heptane	11.21	57	91791	96.50	ug/L		97
61) 1,2-dichloroethane	10.86	62	188732	89.72	ug/L		100
62) trichloroethene	11.79	130	164434	100.47	ug/L		99
63) ethyl acrylate	11.80	55	209279	101.90	ug/L		99
64) 2-nitropropane	12.79	41	44732	88.35	ug/L		96
65) 2-chloroethyl vinyl ether	12.87	63	567489	487.77	ug/L		99
66) methyl methacrylate	12.15	100	45574	109.92	ug/L		95
67) 1,2-dichloropropane	12.17	76	65579	95.34	ug/L		98
68) dibromomethane	12.31	93	99544	95.78	ug/L		95
69) methylcyclohexane	12.19	83	270321	98.00	ug/L		99
70) bromodichloromethane	12.53	83	223803	96.39	ug/L		99
71) cis-1,3-dichloropropene	13.16	75	276013	98.67	ug/L		99
72) 4-methyl-2-pentanone	13.30	58	278419	395.03	ug/L		99
73) 3-methyl-1-butanol	13.32	70	117595	279.86	ug/L		97
76) toluene	13.67	92	373408	91.39	ug/L		99
77) trans-1,3-dichloropropene	13.93	75	253457	95.55	ug/L		98
78) ethyl methacrylate	13.95	69	214733	102.08	ug/L		97
79) 1,1,2-trichloroethane	14.22	83	128574	92.63	ug/L		97
80) tetrachloroethene	14.42	164	139033	93.24	ug/L		99
81) 1,3-dichloropropane	14.46	76	224536	86.25	ug/L		100
82) 2-hexanone	14.46	58	241141	383.17	ug/L		97
83) butyl acetate	14.60	56	124788	93.50	ug/L		99
84) dibromochloromethane	14.79	129	186907	96.62	ug/L		99
85) 1,2-dibromoethane	14.99	107	180980	97.62	ug/L		98
86) n-butyl ether	15.66	57	666346	86.69	ug/L		99
87) chlorobenzene	15.64	112	432461	92.66	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	182841	86.10	ug/L		99
89) ethylbenzene	15.74	91	659914	83.41	ug/L		99
90) m,p-xylene	15.91	106	540549	172.33	ug/L		98
91) o-xylene	16.43	91	616312	84.79	ug/L		99
92) styrene	16.45	104	445657	88.14	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

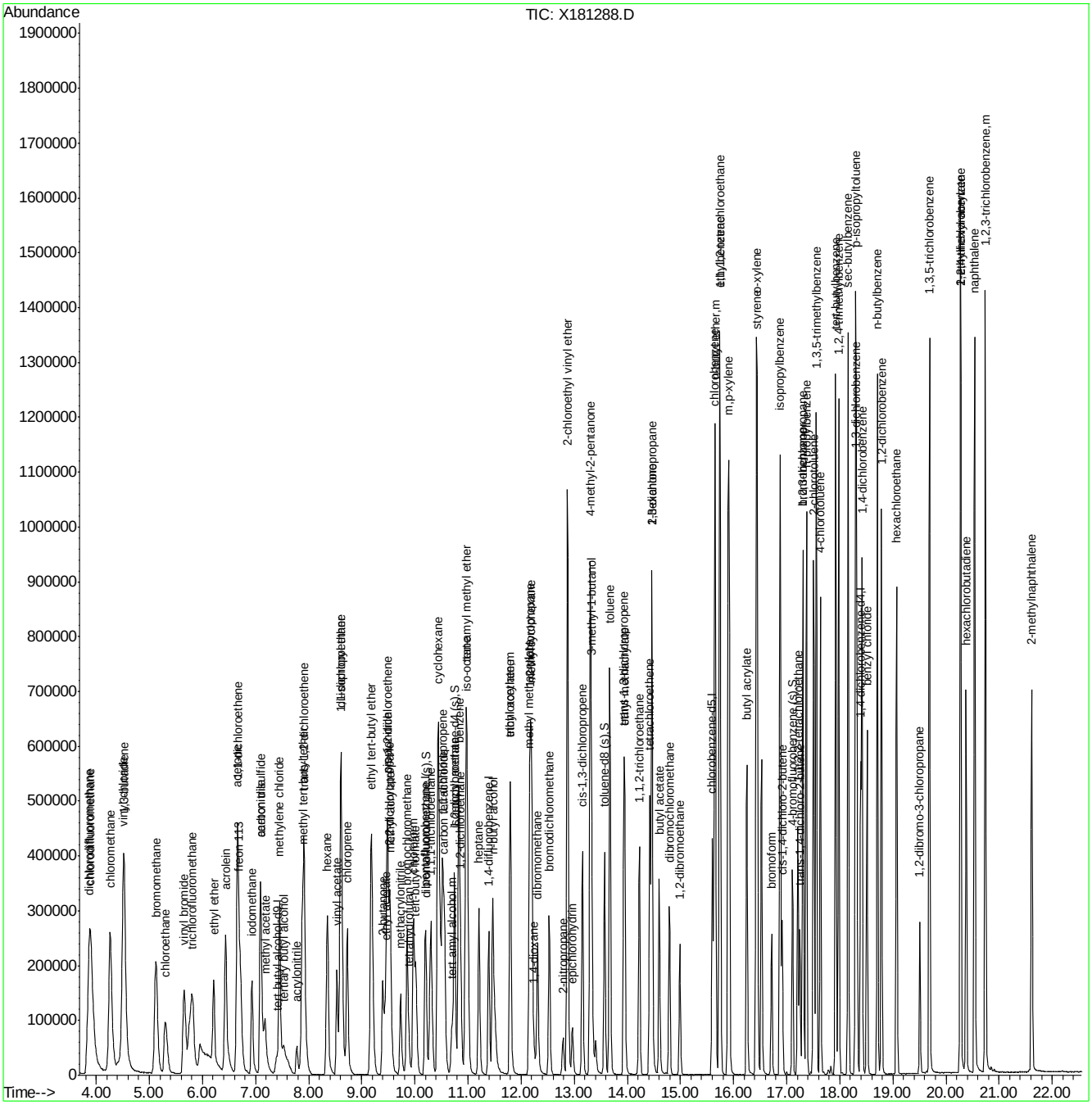
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	390335	91.59	ug/L		99
94) bromoform	16.72	173	132298	96.93	ug/L		97
95) isopropylbenzene	16.88	105	802704	86.39	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	67459	95.35	ug/L		97
99) bromobenzene	17.31	156	197171	99.08	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.21	83	224380	104.23	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	51371	105.09	ug/L		99
102) 1,2,3-trichloropropane	17.30	110	54697	104.89	ug/L	#	76
103) n-propylbenzene	17.37	91	805070	97.00	ug/L		100
104) 2-chlorotoluene	17.51	126	191754	101.96	ug/L		96
105) 4-chlorotoluene	17.63	91	481252	95.24	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	634067	98.26	ug/L		99
107) tert-butylbenzene	17.92	119	627540	109.51	ug/L		99
108) 1,2,4-trimethylbenzene	17.98	105	640979	94.26	ug/L		98
109) sec-butylbenzene	18.16	105	900858	103.78	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	348072	90.74	ug/L		99
111) p-isopropyltoluene	18.30	119	753610	99.70	ug/L		100
112) 1,4-dichlorobenzene	18.42	146	362886	94.69	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	400055	91.89	ug/L		99
114) benzyl chloride	18.51	91	412790	93.50	ug/L		100
115) n-butylbenzene	18.71	92	363436	100.87	ug/L		96
116) 1,2-dibromo-3-chloropropan	19.51	157	75771	111.67	ug/L		97
117) 1,3,5-trichlorobenzene	19.69	180	423390	99.64	ug/L		99
118) hexachlorobutadiene	20.38	225	145862	100.84	ug/L		98
119) naphthalene	20.54	128	1067113	119.53	ug/L		100
120) 2-ethylhexyl acrylate	20.28	70	49872	32.10	ug/L		94
121) 1,2,4-trichlorobenzene	20.28	180	445443	114.03	ug/L		99
122) 1,2,3-trichlorobenzene	20.74	180	470276	118.70	ug/L		99
123) hexachloroethane	19.07	201	154811	122.46	ug/L		99
124) 2-methylnaphthalene	21.61	142	378317	83.35	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181288.D
Acq On : 2 May 2019 8:51 pm
Operator : juntaep
Sample : ic7749-100
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 09 12:17:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.41	65	138754	500.00	ug/L	0.01
5) pentafluorobenzene	10.20	168	202245	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	280314	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	294390	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	142923	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.22	113	83278	50.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.22%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	81494	44.07	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 88.14%			
75) toluene-d8 (s)	13.58	98	337045	47.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.52%			
98) 4-bromofluorobenzene (s)	17.11	95	128739	54.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.96%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.55	59	326388	1080.02	ug/L	98
4) 1,4-dioxane	12.25	88	139889	6226.75	ug/L	97
6) chlorodifluoromethane	3.89	51	1072416	173.56	ug/L	99
7) dichlorodifluoromethane	3.87	85	1196685	194.91	ug/L	99
8) chloromethane	4.27	50	1272189	158.67	ug/L	99
9) vinyl chloride	4.51	62	1052113	163.77	ug/L	98
10) bromomethane	5.12	96	517131	149.29	ug/L	99
11) chloroethane	5.31	64	376826	175.01	ug/L	98
12) vinyl bromide	5.66	106	467337	194.24	ug/L	96
13) trichlorofluoromethane	5.81	101	747873	191.03	ug/L	99
14) 1,3-butadiene	4.53	54	467095	170.22	ug/L	98
15) ethyl ether	6.22	74	165005	189.45	ug/L	100
16) acrolein	6.44	56	65849	140.47	ug/L	97
17) 1,1-dichloroethene	6.66	96	255954	175.51	ug/L	98
18) freon 113	6.70	101	448740	191.26	ug/L	98
19) acetone	6.66	43	368384	566.36	ug/L	97
20) acetonitrile	7.11	41	609284	1616.98	ug/L	99
21) iodomethane	6.93	142	525182	187.12	ug/L	98
22) carbon disulfide	7.10	76	922457	177.88	ug/L	99
23) methylene chloride	7.46	84	327740	169.16	ug/L	94
24) methyl acetate	7.18	43	237044	168.65	ug/L	98
25) methyl tert butyl ether	7.89	73	1134114	178.63	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	266133	168.90	ug/L	100
27) hexane	8.36	57	453193	202.53	ug/L	98
28) di-isopropyl ether	8.62	45	1229084	168.72	ug/L	97
29) 2-butanone	9.40	72	153638	843.40	ug/L	99
30) 1,1-dichloroethane	8.60	63	518341	171.58	ug/L	99
31) chloroprene	8.73	53	413531	183.71	ug/L	96
32) acrylonitrile	7.78	53	133360	211.44	ug/L	98
33) vinyl acetate	8.53	86	61950	212.03	ug/L #	91
34) ethyl tert-butyl ether	9.18	59	1292322	191.61	ug/L	99
35) ethyl acetate	9.44	45	54801	221.38	ug/L	89
36) 2,2-dichloropropane	9.53	77	542154	165.98	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
37) cis-1,2-dichloroethene	9.49	96	308098	173.38 ug/L		98
38) methyl acrylate	9.54	85	45350	211.62 ug/L	#	88
39) propionitrile	9.48	54	474798	1829.79 ug/L		98
40) tert-butyl formate	10.02	59	305421	180.28 ug/L		99
41) bromochloromethane	9.85	128	174882	189.20 ug/L		95
42) tetrahydrofuran	9.88	72	42972	203.19 ug/L	#	81
43) chloroform	9.98	83	512504	167.40 ug/L		97
45) methacrylonitrile	9.73	67	134811	202.10 ug/L		94
46) 1,1,1-trichloroethane	10.30	97	623067	205.70 ug/L		98
47) cyclohexane	10.45	84	691924	206.72 ug/L		93
48) tert amyl alcohol	10.70	55	99282	943.11 ug/L		92
49) 1,1-dichloropropene	10.52	75	348020	179.04 ug/L		98
51) carbon tetrachloride	10.56	117	484841	190.61 ug/L		98
52) isopropyl acetate	10.75	87	73665	210.61 ug/L		99
55) iso-octane	10.99	57	1147878	230.53 ug/L		98
56) epichlorohydrin	12.96	57	186542	942.30 ug/L		99
57) n-butyl alcohol	11.47	56	693628	10849.20 ug/L		97
58) benzene	10.83	78	1115293	166.61 ug/L		99
59) tert-amyl methyl ether	10.97	73	1129159	178.74 ug/L		99
60) heptane	11.21	57	203524	205.18 ug/L		97
61) 1,2-dichloroethane	10.87	62	361185	164.64 ug/L		98
62) trichloroethene	11.79	130	319537	187.22 ug/L		99
63) ethyl acrylate	11.80	55	422354	197.19 ug/L		100
64) 2-nitropropane	12.79	41	92509	175.21 ug/L		96
65) 2-chloroethyl vinyl ether	12.87	63	1107932	913.18 ug/L		98
66) methyl methacrylate	12.15	100	94451	218.46 ug/L	#	87
67) 1,2-dichloropropane	12.17	76	125960	175.61 ug/L		96
68) dibromomethane	12.31	93	195185	180.08 ug/L		97
69) methylcyclohexane	12.20	83	589738	205.02 ug/L		96
70) bromodichloromethane	12.53	83	449468	185.63 ug/L		96
71) cis-1,3-dichloropropene	13.16	75	549293	188.30 ug/L		98
72) 4-methyl-2-pentanone	13.30	58	585498	796.61 ug/L		95
73) 3-methyl-1-butanol	13.33	70	249344	569.03 ug/L		96
76) toluene	13.67	92	762292	174.24 ug/L		96
77) trans-1,3-dichloropropene	13.93	75	500078	176.07 ug/L		98
78) ethyl methacrylate	13.95	69	440882	195.73 ug/L		97
79) 1,1,2-trichloroethane	14.22	83	260084	174.99 ug/L		96
80) tetrachloroethene	14.42	164	281069	176.04 ug/L		98
81) 1,3-dichloropropane	14.46	76	431024	154.62 ug/L		99
82) 2-hexanone	14.46	58	497604	738.42 ug/L		93
83) butyl acetate	14.60	56	261087	182.70 ug/L		100
84) dibromochloromethane	14.79	129	382004	184.43 ug/L		99
85) 1,2-dibromoethane	14.99	107	360612	181.65 ug/L		98
86) n-butyl ether	15.66	57	1337269	162.48 ug/L		99
87) chlorobenzene	15.64	112	869149	173.92 ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	382478	168.20 ug/L		98
89) ethylbenzene	15.74	91	1306504	154.22 ug/L		99
90) m,p-xylene	15.91	106	1096220	326.38 ug/L		95
91) o-xylene	16.43	91	1260665	161.98 ug/L		96
92) styrene	16.45	104	873628	161.36 ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration

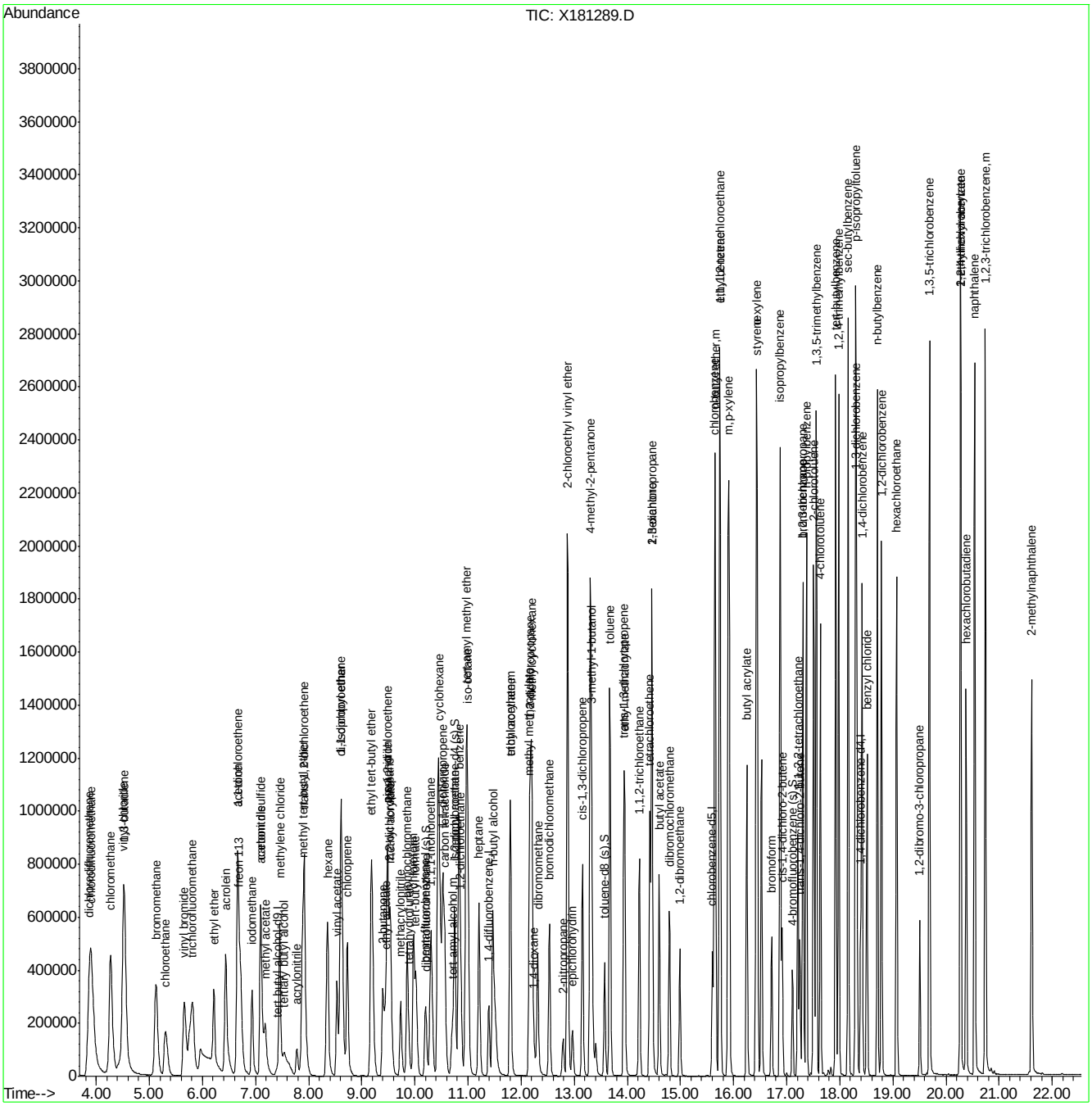
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	804692	176.34	ug/L		99
94) bromoform	16.72	173	272906	186.73	ug/L		97
95) isopropylbenzene	16.88	105	1679531	168.82	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	134299	177.29	ug/L		96
99) bromobenzene	17.31	156	382293	184.58	ug/L		99
100) 1,1,2,2-tetrachloroethane	17.21	83	459187	204.94	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	98489	193.58	ug/L		93
102) 1,2,3-trichloropropane	17.30	110	108803	200.47	ug/L	#	73
103) n-propylbenzene	17.37	91	1618820	187.40	ug/L		99
104) 2-chlorotoluene	17.51	126	397202	202.91	ug/L		95
105) 4-chlorotoluene	17.63	91	951516	180.92	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	1345377	200.32	ug/L		98
107) tert-butylbenzene	17.92	119	1306810	219.10	ug/L		97
108) 1,2,4-trimethylbenzene	17.98	105	1322793	186.89	ug/L		96
109) sec-butylbenzene	18.16	105	1916287	212.11	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	672448	168.44	ug/L		99
111) p-isopropyltoluene	18.30	119	1589623	202.06	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	724070	181.53	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	796942	175.87	ug/L		99
114) benzyl chloride	18.51	91	812691	176.86	ug/L		99
115) n-butylbenzene	18.71	92	748730	199.67	ug/L		96
116) 1,2-dibromo-3-chloropropan	19.51	157	162718	230.41	ug/L		97
117) 1,3,5-trichlorobenzene	19.69	180	875431	197.94	ug/L		100
118) hexachlorobutadiene	20.38	225	306392	203.52	ug/L		98
119) naphthalene	20.54	128	2170954	233.63	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	121485	75.12	ug/L		88
121) 1,2,4-trichlorobenzene	20.28	180	910624	223.98	ug/L		98
122) 1,2,3-trichlorobenzene	20.74	180	946779	229.60	ug/L		100
123) hexachloroethane	19.07	201	334125	253.93	ug/L		96
124) 2-methylnaphthalene	21.61	142	818033	173.16	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181289.D
Acq On : 2 May 2019 9:19 pm
Operator : juntaep
Sample : ic7749-200
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 09 12:17:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 12:15:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	138261	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	210810	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	287197	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	284940	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	145478	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	86219	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.52%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	91451	48.27	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.54%			
75) toluene-d8 (s)	13.57	98	333168	48.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.54%			
98) 4-bromofluorobenzene (s)	17.11	95	128905	54.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.18%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.54	59	86527	276.04	ug/L	97
4) 1,4-dioxane	12.24	88	35824	1386.08	ug/L #	1
6) chlorodifluoromethane	3.89	51	370674	57.55	ug/L	98
7) dichlorodifluoromethane	3.88	85	353426	55.22	ug/L	99
8) chloromethane	4.27	50	415232	51.13	ug/L	99
9) vinyl chloride	4.50	62	327103	48.85	ug/L	99
10) bromomethane	5.12	96	170834	51.26	ug/L	99
11) chloroethane	5.30	64	115486	51.46	ug/L	99
12) vinyl bromide	5.66	106	127929	51.01	ug/L	95
13) trichlorofluoromethane	5.80	101	209095	51.24	ug/L	99
14) 1,3-butadiene	4.52	54	166406	58.18	ug/L	97
15) ethyl ether	6.21	74	49109	54.09	ug/L	92
16) acrolein	6.44	56	20377	48.24	ug/L	96
17) 1,1-dichloroethene	6.66	96	73026	48.04	ug/L	98
18) freon 113	6.70	101	141867	58.01	ug/L	96
19) acetone	6.66	43	117335	211.65	ug/L	99
20) acetonitrile	7.10	41	161402	439.36	ug/L	98
21) iodomethane	6.93	142	166998	57.08	ug/L	99
22) carbon disulfide	7.10	76	294464	54.48	ug/L	99
23) methylene chloride	7.46	84	91450	47.58	ug/L	97
24) methyl acetate	7.18	43	69941	47.74	ug/L	96
25) methyl tert butyl ether	7.88	73	631590	95.44	ug/L	98
26) trans-1,2-dichloroethene	7.92	96	76762	46.74	ug/L	99
27) hexane	8.36	57	129109	53.64	ug/L	97
28) di-isopropyl ether	8.61	45	345733	45.53	ug/L	99
29) 2-butanone	9.39	72	41949	220.92	ug/L	97
30) 1,1-dichloroethane	8.60	63	159711	50.72	ug/L	98
31) chloroprene	8.73	53	127278	54.25	ug/L	99
32) acrylonitrile	7.78	53	42096	61.38	ug/L	94
33) vinyl acetate	8.53	86	16731	52.02	ug/L	95
34) ethyl tert-butyl ether	9.18	59	351684	50.03	ug/L	98
35) ethyl acetate	9.43	45	15969	54.46	ug/L	89
36) 2,2-dichloropropane	9.52	77	143742	44.49	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.48	96	90091	47.64	ug/L		97
38) methyl acrylate	9.54	85	13006	58.23	ug/L	#	84
39) propionitrile	9.47	54	147269	544.49	ug/L		99
40) tert-butyl formate	10.02	59	82299	46.60	ug/L		99
41) bromochloromethane	9.85	128	51876	53.84	ug/L		94
42) tetrahydrofuran	9.88	72	12926	56.13	ug/L		89
43) chloroform	9.97	83	151391	49.22	ug/L		99
45) methacrylonitrile	9.73	67	38418	55.25	ug/L		95
46) 1,1,1-trichloroethane	10.30	97	163625	51.82	ug/L		99
47) cyclohexane	10.45	84	187097	53.63	ug/L		95
48) tert amyl alcohol	10.69	55	28265	257.59	ug/L		95
49) 1,1-dichloropropene	10.52	75	104236	51.45	ug/L		98
51) carbon tetrachloride	10.56	117	136974	51.66	ug/L		99
52) isopropyl acetate	10.75	87	20016	54.90	ug/L	#	92
55) iso-octane	10.98	57	263999	51.75	ug/L		98
56) epichlorohydrin	12.96	57	53513	263.84	ug/L		99
57) n-butyl alcohol	11.47	56	174805	2668.64	ug/L		98
58) benzene	10.83	78	332170	49.84	ug/L		99
59) tert-amyl methyl ether	10.97	73	305838	47.25	ug/L		99
60) heptane	11.21	57	65218	64.17	ug/L		98
61) 1,2-dichloroethane	10.86	62	107006	47.61	ug/L		99
62) trichloroethene	11.79	130	93354	53.39	ug/L		97
63) ethyl acrylate	11.80	55	124827	56.88	ug/L		99
64) 2-nitropropane	12.79	41	27009	52.73	ug/L		96
65) 2-chloroethyl vinyl ether	12.87	63	349043	280.79	ug/L		99
66) methyl methacrylate	12.15	100	24191	52.13	ug/L	#	82
67) 1,2-dichloropropane	12.17	76	35720	48.61	ug/L		96
68) dibromomethane	12.31	93	54491	49.07	ug/L		92
69) methylcyclohexane	12.19	83	154383	50.47	ug/L		96
70) bromodichloromethane	12.53	83	122004	49.18	ug/L		97
71) cis-1,3-dichloropropene	13.16	75	154248	51.61	ug/L		99
72) 4-methyl-2-pentanone	13.30	58	168034	223.14	ug/L		100
73) 3-methyl-1-butanol	13.32	70	68470	1106.03	ug/L		97
76) toluene	13.67	92	213135	50.33	ug/L		97
77) trans-1,3-dichloropropene	13.93	75	143011	52.02	ug/L		98
78) ethyl methacrylate	13.95	69	126465	55.83	ug/L		99
79) 1,1,2-trichloroethane	14.22	83	74318	51.66	ug/L		98
80) tetrachloroethene	14.42	164	81985	53.05	ug/L		97
81) 1,3-dichloropropane	14.46	76	132578	49.14	ug/L		99
82) 2-hexanone	14.46	58	140377	204.93	ug/L		98
83) butyl acetate	14.60	56	69936	50.56	ug/L		97
84) dibromochloromethane	14.79	129	107287	53.51	ug/L		99
85) 1,2-dibromoethane	14.99	107	101932	53.05	ug/L		99
86) n-butyl ether	15.66	57	408043	53.41	ug/L		100
87) chlorobenzene	15.64	112	246318	50.92	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.74	131	108121	50.62	ug/L		97
89) ethylbenzene	15.74	91	385958	48.72	ug/L		99
90) m,p-xylene	15.91	106	312083	98.73	ug/L		99
91) o-xylene	16.43	91	360686	49.67	ug/L		99
92) styrene	16.45	104	258530	49.34	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

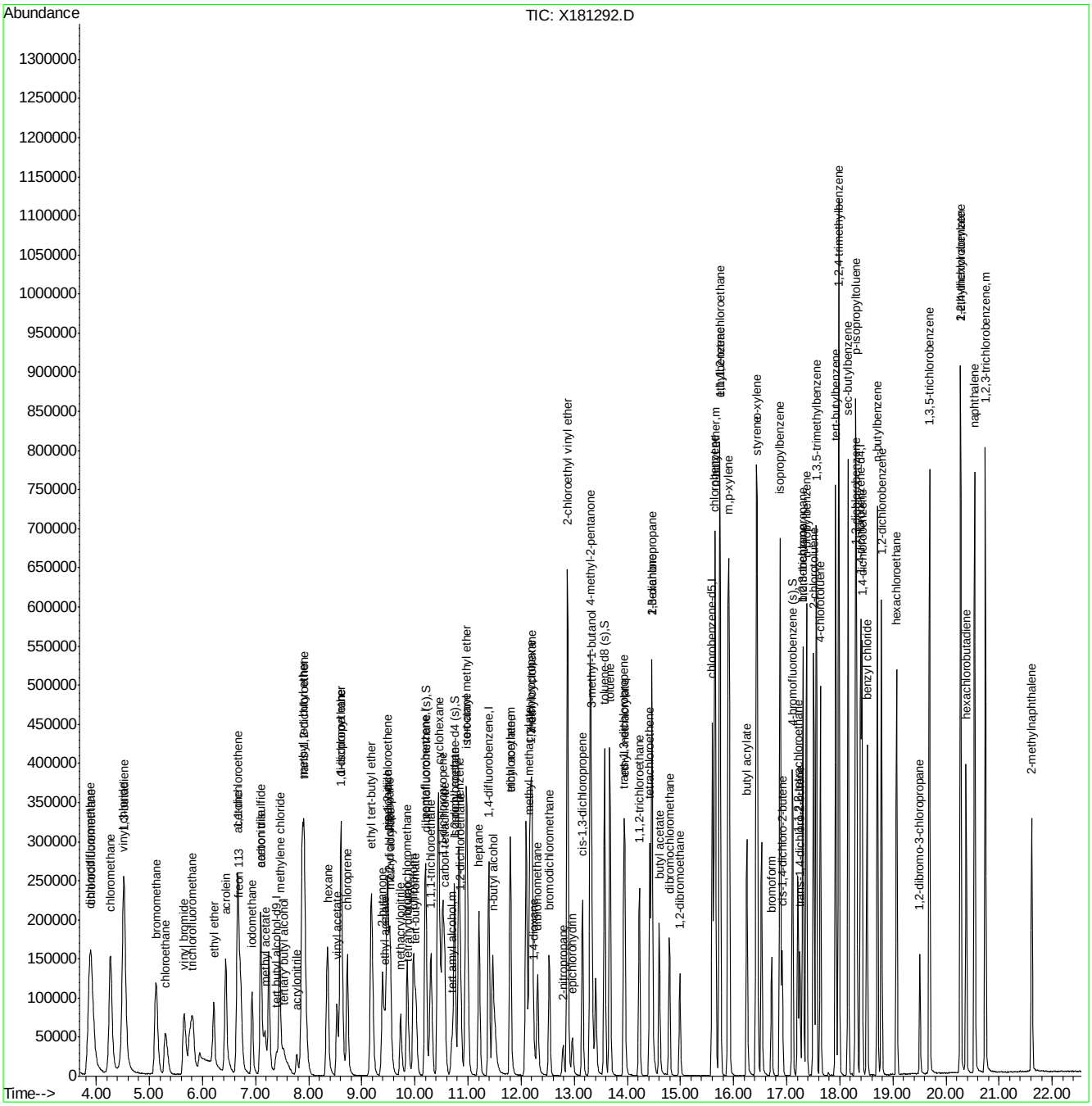
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) butyl acrylate	16.25	55	215202	48.72	ug/L		99
94) bromoform	16.72	173	77450	54.75	ug/L		98
95) isopropylbenzene	16.88	105	474596	50.98	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	38155	49.62	ug/L		99
99) bromobenzene	17.31	156	110872	52.59	ug/L		98
100) 1,1,2,2-tetrachloroethane	17.21	83	127139	55.75	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	31532	60.89	ug/L		97
102) 1,2,3-trichloropropane	17.30	110	31149	54.42	ug/L	#	77
103) n-propylbenzene	17.37	91	473683	53.87	ug/L		99
104) 2-chlorotoluene	17.51	126	108082	54.24	ug/L		96
105) 4-chlorotoluene	17.63	91	280924	52.48	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	373269	55.86	ug/L		100
107) tert-butylbenzene	17.92	119	357114	58.82	ug/L		99
108) 1,2,4-trimethylbenzene	17.98	105	371713	53.32	ug/L		99
109) sec-butylbenzene	18.16	105	516529	56.17	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	203401	50.05	ug/L		99
111) p-isopropyltoluene	18.30	119	441256	55.10	ug/L		99
112) 1,4-dichlorobenzene	18.42	146	205310	52.08	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	235841	52.55	ug/L		99
114) benzyl chloride	18.51	91	278978	61.53	ug/L		99
115) n-butylbenzene	18.71	92	210164	55.06	ug/L		97
116) 1,2-dibromo-3-chloropropan	19.51	157	41471	55.52	ug/L		98
117) 1,3,5-trichlorobenzene	19.69	180	245884	54.62	ug/L		98
118) hexachlorobutadiene	20.38	225	80620	52.61	ug/L		99
119) naphthalene	20.54	128	609521	57.27	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	23238	12.00	ug/L		95
121) 1,2,4-trichlorobenzene	20.28	180	254332	58.93	ug/L		100
122) 1,2,3-trichlorobenzene	20.74	180	261474	59.78	ug/L		98
123) hexachloroethane	19.07	201	85864	60.61	ug/L		99
124) 2-methylnaphthalene	21.61	142	169781	23.44	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181292.D
Acq On : 2 May 2019 10:45 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 14:51:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181293.D
Acq On : 2 May 2019 11:14 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 09 14:52:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration

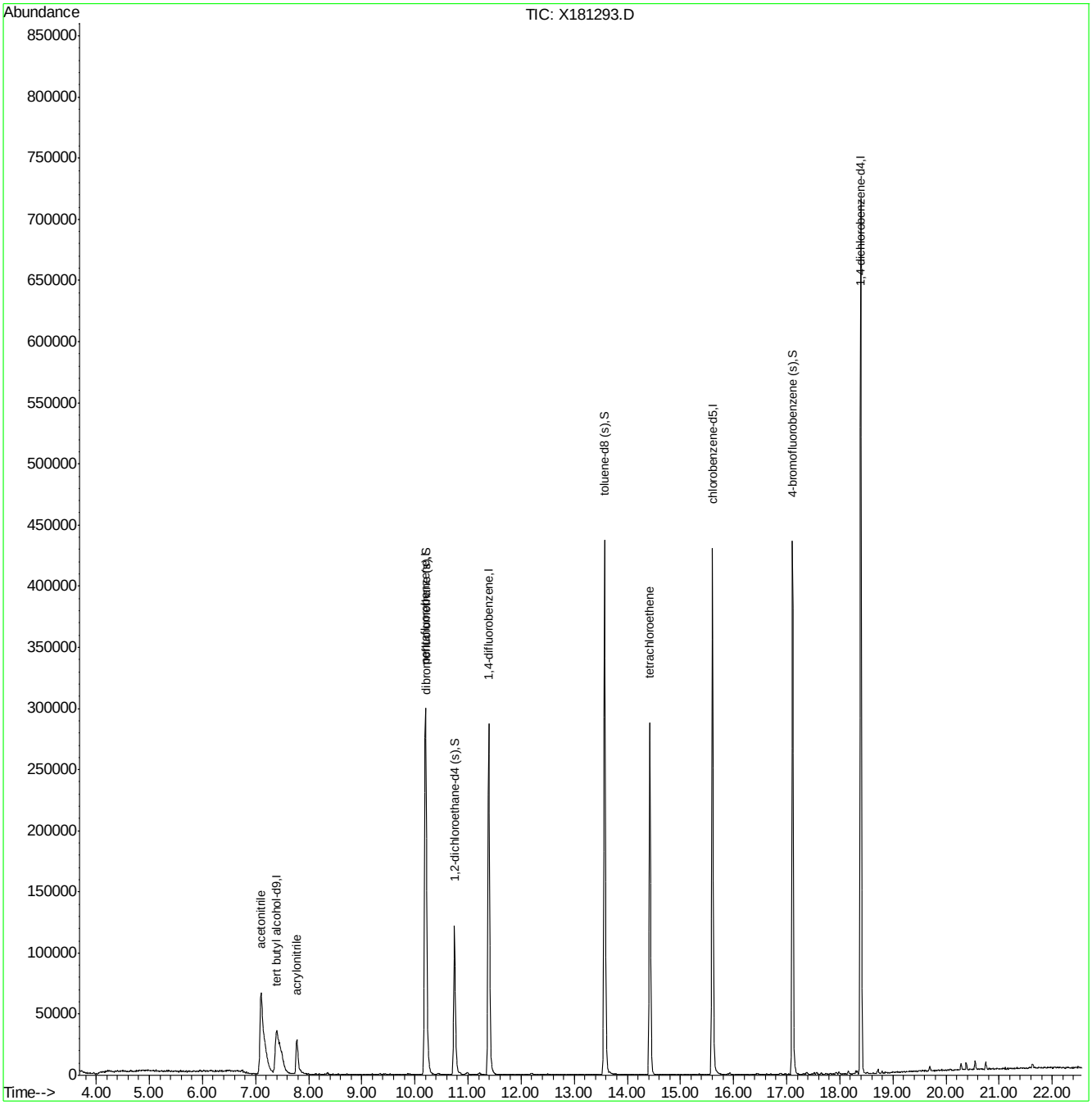
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.39	65	155140	500.00	ug/L	-0.01
5) pentafluorobenzene	10.20	168	222936	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	299119	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	283770	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	188775	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	92472	50.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.96%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	102538	51.97	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.94%			
75) toluene-d8 (s)	13.57	98	350104	51.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.94%			
98) 4-bromofluorobenzene (s)	17.11	95	145205	46.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.90%			
Target Compounds						Qvalue
20) acetonitrile	7.10	41	204930	527.51	ug/L	98
32) acrylonitrile	7.78	53	36860	50.82	ug/L	94
80) tetrachloroethene	14.42	164	80720	52.45	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7749\
Data File : X181293.D
Acq On : 2 May 2019 11:14 pm
Operator : juntaep
Sample : icv7749-50
Misc : MS34046,VX7749,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 09 14:52:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu May 09 14:26:25 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.40	65	131265	500.00	ug/L	0.00
5) pentafluorobenzene	10.20	168	192685	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.39	114	260927	50.00	ug/L	0.00
74) chlorobenzene-d5	15.60	117	262071	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.39	152	147792	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.20	168	192685	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.21	113	85259	54.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.76%			
54) 1,2-dichloroethane-d4 (s)	10.75	65	84938	49.35	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.70%			
75) toluene-d8 (s)	13.57	98	315275	50.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.36%			
98) 4-bromofluorobenzene (s)	17.11	95	125284	51.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.53	59	28039	94.22	ug/L	90
4) 1,4-dioxane	12.24	88	13749	560.32	ug/L	91
6) chlorodifluoromethane	3.90	51	116964	19.87	ug/L	99
7) dichlorodifluoromethane	3.88	85	131467	22.47	ug/L	99
8) chloromethane	4.28	50	149473	20.14	ug/L	100
9) vinyl chloride	4.52	62	130589	21.34	ug/L	97
10) bromomethane	5.13	96	69661	22.87	ug/L	99
11) chloroethane	5.31	64	44818	21.85	ug/L	94
12) vinyl bromide	5.66	106	45994	20.07	ug/L	92
13) trichlorofluoromethane	5.81	101	84970	22.78	ug/L	97
14) 1,3-butadiene	4.54	54	52343	20.02	ug/L	99
15) ethyl ether	6.22	74	17130	20.64	ug/L	86
16) acrolein	6.44	56	5759	14.92	ug/L	99
17) 1,1-dichloroethene	6.67	96	32510	23.40	ug/L	87
18) freon 113	6.71	101	53031	23.72	ug/L	95
19) acetone	6.66	43	40644	80.21	ug/L	91
20) acetonitrile	7.10	41	63636	189.52	ug/L	92
21) iodomethane	6.94	142	57690	21.57	ug/L	97
22) carbon disulfide	7.10	76	111307	22.53	ug/L	96
23) methylene chloride	7.46	84	38414	21.87	ug/L	89
24) methyl acetate	7.19	43	23566	17.60	ug/L	93
25) methyl tert butyl ether	7.89	73	114234	18.89	ug/L	99
26) trans-1,2-dichloroethene	7.92	96	33500	22.32	ug/L	94
27) hexane	8.36	57	42881	19.49	ug/L	94
28) di-isopropyl ether	8.62	45	126567	18.24	ug/L	97
29) 2-butanone	9.40	72	15846	91.30	ug/L #	74
30) 1,1-dichloroethane	8.60	63	62931	21.86	ug/L	98
31) chloroprene	8.73	53	41921	19.55	ug/L	90
32) acrylonitrile	7.79	53	13001	20.74	ug/L	91
33) vinyl acetate	8.53	86	5563	18.92	ug/L #	50
34) ethyl tert-butyl ether	9.19	59	121930	18.98	ug/L	98
35) ethyl acetate	9.44	45	4471	16.68	ug/L	80

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.52	77	66649	22.57	ug/L		95
37) cis-1,2-dichloroethene	9.49	96	37709	21.81	ug/L		96
38) methyl acrylate	9.54	85	4188	20.51	ug/L	#	70
39) propionitrile	9.47	54	52167	211.02	ug/L		99
40) tert-butyl formate	10.02	59	29009	17.97	ug/L		95
41) bromochloromethane	9.85	128	19489	22.13	ug/L		97
42) tetrahydrofuran	9.89	72	3871	18.39	ug/L		88
43) chloroform	9.97	83	58950	20.97	ug/L		98
45) methacrylonitrile	9.73	67	12484	19.64	ug/L		93
46) 1,1,1-trichloroethane	10.30	97	62501	21.66	ug/L		97
47) cyclohexane	10.45	84	60282	18.90	ug/L		95
48) tert amyl alcohol	10.70	55	9913	98.84	ug/L	#	65
49) 1,1-dichloropropene	10.52	75	40459	21.85	ug/L		96
51) carbon tetrachloride	10.56	117	53499	22.08	ug/L		97
52) isopropyl acetate	10.75	87	6615	19.85	ug/L	#	64
55) iso-octane	10.99	57	93410	20.15	ug/L		98
56) epichlorohydrin	12.96	57	17551	95.24	ug/L		100
57) n-butyl alcohol	11.47	56	60875	1022.91	ug/L		97
58) benzene	10.83	78	128725	21.26	ug/L		99
59) tert-amyl methyl ether	10.97	73	110750	18.83	ug/L		96
60) heptane	11.21	57	18584	20.13	ug/L		93
61) 1,2-dichloroethane	10.87	62	39491	19.34	ug/L		97
62) trichloroethene	11.80	130	34009	21.41	ug/L		97
63) ethyl acrylate	11.80	55	38171	19.15	ug/L		97
64) 2-nitropropane	12.79	41	6662	14.32	ug/L		94
65) 2-chloroethyl vinyl ether	12.87	63	118989	105.36	ug/L		99
66) methyl methacrylate	12.16	100	7451	17.67	ug/L		93
67) 1,2-dichloropropane	12.17	76	13576	20.33	ug/L		94
68) dibromomethane	12.31	93	21555	21.36	ug/L		96
69) methylcyclohexane	12.20	83	59692	21.48	ug/L		96
70) bromodichloromethane	12.53	83	45201	20.05	ug/L		97
71) cis-1,3-dichloropropene	13.16	75	54852	20.20	ug/L		93
72) 4-methyl-2-pentanone	13.30	58	57462	83.99	ug/L		91
73) 3-methyl-1-butanol	13.33	70	23873	424.46	ug/L		91
76) toluene	13.67	92	77337	19.86	ug/L		98
77) trans-1,3-dichloropropene	13.94	75	49030	19.39	ug/L		98
78) ethyl methacrylate	13.95	69	41028	19.69	ug/L		91
79) 1,1,2-trichloroethane	14.22	83	27770	20.99	ug/L		97
80) tetrachloroethene	14.43	164	29572	20.81	ug/L		94
81) 1,3-dichloropropane	14.46	76	51060	20.58	ug/L		90
82) 2-hexanone	14.46	58	52353	83.10	ug/L		89
83) butyl acetate	14.61	56	24100	18.94	ug/L		87
84) dibromochloromethane	14.79	129	37102	20.12	ug/L		99
85) 1,2-dibromoethane	14.99	107	36867	20.86	ug/L		100
86) n-butyl ether	15.66	57	136239	19.39	ug/L		98
87) chlorobenzene	15.65	112	91706	20.61	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.74	131	39680	20.20	ug/L		95
89) ethylbenzene	15.75	91	146261	20.07	ug/L		99
90) m,p-xylene	15.91	106	116265	39.99	ug/L		99
91) o-xylene	16.43	91	131645	19.71	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

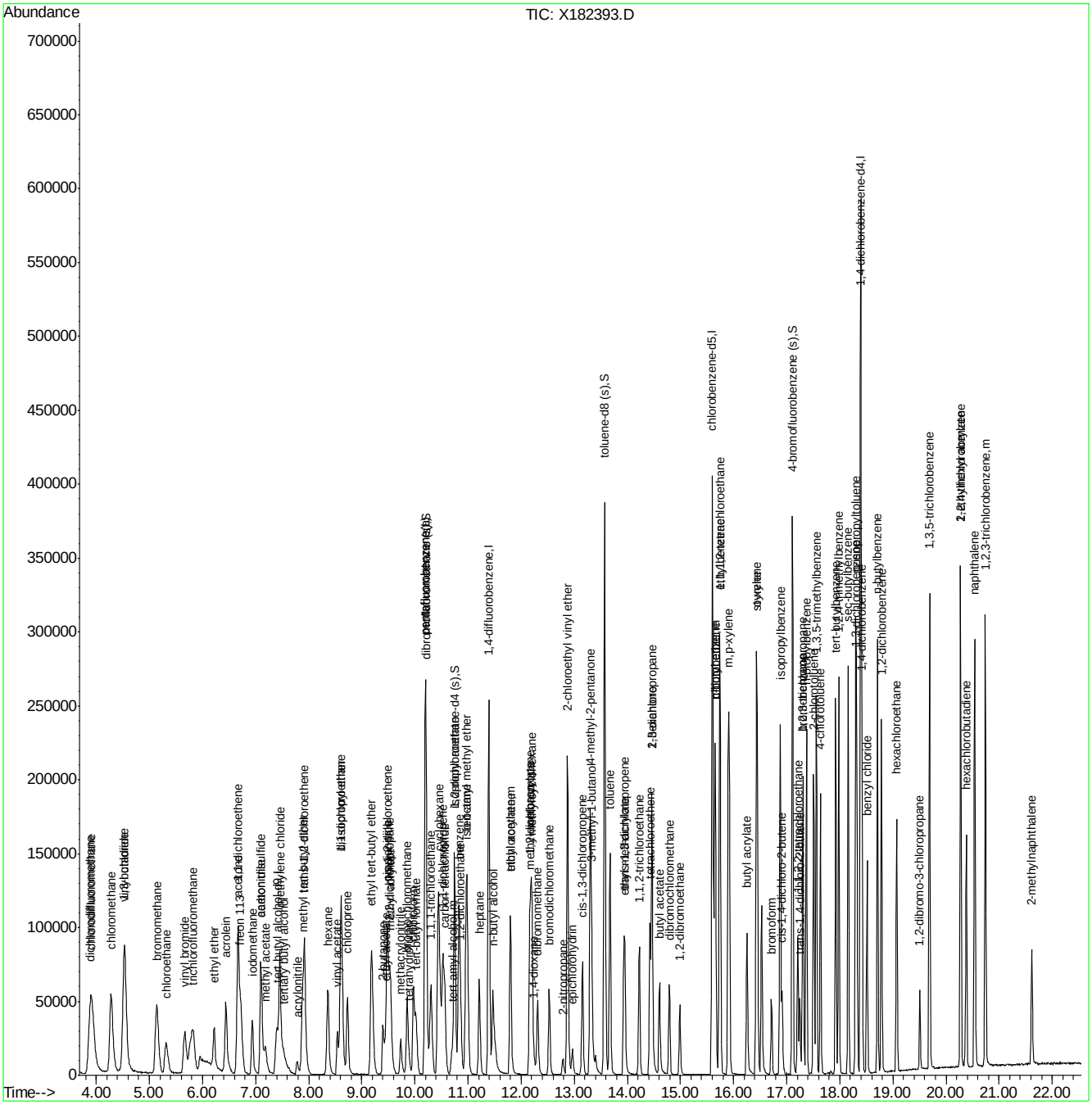
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) styrene	16.45	104	98078	20.35	ug/L		100
93) butyl acrylate	16.25	55	70209	17.28	ug/L		99
94) bromoform	16.71	173	26704	20.53	ug/L		95
95) isopropylbenzene	16.88	105	163299	19.07	ug/L		99
96) cis-1,4-dichloro-2-butene	16.92	88	13582	19.20	ug/L		91
99) bromobenzene	17.31	156	44126	20.60	ug/L		95
100) 1,1,2,2-tetrachloroethane	17.21	83	47489	20.50	ug/L		99
101) trans-1,4-dichloro-2-buten	17.25	53	9981	18.97	ug/L		85
102) 1,2,3-trichloropropane	17.30	110	11841	20.36	ug/L	#	74
103) n-propylbenzene	17.37	91	180687	20.23	ug/L		99
104) 2-chlorotoluene	17.51	126	41195	20.35	ug/L		98
105) 4-chlorotoluene	17.63	91	108949	20.03	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	137987	20.33	ug/L		99
107) tert-butylbenzene	17.92	119	120442	19.53	ug/L		98
108) 1,2,4-trimethylbenzene	17.98	105	143606	20.28	ug/L		99
109) sec-butylbenzene	18.16	105	186696	19.98	ug/L		98
110) 1,3-dichlorobenzene	18.32	146	84684	20.51	ug/L		98
111) p-isopropyltoluene	18.30	119	160090	19.68	ug/L		98
112) 1,4-dichlorobenzene	18.42	146	82765	20.67	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	94149	20.65	ug/L		99
114) benzyl chloride	18.51	91	96354	20.92	ug/L		98
115) n-butylbenzene	18.71	92	82114	21.18	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	15317	20.19	ug/L		95
117) 1,3,5-trichlorobenzene	19.69	180	98278	21.49	ug/L		100
118) hexachlorobutadiene	20.39	225	33138	21.29	ug/L		99
119) naphthalene	20.54	128	227318	21.02	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	5499	2.80	ug/L		97
121) 1,2,4-trichlorobenzene	20.28	180	101913	23.24	ug/L		97
122) 1,2,3-trichlorobenzene	20.74	180	101087	22.75	ug/L		99
123) hexachloroethane	19.07	201	28627	19.89	ug/L		98
124) 2-methylnaphthalene	21.62	142	40491	8.06	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7807\
Data File : X182393.D
Acq On : 26 Jun 2019 6:55 am
Operator : deving
Sample : cc7749-20
Misc : MS35756,VX7807,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 26 14:45:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.414	65	121845	500.00	ug/L	0.01
5) pentafluorobenzene	10.196	168	190706	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.394	114	259159	50.00	ug/L	0.00
74) chlorobenzene-d5	15.605	117	264567	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.397	152	142972	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	190706	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	83222	53.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.26%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	80415	47.04	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 94.08%			
75) toluene-d8 (s)	13.575	98	310482	48.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.90%			
98) 4-bromofluorobenzene (s)	17.111	95	123186	52.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.18%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.539	59	66816	241.87	ug/L	93
4) 1,4-dioxane	12.247	88	32468	1425.49	ug/L	94
6) chlorodifluoromethane	3.915	51	263766	45.27	ug/L	97
7) dichlorodifluoromethane	3.899	85	298467	51.55	ug/L	97
8) chloromethane	4.286	50	333271	45.36	ug/L	98
9) vinyl chloride	4.527	62	284541	46.97	ug/L	100
10) bromomethane	5.149	96	160899	53.37	ug/L	96
11) chloroethane	5.322	64	103746	51.10	ug/L	96
12) vinyl bromide	5.672	106	113963	50.23	ug/L	95
13) trichlorofluoromethane	5.829	101	198999	53.91	ug/L	99
14) 1,3-butadiene	4.548	54	147474	56.99	ug/L	96
15) ethyl ether	6.227	74	41392	50.40	ug/L	84
16) acrolein	6.446	56	12868	33.68	ug/L	97
17) 1,1-dichloroethene	6.671	96	72712	52.88	ug/L	95
18) freon 113	6.708	101	120655	54.54	ug/L	96
19) acetone	6.661	43	84522	168.53	ug/L	93
20) acetonitrile	7.105	41	146011	439.37	ug/L	95
21) iodomethane	6.943	142	138379	52.29	ug/L	96
22) carbon disulfide	7.105	76	258771	52.92	ug/L	96
23) methylene chloride	7.461	84	90586	52.10	ug/L	92
24) methyl acetate	7.189	43	54442	41.08	ug/L	95
25) methyl tert butyl ether	7.895	73	287239	47.98	ug/L	99
26) trans-1,2-dichloroethene	7.926	96	77059	51.86	ug/L	94
27) hexane	8.366	57	99237	45.57	ug/L	95
28) di-isopropyl ether	8.622	45	308466	44.91	ug/L	96
29) 2-butanone	9.401	72	36222	210.87	ug/L #	87
30) 1,1-dichloroethane	8.601	63	144588	50.76	ug/L	98
31) chloroprene	8.732	53	100300	47.26	ug/L	93
32) acrylonitrile	7.775	53	30957	49.90	ug/L	98
33) vinyl acetate	8.538	86	15075	51.81	ug/L #	66
34) ethyl tert-butyl ether	9.187	59	312243	49.10	ug/L	99
35) ethyl acetate	9.448	45	11648	43.91	ug/L	82
36) 2,2-dichloropropane	9.532	77	149616	51.19	ug/L	96
37) cis-1,2-dichloroethene	9.485	96	87437	51.11	ug/L	96
38) methyl acrylate	9.543	85	11130	55.08	ug/L #	76
39) propionitrile	9.475	54	121745	497.57	ug/L	99
40) tert-butyl formate	10.019	59	75320	47.15	ug/L	96
41) bromochloromethane	9.856	128	46464	53.31	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.888	72	10429	50.06	ug/L		91
43) chloroform	9.977	83	137925	49.57	ug/L		99
45) methacrylonitrile	9.731	67	31173	49.56	ug/L		98
46) 1,1,1-trichloroethane	10.306	97	148723	52.07	ug/L		99
47) cyclohexane	10.458	84	157884	50.02	ug/L		88
48) tert amyl alcohol	10.704	55	23574	237.49	ug/L	#	80
49) 1,1-dichloropropene	10.526	75	92392	50.41	ug/L		98
51) carbon tetrachloride	10.563	117	120712	50.33	ug/L		97
52) isopropyl acetate	10.751	87	17092	51.82	ug/L	#	71
55) iso-octane	10.991	57	221316	48.08	ug/L		98
56) epichlorohydrin	12.963	57	40989	223.95	ug/L		97
57) n-butyl alcohol	11.467	56	151522	2563.45	ug/L		94
58) benzene	10.835	78	297245	49.43	ug/L		100
59) tert-amyl methyl ether	10.965	73	279106	47.79	ug/L		98
60) heptane	11.211	57	43556	47.50	ug/L		96
61) 1,2-dichloroethane	10.866	62	90834	44.79	ug/L		99
62) trichloroethene	11.797	130	81304	51.52	ug/L		100
63) ethyl acrylate	11.802	55	94699	47.82	ug/L		98
64) 2-nitropropane	12.785	41	16641	36.00	ug/L		89
65) 2-chloroethyl vinyl ether	12.874	63	260995	232.68	ug/L		100
66) methyl methacrylate	12.158	100	20777	49.62	ug/L	#	82
67) 1,2-dichloropropane	12.173	76	32745	49.38	ug/L		90
68) dibromomethane	12.309	93	50015	49.91	ug/L		95
69) methylcyclohexane	12.205	83	144638	52.40	ug/L		98
70) bromodichloromethane	12.534	83	109230	48.79	ug/L		98
71) cis-1,3-dichloropropene	13.157	75	131530	48.77	ug/L		92
72) 4-methyl-2-pentanone	13.303	58	140053	206.11	ug/L		93
73) 3-methyl-1-butanol	13.324	70	57061	1021.45	ug/L		95
76) toluene	13.675	92	186173	47.35	ug/L		99
77) trans-1,3-dichloropropene	13.936	75	116313	45.57	ug/L		98
78) ethyl methacrylate	13.952	69	102865	48.91	ug/L		93
79) 1,1,2-trichloroethane	14.224	83	66068	49.46	ug/L		97
80) tetrachloroethene	14.428	164	69576	48.49	ug/L		95
81) 1,3-dichloropropane	14.464	76	117729	46.99	ug/L		89
82) 2-hexanone	14.464	58	121458	190.96	ug/L	#	86
83) butyl acetate	14.600	56	60008	46.72	ug/L		95
84) dibromochloromethane	14.794	129	89569	48.12	ug/L		98
85) 1,2-dibromoethane	14.987	107	90907	50.95	ug/L		97
86) n-butyl ether	15.662	57	332684	46.90	ug/L		99
87) chlorobenzene	15.646	112	219958	48.98	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.740	131	95238	48.02	ug/L		99
89) ethylbenzene	15.746	91	342151	46.52	ug/L		98
90) m,p-xylene	15.908	106	273457	93.17	ug/L		98
91) o-xylene	16.431	91	313035	46.43	ug/L		99
92) styrene	16.447	104	232854	47.86	ug/L		98
93) butyl acrylate	16.248	55	178489	43.52	ug/L		99
94) bromoform	16.719	173	62808	47.82	ug/L		94
95) isopropylbenzene	16.881	105	404381	46.79	ug/L		100
96) cis-1,4-dichloro-2-butene	16.917	88	16040	22.46	ug/L		89
99) bromobenzene	17.310	156	104228	50.31	ug/L		99
100) 1,1,2,2-tetrachloroethane	17.210	83	116087	51.79	ug/L		100
101) trans-1,4-dichloro-2-b...	17.247	53	13329	26.19	ug/L		95
102) 1,2,3-trichloropropane	17.299	110	28207	50.15	ug/L	#	76
103) n-propylbenzene	17.372	91	423678	49.03	ug/L		98
104) 2-chlorotoluene	17.508	126	98211	50.15	ug/L		96
105) 4-chlorotoluene	17.639	91	251123	47.73	ug/L		98
106) 1,3,5-trimethylbenzene	17.561	105	329490	50.17	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration

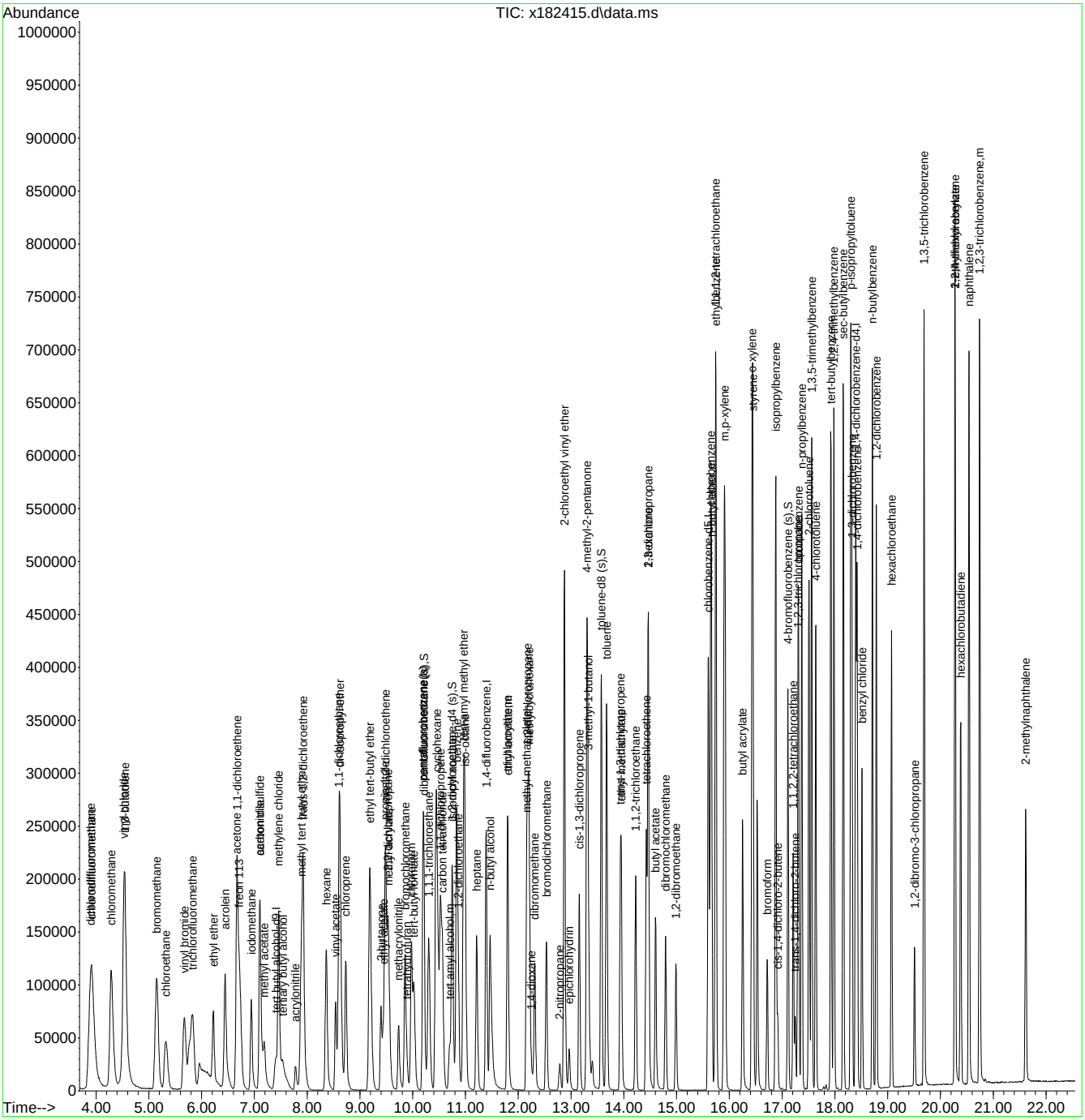
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	17.927	119	310845	52.10	ug/L	95
108) 1,2,4-trimethylbenzene	17.979	105	337414	49.25	ug/L	99
109) sec-butylbenzene	18.157	105	457490	50.62	ug/L	98
110) 1,3-dichlorobenzene	18.324	146	189858	47.54	ug/L	99
111) p-isopropyltoluene	18.298	119	382992	48.67	ug/L	99
112) 1,4-dichlorobenzene	18.424	146	192769	49.76	ug/L	97
113) 1,2-dichlorobenzene	18.784	146	216756	49.15	ug/L	98
114) benzyl chloride	18.513	91	202329	45.41	ug/L	99
115) n-butylbenzene	18.711	92	191384	51.02	ug/L	98
116) 1,2-dibromo-3-chloropr...	19.512	157	37639	51.28	ug/L	98
117) 1,3,5-trichlorobenzene	19.689	180	227729	51.47	ug/L	98
118) hexachlorobutadiene	20.385	225	74031	49.16	ug/L	98
119) naphthalene	20.542	128	549427	52.53	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	21687	11.40	ug/L	93
121) 1,2,4-trichlorobenzene	20.275	180	240032	56.59	ug/L	98
122) 1,2,3-trichlorobenzene	20.741	180	244249	56.82	ug/L	97
123) hexachloroethane	19.072	201	72988	52.42	ug/L	99
124) 2-methylnaphthalene	21.614	142	135578	19.67	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\Jun-2019\6-27\vx7807\
Data File : x182415.d
Acq On : 26 Jun 2019 6:07 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS35702,VX7807,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 26 22:22:14 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Tue Jun 25 12:21:02 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182431.D
Acq On : 27 Jun 2019 6:24 am
Operator : brittank
Sample : cc7749-20
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 27 14:44:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.39	65	131394	500.00	ug/L		-0.01
5) pentafluorobenzene	10.19	168	191614	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.38	114	255487	50.00	ug/L		0.00
74) chlorobenzene-d5	15.60	117	255353	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	18.39	152	150338	50.00	ug/L		0.00
127) pentafluorobenzene(a)	10.19	168	191614	50.00	ug/L		-0.01
130) chlorobenzene-d5(a)	15.60	117	255353	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.21	113	83126	53.32	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.64%				
54) 1,2-dichloroethane-d4 (s)	10.74	65	80955	48.04	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 96.08%				
75) toluene-d8 (s)	13.56	98	306573	50.08	ug/L		-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%				
98) 4-bromofluorobenzene (s)	17.11	95	121440	49.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.53	59	28040	94.13	ug/L		94
4) 1,4-dioxane	12.24	88	13839	563.44	ug/L		98
6) chlorodifluoromethane	3.91	51	111130	18.98	ug/L		96
7) dichlorodifluoromethane	3.89	85	131921	22.68	ug/L		96
8) chloromethane	4.29	50	134828	18.27	ug/L		98
9) vinyl chloride	4.53	62	123676	20.32	ug/L		99
10) bromomethane	5.15	96	70305	23.21	ug/L		95
11) chloroethane	5.32	64	43456	21.30	ug/L		93
12) vinyl bromide	5.67	106	54163	23.76	ug/L		92
13) trichlorofluoromethane	5.82	101	84995	22.92	ug/L		93
14) 1,3-butadiene	4.54	54	60452	23.25	ug/L		99
15) ethyl ether	6.21	74	16836	20.40	ug/L	#	78
16) acrolein	6.44	56	5493	14.31	ug/L		88
17) 1,1-dichloroethene	6.67	96	30524	22.09	ug/L		93
18) freon 113	6.71	101	52104	23.44	ug/L		97
19) acetone	6.66	43	36794	73.02	ug/L		96
20) acetonitrile	7.10	41	61749	184.93	ug/L		94
21) iodomethane	6.93	142	58486	21.99	ug/L		96
22) carbon disulfide	7.10	76	109296	22.25	ug/L		95
23) methylene chloride	7.46	84	36848	21.09	ug/L		90
24) methyl acetate	7.18	43	22605	16.98	ug/L		95
25) methyl tert butyl ether	7.88	73	113170	18.81	ug/L		96
26) trans-1,2-dichloroethene	7.92	96	33424	22.39	ug/L		90
27) hexane	8.36	57	42898	19.61	ug/L		93
28) di-isopropyl ether	8.62	45	120811	17.50	ug/L		99
29) 2-butanone	9.39	72	14518	84.12	ug/L	#	85
30) 1,1-dichloroethane	8.60	63	59420	20.76	ug/L		97
31) chloroprene	8.73	53	40022	18.77	ug/L		92
32) acrylonitrile	7.77	53	12111	19.43	ug/L		92
33) vinyl acetate	8.54	86	5650	19.33	ug/L	#	36
34) ethyl tert-butyl ether	9.18	59	119192	18.65	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182431.D
Acq On : 27 Jun 2019 6:24 am
Operator : brittank
Sample : cc7749-20
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 27 14:44:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) ethyl acetate	9.44	45	4416	16.57	ug/L		74
36) 2,2-dichloropropane	9.53	77	66969	22.81	ug/L		94
37) cis-1,2-dichloroethene	9.47	96	36803	21.41	ug/L		97
38) methyl acrylate	9.54	85	3839	18.91	ug/L	#	69
39) propionitrile	9.47	54	50731	206.36	ug/L		93
40) tert-butyl formate	10.01	59	30347	18.91	ug/L		92
41) bromochloromethane	9.85	128	19504	22.27	ug/L		93
42) tetrahydrofuran	9.88	72	3687	17.62	ug/L	#	72
43) chloroform	9.97	83	57101	20.43	ug/L		99
45) methacrylonitrile	9.73	67	12014	19.01	ug/L		99
46) 1,1,1-trichloroethane	10.30	97	60528	21.09	ug/L		99
47) cyclohexane	10.45	84	67355	21.24	ug/L		89
48) tert amyl alcohol	10.70	55	9966	99.92	ug/L	#	72
49) 1,1-dichloropropene	10.52	75	38777	21.06	ug/L		99
51) carbon tetrachloride	10.56	117	52249	21.68	ug/L		95
52) isopropyl acetate	10.75	87	6581	19.86	ug/L	#	55
55) iso-octane	10.98	57	94140	20.74	ug/L		99
56) epichlorohydrin	12.96	57	16446	91.15	ug/L		96
57) n-butyl alcohol	11.46	56	59894	1027.85	ug/L		90
58) benzene	10.82	78	124198	20.95	ug/L		98
59) tert-amyl methyl ether	10.96	73	110588	19.21	ug/L		98
60) heptane	11.21	57	19232	21.27	ug/L		92
61) 1,2-dichloroethane	10.86	62	37460	18.73	ug/L		98
62) trichloroethene	11.79	130	33190	21.34	ug/L		98
63) ethyl acrylate	11.80	55	35866	18.37	ug/L		98
64) 2-nitropropane	12.79	41	6864	15.06	ug/L		97
65) 2-chloroethyl vinyl ether	12.87	63	110697	100.10	ug/L		98
66) methyl methacrylate	12.15	100	7656	18.55	ug/L	#	75
67) 1,2-dichloropropane	12.17	76	13258	20.28	ug/L		97
68) dibromomethane	12.30	93	20648	20.90	ug/L		97
69) methylcyclohexane	12.19	83	60244	22.14	ug/L		95
70) bromodichloromethane	12.52	83	43879	19.88	ug/L		99
71) cis-1,3-dichloropropene	13.15	75	53156	19.99	ug/L		90
72) 4-methyl-2-pentanone	13.30	58	54582	81.48	ug/L		93
73) 3-methyl-1-butanol	13.32	70	24044	436.60	ug/L		90
76) toluene	13.67	92	74709	19.69	ug/L		96
77) trans-1,3-dichloropropene	13.93	75	46273	18.78	ug/L		98
78) ethyl methacrylate	13.95	69	38655	19.04	ug/L		93
79) 1,1,2-trichloroethane	14.22	83	26107	20.25	ug/L		95
80) tetrachloroethene	14.42	164	29122	21.03	ug/L		100
81) 1,3-dichloropropane	14.46	76	47728	19.74	ug/L		92
82) 2-hexanone	14.46	58	48815	79.52	ug/L	#	88
83) butyl acetate	14.60	56	22764	18.36	ug/L		94
84) dibromochloromethane	14.79	129	36176	20.14	ug/L		99
85) 1,2-dibromoethane	14.98	107	36261	21.06	ug/L		99
86) n-butyl ether	15.66	57	129149	18.86	ug/L		99
87) chlorobenzene	15.64	112	89536	20.66	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.74	131	38522	20.12	ug/L		97
89) ethylbenzene	15.74	91	141871	19.98	ug/L		97
90) m,p-xylene	15.91	106	112507	39.72	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182431.D
Acq On : 27 Jun 2019 6:24 am
Operator : brittank
Sample : cc7749-20
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 27 14:44:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

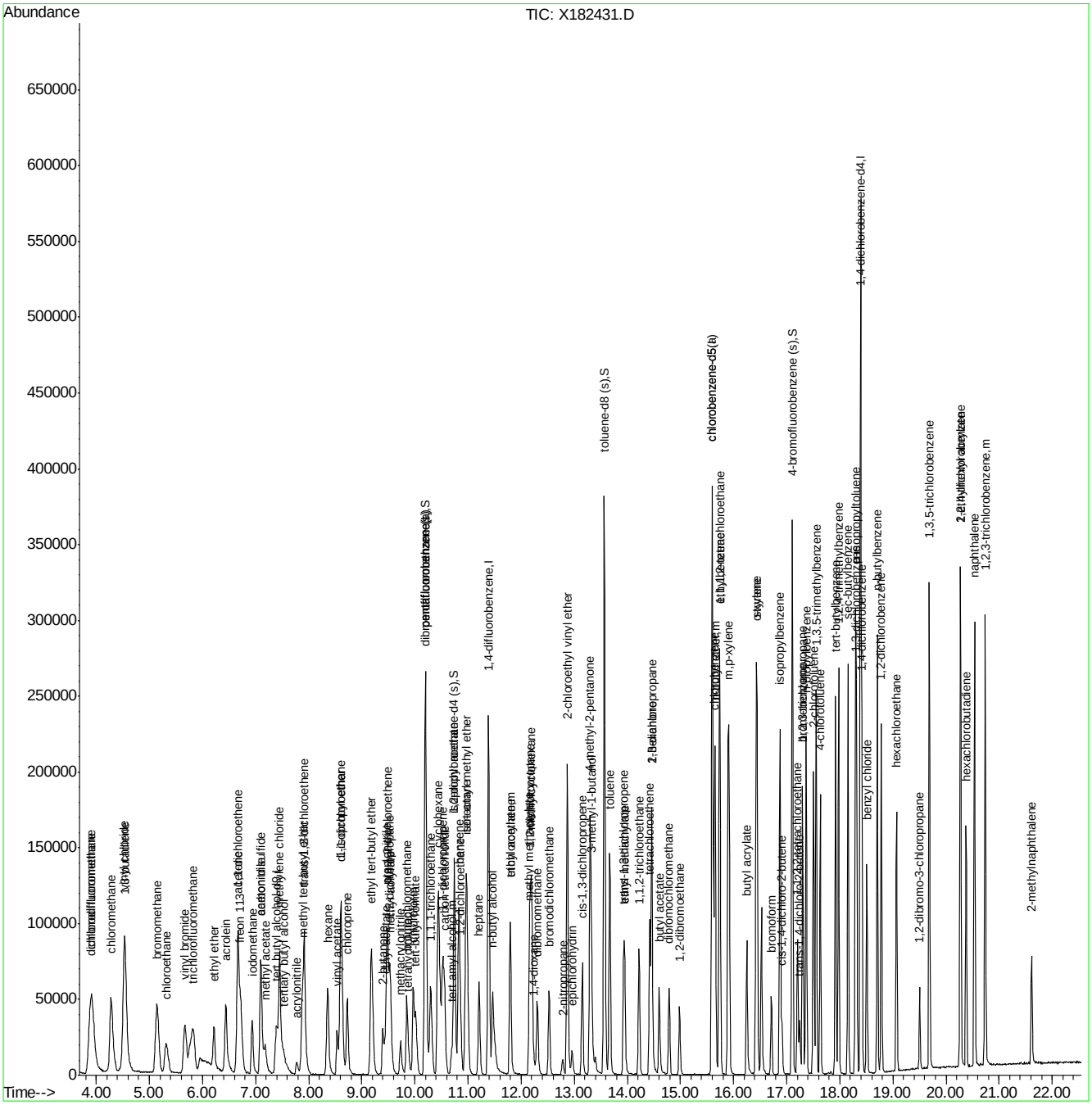
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
91) o-xylene	16.43	91	125536	19.29	ug/L		99
92) styrene	16.44	104	95393	20.31	ug/L		97
93) butyl acrylate	16.25	55	65716	16.60	ug/L		98
94) bromoform	16.71	173	25751	20.31	ug/L		95
95) isopropylbenzene	16.88	105	160602	19.25	ug/L		98
96) cis-1,4-dichloro-2-butene	16.91	88	9359	13.58	ug/L		96
99) bromobenzene	17.31	156	44084	20.24	ug/L		84
100) 1,1,2,2-tetrachloroethane	17.21	83	46641	19.79	ug/L		100
101) trans-1,4-dichloro-2-buten	17.25	53	6929	12.95	ug/L		90
102) 1,2,3-trichloropropane	17.29	110	12018	20.32	ug/L	#	57
103) n-propylbenzene	17.37	91	174415	19.20	ug/L		97
104) 2-chlorotoluene	17.50	126	40927	19.88	ug/L		95
105) 4-chlorotoluene	17.63	91	105404	19.05	ug/L		99
106) 1,3,5-trimethylbenzene	17.56	105	134658	19.50	ug/L		99
107) tert-butylbenzene	17.92	119	121933	19.43	ug/L		97
108) 1,2,4-trimethylbenzene	17.98	105	141414	19.63	ug/L		100
109) sec-butylbenzene	18.16	105	184332	19.40	ug/L		99
110) 1,3-dichlorobenzene	18.32	146	85045	20.25	ug/L		99
111) p-isopropyltoluene	18.30	119	157425	19.02	ug/L		98
112) 1,4-dichlorobenzene	18.42	146	81904	20.10	ug/L		99
113) 1,2-dichlorobenzene	18.78	146	95146	20.52	ug/L		99
114) benzyl chloride	18.51	91	96344	20.56	ug/L		99
115) n-butylbenzene	18.71	92	79475	20.15	ug/L		98
116) 1,2-dibromo-3-chloropropan	19.51	157	15688	20.33	ug/L		98
117) 1,3,5-trichlorobenzene	19.68	180	99838	21.46	ug/L		99
118) hexachlorobutadiene	20.38	225	33634	21.24	ug/L		95
119) naphthalene	20.54	128	228934	20.82	ug/L		99
120) 2-ethylhexyl acrylate	20.28	70	5058	2.53	ug/L		95
121) 1,2,4-trichlorobenzene	20.27	180	102810	23.05	ug/L		98
122) 1,2,3-trichlorobenzene	20.74	180	101700	22.50	ug/L		99
123) hexachloroethane	19.07	201	28696	19.60	ug/L		98
124) 2-methylnaphthalene	21.61	142	39732	7.89	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VX7809\
Data File : X182431.D
Acq On : 27 Jun 2019 6:24 am
Operator : brittank
Sample : cc7749-20
Misc : MS35702,VX7809,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 27 14:44:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182451.d
Acq On : 27 Jun 2019 5:33 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS33702,VX7809,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 03:34:34 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.409	65	114985	500.00	ug/L	0.00
5) pentafluorobenzene	10.196	168	183036	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.389	114	253848	50.00	ug/L	0.00
74) chlorobenzene-d5	15.599	117	257058	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	18.392	152	140452	50.00	ug/L	0.00
127) pentafluorobenzene(a)	10.196	168	183036	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	15.599	117	257058	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.212	113	80305	53.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.84%			
54) 1,2-dichloroethane-d4 (s)	10.746	65	79809	47.66	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 95.32%			
75) toluene-d8 (s)	13.570	98	304006	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.66%			
98) 4-bromofluorobenzene (s)	17.106	95	117508	51.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.14%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.534	59	61215	234.82	ug/L	96
4) 1,4-dioxane	12.241	88	28191	1311.55	ug/L	96
6) chlorodifluoromethane	3.910	51	258034	46.14	ug/L	99
7) dichlorodifluoromethane	3.894	85	309842	55.76	ug/L	99
8) chloromethane	4.286	50	313946	44.52	ug/L	99
9) vinyl chloride	4.527	62	276023	47.48	ug/L	99
10) bromomethane	5.154	96	155822	53.85	ug/L	98
11) chloroethane	5.327	64	101147	51.91	ug/L	99
12) vinyl bromide	5.677	106	133642	61.38	ug/L	97
13) trichlorofluoromethane	5.829	101	209396	59.10	ug/L	99
14) 1,3-butadiene	4.543	54	132212	53.24	ug/L	99
15) ethyl ether	6.216	74	37749	47.89	ug/L	88
16) acrolein	6.446	56	13029	35.53	ug/L	87
17) 1,1-dichloroethene	6.666	96	74573	56.50	ug/L	95
18) freon 113	6.703	101	123805	58.31	ug/L	99
19) acetone	6.656	43	80144	166.50	ug/L	98
20) acetonitrile	7.100	41	132658	415.91	ug/L	98
21) iodomethane	6.938	142	140960	55.49	ug/L	98
22) carbon disulfide	7.100	76	261966	55.82	ug/L	97
23) methylene chloride	7.456	84	88554	53.06	ug/L	89
24) methyl acetate	7.184	43	50419	39.64	ug/L	90
25) methyl tert butyl ether	7.890	73	266325	46.35	ug/L	99
26) trans-1,2-dichloroethene	7.921	96	73677	51.67	ug/L	97
27) hexane	8.355	57	93025	44.51	ug/L	95
28) di-isopropyl ether	8.617	45	284953	43.22	ug/L	96
29) 2-butanone	9.396	72	33388	202.52	ug/L #	80
30) 1,1-dichloroethane	8.596	63	139829	51.14	ug/L	96
31) chloroprene	8.727	53	95671	46.96	ug/L	95
32) acrylonitrile	7.775	53	29145	48.95	ug/L	94
33) vinyl acetate	8.538	86	13931	49.88	ug/L #	72
34) ethyl tert-butyl ether	9.182	59	292883	47.98	ug/L	99
35) ethyl acetate	9.443	45	10811	42.47	ug/L	83
36) 2,2-dichloropropane	9.527	77	133304	47.52	ug/L	95
37) cis-1,2-dichloroethene	9.480	96	82306	50.12	ug/L	96
38) methyl acrylate	9.543	85	10167	52.42	ug/L #	75
39) propionitrile	9.469	54	110577	470.87	ug/L	99
40) tert-butyl formate	10.019	59	67321	43.91	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182451.d
Acq On : 27 Jun 2019 5:33 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS33702,VX7809,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 03:34:34 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) bromochloromethane	9.851	128	44112	52.73	ug/L		97
42) tetrahydrofuran	9.883	72	9649	48.26	ug/L		97
43) chloroform	9.972	83	133398	49.95	ug/L		98
45) methacrylonitrile	9.731	67	28722	47.58	ug/L		97
46) 1,1,1-trichloroethane	10.301	97	144538	52.73	ug/L		99
47) cyclohexane	10.453	84	144812	47.80	ug/L		85
48) tert amyl alcohol	10.693	55	22402	235.14	ug/L	#	75
49) 1,1-dichloropropene	10.521	75	90301	51.33	ug/L		98
51) carbon tetrachloride	10.557	117	117818	51.18	ug/L		99
52) isopropyl acetate	10.751	87	16050	50.70	ug/L	#	85
55) iso-octane	10.986	57	218678	48.50	ug/L		97
56) epichlorohydrin	12.963	57	38005	211.99	ug/L		97
57) n-butyl alcohol	11.467	56	137714	2378.59	ug/L		89
58) benzene	10.829	78	284575	48.31	ug/L		100
59) tert-amyl methyl ether	10.965	73	261921	45.78	ug/L		96
60) heptane	11.211	57	40298	44.86	ug/L		94
61) 1,2-dichloroethane	10.861	62	86980	43.78	ug/L		99
62) trichloroethene	11.792	130	80532	52.10	ug/L		100
63) ethyl acrylate	11.797	55	87578	45.15	ug/L		99
64) 2-nitropropane	12.785	41	15416	34.05	ug/L		97
65) 2-chloroethyl vinyl ether	12.869	63	261626	238.12	ug/L		99
66) methyl methacrylate	12.153	100	19355	47.19	ug/L	#	84
67) 1,2-dichloropropane	12.168	76	31396	48.33	ug/L		93
68) dibromomethane	12.309	93	49028	49.95	ug/L		97
69) methylcyclohexane	12.200	83	140177	51.84	ug/L		97
70) bromodichloromethane	12.529	83	105509	48.12	ug/L		95
71) cis-1,3-dichloropropene	13.151	75	124455	47.11	ug/L		92
72) 4-methyl-2-pentanone	13.298	58	130803	196.52	ug/L		90
73) 3-methyl-1-butanol	13.319	70	54283	992.06	ug/L		96
76) toluene	13.669	92	178140	46.63	ug/L		99
77) trans-1,3-dichloropropene	13.931	75	112014	45.17	ug/L		97
78) ethyl methacrylate	13.952	69	95129	46.55	ug/L		93
79) 1,1,2-trichloroethane	14.224	83	62339	48.03	ug/L		96
80) tetrachloroethene	14.422	164	66050	47.38	ug/L		99
81) 1,3-dichloropropane	14.459	76	111058	45.63	ug/L		92
82) 2-hexanone	14.459	58	114749	185.69	ug/L		90
83) butyl acetate	14.600	56	55026	44.10	ug/L		93
84) dibromochloromethane	14.789	129	84845	46.91	ug/L		99
85) 1,2-dibromoethane	14.987	107	87175	50.29	ug/L		97
86) n-butyl ether	15.657	57	307595	44.63	ug/L		100
87) chlorobenzene	15.641	112	207886	47.64	ug/L		99
88) 1,1,1,2-tetrachloroethane	15.735	131	90670	47.05	ug/L		99
89) ethylbenzene	15.740	91	323340	45.24	ug/L		99
90) m,p-xylene	15.908	106	258233	90.56	ug/L		97
91) o-xylene	16.426	91	298811	45.61	ug/L		98
92) styrene	16.447	104	220508	46.64	ug/L		95
93) butyl acrylate	16.248	55	167493	42.03	ug/L		99
94) bromoform	16.713	173	59713	46.79	ug/L		94
95) isopropylbenzene	16.875	105	382638	45.56	ug/L		98
96) cis-1,4-dichloro-2-butene	16.912	88	25440	36.67	ug/L		90
99) bromobenzene	17.310	156	99117	48.70	ug/L		92
100) 1,1,2,2-tetrachloroethane	17.205	83	106365	48.31	ug/L		99
101) trans-1,4-dichloro-2-b...	17.247	53	19658	39.32	ug/L		87
102) 1,2,3-trichloropropane	17.299	110	26281	47.56	ug/L		92
103) n-propylbenzene	17.367	91	394110	46.43	ug/L		99
104) 2-chlorotoluene	17.503	126	92304	47.98	ug/L		96
105) 4-chlorotoluene	17.634	91	236555	45.77	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182451.d
Acq On : 27 Jun 2019 5:33 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS33702,VX7809,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 03:34:34 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration

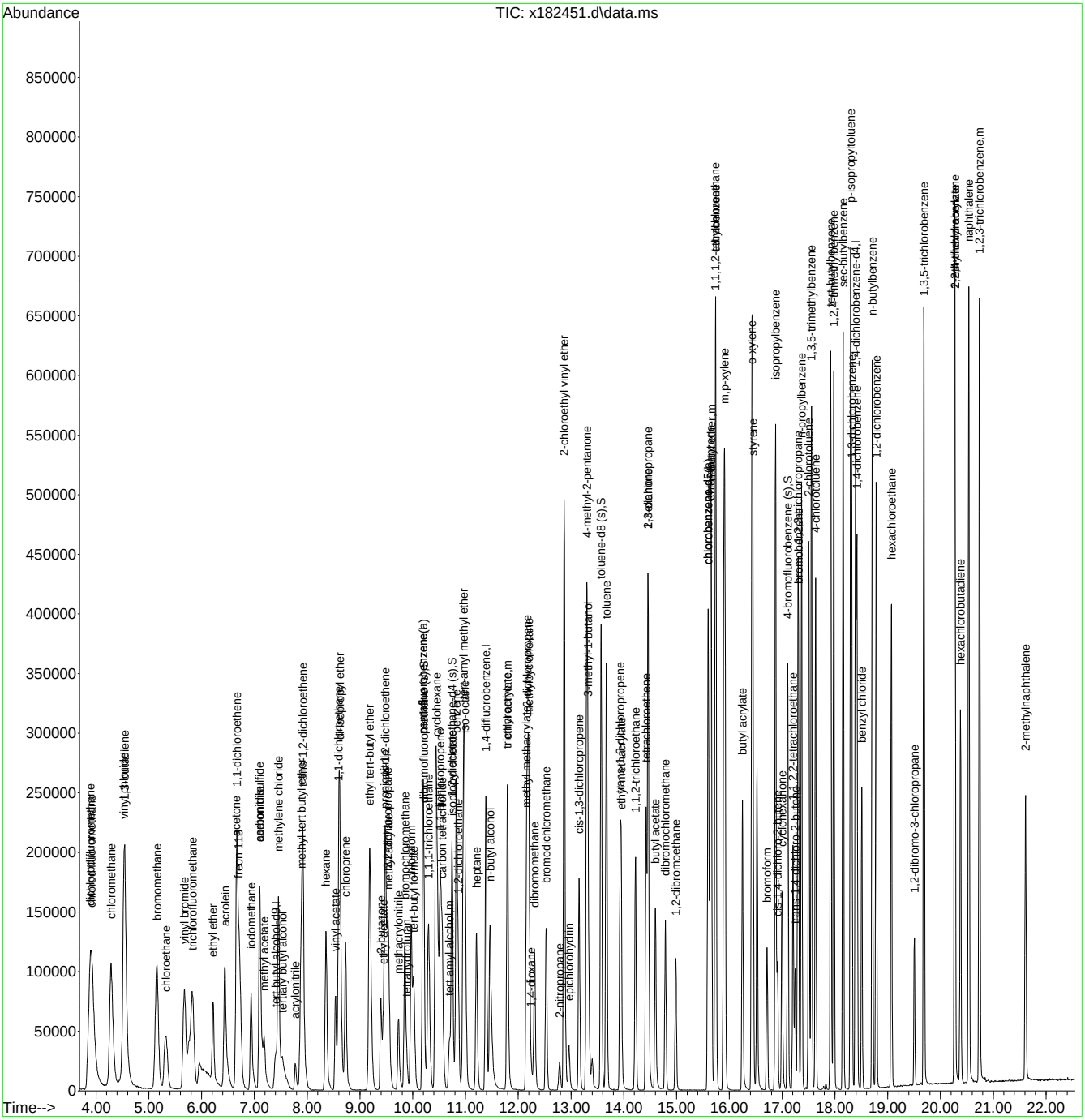
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
106) 1,3,5-trimethylbenzene	17.555	105	306682	47.54	ug/L	100
107) tert-butylbenzene	17.921	119	296558	50.60	ug/L	98
108) 1,2,4-trimethylbenzene	17.979	105	314995	46.80	ug/L	99
109) sec-butylbenzene	18.157	105	422813	47.62	ug/L	98
110) 1,3-dichlorobenzene	18.319	146	179833	45.84	ug/L	99
111) p-isopropyltoluene	18.298	119	355102	45.93	ug/L	98
112) 1,4-dichlorobenzene	18.418	146	180658	47.47	ug/L	99
113) 1,2-dichlorobenzene	18.784	146	203384	46.94	ug/L	97
114) benzyl chloride	18.507	91	169510	38.73	ug/L	99
115) n-butylbenzene	18.706	92	170263	46.20	ug/L	99
116) 1,2-dibromo-3-chloropr...	19.506	157	34619	48.01	ug/L	98
117) 1,3,5-trichlorobenzene	19.689	180	206104	47.42	ug/L	99
118) hexachlorobutadiene	20.380	225	66437	44.91	ug/L	98
119) naphthalene	20.537	128	516456	50.26	ug/L	99
120) 2-ethylhexyl acrylate	20.275	70	19143	10.24	ug/L	93
121) 1,2,4-trichlorobenzene	20.275	180	219531	52.69	ug/L	97
122) 1,2,3-trichlorobenzene	20.741	180	224040	53.05	ug/L	98
123) hexachloroethane	19.072	201	71274	52.11	ug/L	99
124) 2-methylnaphthalene	21.614	142	126439	18.84	ug/L	97
131) cyclohexanone	16.996	55	76694	911.30	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\davem1_062819\vx7809\
Data File : x182451.d
Acq On : 27 Jun 2019 5:33 pm
Operator : jessicap
Sample : ecc7749-50 Inst : ACC-VOA-MSX
Misc : MS33702,VX7809,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX7749.M
Quant Results File: MX7749.RES
Quant Time: Jun 28 03:34:34 2019
Quant Title : Method 8260C, Rxi-624 (60m x 0.25mm x 1.4um)
QLast Update : Thu Jun 27 12:00:34 2019
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-103.11	EC V019-2648-104.2	Acrolein V019-2648-88.5 1		Method	V8260C/V624.1
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	5/11/2018
Internal Surrogate	V019-2648-97					
Internal Surrogate Concentration	50/500ppm					
					Analysis Date	5/11/2019
Ext.Standards	Ext.ABK V019-2648-94.5	Ext.EC V019-2648-99.3	Ext.Acrolein V019-2648-9 0.2	Ext.PA V019-2648-79	Sequence loaded by	Prashant B. Shukla
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm	100ppm-1,000ppm	Data processed by	Bridget Kelly
					Batch ID	VA9645
					Matrix	AQ
					Approved By:	KANYAV
pH Paper Lot#	217518		Initial Calibration Method	MA9645	Approved Date:	5/14/2019 7:30:52 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	249730	BFB		NA			5			1	ok	2:52 PM
A	249731	IC9645-0.2		NA		initial cal.	5			2	ok	1uL Std.ABK,EC,Acrolein in 500mL DI H2O
A	249732	IC9645-0.5		NA		initial cal.	5			3	ok	1uL Std.ABK,EC,Acrolein in 200mL DI H2O
A	249733	IC9645-1		NA		initial cal.	5			4	ok	1uL Std.ABK,EC,Acrolein in 100mL DI H2O
A	249734	IC9645-2		NA		initial cal.	5			5	ok	1uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249735	IC9645-4		NA		initial cal.	5			6	ok	2uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249736	IC9645-8		NA		initial cal.	5			7	ok	4uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249737	IC9645-20		NA		initial cal.	5			8	ok	10uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249738	ICC9645-50		NA		initial cal.	5			9	ok	25uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249739	IC9645-100		NA		initial cal.	5			10	ok	50uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249740	IC9645-200		NA		initial cal.	5			11	ok	100uL Std.ABK,EC,Acrolein in 50mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	249741	IB		NA			5			12	OK	
A	249742	IB		NA			5			13	OK	
A	249743	ICV9645-50		NA		initial cal.	5			14	ok	25uL Ext.ABK,EC,Acrolein in 50mL DI H2O
A	249744	ICV9645-50		NA		initial cal.	5			15	ok	25uL Ext.PA in 50mL DI H2O
A	249745	IB		NA			5			16	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB-624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-143.64	EC V019-2659-27.10	Acrolein V019-2659-15.5		Method	V8260C
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	5/11/2018
Internal Surrogate	V019-2659-06					
Internal Surrogate Concentration	50/500ppm					
					Analysis Date	6/26/2019
dilutions & MS/MSD made by	Devin Gomez				Sequence loaded by	Devin Gomez
					Data processed by	jonkm
					Batch ID	VA9712
rough reviewed by	Bridget Kelly				Matrix	AQ
Initial Calibration Method	MA9645				Approved By:	MOHUI
pH Paper Lot#	217518				Approved Date:	6/27/2019 1:00:54 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	251125	IB		NA			5			1	ok	
A	251126	BFB/CC9645-50		NA			5			2	ok/ok	50uL ABK, EC, Acrolein/100mL 7:02pm
A	251127	BS		NA			5			3	ok	50uL ABK, EC, Acrolein/100mL
A	251128	IB		NA			5			4	ok	
A	251129	MB		NA			5			5	ok	
A	251130	JC90327-7	8	NA	MS35756	V8260TCL20	5		6	6	ok	
A	251131	JC90327-8	7	NA	MS35756	V8260TCL20	5		6	7	ok	
A	251132	JC90327-10	2	NA	MS35756	V8260TCL20	5		6	8	ok	
A	251133	JC90327-3	10	10X	MS35756	V8260TCL20	5/50		7	9	ok	
A	251134	JC90327-6	9	10X	MS35756	V8260TCL20	5/50		7	10	ok	
A	251135	JC90327-9	8	10X	MS35756	V8260TCL20	5/50		7	11	ok	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	251136	JC90273-14	1	NA	MS35702	V8260SL	5		1	12	ok	
A	251137	JC90273-15	1	NA	MS35702	V8260SL	5		1	13	rr/dl	f/d rr25x
A	251138	JC90273-16	1	NA	MS35702	V8260SL	5		1	14	rr	c/o
A	251139	JC90273-17	1	NA	MS35702	V8260SL	5		1	15	ok	
A	251140	JC90525-1MS	15	5X	MS35779	V8260TCL20+	10/50		1	16	ok	50uL ABK, EC, Acrolein/100mL
A	251141	JC90525-1MSD	15	5X	MS35779	V8260TCL20+	10/50		1	17	ok	50uL ABK, EC, Acrolein/100mL
A	251142	IB		NA			5			18	ok	
A	251143	JC90525-1	15	5X	MS35779	V8260TCL20+	10/50		1	19	ok	
A	251144	JC90525-2	14	NA	MS35779	V8260TCL20+	5		1	20	ok	
A	251145	JC90525-3	14	NA	MS35779	V8260TCL20+	5		1	21	ok	
A	251146	JC90525-4	13	25X	MS35779	V8260TCL20+	2/50		1	22	ok	
A	251147	JC90525-5	13	NA	MS35779	V8260TCL20+	5		1	23	ok	
A	251148	ECC9645-50		NA			5			24	ok	end (5:53)

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standards	ABK: V019-2648-72.49	EC: V019-2648-92.2	Acrolein: V019-2648-88.2 4		Method	V8260C
Standard Concentration	100-10,000ppm	100ppm	100ppm		Init Calib Date	5/2/19
Internal Surrogate	V019-2648-63					
Internal Surrogate Concentration	250/2,500ppm				Prepared by	Robert Szot
Standards	Ext ABK v019-2648-94.3	Ext C v019-2648-90.4	Ext Acro v018-2648-86.6	EXT PA v019-2648-7 9.2	Analysis Date	5/2/2019
Standard Concentration	100-10,000ppm	100ppm	100ppm	100 ppm	Sequence loaded by	Bridget Kelly
					Data processed by	Bridget Kelly
					Batch ID	VX7749
					Matrix	AQ
Initial Calibration Method	MX7749				Approved By:	KANYAV
pH Paper Lot#	204518				Approved Date:	5/14/2019 5:35:34 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	181279	BFB		NA			5			1	ok	4:28 pm
X	181280	IC7749-0.2		NA		V8260 initial cal.	5			2	ok	1 uL ABK EC Acro / 500 mL
X	181281	IC7749-0.5		NA		V8260 initial cal.	5			3	ok	1 uL ABK EC Acro / 200 mL
X	181282	IC7749-1		NA		V8260 initial cal.	5			4	ok	1 uL ABK EC Acro / 100 mL
X	181283	IC7749-2		NA		V8260 initial cal.	5			6	ok	2 uL ABK EC Acro / 100 mL
X	181284	IC7749-4		NA		V8260 initial cal.	5			5	ok	4 uL ABK EC Acro / 100 mL
X	181285	IC7749-8		NA		V8260 initial cal.	5			8	ok	8 uL ABK EC Acro / 100 mL
X	181286	IC7749-20		NA		V8260 initial cal.	5			7	ok	20 uL ABK EC Acro / 100 mL
X	181287	ICC7749-50		NA		V8260 initial cal.	5			9	ok	50 uL ABK EC Acro / 100 mL
X	181288	IC7749-100		NA		V8260 initial cal.	5			10	ok	100 uL ABK EC Acro / 100 mL
X	181289	IC7749-200		NA		V8260 initial cal.	5			11	ok	200 uL ABK EC Acro / 100 mL

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	181290	IB		NA			5			12	ok	
X	181291	IB		NA			5			13	ok	
X	181292	ICV7749-50		NA		V8260 initial cal.	5			14	ok	50 uL EXT ABK EC Acro / 100 mL
X	181293	ICV7749-50		NA		V8260 initial cal.	5			15	ok	50 uL EXT PA / 100 mL

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standards	ABK: V019-2648-143.34	EC: V019-2659-36.1	Acrolein: V019-2659.15.6	CTFE + F123A: V019 2650.20	Method	V8260C
Standard Concentration	100-10,000ppm	100ppm	100ppm	100 ppm	Init Calib Date	5/2/2019
Internal Surrogate	V019-2648-125					
Internal Surrogate Concentration	250/2,500ppm					
					Analysis Date	6/26/2019
					Sequence loaded by	Jessica Potts
					Data processed by	Lotusa
					Batch ID	VX7807
					Matrix	AQ
Initial Calibration Method	MX7749				Approved By:	KANYAV
pH Paper Lot#	204518				Approved Date:	6/27/2019 2:51:55 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	182392	IB		NA			5			1	ok	
X	182393	BFB/CC7749-20		NA			5			2	ok/ok	20uL ABK, EC, Acrolein/100mL (6:55 AM) # 16 Low
X	182394	CC7749-2		NA			5			3	ok	2uL ABK, EC, Acrolein/100mL for # 16 not used
X	182395	BS		NA			5			4	ok	50uL ABK, EC, Acrolein/100mL
X	182396	IB		NA			5			5	ok	
X	182397	MB		NA			5			6	ok	
X	182398	JC90273-1	1	NA	MS35702	V8260SL	5		1	7	OK	DOD
X	182399	JC90273-2	1	NA	MS35702	V8260SL	5		1	8	OK	DOD
X	182400	JC90273-3	1	NA	MS35702	V8260SL	5		1	9	OK	DOD
X	182401	JC90273-4	2	NA	MS35702	V8260SL	5		1	10	OK	DOD

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	182402	JC90273-6	6	NA	MS35702	V8260SL	5		1	11	OK	DOD
X	182403	JC90121-2	2	NA	MS35698	V8260SL	5		1	12	ok	DOD
X	182404	JC90273-5	2	NA	MS35702	V8260SL	5		1	13	OK	DOD
X	182405	JC90273-7	1	NA	MS35702	V8260SL	5		1	14	OK	DOD
X	182406	JC90273-8	1	NA	MS35702	V8260SL	5		1	15	OK	DOD
X	182407	JC90273-6MS	1	NA	MS35702	V8260SL	5		1	16	OK	20uL ABK, EC, Acrolein/40mL
X	182408	JC90273-6MSD	3	NA	MS35702	V8260SL	5		1	17	OK	20uL ABK, EC, Acrolein/40mL
X	183409	IB		NA			5			18	OK	
X	183410	JC90273-9	2	NA	MS35702	V8260SL	5		1	19	OK	DOD
X	183411	JC90273-10	1	NA	MS35702	V8260SL	5		1	20	OK	DOD
X	183412	JC90273-11	2	NA	MS35702	V8260SL	5		1	21	OK	DOD
X	183413	JC90273-12	2	NA	MS35702	V8260SL	5		1	22	OK	DOD
X	183414	JC90273-13	2	NA	MS35702	V8260SL	5		1	23	OK	DOD
X	183415	ECC7749-50		NA			5			24	OK	50uL ABK, EC, Acrolein/100mL end check DOD 6:07pm

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi-624(60mx0.25mmx1.4um)
Standards	ABK: V019-2648-143.66	Acrolein: V019-2659-15.6	EC:V019-2659-27.3	Cyclohexanone V019-2659-29.5	Method	V8260C
Standard Concentration	100/1000ppm	100 ppm	100ppm	100ppm	Init Calib Date	6/21/2019
Internal Surrogate	V019-2648-125		CTFE + Freon 123A V019-2659-29.4			
Internal Surrogate Concentration	250/2,500ppm		100ppm			
					Analysis Date	6/27/2019
dilutions & MS/MSD made by	Devin Gomez				Sequence loaded by	Jessica Potts
					Data processed by	davem1
					Batch ID	VX7809
					Matrix	AQ
Initial Calibration Method	MX7749, MX7803, MX7808				Approved By:	KANYAV
pH Paper Lot#	204518				Approved Date:	6/29/2019 5:22:04 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	182430	IB		NA			5			1	ok	
X	182431	BFB/CC7749-20		NA			5			2	ok/ok	20uL ABK, EC, Acrolein/100mL (6:24 am)
X	182432	CC7729-2		NA			5			3	ok	2uL ABK, EC, Acrolein/100mL
X	182433	CC7808-20		NA			5			4	ok	20uL cyclohexanone/100mL
X	182434	CC7803-20		NA			5			5	ok	20uL CTFE + Freon 123A/100mL
X	182435	BS		NA			5			6	ok	50uL ABK, EC, Acrolein, CTFE + Freon 123A, Cyclohexanone/100mL
X	182436	IB		NA			5			7	ok	
X	182437	MB		NA			5			8	ok	
X	182438	JC90273-16	2	NA	MS35702	V8260SL	5		1	9	ok	
X	182439	JC90273-15	2	10X	MS35702	V8260SL	5/50		1	10	ok	+A251137
X	182440	JC90379-1	2	NA	MS35746	V8260BENZ	5		1	11	ok	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
X	182441	JC90379-2	2	NA	MS35746	V8260BENZ	5		1	12	ok	121:42
X	182442	JC90379-3	2	NA	MS35746	V8260BENZ	5		1	13	ok	
X	182443	JC90379-1MS	1	NA	MS35746	V8260BENZ	5		1	14	ok	20uL ABK, EC, Acrolein, CTFE + Freon 123A, Cyclohexanone/40mL
X	182444	IB		NA			5			15	ok	
X	182445	JC90379-2DUP	1	NA	MS35746	V8260BENZ	5		1	16	ok	
X	182446	JC80588B-2A		NA	MS33757	V8260SL	5			17	ok	1ppb 1uL cyclohexanone, CTFE + Freon 123A/100mL MDLV
X	182447	JC80444B-13D		NA	MS33763	V8260SL	5			18	ok	2ppb 2uL cyclohexanone, CTFE + Freon 123A/100mL LOD
X	182448	JC80444B-13E		NA	MS33763	V8260SL	5			19	ok	5 ppb 5uL cyclohexanone, CTFE + Freon 123A/100mL LOQ
X	182449	JC80588B-2B		NA	MS33757	V8260SL	5			20	ok	5 ppb 5uL cyclohexanone, CTFE + Freon 123A/100mL mdlV
X	182450	JC90157-2	5	20X	MS35671	V8260SL	2.5/50		1	21	ok	corr rr, F/D
X	182451	ECC7749-50		NA			5			22	ok	05:33 pm; 50uL ABK, EC, Acrolein, CTFE + Freon 123A, Cyclohexanone/100mL

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

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

6265401

SGS Job Number: JC91309

Sampling Date: 07/08/19

Report to:

EA Engineering
269 West Jefferson Street
Syracuse, NY 13202
lmairs@eaest.com; TLamond@EAEst.com;
EDimeo@EAEst.com
ATTN: Nate Kranes

Total number of pages in report: **210**

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.

Mike Earp
General Manager

Client Service contact: Ayesha Kapadia 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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EHS.US.CustomerCare@sgs.com

July 18, 2019

Ms. Nate Kranes
EA Engineering
269 West Jefferson Street
Syracuse, NY 13202

RE: SGS – Dayton, Job # JC91309 – Reissues

Dear Mr. Kranes,

The final report for SGS job number JC91309 has been edited to reflect corrections to the final results. These edits have been incorporated into the revised report which is attached.

Specifically, JC90309-1 and JC91309-2 both sample's ID have been switched over per Ms. Lindsey Mairs's request. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc.

CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: JC91309

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JC91309-1	07/08/19	14:05	LM	07/09/19	AQ	Ground Water	MW10-10D-2019-07-08
JC91309-2	07/08/19	14:00	LM	07/09/19	AQ	Ground Water	MW10-1DA-2019-07-08
JC91309-3	07/08/19	00:00	LM	07/09/19	AQ	Ground Water	MW10-FD-2019-07-08
JC91309-4	07/08/19	14:05	LM	07/09/19	AQ	Trip Blank Water	TRIP BLANK-07-08

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EA Engineering	**Job No**	JC91309
Site:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY	**Report Date**	7/18/2019 9:44:01 AM

On 07/09/2019, 3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC91309 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VA9738

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC91309-1MS, JC91309-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC91309-1 for 2-Butanone (MEK): MDL from current instrument.
- JC91309-4 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ **Batch ID:** VA9741

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC91586-6MS, JC91586-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Trichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Matrix Spike Duplicate Recovery(s) for Trichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for cis-1,2-Dichloroethene, Tetrachloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JC91309-1: Diluted due to high concentration of target compound.
- JC91309-1 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JC91309-2 for 2-Butanone (MEK): Associated CCV outside of control limits high, sample was ND.
- JC91309-2 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JC91309-3 for 2-Butanone (MEK): Associated CCV outside of control limits high, sample was ND.
- JC91309-3 for Acetone: Associated CCV outside of control limits high, sample was ND.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
JC91309-1	**MW10-10D-2019-07-08**					
Benzene [a]		1.7	1.3	1.1	ug/l	SW846 8260C
2-Butanone (MEK) [b]		83.4	40	75	ug/l	SW846 8260C
cis-1,2-Dichloroethene		921	10	7.5	ug/l	SW846 8260C
trans-1,2-Dichloroethene [a]		5.8	2.5	1.9	ug/l	SW846 8260C
2-Hexanone [a]		25.1	13	6.3	ug/l	SW846 8260C
Toluene [a]		5.7	2.5	1.9	ug/l	SW846 8260C
Trichloroethene [a]		12.6	2.5	1.9	ug/l	SW846 8260C
Vinyl chloride [a]		191	2.5	2.0	ug/l	SW846 8260C
JC91309-2	**MW10-1DA-2019-07-08**					
Benzene		2.9	0.50	0.45	ug/l	SW846 8260C
Toluene		0.94 J	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		3.1	1.0	0.80	ug/l	SW846 8260C
Xylene (total)		0.80 J	1.0	0.75	ug/l	SW846 8260C
JC91309-3	**MW10-FD-2019-07-08**					
Benzene		3.0	0.50	0.45	ug/l	SW846 8260C
Toluene		0.96 J	1.0	0.75	ug/l	SW846 8260C
Vinyl chloride		2.8	1.0	0.80	ug/l	SW846 8260C
Xylene (total)		1.5	1.0	0.75	ug/l	SW846 8260C
JC91309-4	**TRIP BLANK-07-08**					

No hits reported in this sample.

(a) Diluted due to high concentration of target compound.
(b) MDL from current instrument.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW10-10D-2019-07-08		
Lab Sample ID:	JC91309-1	**Date Sampled:**	07/08/19
Matrix:	AQ - Ground Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A251702.D	2.5	07/16/19 14:38	ED	n/a	n/a	VA9741
Run #2	A251657.D	10	07/15/19 14:41	ED	n/a	n/a	VA9738

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

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone [b]	19 U	25	19	15	ug/l	
71-43-2	Benzene	1.7	1.3	1.1	1.1	ug/l	
74-97-5	Bromochloromethane	1.3 U	2.5	1.3	1.2	ug/l	
75-27-4	Bromodichloromethane	1.9 U	2.5	1.9	1.5	ug/l	
75-25-2	Bromoform	1.9 U	2.5	1.9	1.6	ug/l	
74-83-9	Bromomethane	4.4 U	5.0	4.4	4.1	ug/l	
78-93-3	2-Butanone (MEK) [c]	83.4 [d]	40	75	7.9	ug/l	
75-15-0	Carbon disulfide	2.5 U	5.0	2.5	2.4	ug/l	
56-23-5	Carbon tetrachloride	1.9 U	2.5	1.9	1.4	ug/l	
108-90-7	Chlorobenzene	1.9 U	2.5	1.9	1.4	ug/l	
75-00-3	Chloroethane	1.9 U	2.5	1.9	1.8	ug/l	
67-66-3	Chloroform	1.9 U	2.5	1.9	1.3	ug/l	
74-87-3	Chloromethane	2.1 U	2.5	2.1	1.9	ug/l	
110-82-7	Cyclohexane	5.0 U	13	5.0	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	3.8 U	5.0	3.8	3.0	ug/l	
124-48-1	Dibromochloromethane	1.9 U	2.5	1.9	1.4	ug/l	
106-93-4	1,2-Dibromoethane	1.3 U	2.5	1.3	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	1.9 U	2.5	1.9	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	1.9 U	2.5	1.9	1.4	ug/l	
106-46-7	1,4-Dichlorobenzene	1.9 U	2.5	1.9	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	3.8 U	5.0	3.8	3.4	ug/l	
75-34-3	1,1-Dichloroethane	1.9 U	2.5	1.9	1.4	ug/l	
107-06-2	1,2-Dichloroethane	1.9 U	2.5	1.9	1.5	ug/l	
75-35-4	1,1-Dichloroethene	1.9 U	2.5	1.9	1.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	921 [d]	10	7.5	5.1	ug/l	
156-60-5	trans-1,2-Dichloroethene	5.8	2.5	1.9	1.3	ug/l	
78-87-5	1,2-Dichloropropane	1.9 U	2.5	1.9	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.3 U	2.5	1.3	1.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.3 U	2.5	1.3	1.1	ug/l	
123-91-1	1,4-Dioxane	190 U	310	190	170	ug/l	
100-41-4	Ethylbenzene	1.9 U	2.5	1.9	1.5	ug/l	
76-13-1	Freon 113	6.3 U	13	6.3	4.9	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:	MW10-10D-2019-07-08		
Lab Sample ID:	JC91309-1	**Date Sampled:**	07/08/19
Matrix:	AQ - Ground Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	25.1	13	6.3	5.1	ug/l	
74-88-4	Iodomethane	2.5 U	5.0	2.5	1.5	ug/l	
98-82-8	Isopropylbenzene	1.9 U	2.5	1.9	1.6	ug/l	
79-20-9	Methyl Acetate	5.0 U	13	5.0	2.0	ug/l	
108-87-2	Methylcyclohexane	5.0 U	13	5.0	1.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.9 U	2.5	1.9	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	8.8 U	13	8.8	4.6	ug/l	
75-09-2	Methylene chloride	3.8 U	5.0	3.8	2.5	ug/l	
100-42-5	Styrene	1.9 U	2.5	1.9	1.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.9 U	2.5	1.9	1.6	ug/l	
127-18-4	Tetrachloroethene	2.3 U	2.5	2.3	2.2	ug/l	
108-88-3	Toluene	5.7	2.5	1.9	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.9 U	2.5	1.9	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.9 U	2.5	1.9	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	1.9 U	2.5	1.9	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	1.9 U	2.5	1.9	1.3	ug/l	
79-01-6	Trichloroethene	12.6	2.5	1.9	1.3	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U	5.0	2.5	2.1	ug/l	
75-01-4	Vinyl chloride	191	2.5	2.0	2.0	ug/l	
1330-20-7	Xylene (total)	1.9 U	2.5	1.9	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	103%	81-124%
2037-26-5	Toluene-D8	98%	98%	80-120%
460-00-4	4-Bromofluorobenzene	107%	104%	80-120%

(a) Diluted due to high concentration of target compound.
(b) Associated CCV outside of control limits high, sample was ND.
(c) MDL from current instrument.
(d) 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:	MW10-1DA-2019-07-08		
Lab Sample ID:	JC91309-2	**Date Sampled:**	07/08/19
Matrix:	AQ - Ground Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251700.D	1	07/16/19 13:40	ED	n/a	n/a	VA9741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone [a]	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	2.9	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK) [a]	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW10-1DA-2019-07-08		
Lab Sample ID:	JC91309-2	**Date Sampled:**	07/08/19
Matrix:	AQ - Ground Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.94	1.0	0.75	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	3.1	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.80	1.0	0.75	0.59	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

(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:	MW10-FD-2019-07-08		
Lab Sample ID:	JC91309-3	**Date Sampled:**	07/08/19
Matrix:	AQ - Ground Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251701.D	1	07/16/19 14:09	ED	n/a	n/a	VA9741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone [a]	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	3.0	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK) [a]	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	MW10-FD-2019-07-08		
Lab Sample ID:	JC91309-3	**Date Sampled:**	07/08/19
Matrix:	AQ - Ground Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.96	1.0	0.75	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride	2.8	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	1.5	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	102%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

(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: TRIP BLANK-07-08
Lab Sample ID: JC91309-4 **Date Sampled:** 07/08/19
Matrix: AQ - Trip Blank Water **Date Received:** 07/09/19
Method: SW846 8260C **Percent Solids:** n/a
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A251654.D	1	07/15/19 13:14	ED	n/a	n/a	VA9738
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	7.5 U	10	7.5	6.0	ug/l	
71-43-2	Benzene	0.45 U	0.50	0.45	0.43	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.48	ug/l	
75-27-4	Bromodichloromethane	0.75 U	1.0	0.75	0.58	ug/l	
75-25-2	Bromoform	0.75 U	1.0	0.75	0.63	ug/l	
74-83-9	Bromomethane	1.8 U	2.0	1.8	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.5 U	10	7.5	6.9	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	0.75 U	1.0	0.75	0.55	ug/l	
108-90-7	Chlorobenzene	0.75 U	1.0	0.75	0.56	ug/l	
75-00-3	Chloroethane	0.75 U	1.0	0.75	0.73	ug/l	
67-66-3	Chloroform	0.75 U	1.0	0.75	0.50	ug/l	
74-87-3	Chloromethane	0.85 U	1.0	0.85	0.76	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.5 U	2.0	1.5	1.2	ug/l	
124-48-1	Dibromochloromethane	0.75 U	1.0	0.75	0.56	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	0.75 U	1.0	0.75	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	0.75 U	1.0	0.75	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75 U	1.0	0.75	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	1.5 U	2.0	1.5	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.75 U	1.0	0.75	0.57	ug/l	
107-06-2	1,2-Dichloroethane	0.75 U	1.0	0.75	0.60	ug/l	
75-35-4	1,1-Dichloroethene	0.75 U	1.0	0.75	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.75 U	1.0	0.75	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.75 U	1.0	0.75	0.54	ug/l	
78-87-5	1,2-Dichloropropane	0.75 U	1.0	0.75	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	75 U	130	75	69	ug/l	
100-41-4	Ethylbenzene	0.75 U	1.0	0.75	0.60	ug/l	
76-13-1	Freon 113	2.5 U	5.0	2.5	1.9	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:	TRIP BLANK-07-08		
Lab Sample ID:	JC91309-4	**Date Sampled:**	07/08/19
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/09/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
591-78-6	2-Hexanone	2.5 U	5.0	2.5	2.0	ug/l	
74-88-4	Iodomethane	1.0 U	2.0	1.0	0.60	ug/l	
98-82-8	Isopropylbenzene	0.75 U	1.0	0.75	0.65	ug/l	
79-20-9	Methyl Acetate	2.0 U	5.0	2.0	0.80	ug/l	
108-87-2	Methylcyclohexane	2.0 U	5.0	2.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75 U	1.0	0.75	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.5 U	5.0	3.5	1.9	ug/l	
75-09-2	Methylene chloride	1.5 U	2.0	1.5	1.0	ug/l	
100-42-5	Styrene	0.75 U	1.0	0.75	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	1.0	0.75	0.65	ug/l	
127-18-4	Tetrachloroethene	0.90 U	1.0	0.90	0.90	ug/l	
108-88-3	Toluene	0.75 U	1.0	0.75	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.75 U	1.0	0.75	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.75 U	1.0	0.75	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	0.75 U	1.0	0.75	0.53	ug/l	
79-01-6	Trichloroethene	0.75 U	1.0	0.75	0.53	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.84	ug/l	
75-01-4	Vinyl chloride [a]	0.80 U	1.0	0.80	0.79	ug/l	
1330-20-7	Xylene (total)	0.75 U	1.0	0.75	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

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

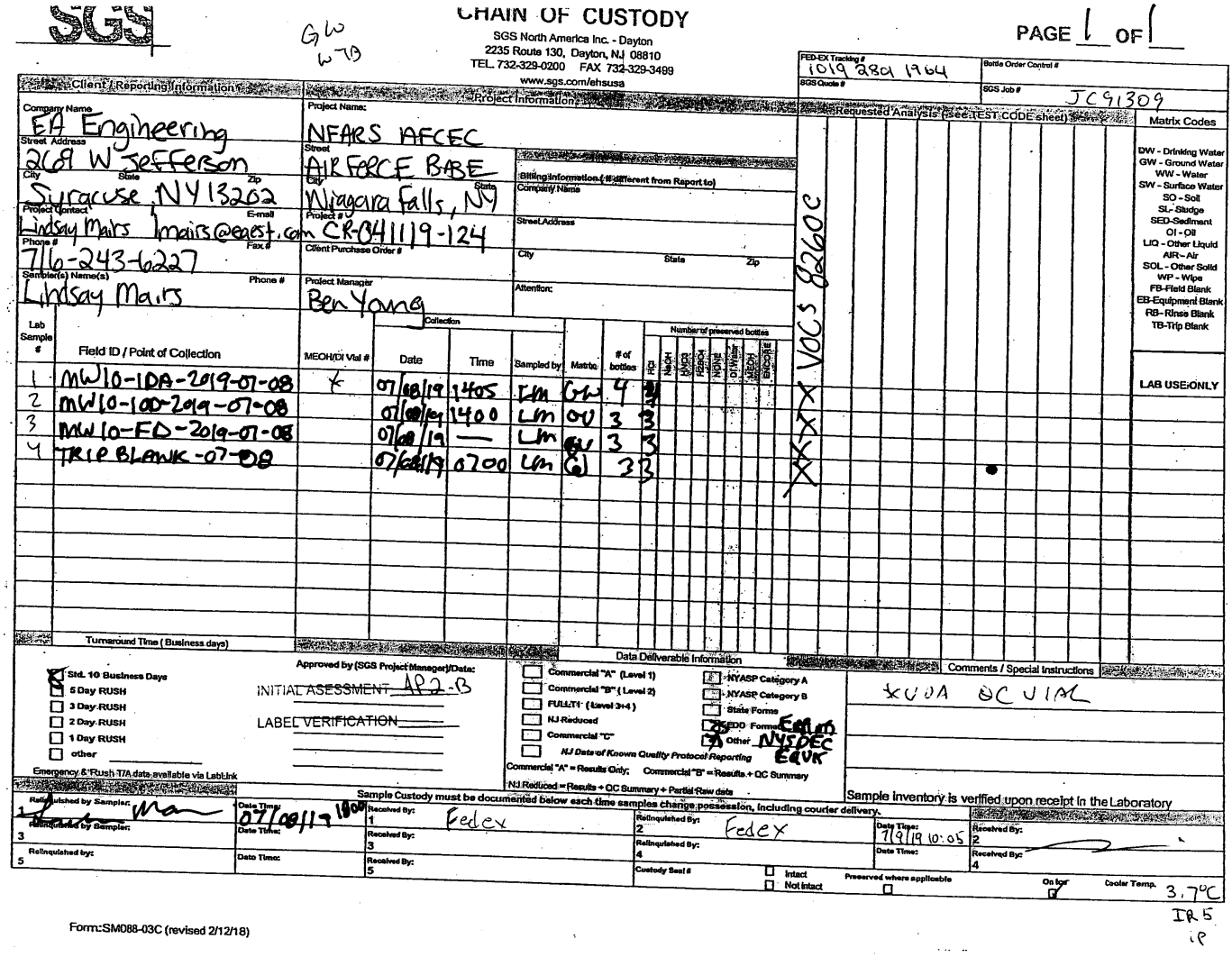
U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody
- QC Evaluation: DOD QSM5 Limits



CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 1 OF 1

GW
W-TB

FED-EX Tracking # 1019 2801 1964
Bottle Order Control #
SGS Quote #
SGS Job # JC91309

Client / Reporting Information
Company Name: EA Engineering
Street Address: 2C9 W Jefferson
City: Syracuse State: NY Zip: 13202
Project Contact: Lindsay Mairs E-mail: lmairs@eaest.com
Phone #: 716-243-6227 Fax #:
Sampler(s) Name(s): Lindsay Mairs Phone #:

Project Information
Project Name: NFARS AFCEC
Street: AIR FORCE BASE
City: Niagara Falls State: NY
Project #: CR-041119-124
Client Purchase Order #:
Project Manager: Ben Young

Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)
Matrix Codes

Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved bottles	Requested Analysis: VOCs 8260C
1	MW10-1DA-2019-07-08	X	07/08/19	1405	LM	GW	4	3	X
2	MW10-1DD-2019-07-08		07/08/19	1400	LM	GW	3	3	X
3	MW10-FD-2019-07-08		07/08/19	—	LM	GW	3	3	X
4	TRIP BLANK-07-08		07/08/19	0700	LM	GW	3	3	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - 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

LAB USE ONLY

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available via LabLink

Approved by (SGS Project Manager)/Date:
INITIAL ASSESSMENT: AP 2-13
LABEL VERIFICATION:

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [x] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format EQuIS
- [ ] Other NYSDEC EQUIS

Commercial "A" = Results Only; Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions
*VOA OC VIAL

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		07/08/19 1800	Fedex	Fedex	7/9/19 10:05	
2						
3						
4						
5						

Custody Seal # Intact Not Intact Preserved where applicable On Ice Cooler Temp. 3.7°C

Sample Inventory is verified upon receipt in the Laboratory

IR 5
cp

Form:SM088-03C (revised 2/12/18)

SGS Sample Receipt Summary

Job Number: JC91309 **Client:** _____ **Project:** _____

Date / Time Received: 7/9/2019 10:05:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.7);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 229517 pH 12+: 208717 Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

Job Change Order: JC91309

Requested Date: 7/18/2019 **Received Date:** 7/9/2019

Account Name: EA Engineering **Due Date:** 7/16/2019

Project Description: Niagara Falls Air Reserve Station (NFARS), Niagar **Deliverable:** NYASPB

C/O Initiated By: AK **PM:** AK **TAT (Days):** 7

==========

Sample #: JC91309-1 **Change:**

Dept: please revise ID to MW10-10D-2019-07-08

TAT: 7

MW10-10A-2019-07-08

==========

==========

Sample #: JC91309-2 **Change:**

Dept: Please revised ID to MW10-1DA-2019-07-08

TAT: 7

MW10-10D-2019-07-08

==========

Above Changes Per: Lindsey Mairs **Date/Time:** 7/18/2019 12:17:15 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Internal Sample Tracking Chronicle

EA Engineering

Job No: JC91309

Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Project No: 6265401

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC91309-1 Collected: 08-JUL-19 14:05 By: LM MW10-10D-2019-07-08				Received: 09-JUL-19	By: AS	
JC91309-1	SW846 8260C	15-JUL-19 14:41	ED			V8260SL
JC91309-1	SW846 8260C	16-JUL-19 14:38	ED			V8260SL
JC91309-2 Collected: 08-JUL-19 14:00 By: LM MW10-1DA-2019-07-08				Received: 09-JUL-19	By: AS	
JC91309-2	SW846 8260C	16-JUL-19 13:40	ED			V8260SL
JC91309-3 Collected: 08-JUL-19 00:00 By: LM MW10-FD-2019-07-08				Received: 09-JUL-19	By: AS	
JC91309-3	SW846 8260C	16-JUL-19 14:09	ED			V8260SL
JC91309-4 Collected: 08-JUL-19 14:05 By: LM TRIP BLANK-07-08				Received: 09-JUL-19	By: AS	
JC91309-4	SW846 8260C	15-JUL-19 13:14	ED			V8260SL

SGS Internal Chain of Custody

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 07/09/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC91309-1.1	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-1.1	Secured Storage	Edward Durner	07/15/19 10:14	Retrieve from Storage
JC91309-1.1	Edward Durner	GCMSA	07/15/19 10:14	Load on Instrument
JC91309-1.1	GCMSA	Edward Durner	07/16/19 07:33	Unload from Instrument
JC91309-1.1	Edward Durner	Secured Storage	07/16/19 07:34	Return to Storage
JC91309-1.2	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-1.2	Secured Storage	Eddie Huang	07/16/19 13:27	Retrieve from Storage
JC91309-1.2	Eddie Huang	GCMSA	07/16/19 13:27	Load on Instrument
JC91309-1.2	GCMSA	Edward Durner	07/17/19 06:48	Unload from Instrument
JC91309-1.2	Edward Durner	Secured Storage	07/17/19 06:48	Return to Storage
JC91309-1.3	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-1.4	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-2.1	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-2.1	Secured Storage	Edward Durner	07/15/19 10:14	Retrieve from Storage
JC91309-2.1	Edward Durner	GCMSA	07/15/19 10:14	Load on Instrument
JC91309-2.1	GCMSA	Edward Durner	07/16/19 07:33	Unload from Instrument
JC91309-2.1	Edward Durner	Secured Storage	07/16/19 07:34	Return to Storage
JC91309-2.2	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-2.2	Secured Storage	Eddie Huang	07/16/19 13:27	Retrieve from Storage
JC91309-2.2	Eddie Huang	GCMSA	07/16/19 13:27	Load on Instrument
JC91309-2.2	GCMSA	Edward Durner	07/17/19 06:48	Unload from Instrument
JC91309-2.2	Edward Durner	Secured Storage	07/17/19 06:48	Return to Storage
JC91309-2.3	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-3.1	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-3.1	Secured Storage	Eddie Huang	07/16/19 13:27	Retrieve from Storage
JC91309-3.1	Eddie Huang	GCMSA	07/16/19 13:27	Load on Instrument
JC91309-3.1	GCMSA	Edward Durner	07/17/19 06:48	Unload from Instrument
JC91309-3.1	Edward Durner	Secured Storage	07/17/19 06:48	Return to Storage
JC91309-3.2	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-3.2	Secured Storage	Edward Durner	07/15/19 10:14	Retrieve from Storage
JC91309-3.2	Edward Durner	GCMSA	07/15/19 10:14	Load on Instrument
JC91309-3.2	GCMSA	Edward Durner	07/16/19 07:33	Unload from Instrument
JC91309-3.2	Edward Durner	Secured Storage	07/16/19 07:34	Return to Storage
JC91309-3.3	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage

SGS Internal Chain of Custody

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Received: 07/09/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC91309-4.1	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-4.2	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-4.3	Shivani Gogwekar	Secured Storage	07/09/19 16:17	Return to Storage
JC91309-4.3	Secured Storage	Edward Durner	07/15/19 10:14	Retrieve from Storage
JC91309-4.3	Edward Durner	GCMSA	07/15/19 10:14	Load on Instrument
JC91309-4.3	GCMSA	Edward Durner	07/16/19 07:33	Unload from Instrument
JC91309-4.3	Edward Durner	Secured Storage	07/16/19 07:34	Return to Storage

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9738	SW846 8260C						
VA9738-BS	67-64-1	Acetone	BSP	REC	94	%	39-160
VA9738-BS	71-43-2	Benzene	BSP	REC	88	%	79-120
VA9738-BS	74-97-5	Bromochloromethane	BSP	REC	98	%	78-123
VA9738-BS	75-27-4	Bromodichloromethane	BSP	REC	97	%	79-125
VA9738-BS	75-25-2	Bromoform	BSP	REC	107	%	66-130
VA9738-BS	74-83-9	Bromomethane	BSP	REC	96	%	53-141
VA9738-BS	78-93-3	2-Butanone (MEK)	BSP	REC	104	%	56-143
VA9738-BS	75-15-0	Carbon disulfide	BSP	REC	82	%	64-133
VA9738-BS	56-23-5	Carbon tetrachloride	BSP	REC	99	%	72-136
VA9738-BS	108-90-7	Chlorobenzene	BSP	REC	95	%	82-118
VA9738-BS	75-00-3	Chloroethane	BSP	REC	99	%	60-138
VA9738-BS	67-66-3	Chloroform	BSP	REC	91	%	79-124
VA9738-BS	74-87-3	Chloromethane	BSP	REC	105	%	50-139
VA9738-BS	110-82-7	Cyclohexane	BSP	REC	93	%	71-130
VA9738-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	104	%	62-128
VA9738-BS	124-48-1	Dibromochloromethane	BSP	REC	99	%	74-126
VA9738-BS	106-93-4	1,2-Dibromoethane	BSP	REC	104	%	77-121
VA9738-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	98	%	80-119
VA9738-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	98	%	80-119
VA9738-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	95	%	79-118
VA9738-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	97	%	32-152
VA9738-BS	75-34-3	1,1-Dichloroethane	BSP	REC	91	%	77-125
VA9738-BS	107-06-2	1,2-Dichloroethane	BSP	REC	83	%	73-128
VA9738-BS	75-35-4	1,1-Dichloroethene	BSP	REC	84	%	71-131
VA9738-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	96	%	78-123
VA9738-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	95	%	75-124
VA9738-BS	78-87-5	1,2-Dichloropropane	BSP	REC	94	%	78-122
VA9738-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	102	%	75-124
VA9738-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	103	%	73-127
VA9738-BS	123-91-1	1,4-Dioxane	BSP	REC	94	%	59-139
VA9738-BS	100-41-4	Ethylbenzene	BSP	REC	92	%	79-121
VA9738-BS	76-13-1	Freon 113	BSP	REC	90	%	70-136
VA9738-BS	591-78-6	2-Hexanone	BSP	REC	94	%	57-139
VA9738-BS	74-88-4	Iodomethane	BSP	REC	91	%	69-131
VA9738-BS	98-82-8	Isopropylbenzene	BSP	REC	94	%	72-131
VA9738-BS	79-20-9	Methyl Acetate	BSP	REC	93	%	56-136
VA9738-BS	108-87-2	Methylcyclohexane	BSP	REC	83	%	72-132
VA9738-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	99	%	71-124
VA9738-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	95	%	67-130
VA9738-BS	75-09-2	Methylene chloride	BSP	REC	92	%	74-124
VA9738-BS	100-42-5	Styrene	BSP	REC	91	%	78-123
VA9738-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	109	%	71-121

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9738-BS	127-18-4	Tetrachloroethene	BSP	REC	88	%	74-129
VA9738-BS	108-88-3	Toluene	BSP	REC	92	%	80-121
VA9738-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	98	%	69-129
VA9738-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	98	%	69-130
VA9738-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	100	%	74-131
VA9738-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	101	%	80-119
VA9738-BS	79-01-6	Trichloroethene	BSP	REC	89	%	79-123
VA9738-BS	75-69-4	Trichlorofluoromethane	BSP	REC	96	%	65-141
VA9738-BS	75-01-4	Vinyl chloride	BSP	REC	116	%	58-137
VA9738-BS	1330-20-7	Xylene (total)	BSP	REC	95	%	79-121
VA9738-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	104	%	80-119
VA9738-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	81-118
VA9738-BS	2037-26-5	Toluene-D8	BSP	SURR	97	%	89-112
VA9738-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	110	%	85-114
JC91309-1MS	67-64-1	Acetone	MS	REC	105	%	39-160
JC91309-1MS	71-43-2	Benzene	MS	REC	91	%	79-120
JC91309-1MS	74-97-5	Bromochloromethane	MS	REC	106	%	78-123
JC91309-1MS	75-27-4	Bromodichloromethane	MS	REC	98	%	79-125
JC91309-1MS	75-25-2	Bromoform	MS	REC	105	%	66-130
JC91309-1MS	74-83-9	Bromomethane	MS	REC	91	%	53-141
JC91309-1MS	78-93-3	2-Butanone (MEK)	MS	REC	108	%	56-143
JC91309-1MS	75-15-0	Carbon disulfide	MS	REC	96	%	64-133
JC91309-1MS	56-23-5	Carbon tetrachloride	MS	REC	109	%	72-136
JC91309-1MS	108-90-7	Chlorobenzene	MS	REC	96	%	82-118
JC91309-1MS	75-00-3	Chloroethane	MS	REC	95	%	60-138
JC91309-1MS	67-66-3	Chloroform	MS	REC	98	%	79-124
JC91309-1MS	74-87-3	Chloromethane	MS	REC	98	%	50-139
JC91309-1MS	110-82-7	Cyclohexane	MS	REC	98	%	71-130
JC91309-1MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	103	%	62-128
JC91309-1MS	124-48-1	Dibromochloromethane	MS	REC	102	%	74-126
JC91309-1MS	106-93-4	1,2-Dibromoethane	MS	REC	109	%	77-121
JC91309-1MS	95-50-1	1,2-Dichlorobenzene	MS	REC	95	%	80-119
JC91309-1MS	541-73-1	1,3-Dichlorobenzene	MS	REC	96	%	80-119
JC91309-1MS	106-46-7	1,4-Dichlorobenzene	MS	REC	93	%	79-118
JC91309-1MS	75-71-8	Dichlorodifluoromethane	MS	REC	93	%	32-152
JC91309-1MS	75-34-3	1,1-Dichloroethane	MS	REC	98	%	77-125
JC91309-1MS	107-06-2	1,2-Dichloroethane	MS	REC	87	%	73-128
JC91309-1MS	75-35-4	1,1-Dichloroethene	MS	REC	103	%	71-131
JC91309-1MS	156-59-2	cis-1,2-Dichloroethene	MS	REC	72	%	78-123
JC91309-1MS	156-60-5	trans-1,2-Dichloroethene	MS	REC	106	%	75-124
JC91309-1MS	78-87-5	1,2-Dichloropropane	MS	REC	95	%	78-122
JC91309-1MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	104	%	75-124
JC91309-1MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	104	%	73-127
JC91309-1MS	123-91-1	1,4-Dioxane	MS	REC	102	%	59-139
JC91309-1MS	100-41-4	Ethylbenzene	MS	REC	91	%	79-121

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91309-1MS	76-13-1	Freon 113	MS	REC	110	%	70-136
JC91309-1MS	591-78-6	2-Hexanone	MS	REC	95	%	57-139
JC91309-1MS	74-88-4	Iodomethane	MS	REC	107	%	69-131
JC91309-1MS	98-82-8	Isopropylbenzene	MS	REC	94	%	72-131
JC91309-1MS	79-20-9	Methyl Acetate	MS	REC	99	%	56-136
JC91309-1MS	108-87-2	Methylcyclohexane	MS	REC	93	%	72-132
JC91309-1MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	106	%	71-124
JC91309-1MS	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	95	%	67-130
JC91309-1MS	75-09-2	Methylene chloride	MS	REC	104	%	74-124
JC91309-1MS	100-42-5	Styrene	MS	REC	90	%	78-123
JC91309-1MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	110	%	71-121
JC91309-1MS	127-18-4	Tetrachloroethene	MS	REC	90	%	74-129
JC91309-1MS	108-88-3	Toluene	MS	REC	93	%	80-121
JC91309-1MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	99	%	69-129
JC91309-1MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	97	%	69-130
JC91309-1MS	71-55-6	1,1,1-Trichloroethane	MS	REC	110	%	74-131
JC91309-1MS	79-00-5	1,1,2-Trichloroethane	MS	REC	103	%	80-119
JC91309-1MS	79-01-6	Trichloroethene	MS	REC	91	%	79-123
JC91309-1MS	75-69-4	Trichlorofluoromethane	MS	REC	102	%	65-141
JC91309-1MS	75-01-4	Vinyl chloride	MS	REC	102	%	58-137
JC91309-1MS	1330-20-7	Xylene (total)	MS	REC	93	%	79-121
JC91309-1MS	1868-53-7	Dibromofluoromethane	MS	SURR	109	%	80-119
JC91309-1MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	98	%	81-118
JC91309-1MS	2037-26-5	Toluene-D8	MS	SURR	97	%	89-112
JC91309-1MS	460-00-4	4-Bromofluorobenzene	MS	SURR	108	%	85-114
JC91309-1MSD	67-64-1	Acetone	MSD	REC	109	%	39-160
JC91309-1MSD	67-64-1	Acetone	MSD	RPD	4	%	20
JC91309-1MSD	71-43-2	Benzene	MSD	REC	96	%	79-120
JC91309-1MSD	71-43-2	Benzene	MSD	RPD	5	%	20
JC91309-1MSD	74-97-5	Bromochloromethane	MSD	REC	109	%	78-123
JC91309-1MSD	74-97-5	Bromochloromethane	MSD	RPD	2	%	20
JC91309-1MSD	75-27-4	Bromodichloromethane	MSD	REC	104	%	79-125
JC91309-1MSD	75-27-4	Bromodichloromethane	MSD	RPD	6	%	20
JC91309-1MSD	75-25-2	Bromoform	MSD	REC	108	%	66-130
JC91309-1MSD	75-25-2	Bromoform	MSD	RPD	3	%	20
JC91309-1MSD	74-83-9	Bromomethane	MSD	REC	95	%	53-141
JC91309-1MSD	74-83-9	Bromomethane	MSD	RPD	3	%	20
JC91309-1MSD	78-93-3	2-Butanone (MEK)	MSD	REC	113	%	56-143
JC91309-1MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	4	%	20
JC91309-1MSD	75-15-0	Carbon disulfide	MSD	REC	102	%	64-133
JC91309-1MSD	75-15-0	Carbon disulfide	MSD	RPD	5	%	20
JC91309-1MSD	56-23-5	Carbon tetrachloride	MSD	REC	114	%	72-136
JC91309-1MSD	56-23-5	Carbon tetrachloride	MSD	RPD	5	%	20
JC91309-1MSD	108-90-7	Chlorobenzene	MSD	REC	99	%	82-118
JC91309-1MSD	108-90-7	Chlorobenzene	MSD	RPD	3	%	20

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91309-1MSD	75-00-3	Chloroethane	MSD	REC	98	%	60-138
JC91309-1MSD	75-00-3	Chloroethane	MSD	RPD	4	%	20
JC91309-1MSD	67-66-3	Chloroform	MSD	REC	101	%	79-124
JC91309-1MSD	67-66-3	Chloroform	MSD	RPD	2	%	20
JC91309-1MSD	74-87-3	Chloromethane	MSD	REC	102	%	50-139
JC91309-1MSD	74-87-3	Chloromethane	MSD	RPD	4	%	20
JC91309-1MSD	110-82-7	Cyclohexane	MSD	REC	101	%	71-130
JC91309-1MSD	110-82-7	Cyclohexane	MSD	RPD	3	%	20
JC91309-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	110	%	62-128
JC91309-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	7	%	20
JC91309-1MSD	124-48-1	Dibromochloromethane	MSD	REC	105	%	74-126
JC91309-1MSD	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
JC91309-1MSD	106-93-4	1,2-Dibromoethane	MSD	REC	112	%	77-121
JC91309-1MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	3	%	20
JC91309-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	101	%	80-119
JC91309-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	6	%	20
JC91309-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
JC91309-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	5	%	20
JC91309-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	98	%	79-118
JC91309-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	5	%	20
JC91309-1MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	95	%	32-152
JC91309-1MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
JC91309-1MSD	75-34-3	1,1-Dichloroethane	MSD	REC	102	%	77-125
JC91309-1MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	3	%	20
JC91309-1MSD	107-06-2	1,2-Dichloroethane	MSD	REC	90	%	73-128
JC91309-1MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	4	%	20
JC91309-1MSD	75-35-4	1,1-Dichloroethene	MSD	REC	108	%	71-131
JC91309-1MSD	75-35-4	1,1-Dichloroethene	MSD	RPD	4	%	20
JC91309-1MSD	156-59-2	cis-1,2-Dichloroethene	MSD	REC	82	%	78-123
JC91309-1MSD	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	4	%	20
JC91309-1MSD	156-60-5	trans-1,2-Dichloroethene	MSD	REC	109	%	75-124
JC91309-1MSD	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	3	%	20
JC91309-1MSD	78-87-5	1,2-Dichloropropane	MSD	REC	98	%	78-122
JC91309-1MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	4	%	20
JC91309-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	110	%	75-124
JC91309-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	5	%	20
JC91309-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	111	%	73-127
JC91309-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	6	%	20
JC91309-1MSD	123-91-1	1,4-Dioxane	MSD	REC	106	%	59-139
JC91309-1MSD	123-91-1	1,4-Dioxane	MSD	RPD	3	%	20
JC91309-1MSD	100-41-4	Ethylbenzene	MSD	REC	95	%	79-121
JC91309-1MSD	100-41-4	Ethylbenzene	MSD	RPD	4	%	20
JC91309-1MSD	76-13-1	Freon 113	MSD	REC	113	%	70-136
JC91309-1MSD	76-13-1	Freon 113	MSD	RPD	3	%	20
JC91309-1MSD	591-78-6	2-Hexanone	MSD	REC	99	%	57-139

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91309-1MSD	591-78-6	2-Hexanone	MSD	RPD	4	%	20
JC91309-1MSD	74-88-4	Iodomethane	MSD	REC	113	%	69-131
JC91309-1MSD	74-88-4	Iodomethane	MSD	RPD	6	%	20
JC91309-1MSD	98-82-8	Isopropylbenzene	MSD	REC	99	%	72-131
JC91309-1MSD	98-82-8	Isopropylbenzene	MSD	RPD	5	%	20
JC91309-1MSD	79-20-9	Methyl Acetate	MSD	REC	101	%	56-136
JC91309-1MSD	79-20-9	Methyl Acetate	MSD	RPD	2	%	20
JC91309-1MSD	108-87-2	Methylcyclohexane	MSD	REC	98	%	72-132
JC91309-1MSD	108-87-2	Methylcyclohexane	MSD	RPD	6	%	20
JC91309-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	109	%	71-124
JC91309-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	3	%	20
JC91309-1MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	99	%	67-130
JC91309-1MSD	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	4	%	20
JC91309-1MSD	75-09-2	Methylene chloride	MSD	REC	107	%	74-124
JC91309-1MSD	75-09-2	Methylene chloride	MSD	RPD	3	%	20
JC91309-1MSD	100-42-5	Styrene	MSD	REC	94	%	78-123
JC91309-1MSD	100-42-5	Styrene	MSD	RPD	5	%	20
JC91309-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	112	%	71-121
JC91309-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	2	%	20
JC91309-1MSD	127-18-4	Tetrachloroethene	MSD	REC	96	%	74-129
JC91309-1MSD	127-18-4	Tetrachloroethene	MSD	RPD	7	%	20
JC91309-1MSD	108-88-3	Toluene	MSD	REC	97	%	80-121
JC91309-1MSD	108-88-3	Toluene	MSD	RPD	4	%	20
JC91309-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	105	%	69-129
JC91309-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	6	%	20
JC91309-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	102	%	69-130
JC91309-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	5	%	20
JC91309-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	113	%	74-131
JC91309-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
JC91309-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	105	%	80-119
JC91309-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	1	%	20
JC91309-1MSD	79-01-6	Trichloroethene	MSD	REC	97	%	79-123
JC91309-1MSD	79-01-6	Trichloroethene	MSD	RPD	5	%	20
JC91309-1MSD	75-69-4	Trichlorofluoromethane	MSD	REC	106	%	65-141
JC91309-1MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	4	%	20
JC91309-1MSD	75-01-4	Vinyl chloride	MSD	REC	110	%	58-137
JC91309-1MSD	75-01-4	Vinyl chloride	MSD	RPD	5	%	20
JC91309-1MSD	1330-20-7	Xylene (total)	MSD	REC	97	%	79-121
JC91309-1MSD	1330-20-7	Xylene (total)	MSD	RPD	5	%	20
JC91309-1MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	109	%	80-119
JC91309-1MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	99	%	81-118
JC91309-1MSD	2037-26-5	Toluene-D8	MSD	SURR	99	%	89-112
JC91309-1MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	112	%	85-114
VA9738-MB	1868-53-7	Dibromofluoromethane	MB	SURR	105	%	80-119
VA9738-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	101	%	81-118

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9738-MB	2037-26-5	Toluene-D8	MB	SURR	98	%	89-112
VA9738-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	98	%	85-114
JC91309-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	108	%	80-119
JC91309-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC91309-1	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
JC91309-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	104	%	85-114
JC91309-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	109	%	80-119
JC91309-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
JC91309-4	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC91309-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
VA9741	SW846 8260C						
VA9741-BS	67-64-1	Acetone	BSP	REC	96	%	39-160
VA9741-BS	71-43-2	Benzene	BSP	REC	88	%	79-120
VA9741-BS	74-97-5	Bromochloromethane	BSP	REC	103	%	78-123
VA9741-BS	75-27-4	Bromodichloromethane	BSP	REC	98	%	79-125
VA9741-BS	75-25-2	Bromoform	BSP	REC	107	%	66-130
VA9741-BS	74-83-9	Bromomethane	BSP	REC	94	%	53-141
VA9741-BS	78-93-3	2-Butanone (MEK)	BSP	REC	100	%	56-143
VA9741-BS	75-15-0	Carbon disulfide	BSP	REC	86	%	64-133
VA9741-BS	56-23-5	Carbon tetrachloride	BSP	REC	98	%	72-136
VA9741-BS	108-90-7	Chlorobenzene	BSP	REC	96	%	82-118
VA9741-BS	75-00-3	Chloroethane	BSP	REC	99	%	60-138
VA9741-BS	67-66-3	Chloroform	BSP	REC	93	%	79-124
VA9741-BS	74-87-3	Chloromethane	BSP	REC	101	%	50-139
VA9741-BS	110-82-7	Cyclohexane	BSP	REC	93	%	71-130
VA9741-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	102	%	62-128
VA9741-BS	124-48-1	Dibromochloromethane	BSP	REC	103	%	74-126
VA9741-BS	106-93-4	1,2-Dibromoethane	BSP	REC	106	%	77-121
VA9741-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	95	%	80-119
VA9741-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	94	%	80-119
VA9741-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	93	%	79-118
VA9741-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	91	%	32-152
VA9741-BS	75-34-3	1,1-Dichloroethane	BSP	REC	95	%	77-125
VA9741-BS	107-06-2	1,2-Dichloroethane	BSP	REC	85	%	73-128
VA9741-BS	75-35-4	1,1-Dichloroethene	BSP	REC	92	%	71-131
VA9741-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	97	%	78-123
VA9741-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	96	%	75-124
VA9741-BS	78-87-5	1,2-Dichloropropane	BSP	REC	95	%	78-122
VA9741-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	100	%	75-124
VA9741-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	108	%	73-127
VA9741-BS	123-91-1	1,4-Dioxane	BSP	REC	99	%	59-139
VA9741-BS	100-41-4	Ethylbenzene	BSP	REC	89	%	79-121
VA9741-BS	76-13-1	Freon 113	BSP	REC	85	%	70-136

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VA9741-BS	591-78-6	2-Hexanone	BSP	REC	96	%	57-139
VA9741-BS	74-88-4	Iodomethane	BSP	REC	99	%	69-131
VA9741-BS	98-82-8	Isopropylbenzene	BSP	REC	93	%	72-131
VA9741-BS	79-20-9	Methyl Acetate	BSP	REC	95	%	56-136
VA9741-BS	108-87-2	Methylcyclohexane	BSP	REC	79	%	72-132
VA9741-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	101	%	71-124
VA9741-BS	108-10-1	4-Methyl-2-pentanone(MIBK)	BSP	REC	94	%	67-130
VA9741-BS	75-09-2	Methylene chloride	BSP	REC	103	%	74-124
VA9741-BS	100-42-5	Styrene	BSP	REC	91	%	78-123
VA9741-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	108	%	71-121
VA9741-BS	127-18-4	Tetrachloroethene	BSP	REC	86	%	74-129
VA9741-BS	108-88-3	Toluene	BSP	REC	94	%	80-121
VA9741-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	99	%	69-129
VA9741-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	97	%	69-130
VA9741-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	100	%	74-131
VA9741-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	106	%	80-119
VA9741-BS	79-01-6	Trichloroethene	BSP	REC	88	%	79-123
VA9741-BS	75-69-4	Trichlorofluoromethane	BSP	REC	97	%	65-141
VA9741-BS	75-01-4	Vinyl chloride	BSP	REC	111	%	58-137
VA9741-BS	1330-20-7	Xylene (total)	BSP	REC	92	%	79-121
VA9741-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	107	%	80-119
VA9741-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	97	%	81-118
VA9741-BS	2037-26-5	Toluene-D8	BSP	SURR	101	%	89-112
VA9741-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	107	%	85-114
JC91586-6MS*	67-64-1	Acetone	MS	REC	95	%	39-160
JC91586-6MS*	71-43-2	Benzene	MS	REC	78	%	79-120
JC91586-6MS*	74-97-5	Bromochloromethane	MS	REC	94	%	78-123
JC91586-6MS*	75-27-4	Bromodichloromethane	MS	REC	90	%	79-125
JC91586-6MS*	75-25-2	Bromoform	MS	REC	99	%	66-130
JC91586-6MS*	74-83-9	Bromomethane	MS	REC	82	%	53-141
JC91586-6MS*	78-93-3	2-Butanone (MEK)	MS	REC	108	%	56-143
JC91586-6MS*	75-15-0	Carbon disulfide	MS	REC	80	%	64-133
JC91586-6MS*	56-23-5	Carbon tetrachloride	MS	REC	85	%	72-136
JC91586-6MS*	108-90-7	Chlorobenzene	MS	REC	86	%	82-118
JC91586-6MS*	75-00-3	Chloroethane	MS	REC	87	%	60-138
JC91586-6MS*	67-66-3	Chloroform	MS	REC	84	%	79-124
JC91586-6MS*	74-87-3	Chloromethane	MS	REC	88	%	50-139
JC91586-6MS*	110-82-7	Cyclohexane	MS	REC	79	%	71-130
JC91586-6MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	98	%	62-128
JC91586-6MS*	124-48-1	Dibromochloromethane	MS	REC	95	%	74-126
JC91586-6MS*	106-93-4	1,2-Dibromoethane	MS	REC	104	%	77-121
JC91586-6MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	87	%	80-119
JC91586-6MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	87	%	80-119
JC91586-6MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	86	%	79-118
JC91586-6MS*	75-71-8	Dichlorodifluoromethane	MS	REC	82	%	32-152

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91586-6MS*	75-34-3	1,1-Dichloroethane	MS	REC	85	%	77-125
JC91586-6MS*	107-06-2	1,2-Dichloroethane	MS	REC	80	%	73-128
JC91586-6MS*	75-35-4	1,1-Dichloroethene	MS	REC	86	%	71-131
JC91586-6MS*	156-59-2	cis-1,2-Dichloroethene	MS	REC	-36 [a]	%	78-123
JC91586-6MS*	156-60-5	trans-1,2-Dichloroethene	MS	REC	79	%	75-124
JC91586-6MS*	78-87-5	1,2-Dichloropropane	MS	REC	86	%	78-122
JC91586-6MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	93	%	75-124
JC91586-6MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	98	%	73-127
JC91586-6MS*	123-91-1	1,4-Dioxane	MS	REC	90	%	59-139
JC91586-6MS*	100-41-4	Ethylbenzene	MS	REC	77	%	79-121
JC91586-6MS*	76-13-1	Freon 113	MS	REC	80	%	70-136
JC91586-6MS*	591-78-6	2-Hexanone	MS	REC	92	%	57-139
JC91586-6MS*	74-88-4	Iodomethane	MS	REC	94	%	69-131
JC91586-6MS*	98-82-8	Isopropylbenzene	MS	REC	79	%	72-131
JC91586-6MS*	79-20-9	Methyl Acetate	MS	REC	92	%	56-136
JC91586-6MS*	108-87-2	Methylcyclohexane	MS	REC	73	%	72-132
JC91586-6MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	96	%	71-124
JC91586-6MS*	108-10-1	4-Methyl-2-pentanone(MIBK)	MS	REC	89	%	67-130
JC91586-6MS*	75-09-2	Methylene chloride	MS	REC	98	%	74-124
JC91586-6MS*	100-42-5	Styrene	MS	REC	78	%	78-123
JC91586-6MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	102	%	71-121
JC91586-6MS*	127-18-4	Tetrachloroethene	MS	REC	-112 [a]	%	74-129
JC91586-6MS*	108-88-3	Toluene	MS	REC	82	%	80-121
JC91586-6MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	93	%	69-129
JC91586-6MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	89	%	69-130
JC91586-6MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	86	%	74-131
JC91586-6MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	98	%	80-119
JC91586-6MS*	79-01-6	Trichloroethene	MS	REC	28 [a]	%	79-123
JC91586-6MS*	75-69-4	Trichlorofluoromethane	MS	REC	86	%	65-141
JC91586-6MS*	75-01-4	Vinyl chloride	MS	REC	84	%	58-137
JC91586-6MS*	1330-20-7	Xylene (total)	MS	REC	80	%	79-121
JC91586-6MS*	1868-53-7	Dibromofluoromethane	MS	SURR	107	%	80-119
JC91586-6MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	99	%	81-118
JC91586-6MS*	2037-26-5	Toluene-D8	MS	SURR	100	%	89-112
JC91586-6MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	109	%	85-114
JC91586-6MSD*	67-64-1	Acetone	MSD	REC	96	%	39-160
JC91586-6MSD*	67-64-1	Acetone	MSD	RPD	1	%	20
JC91586-6MSD*	71-43-2	Benzene	MSD	REC	80	%	79-120
JC91586-6MSD*	71-43-2	Benzene	MSD	RPD	2	%	20
JC91586-6MSD*	74-97-5	Bromochloromethane	MSD	REC	94	%	78-123
JC91586-6MSD*	74-97-5	Bromochloromethane	MSD	RPD	0	%	20
JC91586-6MSD*	75-27-4	Bromodichloromethane	MSD	REC	90	%	79-125
JC91586-6MSD*	75-27-4	Bromodichloromethane	MSD	RPD	1	%	20
JC91586-6MSD*	75-25-2	Bromoform	MSD	REC	103	%	66-130
JC91586-6MSD*	75-25-2	Bromoform	MSD	RPD	4	%	20

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91586-6MSD*	74-83-9	Bromomethane	MSD	REC	83	%	53-141
JC91586-6MSD*	74-83-9	Bromomethane	MSD	RPD	1	%	20
JC91586-6MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	106	%	56-143
JC91586-6MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	2	%	20
JC91586-6MSD*	75-15-0	Carbon disulfide	MSD	REC	82	%	64-133
JC91586-6MSD*	75-15-0	Carbon disulfide	MSD	RPD	1	%	20
JC91586-6MSD*	56-23-5	Carbon tetrachloride	MSD	REC	86	%	72-136
JC91586-6MSD*	56-23-5	Carbon tetrachloride	MSD	RPD	0	%	20
JC91586-6MSD*	108-90-7	Chlorobenzene	MSD	REC	86	%	82-118
JC91586-6MSD*	108-90-7	Chlorobenzene	MSD	RPD	0	%	20
JC91586-6MSD*	75-00-3	Chloroethane	MSD	REC	86	%	60-138
JC91586-6MSD*	75-00-3	Chloroethane	MSD	RPD	2	%	20
JC91586-6MSD*	67-66-3	Chloroform	MSD	REC	84	%	79-124
JC91586-6MSD*	67-66-3	Chloroform	MSD	RPD	0	%	20
JC91586-6MSD*	74-87-3	Chloromethane	MSD	REC	88	%	50-139
JC91586-6MSD*	74-87-3	Chloromethane	MSD	RPD	0	%	20
JC91586-6MSD*	110-82-7	Cyclohexane	MSD	REC	78	%	71-130
JC91586-6MSD*	110-82-7	Cyclohexane	MSD	RPD	2	%	20
JC91586-6MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	98	%	62-128
JC91586-6MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	0	%	20
JC91586-6MSD*	124-48-1	Dibromochloromethane	MSD	REC	97	%	74-126
JC91586-6MSD*	124-48-1	Dibromochloromethane	MSD	RPD	2	%	20
JC91586-6MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	106	%	77-121
JC91586-6MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	2	%	20
JC91586-6MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	88	%	80-119
JC91586-6MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	1	%	20
JC91586-6MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	86	%	80-119
JC91586-6MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	0	%	20
JC91586-6MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	86	%	79-118
JC91586-6MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
JC91586-6MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	83	%	32-152
JC91586-6MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	1	%	20
JC91586-6MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	84	%	77-125
JC91586-6MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	1	%	20
JC91586-6MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	82	%	73-128
JC91586-6MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	2	%	20
JC91586-6MSD*	75-35-4	1,1-Dichloroethene	MSD	REC	87	%	71-131
JC91586-6MSD*	75-35-4	1,1-Dichloroethene	MSD	RPD	1	%	20
JC91586-6MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	REC	-36 [a]	%	78-123
JC91586-6MSD*	156-59-2	cis-1,2-Dichloroethene	MSD	RPD	0	%	20
JC91586-6MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	REC	80	%	75-124
JC91586-6MSD*	156-60-5	trans-1,2-Dichloroethene	MSD	RPD	1	%	20
JC91586-6MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	85	%	78-122
JC91586-6MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
JC91586-6MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	95	%	75-124

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91586-6MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	2	%	20
JC91586-6MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	102	%	73-127
JC91586-6MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	4	%	20
JC91586-6MSD*	123-91-1	1,4-Dioxane	MSD	REC	96	%	59-139
JC91586-6MSD*	123-91-1	1,4-Dioxane	MSD	RPD	6	%	20
JC91586-6MSD*	100-41-4	Ethylbenzene	MSD	REC	77	%	79-121
JC91586-6MSD*	100-41-4	Ethylbenzene	MSD	RPD	1	%	20
JC91586-6MSD*	76-13-1	Freon 113	MSD	REC	80	%	70-136
JC91586-6MSD*	76-13-1	Freon 113	MSD	RPD	0	%	20
JC91586-6MSD*	591-78-6	2-Hexanone	MSD	REC	94	%	57-139
JC91586-6MSD*	591-78-6	2-Hexanone	MSD	RPD	2	%	20
JC91586-6MSD*	74-88-4	Iodomethane	MSD	REC	96	%	69-131
JC91586-6MSD*	74-88-4	Iodomethane	MSD	RPD	2	%	20
JC91586-6MSD*	98-82-8	Isopropylbenzene	MSD	REC	78	%	72-131
JC91586-6MSD*	98-82-8	Isopropylbenzene	MSD	RPD	1	%	20
JC91586-6MSD*	79-20-9	Methyl Acetate	MSD	REC	93	%	56-136
JC91586-6MSD*	79-20-9	Methyl Acetate	MSD	RPD	0	%	20
JC91586-6MSD*	108-87-2	Methylcyclohexane	MSD	REC	74	%	72-132
JC91586-6MSD*	108-87-2	Methylcyclohexane	MSD	RPD	1	%	20
JC91586-6MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	97	%	71-124
JC91586-6MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	2	%	20
JC91586-6MSD*	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	REC	90	%	67-130
JC91586-6MSD*	108-10-1	4-Methyl-2-pentanone(MIBK)	MSD	RPD	1	%	20
JC91586-6MSD*	75-09-2	Methylene chloride	MSD	REC	101	%	74-124
JC91586-6MSD*	75-09-2	Methylene chloride	MSD	RPD	3	%	20
JC91586-6MSD*	100-42-5	Styrene	MSD	REC	79	%	78-123
JC91586-6MSD*	100-42-5	Styrene	MSD	RPD	2	%	20
JC91586-6MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	102	%	71-121
JC91586-6MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	1	%	20
JC91586-6MSD*	127-18-4	Tetrachloroethene	MSD	REC	-120 [a]	%	74-129
JC91586-6MSD*	127-18-4	Tetrachloroethene	MSD	RPD	1	%	20
JC91586-6MSD*	108-88-3	Toluene	MSD	REC	81	%	80-121
JC91586-6MSD*	108-88-3	Toluene	MSD	RPD	1	%	20
JC91586-6MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	94	%	69-129
JC91586-6MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	1	%	20
JC91586-6MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	89	%	69-130
JC91586-6MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	0	%	20
JC91586-6MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	88	%	74-131
JC91586-6MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
JC91586-6MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	98	%	80-119
JC91586-6MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	0	%	20
JC91586-6MSD*	79-01-6	Trichloroethene	MSD	REC	24 [a]	%	79-123
JC91586-6MSD*	79-01-6	Trichloroethene	MSD	RPD	2	%	20
JC91586-6MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	88	%	65-141
JC91586-6MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	2	%	20

* Sample used for QC is not from job JC91309

QC Evaluation: DOD QSM5 Limits

Job Number: JC91309
Account: EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY
Collected: 07/08/19

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
JC91586-6MSD*	75-01-4	Vinyl chloride	MSD	REC	87	%	58-137
JC91586-6MSD*	75-01-4	Vinyl chloride	MSD	RPD	3	%	20
JC91586-6MSD*	1330-20-7	Xylene (total)	MSD	REC	78	%	79-121
JC91586-6MSD*	1330-20-7	Xylene (total)	MSD	RPD	2	%	20
JC91586-6MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	104	%	80-119
JC91586-6MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	97	%	81-118
JC91586-6MSD*	2037-26-5	Toluene-D8	MSD	SURR	98	%	89-112
JC91586-6MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	108	%	85-114
VA9741-MB	1868-53-7	Dibromofluoromethane	MB	SURR	106	%	80-119
VA9741-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	103	%	81-118
VA9741-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	89-112
VA9741-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	96	%	85-114
JC91309-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	80-119
JC91309-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
JC91309-1	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
JC91309-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	107	%	85-114
JC91309-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	80-119
JC91309-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
JC91309-2	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
JC91309-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	101	%	85-114
JC91309-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	107	%	80-119
JC91309-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
JC91309-3	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
JC91309-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114

(a) Outside control limits due to high level in sample relative to spike amount.

* Sample used for QC is not from job JC91309

MS Volatiles

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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: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9738-MB	A251644.D	1	07/15/19	ED	n/a	n/a	VA9738

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9738-MB	A251644.D	1	07/15/19	ED	n/a	n/a	VA9738

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-4

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	98%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9741-MB	A251699.D	1	07/16/19	ED	n/a	n/a	VA9741

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-2, JC91309-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	130	69	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
74-88-4	Iodomethane	ND	2.0	0.60	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	

Method Blank Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9741-MB	A251699.D	1	07/16/19	ED	n/a	n/a	VA9741

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-2, JC91309-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	96%	80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
1066-40-6	Silanol, trimethyl-	9.65	11	ug/l	JN
	Total TIC, Volatile		11	ug/l	J

Blank Spike Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9738-BS	A251642.D	1	07/15/19	ED	n/a	n/a	VA9738

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	188	94	42-150
71-43-2	Benzene	50	43.8	88	80-120
74-97-5	Bromochloromethane	50	49.1	98	84-121
75-27-4	Bromodichloromethane	50	48.5	97	83-120
75-25-2	Bromoform	50	53.7	107	76-129
74-83-9	Bromomethane	50	47.8	96	57-138
78-93-3	2-Butanone (MEK)	200	208	104	64-137
75-15-0	Carbon disulfide	50	41.1	82	64-137
56-23-5	Carbon tetrachloride	50	49.7	99	75-135
108-90-7	Chlorobenzene	50	47.4	95	84-117
75-00-3	Chloroethane	50	49.4	99	63-132
67-66-3	Chloroform	50	45.6	91	80-119
74-87-3	Chloromethane	50	52.6	105	46-136
110-82-7	Cyclohexane	50	46.5	93	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	51.8	104	72-127
124-48-1	Dibromochloromethane	50	49.6	99	80-123
106-93-4	1,2-Dibromoethane	50	51.9	104	84-117
95-50-1	1,2-Dichlorobenzene	50	49.1	98	84-119
541-73-1	1,3-Dichlorobenzene	50	48.8	98	81-117
106-46-7	1,4-Dichlorobenzene	50	47.6	95	82-117
75-71-8	Dichlorodifluoromethane	50	48.5	97	36-149
75-34-3	1,1-Dichloroethane	50	45.5	91	79-120
107-06-2	1,2-Dichloroethane	50	41.6	83	78-126
75-35-4	1,1-Dichloroethene	50	42.1	84	69-126
156-59-2	cis-1,2-Dichloroethene	50	47.8	96	80-120
156-60-5	trans-1,2-Dichloroethene	50	47.3	95	76-120
78-87-5	1,2-Dichloropropane	50	46.9	94	82-121
10061-01-5	cis-1,3-Dichloropropene	50	50.9	102	83-120
10061-02-6	trans-1,3-Dichloropropene	50	51.7	103	82-121
123-91-1	1,4-Dioxane	1250	1170	94	52-147
100-41-4	Ethylbenzene	50	45.8	92	80-120
76-13-1	Freon 113	50	45.2	90	62-182
591-78-6	2-Hexanone	200	187	94	65-132
74-88-4	Iodomethane	50	45.7	91	72-128
98-82-8	Isopropylbenzene	50	47.0	94	83-120
79-20-9	Methyl Acetate	50	46.5	93	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9738-BS	A251642.D	1	07/15/19	ED	n/a	n/a	VA9738

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	41.5	83	71-134
1634-04-4	Methyl Tert Butyl Ether	50	49.5	99	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	189	95	71-131
75-09-2	Methylene chloride	50	45.8	92	77-120
100-42-5	Styrene	50	45.5	91	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	54.5	109	76-119
127-18-4	Tetrachloroethene	50	43.9	88	70-131
108-88-3	Toluene	50	46.2	92	80-120
87-61-6	1,2,3-Trichlorobenzene	50	49.1	98	76-134
120-82-1	1,2,4-Trichlorobenzene	50	48.9	98	79-132
71-55-6	1,1,1-Trichloroethane	50	50.1	100	81-128
79-00-5	1,1,2-Trichloroethane	50	50.4	101	83-118
79-01-6	Trichloroethene	50	44.4	89	80-120
75-69-4	Trichlorofluoromethane	50	47.9	96	64-136
75-01-4	Vinyl chloride	50	58.1	116	51-135
1330-20-7	Xylene (total)	150	143	95	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	81-124%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	110%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9741-BS	A251697.D	1	07/16/19	ED	n/a	n/a	VA9741

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-2, JC91309-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	192	96	42-150
71-43-2	Benzene	50	43.9	88	80-120
74-97-5	Bromochloromethane	50	51.7	103	84-121
75-27-4	Bromodichloromethane	50	48.9	98	83-120
75-25-2	Bromoform	50	53.4	107	76-129
74-83-9	Bromomethane	50	46.9	94	57-138
78-93-3	2-Butanone (MEK)	200	200	100	64-137
75-15-0	Carbon disulfide	50	43.0	86	64-137
56-23-5	Carbon tetrachloride	50	49.1	98	75-135
108-90-7	Chlorobenzene	50	47.8	96	84-117
75-00-3	Chloroethane	50	49.3	99	63-132
67-66-3	Chloroform	50	46.7	93	80-119
74-87-3	Chloromethane	50	50.7	101	46-136
110-82-7	Cyclohexane	50	46.6	93	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	50.8	102	72-127
124-48-1	Dibromochloromethane	50	51.4	103	80-123
106-93-4	1,2-Dibromoethane	50	53.0	106	84-117
95-50-1	1,2-Dichlorobenzene	50	47.4	95	84-119
541-73-1	1,3-Dichlorobenzene	50	47.1	94	81-117
106-46-7	1,4-Dichlorobenzene	50	46.7	93	82-117
75-71-8	Dichlorodifluoromethane	50	45.3	91	36-149
75-34-3	1,1-Dichloroethane	50	47.6	95	79-120
107-06-2	1,2-Dichloroethane	50	42.3	85	78-126
75-35-4	1,1-Dichloroethene	50	45.8	92	69-126
156-59-2	cis-1,2-Dichloroethene	50	48.3	97	80-120
156-60-5	trans-1,2-Dichloroethene	50	48.0	96	76-120
78-87-5	1,2-Dichloropropane	50	47.7	95	82-121
10061-01-5	cis-1,3-Dichloropropene	50	50.2	100	83-120
10061-02-6	trans-1,3-Dichloropropene	50	54.1	108	82-121
123-91-1	1,4-Dioxane	1250	1240	99	52-147
100-41-4	Ethylbenzene	50	44.6	89	80-120
76-13-1	Freon 113	50	42.7	85	62-182
591-78-6	2-Hexanone	200	192	96	65-132
74-88-4	Iodomethane	50	49.6	99	72-128
98-82-8	Isopropylbenzene	50	46.4	93	83-120
79-20-9	Methyl Acetate	50	47.7	95	67-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9741-BS	A251697.D	1	07/16/19	ED	n/a	n/a	VA9741

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-2, JC91309-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	39.5	79	71-134
1634-04-4	Methyl Tert Butyl Ether	50	50.3	101	80-119
108-10-1	4-Methyl-2-pentanone(MIBK)	200	187	94	71-131
75-09-2	Methylene chloride	50	51.3	103	77-120
100-42-5	Styrene	50	45.4	91	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	53.9	108	76-119
127-18-4	Tetrachloroethene	50	42.8	86	70-131
108-88-3	Toluene	50	46.9	94	80-120
87-61-6	1,2,3-Trichlorobenzene	50	49.7	99	76-134
120-82-1	1,2,4-Trichlorobenzene	50	48.5	97	79-132
71-55-6	1,1,1-Trichloroethane	50	50.2	100	81-128
79-00-5	1,1,2-Trichloroethane	50	53.1	106	83-118
79-01-6	Trichloroethene	50	44.1	88	80-120
75-69-4	Trichlorofluoromethane	50	48.3	97	64-136
75-01-4	Vinyl chloride	50	55.5	111	51-135
1330-20-7	Xylene (total)	150	138	92	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	80-120%
17060-07-0	1,2-Dichloroethane-D4	97%	81-124%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	107%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC91309-1MS	A251649.D	10	07/15/19	ED	n/a	n/a	VA9738
JC91309-1MSD	A251650.D	10	07/15/19	ED	n/a	n/a	VA9738
JC91309-1	A251657.D	10	07/15/19	ED	n/a	n/a	VA9738

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-4

CAS No.	Compound	JC91309-1 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	100 U		2000	2090	105	2000	2170	109	4	34-149/17
71-43-2	Benzene	5.0 U		500	456	91	500	479	96	5	54-136/10
74-97-5	Bromochloromethane	10 U		500	532	106	500	545	109	2	79-124/11
75-27-4	Bromodichloromethane	10 U		500	491	98	500	522	104	6	79-124/11
75-25-2	Bromoform	10 U		500	523	105	500	541	108	3	71-130/11
74-83-9	Bromomethane	20 U		500	457	91	500	473	95	3	53-142/14
78-93-3	2-Butanone (MEK)	83.4		2000	2250	108	2000	2350	113	4	54-142/15
75-15-0	Carbon disulfide	20 U		500	482	96	500	509	102	5	59-145/17
56-23-5	Carbon tetrachloride	10 U		500	544	109	500	572	114	5	70-143/12
108-90-7	Chlorobenzene	10 U		500	479	96	500	495	99	3	78-123/10
75-00-3	Chloroethane	10 U		500	474	95	500	491	98	4	57-141/14
67-66-3	Chloroform	10 U		500	492	98	500	504	101	2	76-123/11
74-87-3	Chloromethane	10 U		500	489	98	500	509	102	4	43-141/16
110-82-7	Cyclohexane	50 U		500	491	98	500	507	101	3	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	20 U		500	514	103	500	552	110	7	66-130/13
124-48-1	Dibromochloromethane	10 U		500	508	102	500	523	105	3	76-125/11
106-93-4	1,2-Dibromoethane	10 U		500	544	109	500	558	112	3	78-119/11
95-50-1	1,2-Dichlorobenzene	10 U		500	477	95	500	505	101	6	77-123/11
541-73-1	1,3-Dichlorobenzene	10 U		500	479	96	500	503	101	5	76-122/11
106-46-7	1,4-Dichlorobenzene	10 U		500	464	93	500	490	98	5	76-122/11
75-71-8	Dichlorodifluoromethane	20 U		500	464	93	500	475	95	2	31-159/16
75-34-3	1,1-Dichloroethane	10 U		500	492	98	500	509	102	3	73-126/11
107-06-2	1,2-Dichloroethane	10 U		500	435	87	500	452	90	4	72-131/11
75-35-4	1,1-Dichloroethene	10 U		500	517	103	500	540	108	4	63-136/14
156-59-2	cis-1,2-Dichloroethene	921		500	1280	72	500	1330	82	4	60-136/11
156-60-5	trans-1,2-Dichloroethene	10 U		500	530	106	500	547	109	3	70-126/11
78-87-5	1,2-Dichloropropane	10 U		500	474	95	500	492	98	4	78-124/10
10061-01-5	cis-1,3-Dichloropropene	10 U		500	520	104	500	549	110	5	79-123/11
10061-02-6	trans-1,3-Dichloropropene	10 U		500	522	104	500	556	111	6	77-123/11
123-91-1	1,4-Dioxane	1300 U		12500	12800	102	12500	13200	106	3	49-146/26
100-41-4	Ethylbenzene	10 U		500	453	91	500	473	95	4	51-140/20
76-13-1	Freon 113	50 U		500	549	110	500	567	113	3	60-192/14
591-78-6	2-Hexanone	24.5	J	2000	1920	95	2000	2000	99	4	56-139/14
74-88-4	Iodomethane	20 U		500	535	107	500	566	113	6	67-132/14
98-82-8	Isopropylbenzene	10 U		500	470	94	500	493	99	5	75-129/11
79-20-9	Methyl Acetate	50 U		500	494	99	500	505	101	2	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC91309-1MS	A251649.D	10	07/15/19	ED	n/a	n/a	VA9738
JC91309-1MSD	A251650.D	10	07/15/19	ED	n/a	n/a	VA9738
JC91309-1	A251657.D	10	07/15/19	ED	n/a	n/a	VA9738

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-4

CAS No.	Compound	JC91309-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	50 U		500	463	93	500	490	98	6	57-155/13
1634-04-4	Methyl Tert Butyl Ether	10 U		500	530	106	500	545	109	3	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	50 U		2000	1890	95	2000	1970	99	4	66-136/13
75-09-2	Methylene chloride	20 U		500	519	104	500	534	107	3	73-125/13
100-42-5	Styrene	10 U		500	449	90	500	472	94	5	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	10 U		500	548	110	500	561	112	2	71-122/11
127-18-4	Tetrachloroethene	10 U		500	448	90	500	480	96	7	61-139/11
108-88-3	Toluene	6.0	J	500	473	93	500	490	97	4	60-135/10
87-61-6	1,2,3-Trichlorobenzene	10 U		500	493	99	500	524	105	6	70-138/13
120-82-1	1,2,4-Trichlorobenzene	10 U		500	486	97	500	512	102	5	72-137/13
71-55-6	1,1,1-Trichloroethane	10 U		500	550	110	500	566	113	3	74-138/12
79-00-5	1,1,2-Trichloroethane	10 U		500	517	103	500	524	105	1	78-121/11
79-01-6	Trichloroethene	13.5		500	470	91	500	496	97	5	62-141/10
75-69-4	Trichlorofluoromethane	20 U		500	508	102	500	531	106	4	57-149/14
75-01-4	Vinyl chloride	239		500	750	102	500	790	110	5	43-146/15
1330-20-7	Xylene (total)	10 U		1500	1390	93	1500	1460	97	5	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC91309-1	Limits
1868-53-7	Dibromofluoromethane	109%	109%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	99%	103%	81-124%
2037-26-5	Toluene-D8	97%	99%	98%	80-120%
460-00-4	4-Bromofluorobenzene	108%	112%	104%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC91586-6MS	A251703.D	5	07/16/19	ED	n/a	n/a	VA9741
JC91586-6MSD	A251704.D	5	07/16/19	ED	n/a	n/a	VA9741
JC91586-6 [a]	A251706.D	5	07/16/19	ED	n/a	n/a	VA9741
JC91586-6	A251707.D	50	07/16/19	ED	n/a	n/a	VA9741

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-2, JC91309-3

CAS No.	Compound	JC91586-6 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	ND		1000	952	95	1000	957	96	1	34-149/17
71-43-2	Benzene	ND		250	196	78	250	200	80	2	54-136/10
74-97-5	Bromochloromethane	ND		250	234	94	250	235	94	0	79-124/11
75-27-4	Bromodichloromethane	ND		250	224	90	250	226	90	1	79-124/11
75-25-2	Bromoform	ND		250	247	99	250	257	103	4	71-130/11
74-83-9	Bromomethane	ND		250	204	82	250	207	83	1	53-142/14
78-93-3	2-Butanone (MEK)	ND		1000	1080	108	1000	1060	106	2	54-142/15
75-15-0	Carbon disulfide	ND		250	201	80	250	204	82	1	59-145/17
56-23-5	Carbon tetrachloride	ND		250	213	85	250	214	86	0	70-143/12
108-90-7	Chlorobenzene	ND		250	214	86	250	214	86	0	78-123/10
75-00-3	Chloroethane	ND		250	218	87	250	214	86	2	57-141/14
67-66-3	Chloroform	ND		250	209	84	250	209	84	0	76-123/11
74-87-3	Chloromethane	ND		250	220	88	250	221	88	0	43-141/16
110-82-7	Cyclohexane	ND		250	198	79	250	195	78	2	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	244	98	250	244	98	0	66-130/13
124-48-1	Dibromochloromethane	ND		250	237	95	250	242	97	2	76-125/11
106-93-4	1,2-Dibromoethane	ND		250	261	104	250	265	106	2	78-119/11
95-50-1	1,2-Dichlorobenzene	ND		250	217	87	250	219	88	1	77-123/11
541-73-1	1,3-Dichlorobenzene	ND		250	217	87	250	216	86	0	76-122/11
106-46-7	1,4-Dichlorobenzene	ND		250	214	86	250	216	86	1	76-122/11
75-71-8	Dichlorodifluoromethane	ND		250	206	82	250	208	83	1	31-159/16
75-34-3	1,1-Dichloroethane	ND		250	212	85	250	209	84	1	73-126/11
107-06-2	1,2-Dichloroethane	ND		250	201	80	250	206	82	2	72-131/11
75-35-4	1,1-Dichloroethene	5.7		250	221	86	250	224	87	1	63-136/14
156-59-2	cis-1,2-Dichloroethene	1670 [c]		250	1630	-36* [b]	250	1630	-36* [b]	0	60-136/11
156-60-5	trans-1,2-Dichloroethene	20.8		250	218	79	250	220	80	1	70-126/11
78-87-5	1,2-Dichloropropane	ND		250	216	86	250	212	85	2	78-124/10
10061-01-5	cis-1,3-Dichloropropene	ND		250	232	93	250	237	95	2	79-123/11
10061-02-6	trans-1,3-Dichloropropene	ND		250	246	98	250	255	102	4	77-123/11
123-91-1	1,4-Dioxane	ND		6250	5640	90	6250	6010	96	6	49-146/26
100-41-4	Ethylbenzene	ND		250	193	77	250	192	77	1	51-140/20
76-13-1	Freon 113	ND		250	199	80	250	199	80	0	60-192/14
591-78-6	2-Hexanone	ND		1000	921	92	1000	935	94	2	56-139/14
74-88-4	Iodomethane	ND		250	236	94	250	240	96	2	67-132/14
98-82-8	Isopropylbenzene	ND		250	197	79	250	195	78	1	75-129/11
79-20-9	Methyl Acetate	ND		250	231	92	250	232	93	0	55-131/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC91586-6MS	A251703.D	5	07/16/19	ED	n/a	n/a	VA9741
JC91586-6MSD	A251704.D	5	07/16/19	ED	n/a	n/a	VA9741
JC91586-6 [a]	A251706.D	5	07/16/19	ED	n/a	n/a	VA9741
JC91586-6	A251707.D	50	07/16/19	ED	n/a	n/a	VA9741

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC91309-1, JC91309-2, JC91309-3

CAS No.	Compound	JC91586-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	ND		250	182	73	250	184	74	1	57-155/13
1634-04-4	Methyl Tert Butyl Ether	ND		250	239	96	250	243	97	2	72-123/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	888	89	1000	898	90	1	66-136/13
75-09-2	Methylene chloride	ND		250	246	98	250	253	101	3	73-125/13
100-42-5	Styrene	ND		250	195	78	250	198	79	2	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	254	102	250	256	102	1	71-122/11
127-18-4	Tetrachloroethene	1610 [c]		250	1450	-112* [b]	250	1430	-120* [b]	1	61-139/11
108-88-3	Toluene	ND		250	204	82	250	202	81	1	60-135/10
87-61-6	1,2,3-Trichlorobenzene	ND		250	233	93	250	236	94	1	70-138/13
120-82-1	1,2,4-Trichlorobenzene	ND		250	223	89	250	222	89	0	72-137/13
71-55-6	1,1,1-Trichloroethane	ND		250	214	86	250	220	88	3	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		250	246	98	250	246	98	0	78-121/11
79-01-6	Trichloroethene	505		250	576	28* [b]	250	566	24* [b]	2	62-141/10
75-69-4	Trichlorofluoromethane	ND		250	215	86	250	219	88	2	57-149/14
75-01-4	Vinyl chloride	100		250	310	84	250	318	87	3	43-146/15
1330-20-7	Xylene (total)	ND		750	598	80	750	588	78	2	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC91586-6	JC91586-6	Limits
1868-53-7	Dibromofluoromethane	107%	104%	105%	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	97%	99%	101%	81-124%
2037-26-5	Toluene-D8	100%	98%	100%	101%	80-120%
460-00-4	4-Bromofluorobenzene	109%	108%	101%	99%	80-120%

(a) Diluted due to high concentration of target compound.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9645-BFB
Lab File ID: A249730.D
Instrument ID: GCMSA
Injection Date: 05/11/19
Injection Time: 14:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	8968	17.1		Pass
75	30.0 - 60.0% of mass 95	24730	47.2		Pass
95	Base peak, 100% relative abundance	52402	100.0		Pass
96	5.0 - 9.0% of mass 95	3491	6.66		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	49818	95.1		Pass
175	5.0 - 9.0% of mass 174	4035	7.70	(8.10) [a]	Pass
176	95.0 - 101.0% of mass 174	48597	92.7	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3296	6.29	(6.78) [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
VA9645-IC9645	A249731.D	05/11/19	15:31	00:39	Initial cal 0.2
VA9645-IC9645	A249732.D	05/11/19	16:00	01:08	Initial cal 0.5
VA9645-IC9645	A249733.D	05/11/19	16:29	01:37	Initial cal 1
VA9645-IC9645	A249734.D	05/11/19	16:57	02:05	Initial cal 2
VA9645-IC9645	A249735.D	05/11/19	17:26	02:34	Initial cal 4
VA9645-IC9645	A249736.D	05/11/19	17:55	03:03	Initial cal 8
VA9645-IC9645	A249737.D	05/11/19	18:24	03:32	Initial cal 20
VA9645-ICC9645	A249738.D	05/11/19	18:53	04:01	Initial cal 50
VA9645-IC9645	A249739.D	05/11/19	19:21	04:29	Initial cal 100
VA9645-IC9645	A249740.D	05/11/19	19:50	04:58	Initial cal 200
VA9645-ICV9645	A249743.D	05/11/19	21:17	06:25	Initial cal verification 50
VA9645-ICV9645	A249744.D	05/11/19	21:46	06:54	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9738-BFB
Lab File ID: A251641.D
Instrument ID: GCMSA
Injection Date: 07/15/19
Injection Time: 06:50

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	11575	17.2		Pass
75	30.0 - 60.0% of mass 95	31640	47.1		Pass
95	Base peak, 100% relative abundance	67200	100.0		Pass
96	5.0 - 9.0% of mass 95	4507	6.71		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	64568	96.1		Pass
175	5.0 - 9.0% of mass 174	5392	8.02	(8.35) [a]	Pass
176	95.0 - 101.0% of mass 174	61952	92.2	(95.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4286	6.38	(6.92) [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
VA9738-CC9645	A251641.D	07/15/19	06:50	00:00	Continuing cal 20
VA9738-BS	A251642.D	07/15/19	07:28	00:38	Blank Spike
VA9738-MB	A251644.D	07/15/19	08:25	01:35	Method Blank
ZZZZZZ	A251645.D	07/15/19	08:54	02:04	(unrelated sample)
ZZZZZZ	A251646.D	07/15/19	09:23	02:33	(unrelated sample)
ZZZZZZ	A251647.D	07/15/19	09:52	03:02	(unrelated sample)
ZZZZZZ	A251648.D	07/15/19	10:21	03:31	(unrelated sample)
JC91309-1MS	A251649.D	07/15/19	10:50	04:00	Matrix Spike
JC91309-1MSD	A251650.D	07/15/19	11:18	04:28	Matrix Spike Duplicate
ZZZZZZ	A251652.D	07/15/19	12:16	05:26	(unrelated sample)
ZZZZZZ	A251653.D	07/15/19	12:45	05:55	(unrelated sample)
JC91309-4	A251654.D	07/15/19	13:14	06:24	TRIP BLANK-07-08
ZZZZZZ	A251655.D	07/15/19	13:43	06:53	(unrelated sample)
ZZZZZZ	A251656.D	07/15/19	14:12	07:22	(unrelated sample)
JC91309-1	A251657.D	07/15/19	14:41	07:51	MW10-10D-2019-07-08
ZZZZZZ	A251660.D	07/15/19	16:08	09:18	(unrelated sample)
ZZZZZZ	A251661.D	07/15/19	16:38	09:48	(unrelated sample)
ZZZZZZ	A251662.D	07/15/19	17:06	10:16	(unrelated sample)
ZZZZZZ	A251663.D	07/15/19	17:35	10:45	(unrelated sample)
VA9738-ECC9645	A251664.D	07/15/19	18:04	11:14	Ending cal 50

Instrument Performance Check (BFB)

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Sample: VA9741-BFB
Lab File ID: A251695.D
Instrument ID: GCMSA
Injection Date: 07/16/19
Injection Time: 10:37

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	10121	17.5		Pass
75	30.0 - 60.0% of mass 95	27040	46.6		Pass
95	Base peak, 100% relative abundance	57965	100.0		Pass
96	5.0 - 9.0% of mass 95	4012	6.92		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	54456	93.9		Pass
175	5.0 - 9.0% of mass 174	4461	7.70	(8.19) [a]	Pass
176	95.0 - 101.0% of mass 174	53088	91.6	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3895	6.72	(7.34) [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
VA9741-CC9645	A251696.D	07/16/19	11:07	00:30	Continuing cal 20
VA9741-BS	A251697.D	07/16/19	11:56	01:19	Blank Spike
VA9741-MB	A251699.D	07/16/19	13:02	02:25	Method Blank
JC91309-2	A251700.D	07/16/19	13:40	03:03	MW10-1DA-2019-07-08
JC91309-3	A251701.D	07/16/19	14:09	03:32	MW10-FD-2019-07-08
JC91309-1	A251702.D	07/16/19	14:38	04:01	MW10-10D-2019-07-08
JC91586-6MS	A251703.D	07/16/19	15:08	04:31	Matrix Spike
JC91586-6MSD	A251704.D	07/16/19	15:37	05:00	Matrix Spike Duplicate
JC91586-6	A251706.D	07/16/19	16:36	05:59	(used for QC only; not part of job JC91309)
JC91586-6	A251707.D	07/16/19	17:06	06:29	(used for QC only; not part of job JC91309)
VA9741-ECC9645	A251708.D	07/16/19	17:35	06:58	Ending cal 50

Internal Standard Area Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VA9738-CC9645	**Injection Date:**	07/15/19
Lab File ID:	A251641.D	**Injection Time:**	06:50
Instrument ID:	GCMSA	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	347742	8.15	226849	10.54	347047	11.50	282500	14.89	152183	17.51
Upper Limit [a]	695484	8.65	453698	11.04	694094	12.00	565000	15.39	304366	18.01
Lower Limit [b]	173871	7.65	113425	10.04	173524	11.00	141250	14.39	76092	17.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA9738-BS	339774	8.16	224880	10.54	353821	11.50	299753	14.89	152734	17.51
VA9738-MB	312199	8.20	215168	10.54	321166	11.50	256903	14.89	156789	17.51
ZZZZZZ	314945	8.16	214958	10.54	313499	11.50	243599	14.89	145954	17.51
ZZZZZZ	302424	8.15	199160	10.54	300825	11.50	242371	14.89	147633	17.51
ZZZZZZ	309705	8.16	191485	10.54	295843	11.50	235302	14.89	143543	17.51
ZZZZZZ	307146	8.15	195253	10.54	296743	11.50	231381	14.89	134604	17.51
JC91309-1MS	308333	8.16	194600	10.53	314150	11.50	267994	14.89	136268	17.51
JC91309-1MSD	294235	8.16	190292	10.54	300533	11.50	255691	14.89	127487	17.51
ZZZZZZ	290160	8.15	192664	10.54	296571	11.50	231839	14.89	141692	17.51
ZZZZZZ	282254	8.17	193840	10.54	290543	11.50	229914	14.89	139851	17.51
JC91309-4	296151	8.16	194161	10.53	295734	11.50	234050	14.89	144713	17.51
ZZZZZZ	297902	8.17	190030	10.54	292754	11.50	236815	14.89	145228	17.51
ZZZZZZ	294203	8.16	198479	10.54	300263	11.50	235046	14.89	142708	17.51
JC91309-1	297865	8.16	185179	10.54	287821	11.50	234936	14.89	129784	17.51
ZZZZZZ	282995	8.16	189397	10.54	286253	11.50	231234	14.89	137705	17.51
ZZZZZZ	292024	8.17	195751	10.54	292437	11.50	229612	14.89	137631	17.51
ZZZZZZ	288458	8.16	194737	10.54	297452	11.50	230123	14.89	137502	17.51
ZZZZZZ	278763	8.15	189894	10.53	286027	11.50	228980	14.89	137141	17.51
VA9738-ECC9645	285714	8.15	192394	10.54	302637	11.50	260451	14.89	134801	17.51

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Check Std:	VA9741-CC9645	**Injection Date:**	07/16/19
Lab File ID:	A251696.D	**Injection Time:**	11:07
Instrument ID:	GCMSA	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	297202	8.16	198664	10.54	300414	11.50	242759	14.89	130694	17.51
Upper Limit [a]	594404	8.66	397328	11.04	600828	12.00	485518	15.39	261388	18.01
Lower Limit [b]	148601	7.66	99332	10.04	150207	11.00	121380	14.39	65347	17.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA9741-BS	315392	8.16	210675	10.54	328507	11.50	266915	14.89	137488	17.51
VA9741-MB	290924	8.15	197982	10.54	300434	11.50	233863	14.89	142019	17.51
JC91309-2	287589	8.16	196002	10.53	294394	11.50	233316	14.89	137873	17.51
JC91309-3	276133	8.15	197336	10.54	299415	11.50	230816	14.89	137400	17.51
JC91309-1 [c]	278337	8.17	202733	10.54	309375	11.50	258184	14.89	129441	17.51
JC91586-6MS	287272	8.16	199543	10.53	309385	11.50	255480	14.89	129924	17.51
JC91586-6MSD	286507	8.16	199277	10.54	305815	11.50	256419	14.89	130030	17.51
JC91586-6	330200	8.16	215843	10.54	327486	11.50	251653	14.89	142080	17.51
JC91586-6	291576	8.16	207575	10.54	314964	11.50	241349	14.89	140338	17.51
VA9741-ECC9645	280122	8.17	213570	10.53	328989	11.50	279857	14.89	137491	17.51

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Diluted due to high concentration of target compound.

Surrogate Recovery Summary

Job Number: JC91309
Account: EAENYES EA Engineering
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

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
JC91309-1	A251702.D	106	102	98	107
JC91309-1	A251657.D	108	103	98	104
JC91309-2	A251700.D	106	103	98	101
JC91309-3	A251701.D	107	102	100	98
JC91309-4	A251654.D	109	105	100	98
JC91309-1MS	A251649.D	109	98	97	108
JC91309-1MSD	A251650.D	109	99	99	112
JC91586-6MS	A251703.D	107	99	100	109
JC91586-6MSD	A251704.D	104	97	98	108
VA9738-BS	A251642.D	104	96	97	110
VA9738-MB	A251644.D	105	101	98	98
VA9741-BS	A251697.D	107	97	101	107
VA9741-MB	A251699.D	106	103	99	96

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Initial Calibration Summary

Job Number: JC91309 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Response Factor Report MSA

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Calibration Files
4 =A249735.D 2 =A249734.D 20 =A249737.D 50 =A249738.D
100 =A249739.D 1 =A249733.D 200 =A249740.D 0.5 =A249732.D
8 =A249736.D 0.2 =A249731.D = =

Compound	4	2	20	50	100	1	200	0.5	8	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) ethanol											0.000#	-1.00
3) tertiary butyl alcohol	1.103	1.004	1.044	1.018	1.061		1.007		0.991		1.033	3.79
4) 1,4-dioxane	0.067	0.055	0.070	0.071	0.075		0.065		0.065		0.067	9.81
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	1.040	1.020	0.962	0.964	0.981	0.916	0.925		0.960		0.971	4.36
7) dichlorodifluoromethane	1.175	1.254	1.210	1.229	1.318	1.076	1.187	0.966	1.216		1.181	8.75
8) chloromethane	1.118	1.249	1.139	1.504	1.569	1.138	1.436	1.213	1.179		1.283	13.49
9) vinyl chloride	1.015	1.106	1.089	1.124	1.201	1.079	1.097	0.981	1.090		1.087	5.75
10) 1,3-butadiene	1.193	1.165	1.013	0.966	0.952	1.074	0.880		1.044		1.036	10.30
11) bromomethane	0.742	0.782	0.738	0.756	0.805	0.780	0.731	0.782	0.754		0.763	3.28
12) chloroethane	0.563	0.552	0.545	0.570	0.613	0.474	0.559	0.513	0.585		0.552	7.31
13) vinyl bromide	0.709	0.770	0.740	0.751	0.821	0.694	0.754	0.550	0.766		0.728	10.48
14) trichlorofluoromethane	1.092	1.144	1.109	1.133	1.213	1.054	1.110		1.143		1.125	4.13
15) ethyl ether	0.273	0.237	0.265	0.265	0.263	0.203	0.255		0.251		0.252	8.95
16) acrolein			0.109	0.118	0.125		0.122		0.099		0.114	9.25
17) freon 113	0.573	0.546	0.546	0.550	0.572	0.502	0.544		0.538		0.547	4.06
18) 1,1-dichloroethene	0.591	0.554	0.529	0.529	0.566	0.467	0.564		0.525		0.541	6.92
19) acetone *This compound fails for EPA 624.1*	0.072	0.069	0.073	0.076	0.077		0.072		0.069		0.073	4.40
20) acetonitrile	0.121	0.120	0.117	0.117	0.119	0.107	0.107		0.113		0.115	4.72
21) iodomethane	1.015	0.949	0.949	0.962	1.023	0.949	1.010	0.815	0.971		0.960	6.47
22) carbon disulfide	1.951	1.859	1.681	1.686	1.767	1.825	1.737	1.994	1.687		1.799	6.51
23) methylene chloride												

0.630 0.578 0.555 0.563 0.590 0.538 0.587 0.453 0.573 0.563 8.62

24) methyl acetate
0.583 0.466 0.500 0.529 0.516 0.492 0.479 0.509 7.60

25) methyl tert butyl ether
1.715 1.647 1.601 1.605 1.684 1.511 1.635 1.388 1.555 1.593 6.20

26) trans-1,2-dichloroethene
0.518 0.467 0.485 0.483 0.490 0.430 0.479 0.414 0.460 0.470 6.73

27) hexane
0.713 0.736 0.668 0.679 0.696 0.694 0.665 0.596 0.664 0.679 5.79

28) di-isopropyl ether
1.778 1.714 1.645 1.644 1.694 1.625 1.623 1.577 1.610 1.410 1.632 5.96

29) ethyl tert-butyl ether
1.684 1.610 1.595 1.594 1.669 1.568 1.602 1.390 1.541 1.359 1.561 6.88

30) 2-butanone
0.088 0.078 0.087 0.090 0.095 0.061 0.095 0.077 0.084 13.63

31) 1,1-dichloroethane
0.935 0.870 0.853 0.835 0.847 0.890 0.813 0.734 0.819 0.844 6.63

32) chloroprene
0.735 0.704 0.695 0.699 0.710 0.606 0.675 0.649 0.684 0.684 5.49

33) acrylonitrile
0.290 0.256 0.260 0.266 0.258 0.227 0.259 7.84

34) vinyl acetate
0.110 0.106 0.107 0.113 0.113 0.099 0.108 4.76

35) ethyl acetate
0.087 0.089 0.102 0.107 0.099 0.080 0.094 11.15

36) 2,2-dichloropropane
0.911 0.877 0.820 0.817 0.833 0.862 0.796 0.671 0.818 0.823 8.16

37) cis-1,2-dichloroethene
0.602 0.548 0.557 0.549 0.561 0.508 0.545 0.460 0.541 0.541 7.20

38) methyl acrylate
0.079 0.090 0.099 0.104 0.105 0.085 0.094 11.30

39) propionitrile
0.124 0.109 0.116 0.119 0.122 0.098 0.118 0.083 0.110 0.111 11.91

40) bromochloromethane
0.311 0.279 0.289 0.285 0.297 0.257 0.285 0.203 0.279 0.276 11.21

41) tetrahydrofuran
0.259 0.258 0.236 0.238 0.242 0.240 0.233 0.218 0.241 5.57

42) chloroform
0.946 0.917 0.838 0.823 0.842 0.824 0.806 0.943 0.846 0.988 0.877 7.35

43) tert-butyl formate
0.481 0.466 0.457 0.463 0.481 0.338 0.460 0.420 0.446 10.66

44) dibromofluoromethane (s)
0.496 0.496 0.497 0.493 0.495 0.495 0.488 0.497 0.494 0.477 0.493 1.29

45) methacrylonitrile
0.245 0.201 0.241 0.248 0.261 0.258 0.225 0.240 8.68

46) cyclohexane
0.912 0.949 0.886 0.928 1.018 0.823 0.955 0.821 0.916 0.912 6.90

47) 1,1,1-trichloroethane
0.937 0.901 0.873 0.880 0.912 0.847 0.883 0.815 0.842 0.707 0.860 7.48

48) iso-butyl alcohol
0.089 0.080 0.084 0.086 0.091 0.070 0.085 0.079 0.083 8.09

49) 1,1-dichloropropene
0.733 0.651 0.632 0.643 0.676 0.595 0.650 0.571 0.630 0.642 7.18

50) carbon tetrachloride
0.842 0.836 0.772 0.773 0.806 0.708 0.779 0.653 0.748 0.768 7.84

51) tert-amyl alcohol
0.080 0.079 0.079 0.080 0.073 0.071 0.077 5.05

52) I 1,4-difluorobenzene ----------ISTD----------

53) 1,2-dichloroethane-d4 (s)

0.368 0.367 0.358 0.350 0.345 0.369 0.335 0.364 0.369 0.366 0.359 3.29

54) benzene
1.388 1.355 1.283 1.244 1.286 1.323 1.213 1.283 1.248 1.140 1.276 5.56

55) iso-octane
1.278 1.146 1.234 1.261 1.345 1.060 1.254 1.043 1.161 1.198 8.54

56) tert-amyl methyl ether
1.206 1.113 1.126 1.082 1.106 1.095 1.040 1.039 1.094 0.969 1.087 5.76

57) heptane
0.274 0.236 0.246 0.239 0.251 0.234 0.231 0.184 0.241 0.237 10.05

58) isopropyl acetate
0.096 0.088 0.098 0.095 0.100 0.093 0.085 0.094 5.76

59) 1,2-dichloroethane
0.480 0.457 0.439 0.422 0.429 0.494 0.403 0.566 0.433 0.458 10.82

60) n-butyl alcohol
0.023 0.021 0.023 0.024 0.024 0.018 0.021 0.021 0.022 8.52

61) ethyl acrylate
0.414 0.351 0.427 0.435 0.457 0.438 0.391 0.416 8.48

62) trichloroethene
0.351 0.350 0.315 0.309 0.331 0.331 0.316 0.309 0.314 0.325 5.03

63) 2-nitropropane
0.148 0.142 0.137 0.147 0.148 0.108 0.142 0.130 0.138 9.79

64) methylcyclohexane
0.717 0.734 0.687 0.670 0.694 0.644 0.657 0.639 0.655 0.611 0.671 5.59

65) 2-chloroethyl vinyl ether
0.169 0.156 0.174 0.185 0.200 0.142 0.196 0.159 0.173 11.72

66) methyl methacrylate
0.088 0.078 0.093 0.100 0.104 0.101 0.080 0.092 11.23

67) 1,2-dichloropropane
0.335 0.309 0.316 0.308 0.325 0.289 0.315 0.269 0.305 0.308 6.26

68) dibromomethane
0.227 0.218 0.207 0.206 0.218 0.167 0.210 0.206 0.207 8.56

69) bromodichloromethane
0.460 0.435 0.428 0.422 0.442 0.390 0.433 0.407 0.413 0.426 4.84

70) epichlorohydrin
0.048 0.046 0.048 0.050 0.051 0.034 0.049 0.044 0.046 11.90

71) cis-1,3-dichloropropene
0.480 0.473 0.471 0.481 0.513 0.428 0.499 0.374 0.449 0.379 0.455 10.40

72) 4-methyl-2-pentanone
0.220 0.195 0.200 0.197 0.202 0.170 0.191 0.155 0.183 0.190 10.00

73) 3-methyl-1-butanol
0.038 0.036 0.038 0.038 0.038 0.029 0.035 0.034 0.036 9.21

74) I chlorobenzene-d5 ----------ISTD----------

75) toluene-d8 (s)
1.363 1.362 1.351 1.308 1.251 1.367 1.220 1.371 1.369 1.334 1.330 4.03

76) toluene
0.978 0.958 0.880 0.865 0.863 0.860 0.817 0.963 0.850 0.802 0.884 7.00

77) trans-1,3-dichloropropene
0.498 0.424 0.475 0.478 0.491 0.426 0.463 0.423 0.463 0.404 0.455 7.17

78) ethyl methacrylate
0.504 0.475 0.477 0.471 0.476 0.444 0.450 0.385 0.455 0.460 7.22

79) 1,1,2-trichloroethane
0.279 0.271 0.262 0.258 0.262 0.226 0.246 0.219 0.250 0.252 7.87

80) 2-hexanone
0.212 0.195 0.192 0.186 0.186 0.172 0.177 0.174 0.185 0.187 6.45

81) tetrachloroethene
0.487 0.457 0.431 0.417 0.418 0.431 0.392 0.445 0.415 0.433 6.39

82) 1,3-dichloropropane
0.529 0.481 0.500 0.498 0.506 0.505 0.484 0.455 0.486 0.414 0.486 6.58

83) butyl acetate

Initial Calibration Summary

Job Number: JC91309 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
      0.309 0.283 0.281 0.272 0.271       0.258       0.270       0.278    5.84
 84)  dibromochloromethane
      0.406 0.370 0.380 0.378 0.390 0.351 0.374 0.396 0.358       0.378    4.62
 85)  1,2-dibromoethane
      0.377 0.362 0.355 0.354 0.371 0.324 0.358 0.257 0.354       0.346   10.50
 86)  n-butyl ether
      1.623 1.521 1.462 1.407 1.417 1.458 1.321 1.460 1.390       1.451    5.90
 87)  chlorobenzene
      1.031 0.924 0.918 0.924 0.958 0.898 0.929 0.901 0.894 0.812  0.919    5.95
 88)  1,1,1,2-tetrachloroethane
      0.521 0.498 0.461 0.441 0.444 0.470 0.422 0.434 0.458 0.454  0.460    6.49
 89)  ethylbenzene
      1.777 1.710 1.616 1.598 1.619 1.613 1.533 1.713 1.558 1.677  1.642    4.63
 90)  m,p-xylene
      0.688 0.640 0.647 0.628 0.650 0.622 0.622 0.621 0.625       0.638    3.39
 91)  o-xylene
      0.778 0.738 0.723 0.694 0.713 0.680 0.685 0.692 0.671 0.686  0.706    4.62
 92)  styrene
      1.141 0.993 0.992 0.977 1.007 0.980 1.004 1.030 0.962 1.066  1.015    5.23
 93)  butyl acrylate
      0.826 0.806 0.767 0.695 0.681 0.718 0.637 0.629 0.755       0.724    9.67
 94)  n-amyl acetate
      0.381 0.362 0.340 0.304 0.291 0.319 0.276       0.331       0.325   10.87
 95)  bromoform
      0.306 0.281 0.272 0.264 0.266 0.238 0.259 0.221 0.261       0.263    9.20
 96)  isopropylbenzene
      2.136 2.026 1.993 1.896 1.899 1.864 1.760 1.885 1.885 1.755  1.910    6.09
 97)  cis-1,4-dichloro-2-butene   *This compounds fails Initial Calibration criteria*
      0.028       0.045 0.064 0.076       0.098       0.029       0.057   48.84

 98) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 99)  4-bromofluorobenzene (s)
      0.738 0.741 0.767 0.800 0.856 0.753 0.870 0.745 0.756 0.763  0.779    6.14
100)  bromobenzene
      0.773 0.671 0.720 0.750 0.834 0.677 0.826 0.669 0.697       0.735    8.78
101)  1,1,2,2-tetrachloroethane
      0.986 0.935 0.960 0.985 1.068 0.905 1.021 0.852 0.885 0.953  0.955    6.74
102)  trans-1,4-dichloro-2-butene  *This compounds fails Initial Calibration criteria*
      0.026       0.062 0.091 0.111       0.114       0.040       0.074   50.09
103)  1,2,3-trichloropropane
      0.278 0.250 0.281 0.279 0.303 0.249 0.290 0.263 0.268       0.273    6.59
104)  n-propylbenzene
      3.684 3.424 3.570 3.629 3.973 3.371 3.755 3.136 3.323 4.010  3.588    7.85
105)  2-chlorotoluene
      0.809 0.733 0.794 0.817 0.920 0.695 0.904       0.721       0.799   10.28
106)  4-chlorotoluene
      1.926 1.831 1.834 1.856 2.042 1.772 1.990 1.767 1.752 1.904  1.867    5.20
107)  1,3,5-trimethylbenzene
      2.807 2.589 2.837 2.982 3.303 2.508 3.120 2.453 2.564 2.501  2.766   10.60
108)  tert-butylbenzene
      0.600 0.516 0.641 0.668 0.755       0.736       0.570       0.641   13.55
109)  1,2,4-trimethylbenzene
      2.852 2.627 2.754 2.816 3.136 2.330 2.981 2.503 2.537 2.837  2.737    8.79
110)  sec-butylbenzene
      3.643 3.469 3.828 4.010 4.434 3.256 4.106       3.467       3.777   10.38
111)  1,3-dichlorobenzene
      1.596 1.424 1.417 1.415 1.503 1.435 1.439 1.370 1.340 1.636  1.458    6.47
112)  p-isopropyltoluene
      3.261 2.976 3.241 3.322 3.742 2.732 3.500 2.809 2.927 2.961  3.147   10.22
113)  1,4-dichlorobenzene
```

Initial Calibration Summary

Job Number: JC91309 **Sample:** VA9645-ICC9645
Account: EAENYES EA Engineering **Lab FileID:** A249738.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

```
       1.584 1.472 1.420 1.410 1.492 1.547 1.423 1.556 1.374        1.475    5.02
114)  1,2-dichlorobenzene
       1.684 1.565 1.523 1.528 1.642 1.521 1.581 1.415 1.457 1.880  1.579    8.36
115)  n-butylbenzene
       1.647 1.584 1.556 1.530 1.658 1.428 1.596 1.449 1.442 1.499  1.539    5.43
116)  1,2-dibromo-3-chloropropane
       0.324 0.324 0.338 0.346 0.361 0.298 0.338       0.339        0.334    5.63
117)  1,3,5-trichlorobenzene
       1.596 1.447 1.425 1.424 1.530 1.482 1.461 1.435 1.386 1.705  1.489    6.51
118)  2-ethylhexyl acrylate
                0.574 0.739 0.907       0.894       0.541        0.731   23.54
             ----- Linear regression -----  Coefficient =  0.9952
               Response Ratio = -0.01690 + 0.90861 *A

119)  1,2,4-trichlorobenzene
       1.409 1.300 1.342 1.342 1.428 1.302 1.343 1.258 1.286 1.387  1.340    4.12
120)  hexachlorobutadiene
       0.547 0.478 0.510 0.525 0.603 0.516 0.581       0.502        0.533    7.86
121)  naphthalene
       4.003 3.646 3.935 3.962 4.189 3.586 3.852 3.449 3.779 4.766  3.917    9.44
122)  1,2,3-trichlorobenzene
       1.426 1.225 1.368 1.365 1.487 1.308 1.388 1.218 1.317        1.345    6.57
123)  hexachloroethane
       0.441 0.385 0.479 0.523 0.617       0.610       0.411        0.495   18.64
124)  2-methylnaphthalene
                1.912 2.142 2.466       2.320       1.602        2.089   16.35
125)  ethylenimine
                                                                    0.000#  -1.00
126)  bis(chloromethyl)ether
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MA9645.M          Tue May 14 14:12:27 2019   RPT1
```

Initial Calibration Verification

Job Number: JC91309 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9645\A249743.D Vial: 14
Acq On : 11 May 2019 9:17 pm Operator: PrashanS
Sample : ICV9645-50 Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.042	-0.9	107	0.00	8.29
4		1,4-dioxane	0.067	0.073	-9.0	108	0.00	12.18
5	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	10.55
6	M	chlorodifluoromethane	0.971	1.099	-13.2	120	0.00	4.58
7	M	dichlorodifluoromethane	1.181	1.204	-1.9	104	0.01	4.55
8	M	chloromethane	1.283	1.462	-14.0	103	0.00	4.99
9	M	vinyl chloride	1.087	1.057	2.8	99	0.00	5.25
10		1,3-butadiene	1.036	1.160	-12.0	127	0.00	5.27
11	M	bromomethane	0.763	0.717	6.0	100	0.00	5.92
12	M	chloroethane	0.552	0.543	1.6	101	0.00	6.11
13		vinyl bromide	0.728	0.740	-1.6	104	0.01	6.49
14	M	trichlorofluoromethane	1.125	1.082	3.8	101	0.00	6.63
15	M	ethyl ether	0.252	0.262	-4.0	105	0.00	7.01
16	M	acrolein	0.114	0.120	-5.3	108	0.00	7.27
17		freon 113	0.547	0.627	-14.6	120	0.00	7.51
18	M	1,1-dichloroethene	0.541	0.522	3.5	104	0.00	7.48
19	M	acetone	0.073	0.075	-2.7	104	0.00	7.48
20	M	acetonitrile	0.115	0.082	28.7	75	0.00	7.93
21	M	iodomethane	0.960	1.138	-18.5	125	0.00	7.75
22	M	carbon disulfide	1.799	1.901	-5.7	119	0.00	7.90
23	M	methylene chloride	0.563	0.573	-1.8	108	0.00	8.23
24	M	methyl acetate	0.509	0.515	-1.2	103	0.00	7.97
25	M	methyl tert butyl ether	1.593	1.648	-3.5	109	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.478	-1.7	105	0.00	8.64
27		hexane	0.679	0.709	-4.4	110	0.00	9.01
28	M	di-isopropyl ether	1.632	1.581	3.1	102	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.571	-0.6	104	0.00	9.71
30	M	2-butanone	0.084	0.091	-8.3	107	0.00	9.92
31	M	1,1-dichloroethane	0.844	0.849	-0.6	107	0.00	9.25
32	M	chloroprene	0.684	0.730	-6.7	110	0.00	9.35
33	M	acrylonitrile	0.259	0.286	-10.4	116	0.00	8.53
34	M	vinyl acetate	0.108	0.101	6.5	100	0.00	9.18
35	M	ethyl acetate	0.094	0.093	1.1	96	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.797	3.2	103	0.00	10.03
37	M	cis-1,2-dichloroethene	0.541	0.533	1.5	103	0.00	9.99
38		methyl acrylate	0.094	0.100	-6.4	107	0.00	10.02
39	M	propionitrile	0.111	0.122	-9.9	108	0.00	10.00
40	M	bromochloromethane	0.276	0.296	-7.2	110	0.00	10.30
41	M	tetrahydrofuran	0.241	0.244	-1.2	108	0.00	10.32

Initial Calibration Verification

Job Number: JC91309 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.840	4.2	108	0.00	10.39
43		tert-butyl formate	0.446	0.424	4.9	97	0.00	10.43
44	S	dibromofluoromethane (s)	0.493	0.487	1.2	104	0.00	10.59
45	M	methacrylonitrile	0.240	0.253	-5.4	108	0.00	10.20
46		cyclohexane	0.912	0.960	-5.3	109	0.00	10.78
47	M	1,1,1-trichloroethane	0.860	0.881	-2.4	106	0.00	10.66
48		iso-butyl alcohol	0.083	0.087	-4.8	107	0.00	10.78
49		1,1-dichloropropene	0.642	0.648	-0.9	107	0.00	10.83
50		carbon tetrachloride	0.768	0.793	-3.3	108	0.00	10.86
51		tert-amyl alcohol	0.077	0.083	-7.8	110	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	11.51
53	S	1,2-dichloroethane-d4 (s)	0.359	0.351	2.2	103	0.00	11.02
54	M	benzene	1.276	1.289	-1.0	107	0.00	11.09
55	M	iso-octane	1.198	1.309	-9.3	107	0.00	11.19
56		tert-amyl methyl ether	1.087	1.091	-0.4	104	0.00	11.17
57	M	heptane	0.237	0.284	-19.8	123	0.00	11.35
58	M	isopropyl acetate	0.094	0.092	2.1	100	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.426	7.0	104	0.00	11.11
60		n-butyl alcohol	0.022	0.024	-9.1	106	0.00	11.55
61		ethyl acrylate	0.416	0.454	-9.1	107	0.00	11.81
62	M	trichloroethene	0.325	0.329	-1.2	110	0.00	11.84
63	M	2-nitropropane	0.138	0.158	-14.5	111	0.00	12.63
64	m	methylcyclohexane	0.671	0.693	-3.3	107	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.199	-15.0	111	0.00	12.65
66	M	methyl methacrylate	0.092	0.104	-13.0	107	0.00	12.09
67	M	1,2-dichloropropane	0.308	0.323	-4.9	108	0.00	12.14
68	M	dibromomethane	0.207	0.214	-3.4	107	0.00	12.26
69	M	bromodichloromethane	0.426	0.424	0.5	103	0.00	12.41
70		epichlorohydrin	0.046	0.052	-13.0	108	0.00	12.75
71	M	cis-1,3-dichloropropene	0.455	0.495	-8.8	106	0.00	12.90
72	M	4-methyl-2-pentanone	0.190	0.202	-6.3	106	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.040	-11.1	110	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.90
75	S	toluene-d8 (s)	1.330	1.316	1.1	103	0.00	13.23
76		toluene	0.884	0.885	-0.1	105	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.507	-11.4	109	0.00	13.51
78		ethyl methacrylate	0.460	0.494	-7.4	108	0.00	13.49
79		1,1,2-trichloroethane	0.252	0.267	-6.0	106	0.00	13.75
80		2-hexanone	0.187	0.189	-1.1	105	0.00	13.92
81	M	tetrachloroethene	0.433	0.460	-6.2	113	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.522	-7.4	108	0.00	13.95
83	M	butyl acetate	0.278	0.277	0.4	105	0.00	14.00
84	M	dibromochloromethane	0.378	0.404	-6.9	110	0.00	14.23
85	M	1,2-dibromoethane	0.346	0.366	-5.8	106	0.00	14.40
86	M	n-butyl ether	1.451	1.497	-3.2	109	0.00	14.87
87	M	chlorobenzene	0.919	0.960	-4.5	107	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.460	0.0	107	0.00	15.01
89	M	ethylbenzene	1.642	1.623	1.2	104	0.00	15.00
90	M	m,p-xylene	0.638	0.642	-0.6	105	0.00	15.13
91	M	o-xylene	0.706	0.718	-1.7	106	0.00	15.59
92	M	styrene	1.015	0.992	2.3	104	0.00	15.60
93		butyl acrylate	0.724	0.690	4.7	102	0.00	15.38
94		n-amyl acetate	0.325	0.285	12.3	96	0.00	15.61
95	M	bromoform	0.263	0.288	-9.5	112	0.00	15.86
96		isopropylbenzene	1.910	1.963	-2.8	106	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.060	-5.3	97	0.00	16.02
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	17.52

Initial Calibration Verification

Job Number: JC91309 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249743.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.791	-1.5	100	0.00	16.20
100	M	bromobenzene	0.735	0.780	-6.1	105	0.00	16.42
101	M	1,1,2,2-tetrachloroethane	0.955	1.013	-6.1	104	0.00	16.29
102	M	trans-1,4-dichloro-2-bute	0.074	0.099	-33.8#	110	0.00	16.32
103	M	1,2,3-trichloropropane	0.273	0.284	-4.0	103	0.00	16.39
104	M	n-propylbenzene	3.588	3.759	-4.8	105	0.00	16.44
105	M	2-chlorotoluene	0.799	0.834	-4.4	103	0.00	16.60
106	M	4-chlorotoluene	1.867	1.942	-4.0	106	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	3.090	-11.7	105	0.00	16.62
108	M	tert-butylbenzene	0.641	0.709	-10.6	107	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.986	-9.1	107	0.00	17.06
110	M	sec-butylbenzene	3.777	4.196	-11.1	106	0.00	17.25
111	M	1,3-dichlorobenzene	1.458	1.480	-1.5	106	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.546	-12.7	108	0.00	17.39
113	M	1,4-dichlorobenzene	1.475	1.469	0.4	106	0.00	17.55
114	M	1,2-dichlorobenzene	1.579	1.590	-0.7	105	0.00	17.97
115	M	n-butylbenzene	1.539	1.560	-1.4	103	0.00	17.85
116	M	1,2-dibromo-3-chloropropa	0.334	0.345	-3.3	101	0.00	18.82
117	M	1,3,5-trichlorobenzene	1.489	1.460	1.9	104	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	10.247	-2.5	116	0.00	19.76

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.363	-1.7	103	0.00	19.78
120	M	hexachlorobutadiene	0.533	0.534	-0.2	103	0.00	19.90
121	M	naphthalene	3.917	4.198	-7.2	107	0.00	20.11
122	M	1,2,3-trichlorobenzene	1.345	1.423	-5.8	106	0.00	20.36
123	M	hexachloroethane	0.495	0.580	-17.2	112	0.00	18.30
124		2-methylnaphthalene	2.089	2.276	-9.0	108	0.00	21.42
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue May 14 14:11:55 2019 RPT1

Initial Calibration Verification

Job Number: JC91309 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9645\A249744.D Vial: 15
Acq On : 11 May 2019 9:46 pm Operator: PrashanS
Sample : ICV9645-50 Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	103	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.54
6	M	chlorodifluoromethane		----------NA----------				
7	M	dichlorodifluoromethane		----------NA----------				
8	M	chloromethane		----------NA----------				
9	M	vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11	M	bromomethane		----------NA----------				
12	M	chloroethane		----------NA----------				
13		vinyl bromide		----------NA----------				
14	M	trichlorofluoromethane		----------NA----------				
15	M	ethyl ether		----------NA----------				
16	M	acrolein		----------NA----------				
17		freon 113		----------NA----------				
18	M	1,1-dichloroethene		----------NA----------				
19	M	acetone		----------NA----------				
20	M	acetonitrile	0.115	0.114	0.9	105	0.00	7.93
21	M	iodomethane		----------NA----------				
22	M	carbon disulfide		----------NA----------				
23	M	methylene chloride		----------NA----------				
24	M	methyl acetate		----------NA----------				
25	M	methyl tert butyl ether		----------NA----------				
26	M	trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28	M	di-isopropyl ether		----------NA----------				
29	M	ethyl tert-butyl ether		----------NA----------				
30	M	2-butanone		----------NA----------				
31	M	1,1-dichloroethane		----------NA----------				
32	M	chloroprene		----------NA----------				
33	M	acrylonitrile	0.259	0.235	9.3	97	0.00	8.53
34	M	vinyl acetate		----------NA----------				
35	M	ethyl acetate		----------NA----------				
36	M	2,2-dichloropropane		----------NA----------				
37	M	cis-1,2-dichloroethene		----------NA----------				
38		methyl acrylate		----------NA----------				
39	M	propionitrile		----------NA----------				
40	M	bromochloromethane		----------NA----------				
41	M	tetrahydrofuran		----------NA----------				

Initial Calibration Verification

Job Number: JC91309 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform		----------NA----------					
43		tert-butyl formate		----------NA----------					
44	S	dibromofluoromethane (s)	0.493	0.481	2.4	104	0.00	10.58	
45	M	methacrylonitrile		----------NA----------					
46		cyclohexane		----------NA----------					
47	M	1,1,1-trichloroethane		----------NA----------					
48		iso-butyl alcohol		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		carbon tetrachloride		----------NA----------					
51		tert-amyl alcohol		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	11.51	
53	S	1,2-dichloroethane-d4 (s)	0.359	0.362	-0.8	103	0.00	11.02	
54	M	benzene		----------NA----------					
55	M	iso-octane		----------NA----------					
56		tert-amyl methyl ether		----------NA----------					
57	M	heptane		----------NA----------					
58	M	isopropyl acetate		----------NA----------					
59	M	1,2-dichloroethane		----------NA----------					
60		n-butyl alcohol		----------NA----------					
61		ethyl acrylate		----------NA----------					
62	M	trichloroethene		----------NA----------					
63	M	2-nitropropane		----------NA----------					
64	m	methylcyclohexane		----------NA----------					
65	M	2-chloroethyl vinyl ether		----------NA----------					
66	M	methyl methacrylate		----------NA----------					
67	M	1,2-dichloropropane		----------NA----------					
68	M	dibromomethane		----------NA----------					
69	M	bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71	M	cis-1,3-dichloropropene		----------NA----------					
72	M	4-methyl-2-pentanone		----------NA----------					
73	M	3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	92	0.00	14.90	
75	S	toluene-d8 (s)	1.330	1.364	-2.6	95	0.00	13.23	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		2-hexanone		----------NA----------					
81	M	tetrachloroethene	0.433	0.422	2.5	93	0.00	13.92	
82	M	1,3-dichloropropane		----------NA----------					
83	M	butyl acetate		----------NA----------					
84	M	dibromochloromethane		----------NA----------					
85	M	1,2-dibromoethane		----------NA----------					
86	M	n-butyl ether		----------NA----------					
87	M	chlorobenzene		----------NA----------					
88	M	1,1,1,2-tetrachloroethane		----------NA----------					
89	M	ethylbenzene		----------NA----------					
90	M	m,p-xylene		----------NA----------					
91	M	o-xylene		----------NA----------					
92	M	styrene		----------NA----------					
93		butyl acrylate		----------NA----------					
94		n-amyl acetate		----------NA----------					
95	M	bromoform		----------NA----------					
96		isopropylbenzene		----------NA----------					
97		cis-1,4-dichloro-2-butene		----------NA----------					
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	17.52	

Initial Calibration Verification

Job Number: JC91309 **Sample:** VA9645-ICV9645
Account: EAENYES EA Engineering **Lab FileID:** A249744.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.759	2.6	104	0.00	16.20	
100	M	bromobenzene	----------NA----------						
101	M	1,1,2,2-tetrachloroethane	----------NA----------						
102	M	trans-1,4-dichloro-2-bute	----------NA----------						
103	M	1,2,3-trichloropropane	----------NA----------						
104	M	n-propylbenzene	----------NA----------						
105	M	2-chlorotoluene	----------NA----------						
106	M	4-chlorotoluene	----------NA----------						
107	M	1,3,5-trimethylbenzene	----------NA----------						
108	M	tert-butylbenzene	----------NA----------						
109	M	1,2,4-trimethylbenzene	----------NA----------						
110	M	sec-butylbenzene	----------NA----------						
111	M	1,3-dichlorobenzene	----------NA----------						
112	M	p-isopropyltoluene	----------NA----------						
113	M	1,4-dichlorobenzene	----------NA----------						
114	M	1,2-dichlorobenzene	----------NA----------						
115	M	n-butylbenzene	----------NA----------						
116	M	1,2-dibromo-3-chloropropa	----------NA----------						
117	M	1,3,5-trichlorobenzene	----------NA----------						
		---------- True	Calc.	% Drift ----------					
118		2-ethylhexyl acrylate	----------NA----------						
		---------- AvgRF	CCRF	% Dev ----------					
119	M	1,2,4-trichlorobenzene	----------NA----------						
120	M	hexachlorobutadiene	----------NA----------						
121	M	naphthalene	----------NA----------						
122	M	1,2,3-trichlorobenzene	----------NA----------						
123	M	hexachloroethane	----------NA----------						
124		2-methylnaphthalene	----------NA----------						
125		ethylenimine	----------NA----------						
126		bis(chloromethyl)ether	----------NA----------						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue May 14 14:11:57 2019 RPT1

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9738-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251641.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kr...1619\va9738\a251641.d Vial: 2
Acq On : 15 Jul 2019 6:50 am Operator: JAYC
Sample : cc9645-20 Inst : MSA
Misc : MS4986,VA9738,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	133	-0.02	8.15
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	0.979	5.2	125	-0.02	8.27
4		1,4-dioxane	0.067	0.064	4.5	122	0.00	12.17
5	I	pentafluorobenzene	1.000	1.000	0.0	126	0.00	10.54
6	M	chlorodifluoromethane	0.971	1.087	-11.9	143	0.00	4.57
7	M	dichlorodifluoromethane	1.181	1.265	-7.1	132	0.01	4.55
8	M	chloromethane	1.283	1.431	-11.5	159	0.00	4.99
9	M	vinyl chloride	1.087	1.347	-23.9#	156	0.00	5.25
10		1,3-butadiene	1.036	0.844	18.5	105	-0.01	5.25
11	M	bromomethane	0.763	0.761	0.3	130	0.00	5.92
12	M	chloroethane	0.552	0.560	-1.4	130	0.00	6.11
13		vinyl bromide	0.728	0.736	-1.1	126	0.00	6.48
14	M	trichlorofluoromethane	1.125	1.125	0.0	128	0.00	6.63
15	M	ethyl ether	0.252	0.250	0.8	119	0.00	7.01
16	M	acrolein	0.114	0.133	-16.7	154	0.00	7.26
17		freon 113	0.547	0.546	0.2	126	0.00	7.50
18	M	1,1-dichloroethene	0.541	0.525	3.0	125	0.00	7.47
19	M	acetone	0.073	0.071	2.7	122	0.00	7.47
20	M	acetonitrile	0.115	0.116	-0.9	125	-0.01	7.92
21	M	iodomethane	0.960	0.966	-0.6	129	-0.02	7.74
22	M	carbon disulfide	1.799	1.700	5.5	128	0.00	7.90
23	M	methylene chloride	0.563	0.570	-1.2	130	0.00	8.22
24	M	methyl acetate	0.509	0.508	0.2	128	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.666	-4.6	131	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.488	-3.8	127	0.00	8.63
27		hexane	0.679	0.645	5.0	122	0.00	9.01
28	M	di-isopropyl ether	1.632	1.674	-2.6	129	0.00	9.22
29	M	ethyl tert-butyl ether	1.561	1.608	-3.0	127	-0.01	9.71
30	M	2-butanone	0.084	0.091	-8.3	132	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.842	0.2	125	0.00	9.24
32	M	chloroprene	0.684	0.651	4.8	118	0.00	9.34
33	M	acrylonitrile	0.259	0.249	3.9	122	0.00	8.53
34	M	vinyl acetate	0.108	0.111	-2.8	132	0.00	9.17
35	M	ethyl acetate	0.094	0.105	-11.7	150	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.901	-9.5	139	0.00	10.02
37	M	cis-1,2-dichloroethene	0.541	0.562	-3.9	127	-0.01	9.98
38		methyl acrylate	0.094	0.094	0.0	132	0.00	10.02
39	M	propionitrile	0.111	0.113	-1.8	123	0.00	9.99
40	M	bromochloromethane	0.276	0.280	-1.4	123	0.00	10.29
41	M	tetrahydrofuran	0.241	0.223	7.5	119	0.00	10.31

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9738-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251641.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.839	4.3	127	-0.01	10.38
43		tert-butyl formate	0.446	0.519	-16.4	143	-0.01	10.42
44	S	dibromofluoromethane (s)	0.493	0.502	-1.8	128	-0.01	10.57
45	M	methacrylonitrile	0.240	0.249	-3.8	130	0.00	10.19
46		cyclohexane	0.912	0.858	5.9	122	-0.01	10.77
47	M	1,1,1-trichloroethane	0.860	0.898	-4.4	130	0.00	10.66
48		iso-butyl alcohol	0.083	0.082	1.2	125	0.00	10.77
49		1,1-dichloropropene	0.642	0.618	3.7	123	0.00	10.83
50		carbon tetrachloride	0.768	0.801	-4.3	131	0.00	10.86
51		tert-amyl alcohol	0.077	0.078	-1.3	125	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	134	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.351	2.2	132	0.00	11.01
54	M	benzene	1.276	1.223	4.2	128	0.00	11.09
55	M	iso-octane	1.198	1.005	16.1	109	0.00	11.18
56		tert-amyl methyl ether	1.087	1.057	2.8	126	0.00	11.16
57	M	heptane	0.237	0.224	5.5	122	0.00	11.34
58	M	isopropyl acetate	0.094	0.092	2.1	126	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.411	10.3	126	-0.01	11.10
60		n-butyl alcohol	0.022	0.022	0.0	130	-0.01	11.55
61		ethyl acrylate	0.416	0.404	2.9	127	-0.01	11.80
62	M	trichloroethene	0.325	0.295	9.2	126	0.00	11.83
63	M	2-nitropropane	0.138	0.136	1.4	132	0.00	12.62
64	m	methylcyclohexane	0.671	0.592	11.8	116	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.170	1.7	131	-0.01	12.64
66	M	methyl methacrylate	0.092	0.091	1.1	132	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.298	3.2	127	-0.01	12.13
68	M	dibromomethane	0.207	0.207	0.0	134	0.00	12.24
69	M	bromodichloromethane	0.426	0.431	-1.2	135	-0.01	12.40
70		epichlorohydrin	0.046	0.047	-2.2	130	0.00	12.74
71	M	cis-1,3-dichloropropene	0.455	0.465	-2.2	132	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.187	1.6	126	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.036	0.0	124	0.00	12.99
74	I	chlorobenzene-d5	1.000	1.000	0.0	129	0.00	14.89
75	S	toluene-d8 (s)	1.330	1.323	0.5	126	0.00	13.23
76		toluene	0.884	0.867	1.9	127	-0.01	13.30
77		trans-1,3-dichloropropene	0.455	0.500	-9.9	136	-0.01	13.50
78		ethyl methacrylate	0.460	0.451	2.0	122	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.256	-1.6	126	-0.01	13.74
80		2-hexanone	0.187	0.189	-1.1	127	-0.01	13.92
81	M	tetrachloroethene	0.433	0.397	8.3	119	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.495	-1.9	128	-0.01	13.94
83	M	butyl acetate	0.278	0.287	-3.2	132	0.00	14.00
84	M	dibromochloromethane	0.378	0.383	-1.3	130	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.375	-8.4	136	0.00	14.39
86	M	n-butyl ether	1.451	1.426	1.7	126	0.00	14.86
87	M	chlorobenzene	0.919	0.898	2.3	126	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.467	-1.5	131	0.00	15.00
89	M	ethylbenzene	1.642	1.565	4.7	125	0.00	14.99
90	M	m,p-xylene	0.638	0.618	3.1	123	-0.01	15.12
91	M	o-xylene	0.706	0.709	-0.4	127	0.00	15.58
92	M	styrene	1.015	0.935	7.9	122	0.00	15.59
93		butyl acrylate	0.724	0.730	-0.8	123	0.00	15.37
94		n-amyl acetate	0.325	0.321	1.2	122	0.00	15.60
95	M	bromoform	0.263	0.288	-9.5	136	-0.01	15.85
96		isopropylbenzene	1.910	1.877	1.7	122	-0.01	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.185	-224.6#	528#	-0.01	16.00
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	122	-0.01	17.51

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9738-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251641.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.823	-5.6	131	0.00	16.20
100	M	bromobenzene	0.735	0.763	-3.8	129	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.025	-7.3	130	-0.01	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.203	-174.3#	397#	0.00	16.32
103	M	1,2,3-trichloropropane	0.273	0.290	-6.2	125	-0.02	16.37
104	M	n-propylbenzene	3.588	3.560	0.8	121	0.00	16.44
105	M	2-chlorotoluene	0.799	0.787	1.5	121	0.00	16.59
106	M	4-chlorotoluene	1.867	1.914	-2.5	127	-0.01	16.71
107	M	1,3,5-trimethylbenzene	2.766	2.853	-3.1	122	0.00	16.61
108	M	tert-butylbenzene	0.641	0.659	-2.8	125	0.00	16.99
109	M	1,2,4-trimethylbenzene	2.737	2.787	-1.8	123	-0.01	17.05
110	M	sec-butylbenzene	3.777	3.882	-2.8	123	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.435	1.6	123	-0.01	17.44
112	M	p-isopropyltoluene	3.147	3.234	-2.8	122	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.429	3.1	123	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.563	1.0	125	-0.01	17.96
115	M	n-butylbenzene	1.539	1.516	1.5	119	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.345	-3.3	124	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.495	-0.4	128	0.00	19.03
		----------	True	Calc.	% Drift	----------		
118		2-ethylhexyl acrylate	4.000	3.436	14.1	121	0.00	19.74
		----------	AvgRF	CCRF	% Dev	----------		
119	M	1,2,4-trichlorobenzene	1.340	1.389	-3.7	126	-0.01	19.77
120	M	hexachlorobutadiene	0.533	0.531	0.4	127	-0.01	19.89
121	M	naphthalene	3.917	3.905	0.3	121	-0.01	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.374	-2.2	122	-0.01	20.35
123	M	hexachloroethane	0.495	0.580	-17.2	147	0.00	18.29
124		2-methylnaphthalene	2.089	1.704	18.4	109	-0.02	21.41
125		ethylenimine	----------NA----------					
126		bis(chloromethyl)ether	----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249737.D MA9645.M Tue Jul 16 03:45:45 2019

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9738-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251664.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : X:\voa-gcms\complete...telv\va9738\a251664.d Vial: 25
Acq On : 15 Jul 2019 6:04 pm Operator: edwardd
Sample : ecc9645-50 Inst : MSA
Misc : MS36114,VA9738,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	108	-0.02	8.15
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.008	2.4	107	0.00	8.28
4		1,4-dioxane	0.067	0.066	1.5	100	0.00	12.18
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.54
6	M	chlorodifluoromethane	0.971	0.879	9.5	97	0.01	4.59
7	M	dichlorodifluoromethane	1.181	1.219	-3.2	106	0.01	4.55
8	M	chloromethane	1.283	1.440	-12.2	102	0.00	4.99
9	M	vinyl chloride	1.087	1.355	-24.7	129	0.01	5.26
10		1,3-butadiene	1.036	0.695	32.9	77	0.00	5.27
11	M	bromomethane	0.763	0.777	-1.8	110	0.00	5.93
12	M	chloroethane	0.552	0.584	-5.8	109	0.00	6.11
13		vinyl bromide	0.728	0.689	5.4	98	0.01	6.49
14	M	trichlorofluoromethane	1.125	1.197	-6.4	113	0.00	6.63
15	M	ethyl ether	0.252	0.249	1.2	100	0.00	7.01
16	M	acrolein	0.114	0.131	-14.9	119	0.00	7.26
17		freon 113	0.547	0.518	5.3	100	0.00	7.50
18	M	1,1-dichloroethene	0.541	0.522	3.5	105	0.00	7.48
19	M	acetone	0.073	0.074	-1.4	103	-0.01	7.46
20	M	acetonitrile	0.115	0.114	0.9	105	-0.02	7.91
21	M	iodomethane	0.960	0.986	-2.7	109	0.00	7.74
22	M	carbon disulfide	1.799	1.576	12.4	100	0.00	7.90
23	M	methylene chloride	0.563	0.578	-2.7	110	0.00	8.23
24	M	methyl acetate	0.509	0.483	5.1	97	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.662	-4.3	111	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.474	-0.9	105	0.00	8.63
27		hexane	0.679	0.568	16.3	89	0.00	9.01
28	M	di-isopropyl ether	1.632	1.662	-1.8	108	0.00	9.22
29	M	ethyl tert-butyl ether	1.561	1.640	-5.1	110	0.00	9.71
30	M	2-butanone	0.084	0.089	-6.0	105	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.848	-0.5	108	0.00	9.24
32	M	chloroprene	0.684	0.678	0.9	104	0.00	9.35
33	M	acrylonitrile	0.259	0.266	-2.7	109	0.00	8.52
34	M	vinyl acetate	0.108	0.106	1.9	106	0.00	9.17
35	M	ethyl acetate	0.094	0.105	-11.7	110	0.00	9.92
36	M	2,2-dichloropropane	0.823	0.775	5.8	101	0.00	10.02
37	M	cis-1,2-dichloroethene	0.541	0.554	-2.4	108	0.00	9.98
38		methyl acrylate	0.094	0.101	-7.4	109	0.00	10.01
39	M	propionitrile	0.111	0.115	-3.6	104	0.00	9.99
40	M	bromochloromethane	0.276	0.289	-4.7	108	0.00	10.29
41	M	tetrahydrofuran	0.241	0.229	5.0	103	0.00	10.31

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9738-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251664.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.877	0.0	114	0.00	10.38
43		tert-butyl formate	0.446	0.512	-14.8	118	0.00	10.42
44	S	dibromofluoromethane (s)	0.493	0.526	-6.7	114	0.00	10.57
45	M	methacrylonitrile	0.240	0.249	-3.8	107	0.00	10.20
46		cyclohexane	0.912	0.901	1.2	104	0.00	10.78
47	M	1,1,1-trichloroethane	0.860	0.937	-9.0	114	0.00	10.65
48		iso-butyl alcohol	0.083	0.085	-2.4	105	0.00	10.78
49		1,1-dichloropropene	0.642	0.628	2.2	104	0.00	10.83
50		carbon tetrachloride	0.768	0.826	-7.6	114	0.00	10.86
51		tert-amyl alcohol	0.077	0.079	-2.6	106	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	113	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.359	0.0	116	0.00	11.01
54	M	benzene	1.276	1.206	5.5	109	0.00	11.09
55	M	iso-octane	1.198	0.996	16.9	89	0.00	11.18
56		tert-amyl methyl ether	1.087	1.064	2.1	111	0.00	11.16
57	M	heptane	0.237	0.208	12.2	98	0.00	11.34
58	M	isopropyl acetate	0.094	0.097	-3.2	116	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.406	11.4	109	0.00	11.10
60		n-butyl alcohol	0.022	0.022	0.0	105	0.00	11.55
61		ethyl acrylate	0.416	0.434	-4.3	112	0.00	11.80
62	M	trichloroethene	0.325	0.310	4.6	113	0.00	11.83
63	M	2-nitropropane	0.138	0.134	2.9	103	0.00	12.62
64	m	methylcyclohexane	0.671	0.583	13.1	98	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.177	-2.3	108	0.00	12.65
66	M	methyl methacrylate	0.092	0.097	-5.4	110	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.314	-1.9	115	0.00	12.13
68	M	dibromomethane	0.207	0.213	-2.9	117	0.00	12.24
69	M	bromodichloromethane	0.426	0.445	-4.5	119	0.00	12.40
70		epichlorohydrin	0.046	0.046	0.0	103	0.00	12.74
71	M	cis-1,3-dichloropropene	0.455	0.484	-6.4	113	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.189	0.5	108	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.035	2.8	105	0.00	13.00
74	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	14.89
75	S	toluene-d8 (s)	1.330	1.301	2.2	110	0.00	13.23
76		toluene	0.884	0.870	1.6	112	0.00	13.30
77		trans-1,3-dichloropropene	0.455	0.489	-7.5	113	0.00	13.50
78		ethyl methacrylate	0.460	0.464	-0.9	109	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.266	-5.6	114	0.00	13.74
80		2-hexanone	0.187	0.182	2.7	109	0.00	13.92
81	M	tetrachloroethene	0.433	0.403	6.9	107	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.509	-4.7	113	0.00	13.94
83	M	butyl acetate	0.278	0.277	0.4	113	0.00	14.00
84	M	dibromochloromethane	0.378	0.407	-7.7	119	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.388	-12.1	122	0.00	14.39
86	M	n-butyl ether	1.451	1.399	3.6	110	0.00	14.86
87	M	chlorobenzene	0.919	0.919	0.0	110	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.461	-0.2	116	0.00	15.00
89	M	ethylbenzene	1.642	1.581	3.7	110	0.00	14.99
90	M	m,p-xylene	0.638	0.629	1.4	111	0.00	15.12
91	M	o-xylene	0.706	0.699	1.0	112	0.00	15.58
92	M	styrene	1.015	0.966	4.8	110	0.00	15.59
93		butyl acrylate	0.724	0.715	1.2	114	0.00	15.37
94		n-amyl acetate	0.325	0.306	5.8	112	0.00	15.60
95	M	bromoform	0.263	0.288	-9.5	121	0.00	15.85
96		isopropylbenzene	1.910	1.900	0.5	111	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.166	-191.2#	287#	0.00	16.00
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	17.51

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9738-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251664.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.840	-7.8	114	0.00	16.20
100	M	bromobenzene	0.735	0.807	-9.8	117	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.077	-12.8	118	0.00	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.186	-151.4#	221#	0.00	16.31
103	M	1,2,3-trichloropropane	0.273	0.301	-10.3	117	-0.02	16.37
104	M	n-propylbenzene	3.588	3.688	-2.8	110	0.00	16.44
105	M	2-chlorotoluene	0.799	0.859	-7.5	114	0.00	16.59
106	M	4-chlorotoluene	1.867	1.951	-4.5	114	0.00	16.71
107	M	1,3,5-trimethylbenzene	2.766	3.042	-10.0	110	0.00	16.61
108	M	tert-butylbenzene	0.641	0.706	-10.1	114	0.00	16.99
109	M	1,2,4-trimethylbenzene	2.737	2.881	-5.3	111	0.00	17.05
110	M	sec-butylbenzene	3.777	4.121	-9.1	111	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.432	1.8	110	0.00	17.44
112	M	p-isopropyltoluene	3.147	3.386	-7.6	110	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.434	2.8	110	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.580	-0.1	112	0.00	17.96
115	M	n-butylbenzene	1.539	1.534	0.3	109	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.348	-4.2	109	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.431	3.9	109	0.00	19.02

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	8.450	15.5	100	0.00	19.74

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.324	1.2	107	0.00	19.77
120	M	hexachlorobutadiene	0.533	0.572	-7.3	118	0.00	19.89
121	M	naphthalene	3.917	3.807	2.8	104	0.00	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.354	-0.7	107	0.00	20.35
123	M	hexachloroethane	0.495	0.651	-31.5	135	0.00	18.29
124		2-methylnaphthalene	2.089	1.830	12.4	93	-0.01	21.41
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue Jul 16 13:08:33 2019

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9741-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251696.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : X:\voa-gcms\complete...llec\va9741\a251696.d Vial: 2
Acq On : 16 Jul 2019 11:07 am Operator: EddieH
Sample : cc9645-20 Inst : MSA
Misc : MS36109,VA9741,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 0.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	114	0.00	8.16
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	1.005	2.7	110	0.02	8.30
4		1,4-dioxane	0.067	0.066	1.5	108	0.00	12.17
5	I	pentafluorobenzene	1.000	1.000	0.0	111	0.00	10.54
6	M	chlorodifluoromethane	0.971	0.920	5.3	106	0.00	4.57
7	M	dichlorodifluoromethane	1.181	1.178	0.3	108	0.02	4.56
8	M	chloromethane	1.283	1.239	3.4	120	0.02	5.00
9	M	vinyl chloride	1.087	1.172	-7.8	119	0.02	5.27
10		1,3-butadiene	1.036	0.740	28.6#	81	0.01	5.28
11	M	bromomethane	0.763	0.783	-2.6	117	0.00	5.93
12	M	chloroethane	0.552	0.603	-9.2	122	0.00	6.10
13		vinyl bromide	0.728	0.688	5.5	103	0.01	6.49
14	M	trichlorofluoromethane	1.125	1.218	-8.3	122	0.00	6.62
15	M	ethyl ether	0.252	0.244	3.2	102	0.00	7.02
16	M	acrolein	0.114	0.135	-18.4	137	0.00	7.26
17		freon 113	0.547	0.505	7.7	102	0.00	7.50
18	M	1,1-dichloroethene	0.541	0.535	1.1	112	0.00	7.47
19	M	acetone	0.073	0.086	-17.8	130	-0.01	7.47
20	M	acetonitrile	0.115	0.113	1.7	107	-0.01	7.92
21	M	iodomethane	0.960	0.928	3.3	108	0.00	7.76
22	M	carbon disulfide	1.799	1.588	11.7	104	0.00	7.91
23	M	methylene chloride	0.563	0.556	1.2	111	0.00	8.23
24	M	methyl acetate	0.509	0.487	4.3	108	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.575	1.1	109	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.436	7.2	99	0.00	8.63
27		hexane	0.679	0.599	11.8	99	0.00	9.01
28	M	di-isopropyl ether	1.632	1.516	7.1	102	0.00	9.22
29	M	ethyl tert-butyl ether	1.561	1.483	5.0	103	-0.01	9.71
30	M	2-butanone	0.084	0.090	-7.1	115	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.775	8.2	100	0.00	9.24
32	M	chloroprene	0.684	0.616	9.9	98	-0.01	9.34
33	M	acrylonitrile	0.259	0.252	2.7	109	0.00	8.53
34	M	vinyl acetate	0.108	0.104	3.7	109	0.00	9.17
35	M	ethyl acetate	0.094	0.095	-1.1	119	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.835	-1.5	113	0.00	10.02
37	M	cis-1,2-dichloroethene	0.541	0.502	7.2	100	-0.01	9.98
38		methyl acrylate	0.094	0.093	1.1	115	0.00	10.01
39	M	propionitrile	0.111	0.115	-3.6	110	-0.02	9.98
40	M	bromochloromethane	0.276	0.269	2.5	103	0.00	10.29
41	M	tetrahydrofuran	0.241	0.214	11.2	100	0.00	10.31

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9741-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251696.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.800	8.8	106	0.00	10.38
43		tert-butyl formate	0.446	0.472	-5.8	114	-0.02	10.41
44	S	dibromofluoromethane (s)	0.493	0.522	-5.9	116	0.00	10.58
45	M	methacrylonitrile	0.240	0.241	-0.4	110	0.00	10.20
46		cyclohexane	0.912	0.824	9.6	103	-0.01	10.77
47	M	1,1,1-trichloroethane	0.860	0.816	5.1	103	0.00	10.66
48		iso-butyl alcohol	0.083	0.081	2.4	107	0.00	10.78
49		1,1-dichloropropene	0.642	0.572	10.9	100	0.00	10.82
50		carbon tetrachloride	0.768	0.740	3.6	106	-0.01	10.86
51		tert-amyl alcohol	0.077	0.080	-3.9	112	0.00	10.96
52	I	1,4-difluorobenzene	1.000	1.000	0.0	116	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.365	-1.7	118	0.00	11.01
54	M	benzene	1.276	1.120	12.2	101	0.00	11.09
55	M	iso-octane	1.198	0.995	16.9	94	0.00	11.18
56		tert-amyl methyl ether	1.087	1.001	7.9	103	0.00	11.16
57	M	heptane	0.237	0.223	5.9	105	0.00	11.34
58	M	isopropyl acetate	0.094	0.095	-1.1	114	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.392	14.4	104	0.00	11.11
60		n-butyl alcohol	0.022	0.023	-4.5	118	0.00	11.55
61		ethyl acrylate	0.416	0.412	1.0	112	-0.01	11.80
62	M	trichloroethene	0.325	0.290	10.8	107	0.00	11.83
63	M	2-nitropropane	0.138	0.125	9.4	106	-0.01	12.61
64	m	methylcyclohexane	0.671	0.583	13.1	99	-0.01	12.14
65	M	2-chloroethyl vinyl ether	0.173	0.166	4.0	111	-0.01	12.64
66	M	methyl methacrylate	0.092	0.086	6.5	108	-0.01	12.07
67	M	1,2-dichloropropane	0.308	0.287	6.8	105	-0.01	12.13
68	M	dibromomethane	0.207	0.202	2.4	113	0.00	12.24
69	M	bromodichloromethane	0.426	0.405	4.9	110	-0.01	12.40
70		epichlorohydrin	0.046	0.046	0.0	111	-0.01	12.74
71	M	cis-1,3-dichloropropene	0.455	0.452	0.7	111	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.183	3.7	107	0.00	13.00
73	M	3-methyl-1-butanol	0.036	0.037	-2.8	110	-0.01	12.99
74	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	14.89
75	S	toluene-d8 (s)	1.330	1.324	0.5	109	0.00	13.23
76		toluene	0.884	0.800	9.5	101	-0.01	13.30
77		trans-1,3-dichloropropene	0.455	0.484	-6.4	113	-0.01	13.50
78		ethyl methacrylate	0.460	0.467	-1.5	109	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.254	-0.8	108	-0.01	13.74
80		2-hexanone	0.187	0.189	-1.1	109	-0.01	13.92
81	M	tetrachloroethene	0.433	0.382	11.8	98	0.00	13.92
82	M	1,3-dichloropropane	0.486	0.475	2.3	105	-0.01	13.94
83	M	butyl acetate	0.278	0.280	-0.7	111	0.00	14.00
84	M	dibromochloromethane	0.378	0.383	-1.3	112	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.364	-5.2	114	0.00	14.39
86	M	n-butyl ether	1.451	1.287	11.3	98	0.00	14.86
87	M	chlorobenzene	0.919	0.850	7.5	103	-0.01	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.455	1.1	109	0.00	15.00
89	M	ethylbenzene	1.642	1.442	12.2	99	-0.01	14.99
90	M	m,p-xylene	0.638	0.563	11.8	97	-0.01	15.12
91	M	o-xylene	0.706	0.648	8.2	99	0.00	15.58
92	M	styrene	1.015	0.917	9.7	103	0.00	15.59
93		butyl acrylate	0.724	0.720	0.6	104	0.00	15.37
94		n-amyl acetate	0.325	0.322	0.9	105	0.00	15.61
95	M	bromoform	0.263	0.286	-8.7	117	-0.01	15.85
96		isopropylbenzene	1.910	1.751	8.3	97	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.175	-207.0#	429#	0.00	16.01
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	-0.01	17.51

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9741-CC9645
Account: EAENYES EA Engineering **Lab FileID:** A251696.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.818	-5.0	112	0.00	16.20
100	M	bromobenzene	0.735	0.728	1.0	106	-0.01	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.038	-8.7	113	-0.01	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.207	-179.7#	348#	-0.01	16.31
103	M	1,2,3-trichloropropane	0.273	0.290	-6.2	108	-0.01	16.38
104	M	n-propylbenzene	3.588	3.332	7.1	98	0.00	16.44
105	M	2-chlorotoluene	0.799	0.763	4.5	101	0.00	16.59
106	M	4-chlorotoluene	1.867	1.793	4.0	102	-0.01	16.71
107	M	1,3,5-trimethylbenzene	2.766	2.659	3.9	98	0.00	16.61
108	M	tert-butylbenzene	0.641	0.623	2.8	102	0.00	17.00
109	M	1,2,4-trimethylbenzene	2.737	2.578	5.8	98	0.00	17.05
110	M	sec-butylbenzene	3.777	3.630	3.9	99	-0.01	17.24
111	M	1,3-dichlorobenzene	1.458	1.361	6.7	100	-0.01	17.44
112	M	p-isopropyltoluene	3.147	3.027	3.8	98	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.395	5.4	103	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.485	6.0	102	-0.01	17.96
115	M	n-butylbenzene	1.539	1.405	8.7	94	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.360	-7.8	111	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.404	5.7	103	0.00	19.03

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	4.000	3.921	2.0	124	0.00	19.74

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.375	-2.6	107	-0.01	19.77
120	M	hexachlorobutadiene	0.533	0.528	0.9	108	-0.02	19.89
121	M	naphthalene	3.917	3.974	-1.5	106	-0.01	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.399	-4.0	107	-0.01	20.35
123	M	hexachloroethane	0.495	0.578	-16.8	126	0.00	18.29
124		2-methylnaphthalene	2.089	1.912	8.5	105	-0.02	21.41
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249737.D MA9645.M Thu Jul 18 09:16:36 2019

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9741-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251708.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...7-19\va9741\a251708.d Vial: 14
Acq On : 16 Jul 2019 5:35 pm Operator: EddieH
Sample : ecc9645-50 Inst : MSA
Misc : MS36221,VA9741,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
Last Update : Mon May 13 16:30:35 2019
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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	106	0.00	8.17
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol	1.033	0.985	4.6	102	0.01	8.30
4		1,4-dioxane	0.067	0.062	7.5	91	-0.01	12.17
5	I	pentafluorobenzene	1.000	1.000	0.0	118	0.00	10.53
6	M	chlorodifluoromethane	0.971	0.932	4.0	115	0.02	4.59
7	M	dichlorodifluoromethane	1.181	1.051	11.0	101	0.03	4.57
8	M	chloromethane	1.283	1.174	8.5	92	0.03	5.01
9	M	vinyl chloride	1.087	1.069	1.7	113	0.02	5.26
10		1,3-butadiene	1.036	0.743	28.3	91	0.03	5.29
11	M	bromomethane	0.763	0.650	14.8	102	0.02	5.95
12	M	chloroethane	0.552	0.501	9.2	104	0.02	6.12
13		vinyl bromide	0.728	0.581	20.2	92	0.02	6.50
14	M	trichlorofluoromethane	1.125	1.041	7.5	109	0.01	6.64
15	M	ethyl ether	0.252	0.253	-0.4	113	0.00	7.01
16	M	acrolein	0.114	0.149	-30.7	149	0.00	7.27
17		freon 113	0.547	0.506	7.5	109	0.02	7.52
18	M	1,1-dichloroethene	0.541	0.562	-3.9	126	0.03	7.51
19	M	acetone	0.073	0.078	-6.8	121	0.00	7.47
20	M	acetonitrile	0.115	0.101	12.2	102	0.00	7.92
21	M	iodomethane	0.960	1.008	-5.0	124	0.03	7.78
22	M	carbon disulfide	1.799	1.674	6.9	118	0.03	7.94
23	M	methylene chloride	0.563	0.599	-6.4	126	0.01	8.24
24	M	methyl acetate	0.509	0.475	6.7	106	0.00	7.96
25	M	methyl tert butyl ether	1.593	1.577	1.0	116	0.00	8.60
26	M	trans-1,2-dichloroethene	0.470	0.461	1.9	113	0.00	8.64
27		hexane	0.679	0.604	11.0	105	0.00	9.01
28	M	di-isopropyl ether	1.632	1.555	4.7	112	0.00	9.23
29	M	ethyl tert-butyl ether	1.561	1.516	2.9	113	0.00	9.71
30	M	2-butanone	0.084	0.089	-6.0	117	0.00	9.91
31	M	1,1-dichloroethane	0.844	0.800	5.2	113	0.00	9.24
32	M	chloroprene	0.684	0.627	8.3	106	0.00	9.35
33	M	acrylonitrile	0.259	0.258	0.4	117	0.00	8.53
34	M	vinyl acetate	0.108	0.111	-2.8	123	0.00	9.17
35	M	ethyl acetate	0.094	0.094	0.0	109	0.00	9.93
36	M	2,2-dichloropropane	0.823	0.819	0.5	119	0.00	10.03
37	M	cis-1,2-dichloroethene	0.541	0.528	2.4	114	0.00	9.99
38		methyl acrylate	0.094	0.095	-1.1	114	0.00	10.02
39	M	propionitrile	0.111	0.108	2.7	108	0.00	9.99
40	M	bromochloromethane	0.276	0.278	-0.7	116	0.00	10.29
41	M	tetrahydrofuran	0.241	0.221	8.3	110	0.00	10.32

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9741-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251708.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

42	M	chloroform	0.877	0.812	7.4	117	0.00	10.38
43		tert-butyl formate	0.446	0.485	-8.7	124	0.00	10.42
44	S	dibromofluoromethane (s)	0.493	0.516	-4.7	124	0.00	10.58
45	M	methacrylonitrile	0.240	0.245	-2.1	117	0.00	10.20
46		cyclohexane	0.912	0.795	12.8	101	0.00	10.79
47	M	1,1,1-trichloroethane	0.860	0.840	2.3	113	0.00	10.65
48		iso-butyl alcohol	0.083	0.076	8.4	104	0.00	10.78
49		1,1-dichloropropene	0.642	0.592	7.8	109	0.00	10.83
50		carbon tetrachloride	0.768	0.754	1.8	116	0.00	10.86
51		tert-amyl alcohol	0.077	0.069	10.4	103	0.00	10.95
52	I	1,4-difluorobenzene	1.000	1.000	0.0	123	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.359	0.353	1.7	123	0.00	11.02
54	M	benzene	1.276	1.143	10.4	113	0.00	11.08
55	M	iso-octane	1.198	1.052	12.2	102	0.00	11.19
56		tert-amyl methyl ether	1.087	1.007	7.4	114	0.00	11.16
57	M	heptane	0.237	0.221	6.8	113	0.00	11.34
58	M	isopropyl acetate	0.094	0.090	4.3	116	0.00	10.98
59	M	1,2-dichloroethane	0.458	0.405	11.6	118	0.00	11.10
60		n-butyl alcohol	0.022	0.020	9.1	103	0.00	11.55
61		ethyl acrylate	0.416	0.420	-1.0	118	0.00	11.81
62	M	trichloroethene	0.325	0.294	9.5	117	0.00	11.83
63	M	2-nitropropane	0.138	0.130	5.8	109	0.00	12.62
64	m	methylcyclohexane	0.671	0.576	14.2	105	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.173	0.174	-0.6	116	0.00	12.65
66	M	methyl methacrylate	0.092	0.094	-2.2	115	0.00	12.08
67	M	1,2-dichloropropane	0.308	0.291	5.5	116	0.00	12.13
68	M	dibromomethane	0.207	0.211	-1.9	126	0.00	12.24
69	M	bromodichloromethane	0.426	0.430	-0.9	125	-0.01	12.40
70		epichlorohydrin	0.046	0.046	0.0	113	0.00	12.75
71	M	cis-1,3-dichloropropene	0.455	0.478	-5.1	122	0.00	12.89
72	M	4-methyl-2-pentanone	0.190	0.176	7.4	110	-0.01	12.99
73	M	3-methyl-1-butanol	0.036	0.032	11.1	102	0.00	12.99
74	I	chlorobenzene-d5	1.000	1.000	0.0	119	0.00	14.89
75	S	toluene-d8 (s)	1.330	1.298	2.4	118	0.00	13.22
76		toluene	0.884	0.815	7.8	112	0.00	13.31
77		trans-1,3-dichloropropene	0.455	0.481	-5.7	120	0.00	13.50
78		ethyl methacrylate	0.460	0.441	4.1	112	0.00	13.48
79		1,1,2-trichloroethane	0.252	0.262	-4.0	121	-0.01	13.74
80		2-hexanone	0.187	0.172	8.0	111	0.00	13.92
81	M	tetrachloroethene	0.433	0.382	11.8	109	0.00	13.91
82	M	1,3-dichloropropane	0.486	0.488	-0.4	117	0.00	13.94
83	M	butyl acetate	0.278	0.253	9.0	111	0.00	14.00
84	M	dibromochloromethane	0.378	0.382	-1.1	120	0.00	14.22
85	M	1,2-dibromoethane	0.346	0.373	-7.8	126	0.00	14.39
86	M	n-butyl ether	1.451	1.251	13.8	106	0.00	14.87
87	M	chlorobenzene	0.919	0.856	6.9	110	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.460	0.430	6.5	116	0.00	15.00
89	M	ethylbenzene	1.642	1.435	12.6	107	0.00	14.99
90	M	m,p-xylene	0.638	0.565	11.4	107	0.00	15.13
91	M	o-xylene	0.706	0.620	12.2	107	0.00	15.58
92	M	styrene	1.015	0.886	12.7	108	0.00	15.59
93		butyl acrylate	0.724	0.653	9.8	112	0.00	15.37
94		n-amyl acetate	0.325	0.275	15.4	108	0.00	15.60
95	M	bromoform	0.263	0.264	-0.4	119	-0.01	15.85
96		isopropylbenzene	1.910	1.692	11.4	106	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.057	0.159	-178.9#	296#	0.00	16.01
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	17.51

Continuing Calibration Summary

Job Number: JC91309 **Sample:** VA9741-ECC9645
Account: EAENYES EA Engineering **Lab FileID:** A251708.D
Project: Niagara Falls Air Reserve Station (NFARS), Niagara Falls, NY

99	S	4-bromofluorobenzene (s)	0.779	0.849	-9.0	117	0.00	16.20
100	M	bromobenzene	0.735	0.766	-4.2	113	0.00	16.41
101	M	1,1,2,2-tetrachloroethane	0.955	1.038	-8.7	116	-0.01	16.28
102	M	trans-1,4-dichloro-2-bute	0.074	0.188	-154.1#	228#	0.00	16.31
103	M	1,2,3-trichloropropane	0.273	0.280	-2.6	111	-0.01	16.38
104	M	n-propylbenzene	3.588	3.475	3.1	106	0.00	16.43
105	M	2-chlorotoluene	0.799	0.802	-0.4	109	0.00	16.59
106	M	4-chlorotoluene	1.867	1.832	1.9	109	0.00	16.72
107	M	1,3,5-trimethylbenzene	2.766	2.855	-3.2	106	0.00	16.61
108	M	tert-butylbenzene	0.641	0.670	-4.5	111	0.00	16.99
109	M	1,2,4-trimethylbenzene	2.737	2.715	0.8	107	0.00	17.05
110	M	sec-butylbenzene	3.777	3.854	-2.0	106	0.00	17.24
111	M	1,3-dichlorobenzene	1.458	1.388	4.8	108	-0.01	17.43
112	M	p-isopropyltoluene	3.147	3.209	-2.0	107	0.00	17.38
113	M	1,4-dichlorobenzene	1.475	1.368	7.3	107	0.00	17.54
114	M	1,2-dichlorobenzene	1.579	1.513	4.2	109	0.00	17.96
115	M	n-butylbenzene	1.539	1.462	5.0	106	0.00	17.84
116	M	1,2-dibromo-3-chloropropa	0.334	0.334	0.0	107	0.00	18.81
117	M	1,3,5-trichlorobenzene	1.489	1.387	6.9	108	0.00	19.02

			True	Calc.	% Drift			
118		2-ethylhexyl acrylate	10.000	8.400	16.0	101	0.00	19.74

			AvgRF	CCRF	% Dev			
119	M	1,2,4-trichlorobenzene	1.340	1.315	1.9	108	-0.01	19.77
120	M	hexachlorobutadiene	0.533	0.562	-5.4	118	0.00	19.90
121	M	naphthalene	3.917	3.733	4.7	104	-0.01	20.10
122	M	1,2,3-trichlorobenzene	1.345	1.360	-1.1	110	-0.01	20.35
123	M	hexachloroethane	0.495	0.634	-28.1	134	0.00	18.29
124		2-methylnaphthalene	2.089	2.004	4.1	103	-0.01	21.41
125		ethylenimine		----------NA----------				
126		bis(chloromethyl)ether		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A249738.D MA9645.M Tue Jul 16 20:02:15 2019

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251657.d
Acq On : 15 Jul 2019 2:41 pm
Operator : edwardd
Sample : JC91309-1 Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:30:16 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

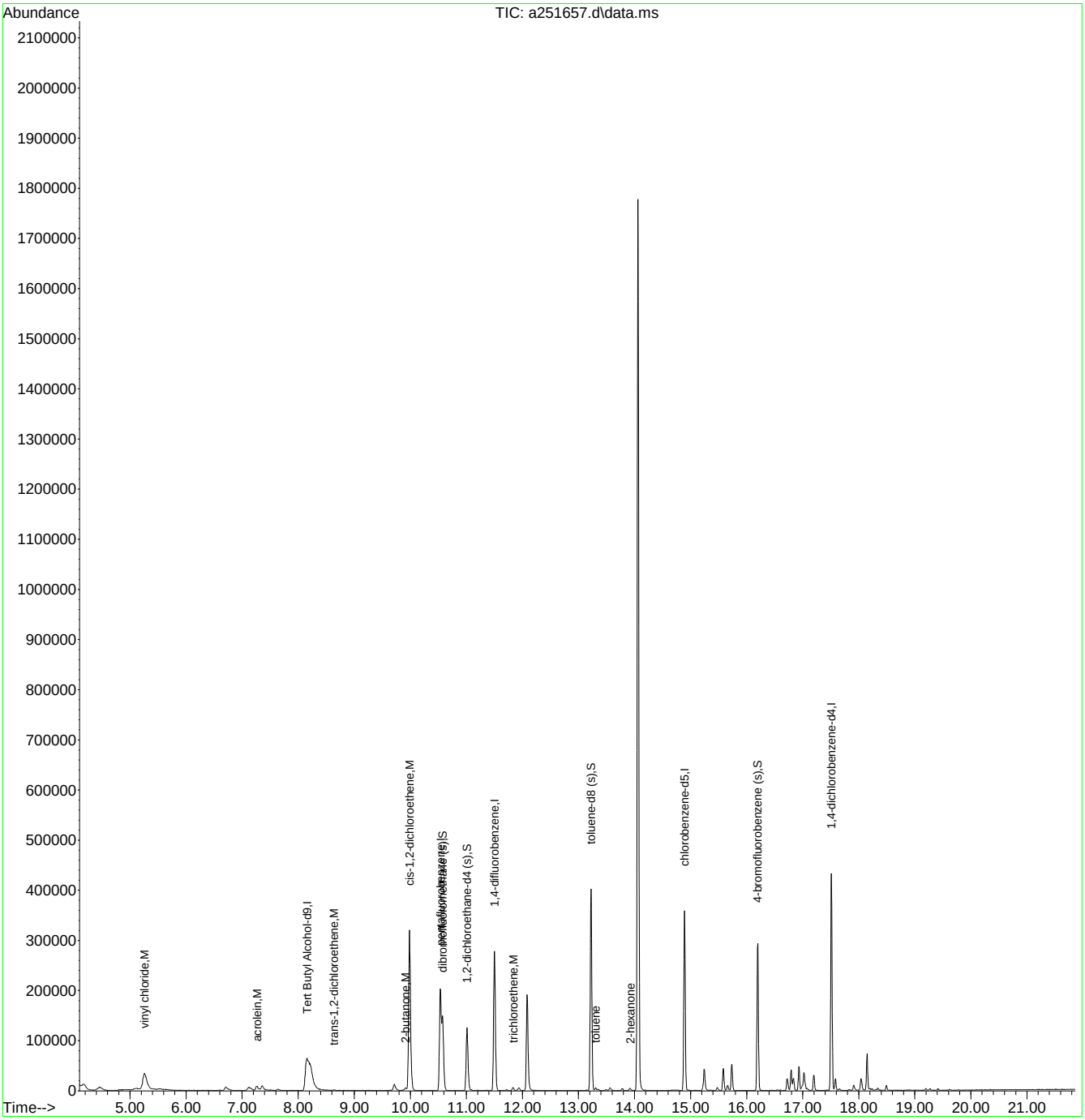
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.161	65	297865	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	185179	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.503	114	287821	50.00	ug/L	0.00
74) chlorobenzene-d5	14.892	117	234936	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.512	152	129784	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.577	113	98968	54.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.44%			
53) 1,2-dichloroethane-d4 (s)	11.011	65	106867	51.68	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.36%			
75) toluene-d8 (s)	13.223	98	304698	48.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.54%			
99) 4-bromofluorobenzene (s)	16.194	95	105308	52.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.18%			
Target Compounds						Qvalue
9) vinyl chloride	5.258	62	96183	23.89	ug/L	98
16) acrolein	7.266	56	15424	36.39	ug/L	95
26) trans-1,2-dichloroethene	8.636	96	799	0.46	ug/L	77
30) 2-butanone	9.913	72	2591	8.34	ug/L #	67
37) cis-1,2-dichloroethene	9.986	96	184582	92.09	ug/L	99
62) trichloroethene	11.837	95	2530	1.35	ug/L	87
76) toluene	13.307	92	2487	0.60	ug/L #	82
80) 2-hexanone	13.924	58	2144	2.45	ug/L	91

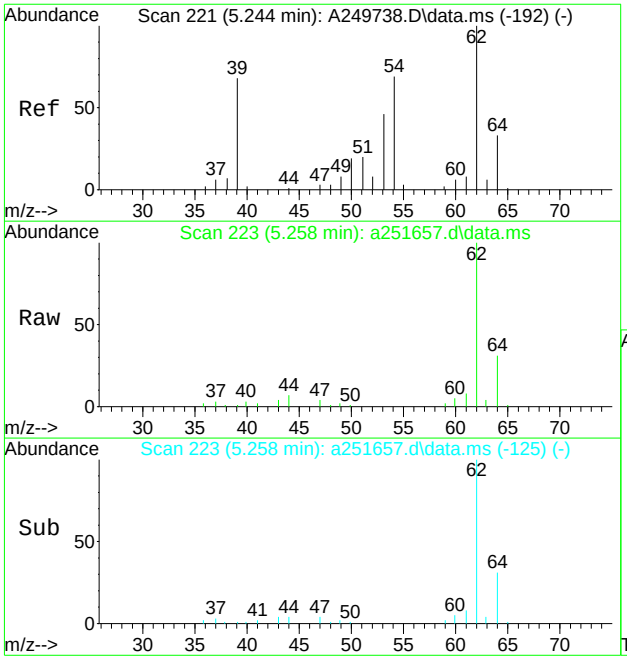
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251657.d
Acq On : 15 Jul 2019 2:41 pm
Operator : edwardd
Sample : JC91309-1 Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:30:16 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

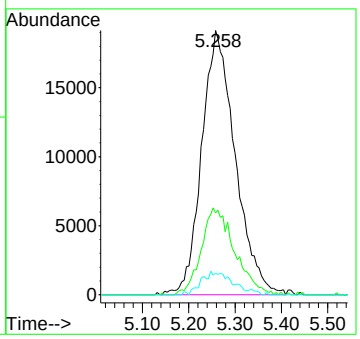


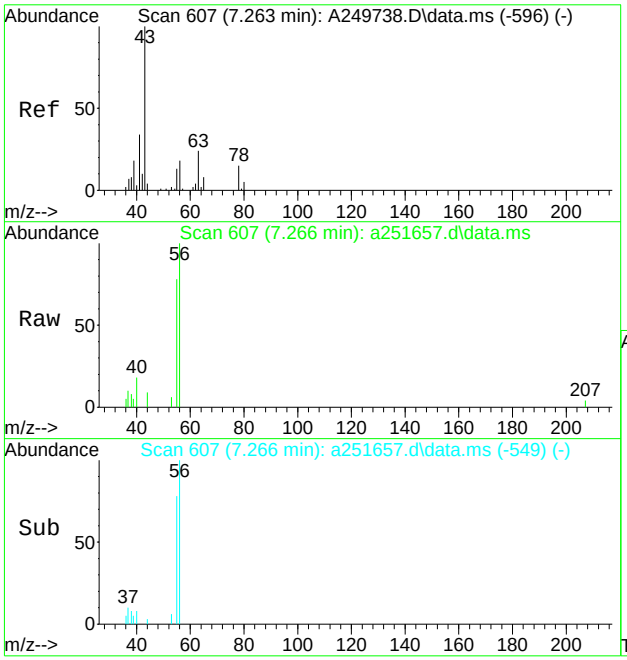


#9
vinyl chloride
Concen: 23.89 ug/L
RT: 5.258 min Scan# 223
Delta R.T. 0.013 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 62 Resp: 96183

Ion	Ratio	Lower	Upper
62	100		
64	31.0	2.5	62.5
61	8.1	0.0	37.6

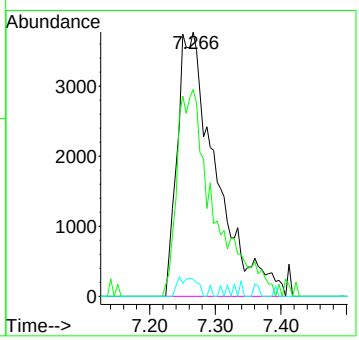


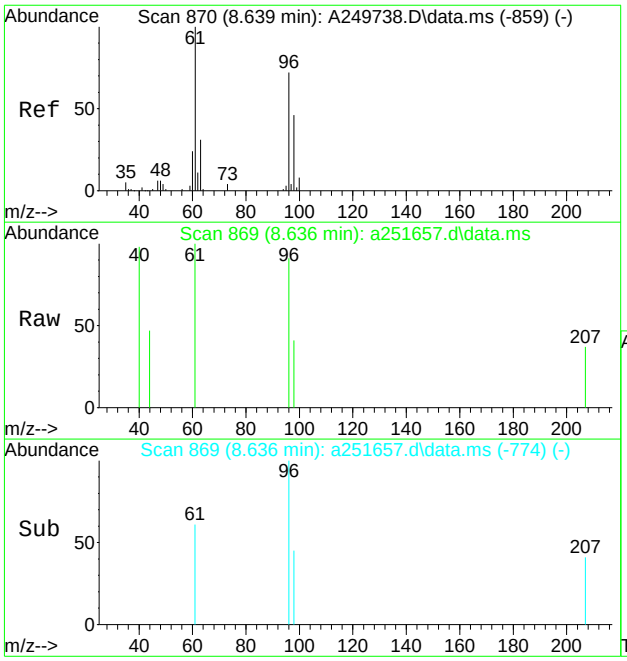


#16
acrolein
Concen: 36.39 ug/L
RT: 7.266 min Scan# 607
Delta R.T. 0.003 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 56 Resp: 15424

Ion	Ratio	Lower	Upper
56	100		
55	78.3	44.9	104.9
53	6.5	0.0	41.8

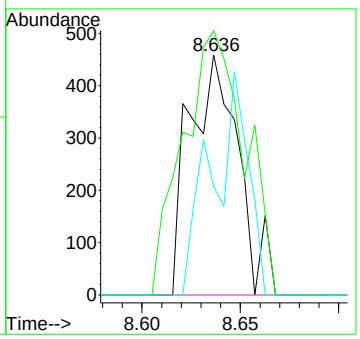


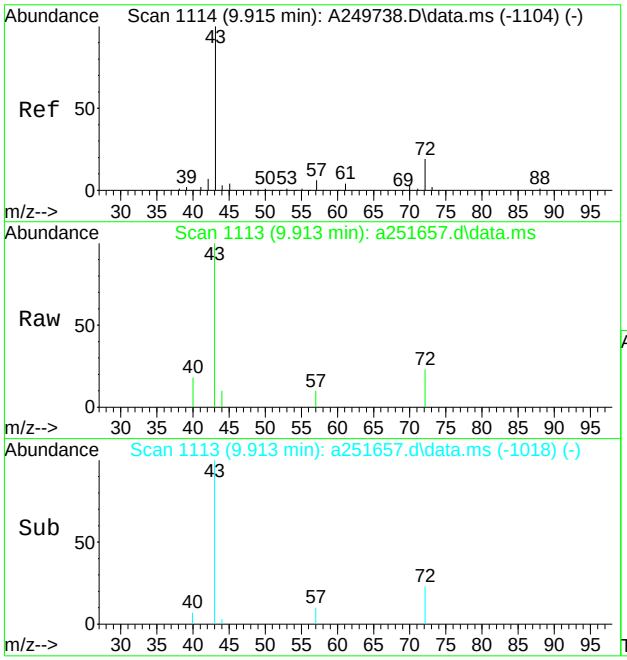


#26
trans-1,2-dichloroethene
Concen: 0.46 ug/L
RT: 8.636 min Scan# 869
Delta R.T. -0.002 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 96 Resp: 799

Ion	Ratio	Lower	Upper
96	100		
61	110.2	108.5	168.5
98	45.1	33.4	93.4

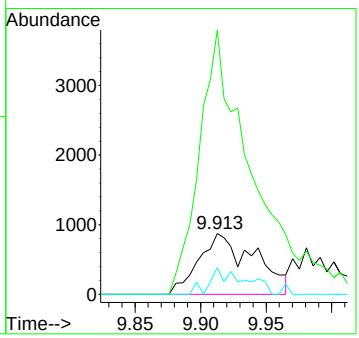


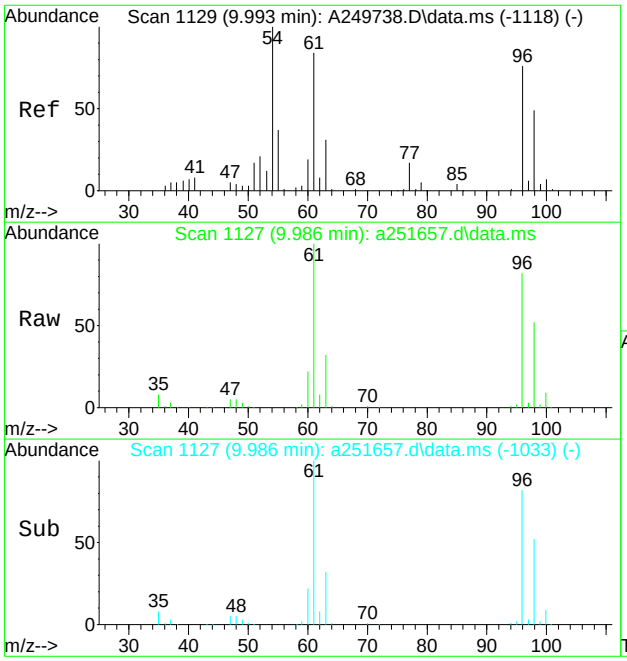


#30
2-butanone
Concen: 8.34 ug/L
RT: 9.913 min Scan# 1113
Delta R.T. -0.002 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 72 Resp: 2591

Ion	Ratio	Lower	Upper
72	100		
43	433.7	499.3	559.3#
57	43.9	0.2	60.2

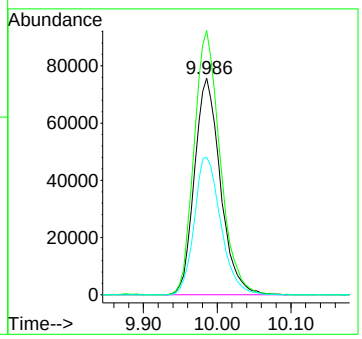


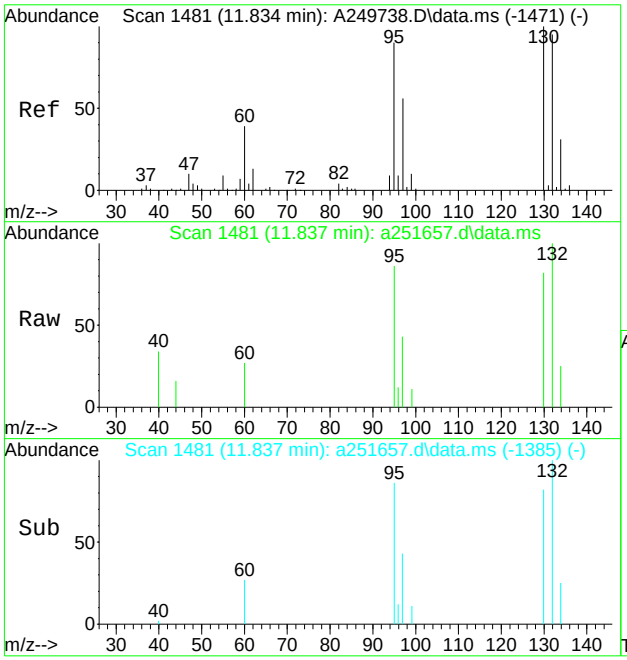


#37
cis-1,2-dichloroethene
Concen: 92.09 ug/L
RT: 9.986 min Scan# 1127
Delta R.T. -0.007 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 96 Resp: 184582

Ion	Ratio	Lower	Upper
96	100		
61	122.0	91.3	151.3
98	63.6	34.7	94.7

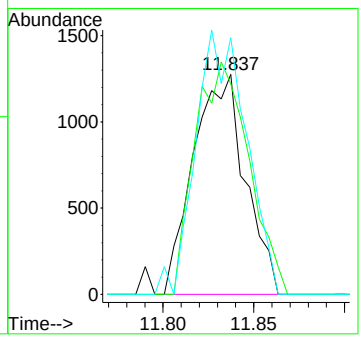


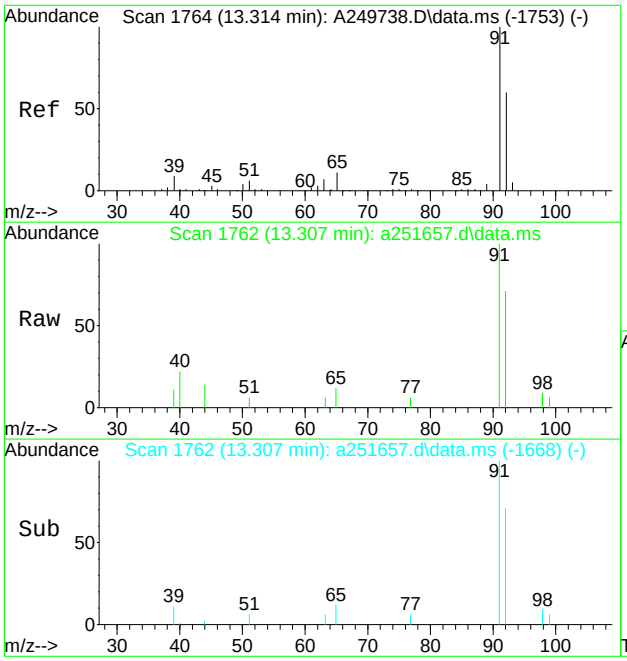


#62
trichloroethene
Concen: 1.35 ug/L
RT: 11.837 min Scan# 1481
Delta R.T. 0.003 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 95 Resp: 2530

Ion	Ratio	Lower	Upper
95	100		
130	95.7	81.5	141.5
132	116.7	75.4	135.4

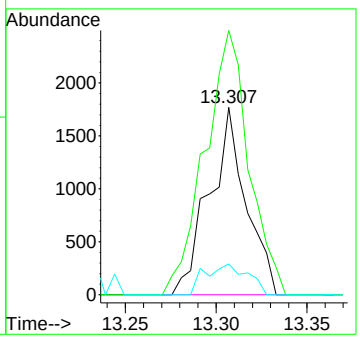


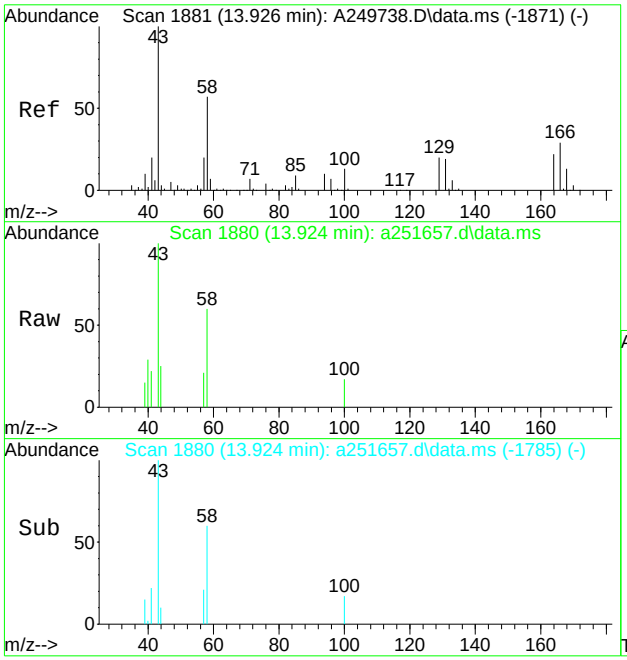


#76
toluene
Concen: 0.60 ug/L
RT: 13.307 min Scan# 1762
Delta R.T. -0.007 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 92 Resp: 2487

Ion	Ratio	Lower	Upper
92	100		
91	141.0	147.7	187.7#
65	16.5	0.0	37.8

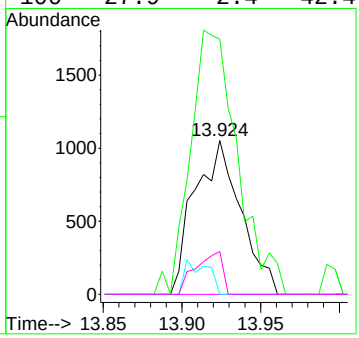




#80
2-hexanone
Concen: 2.45 ug/L
RT: 13.924 min Scan# 1880
Delta R.T. -0.002 min
Lab File: a251657.d
Acq: 15 Jul 2019 2:41 pm

Tgt Ion: 58 Resp: 2144

Ion	Ratio	Lower	Upper
58	100		
43	165.8	155.0	195.0
85	0.0	0.0	35.7
100	27.9	2.4	42.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251702.D
Acq On : 16 Jul 2019 2:38 pm
Operator : EddieH
Sample : JC91309-1
Misc : MS36113,VA9741,5,,,,2.5
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 15:16:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

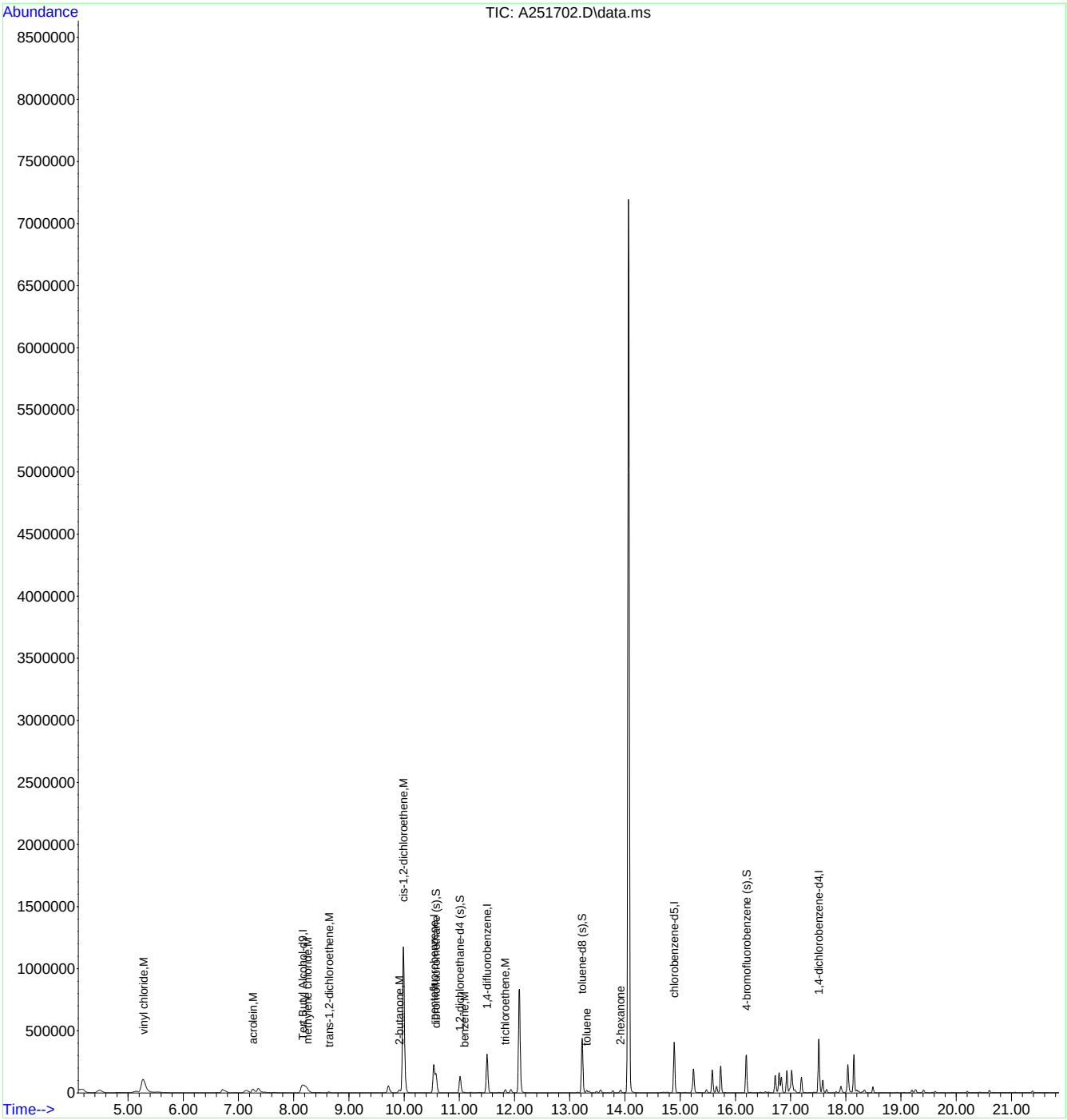
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	278337	500.00	ug/L	0.00
5) pentafluorobenzene	10.535	168	202733	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.503	114	309375	50.00	ug/L	0.00
74) chlorobenzene-d5	14.892	117	258184	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.512	152	129441	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.577	113	106040	53.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.14%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	113234	50.95	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.90%			
75) toluene-d8 (s)	13.223	98	337062	49.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.18%			
99) 4-bromofluorobenzene (s)	16.199	95	107954	53.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.08%			
Target Compounds						Qvalue
9) vinyl chloride	5.273	62	336204	76.28	ug/L	98
16) acrolein	7.261	56	60738	130.91	ug/L	89
23) methylene chloride	8.255	84	846	0.37	ug/L #	12
26) trans-1,2-dichloroethene	8.636	96	4443	2.33	ug/L	82
30) 2-butanone	9.918	72	12488	36.72	ug/L #	54
37) cis-1,2-dichloroethene	9.986	96	705115	321.32	ug/L	99
54) benzene	11.095	78	5244	0.66	ug/L	91
62) trichloroethene	11.827	95	10130	5.04	ug/L	94
76) toluene	13.307	92	10443	2.29	ug/L	97
80) 2-hexanone	13.924	58	9667	10.03	ug/L	88

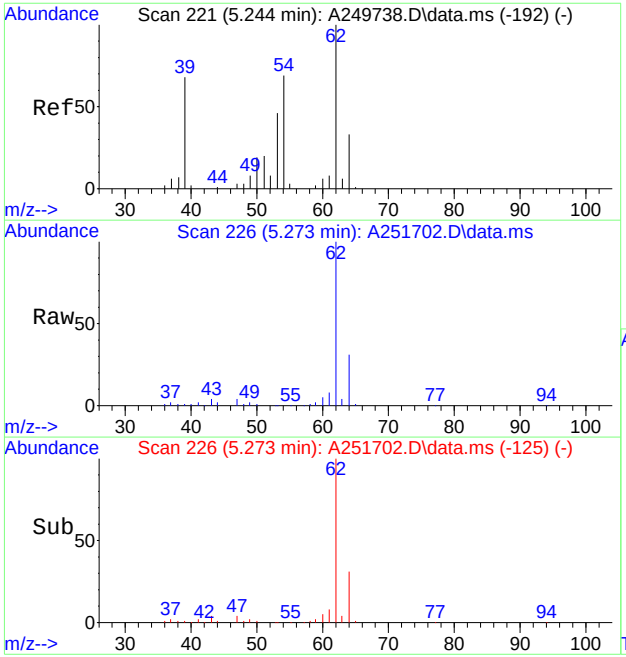
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251702.D
Acq On : 16 Jul 2019 2:38 pm
Operator : EddieH
Sample : JC91309-1
Misc : MS36113,VA9741,5,,,,2.5
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 15:16:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

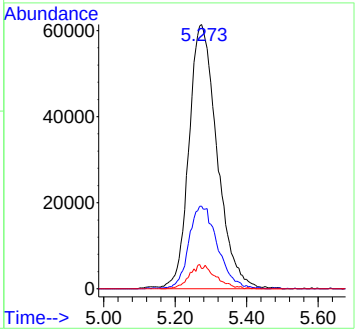


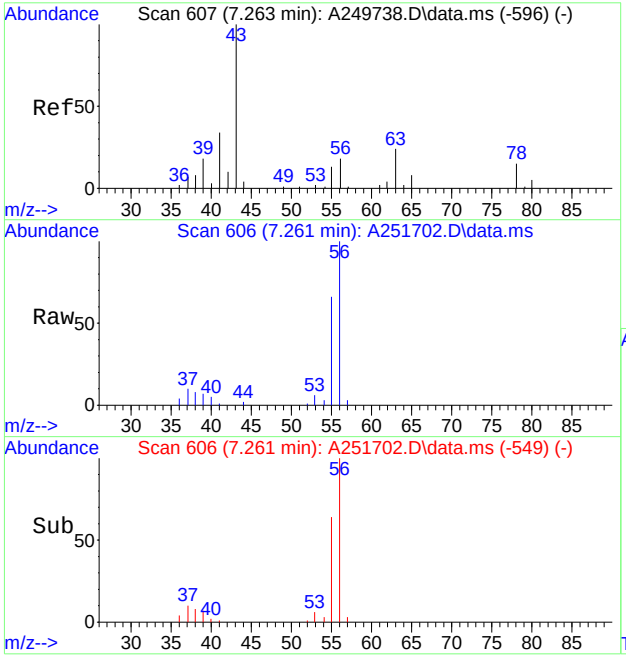


#9
vinyl chloride
Concen: 76.28 ug/L
RT: 5.273 min Scan# 226
Delta R.T. 0.029 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 62 Resp: 336204

Ion	Ratio	Lower	Upper
62	100		
64	31.3	2.5	62.5
61	7.7	0.0	37.6

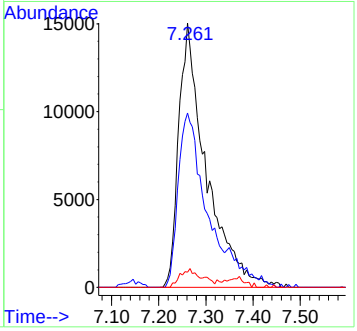


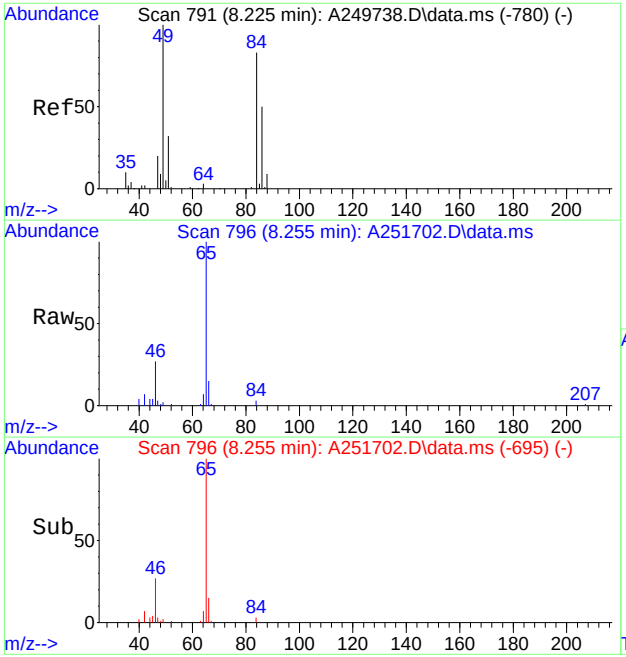


#16
acrolein
Concen: 130.91 ug/L
RT: 7.261 min Scan# 606
Delta R.T. -0.002 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 56 Resp: 60738

Ion	Ratio	Lower	Upper
56	100		
55	65.9	44.9	104.9
53	5.7	0.0	41.8

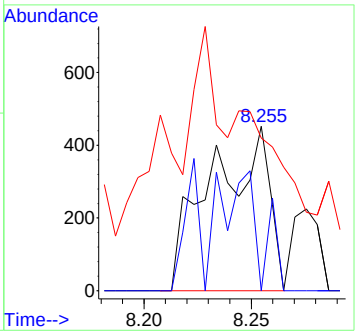


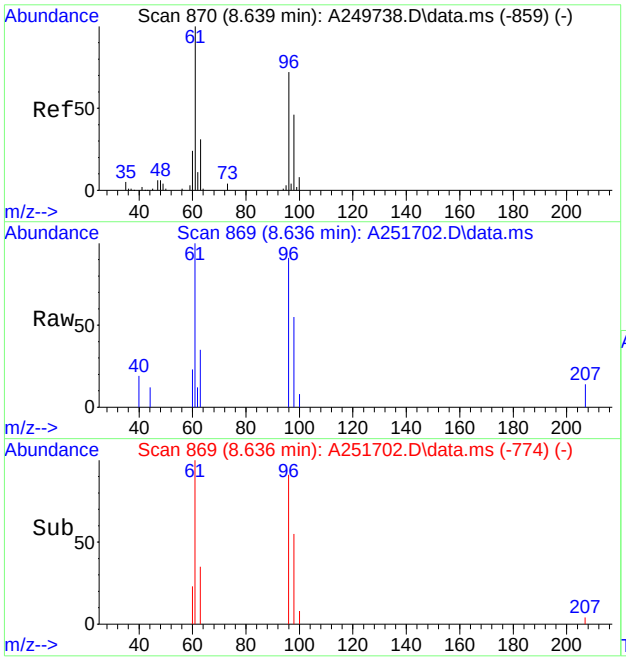


#23
methylene chloride
Concen: 0.37 ug/L
RT: 8.255 min Scan# 796
Delta R.T. 0.030 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 84 Resp: 846

Ion	Ratio	Lower	Upper
84	100		
86	0.0	30.5	90.5#
49	17.7	90.9	150.9#

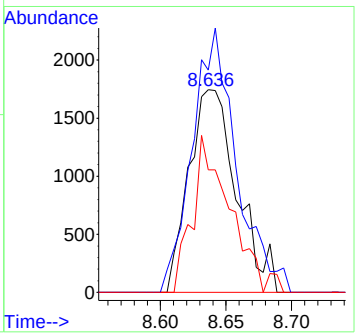


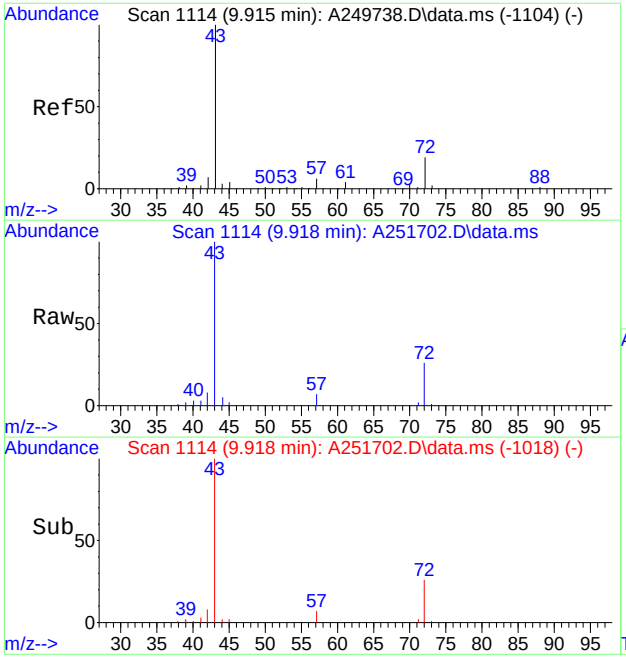


#26
trans-1,2-dichloroethene
Concen: 2.33 ug/L
RT: 8.636 min Scan# 869
Delta R.T. -0.002 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 96 Resp: 4443

Ion	Ratio	Lower	Upper
96	100		
61	109.7	108.5	168.5
98	60.4	33.4	93.4

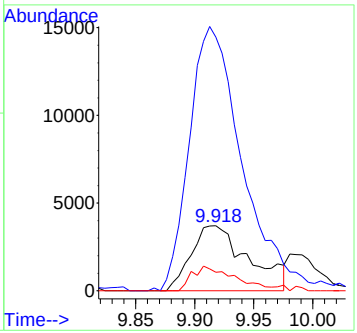


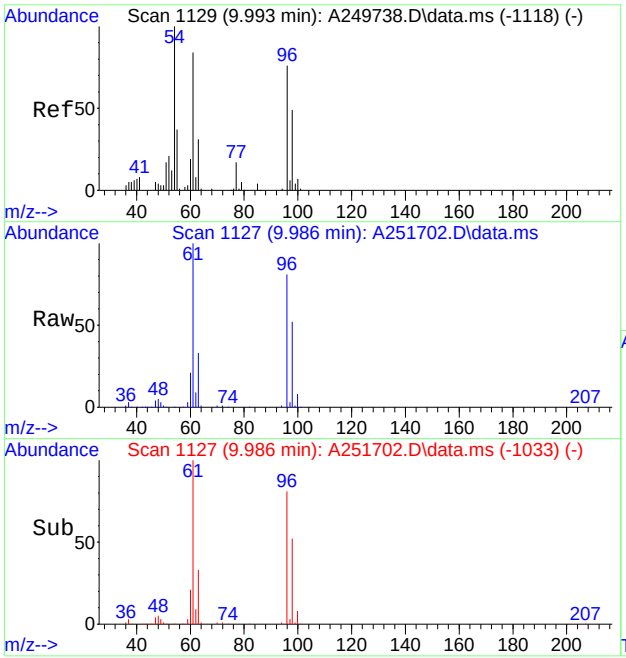


#30
2-butanone
Concen: 36.72 ug/L
RT: 9.918 min Scan# 1114
Delta R.T. 0.003 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 72 Resp: 12488

Ion	Ratio	Lower	Upper
72	100		
43	390.5	499.3	559.3#
57	28.8	0.2	60.2

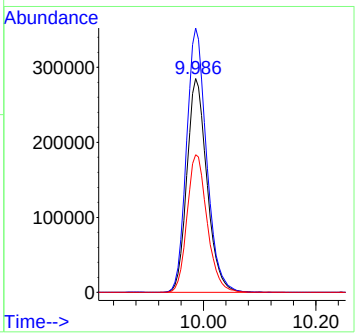


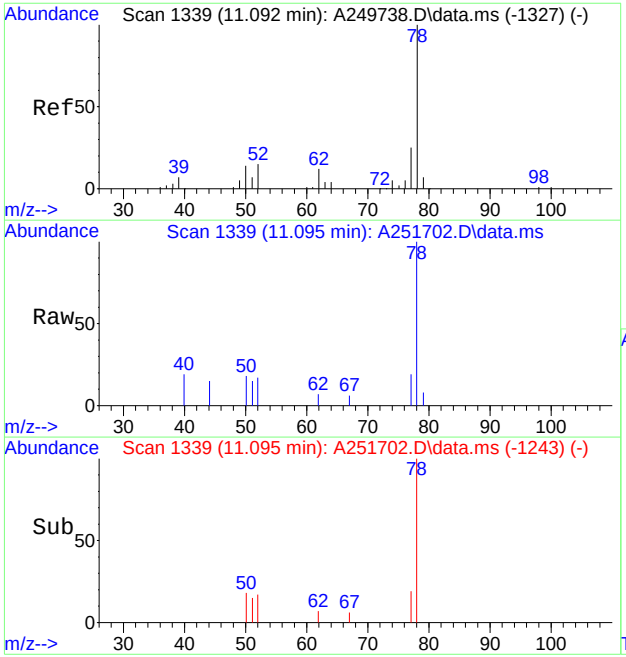


#37
cis-1,2-dichloroethene
Concen: 321.32 ug/L
RT: 9.986 min Scan# 1127
Delta R.T. -0.007 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 96 Resp: 705115

Ion	Ratio	Lower	Upper
96	100		
61	123.6	91.3	151.3
98	64.4	34.7	94.7

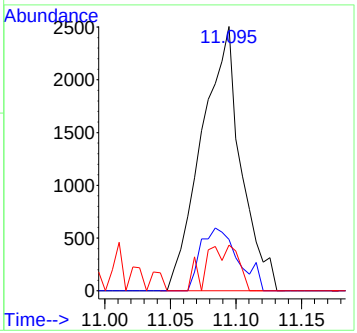


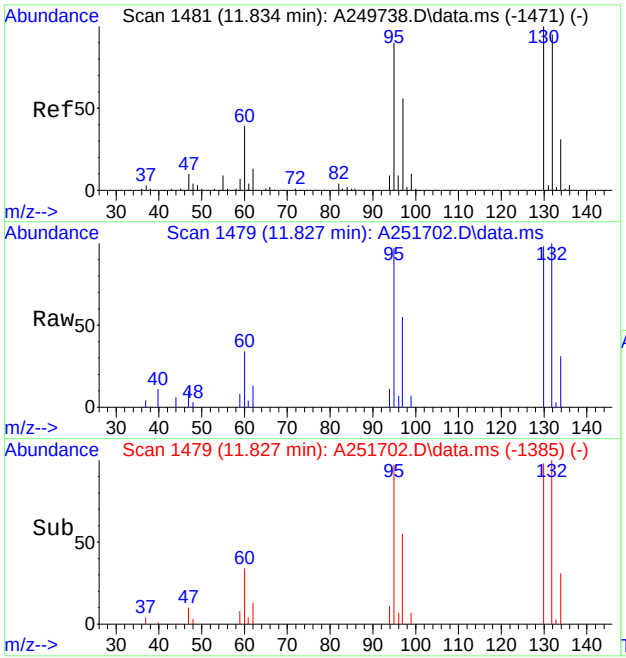


#54
benzene
Concen: 0.66 ug/L
RT: 11.095 min Scan# 1339
Delta R.T. 0.003 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 78 Resp: 5244

Ion	Ratio	Lower	Upper
78	100		
77	19.4	0.0	54.7
52	17.4	0.0	45.2

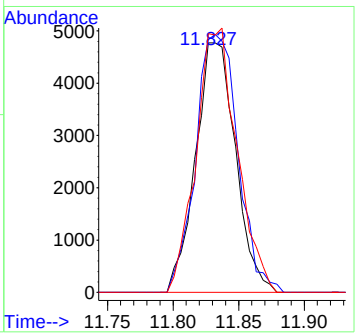


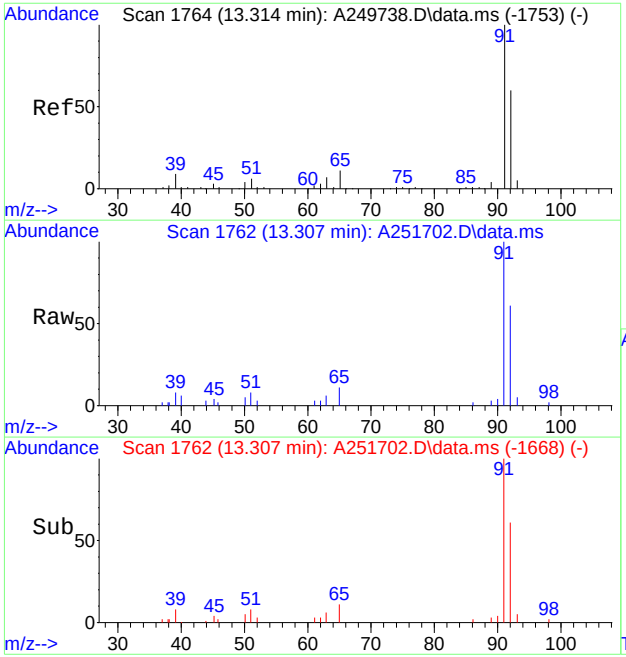


#62
trichloroethene
Concen: 5.04 ug/L
RT: 11.827 min Scan# 1479
Delta R.T. -0.007 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 95 Resp: 10130

Ion	Ratio	Lower	Upper
95	100		
130	101.3	81.5	141.5
132	103.6	75.4	135.4

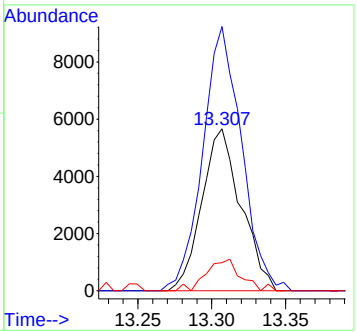


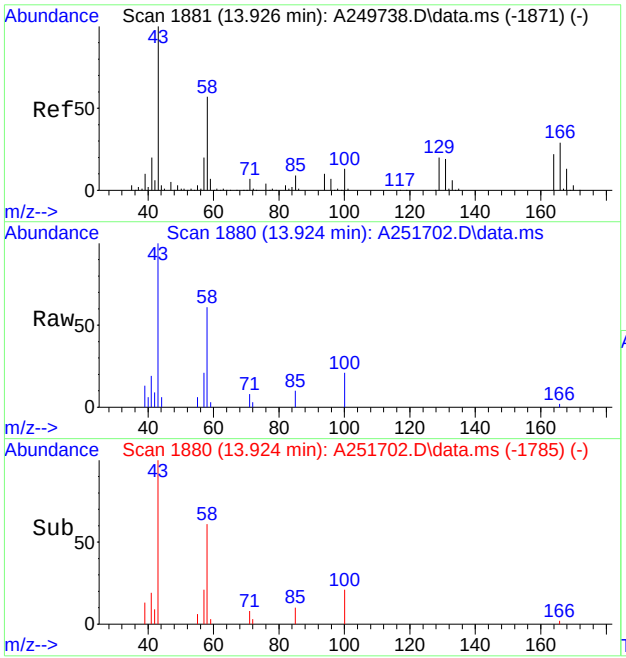


#76
toluene
Concen: 2.29 ug/L
RT: 13.307 min Scan# 1762
Delta R.T. -0.007 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 92 Resp: 10443

Ion	Ratio	Lower	Upper
92	100		
91	163.3	147.7	187.7
65	17.3	0.0	37.8

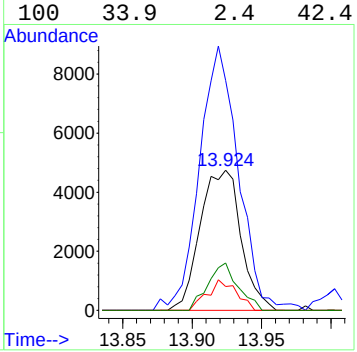




#80
2-hexanone
Concen: 10.03 ug/L
RT: 13.924 min Scan# 1880
Delta R.T. -0.002 min
Lab File: A251702.D
Acq: 16 Jul 2019 2:38 pm

Tgt Ion: 58 Resp: 9667

Ion	Ratio	Lower	Upper
58	100		
43	159.6	155.0	195.0
85	17.0	0.0	35.7
100	33.9	2.4	42.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251700.D
Acq On : 16 Jul 2019 1:40 pm
Operator : EddieH
Sample : JC91309-2
Misc : MS36113,VA9741,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 15:04:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

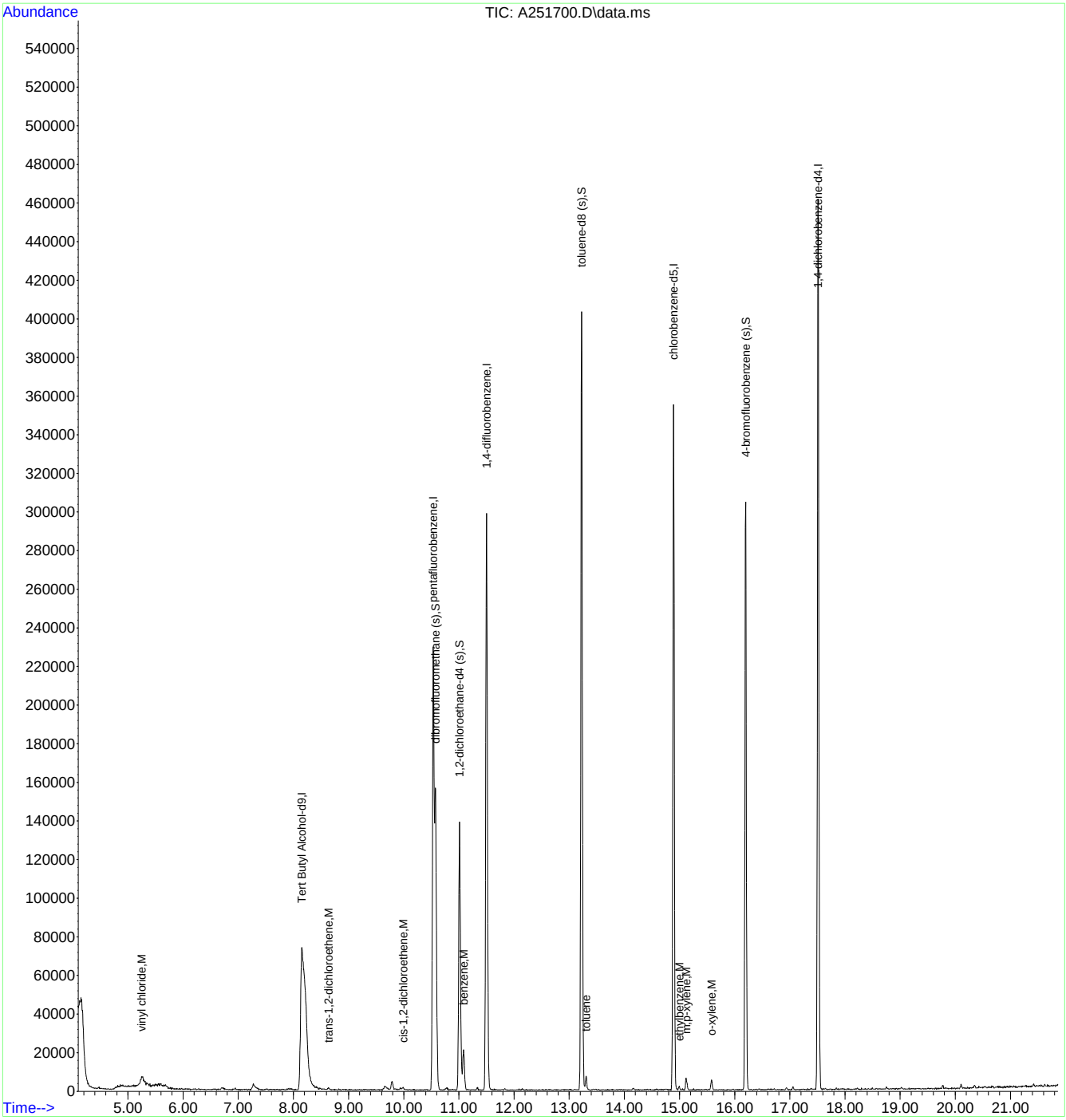
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.155	65	287589	500.00	ug/L	-0.01
5) pentafluorobenzene	10.535	168	196002	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.503	114	294394	50.00	ug/L	0.00
74) chlorobenzene-d5	14.892	117	233316	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.512	152	137873	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.577	113	102358	52.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.96%			
53) 1,2-dichloroethane-d4 (s)	11.011	65	108971	51.52	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.04%			
75) toluene-d8 (s)	13.223	98	303010	48.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.66%			
99) 4-bromofluorobenzene (s)	16.199	95	108706	50.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.24%			
Target Compounds						Qvalue
9) vinyl chloride	5.247	62	13011	3.05	ug/L	94
26) trans-1,2-dichloroethene	8.642	96	637	0.35	ug/L #	45
37) cis-1,2-dichloroethene	9.991	96	549	0.26	ug/L	77
54) benzene	11.084	78	21778	2.90	ug/L	98
76) toluene	13.307	92	3896	0.94	ug/L	90
89) ethylbenzene	14.996	91	1737	0.23	ug/L	64
90) m,p-xylene	15.127	106	2387	0.80	ug/L	82
91) o-xylene	15.582	106	1622	0.49	ug/L	94

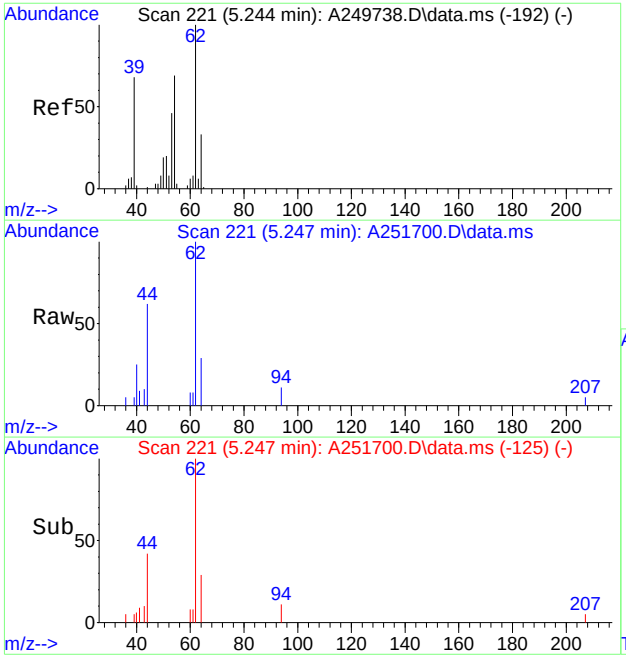
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251700.D
Acq On : 16 Jul 2019 1:40 pm
Operator : EddieH
Sample : JC91309-2
Misc : MS36113,VA9741,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 15:04:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

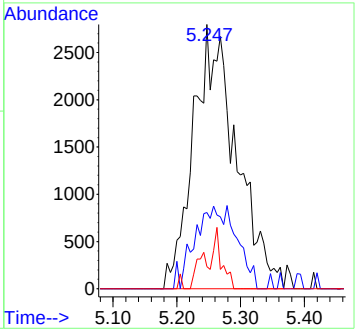


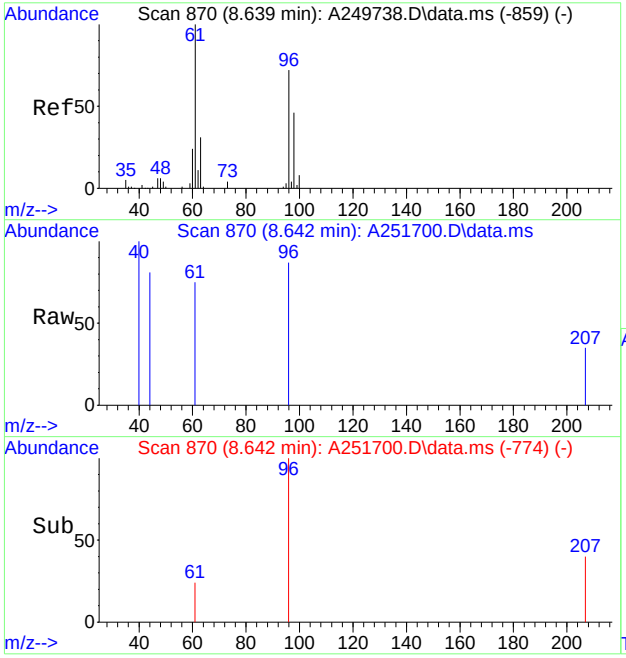


#9
vinyl chloride
Concen: 3.05 ug/L
RT: 5.247 min Scan# 221
Delta R.T. 0.003 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion: 62 Resp: 13011

Ion	Ratio	Lower	Upper
62	100		
64	28.9	2.5	62.5
61	8.4	0.0	37.6

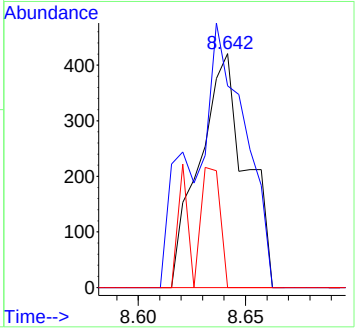


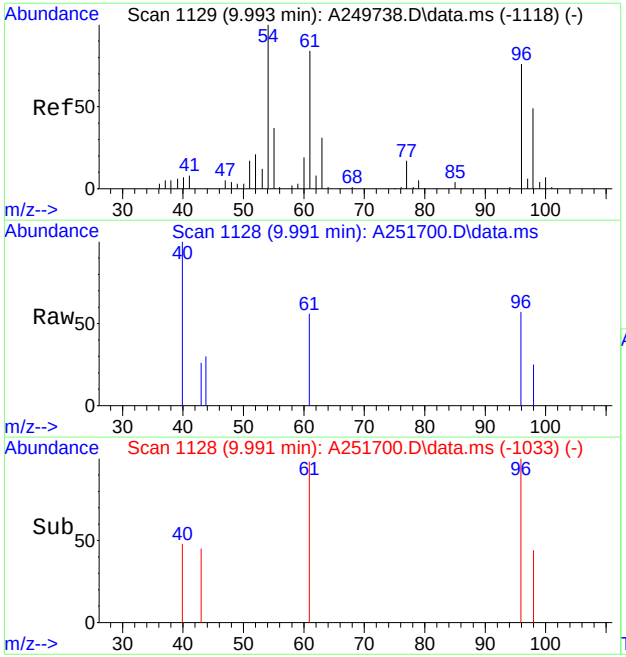


#26
trans-1,2-dichloroethene
Concen: 0.35 ug/L
RT: 8.642 min Scan# 870
Delta R.T. 0.003 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion: 96 Resp: 637

Ion	Ratio	Lower	Upper
96	100		
61	86.2	108.5	168.5#
98	0.0	33.4	93.4#

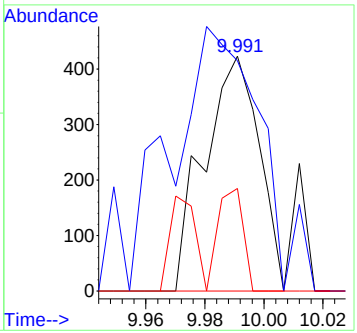


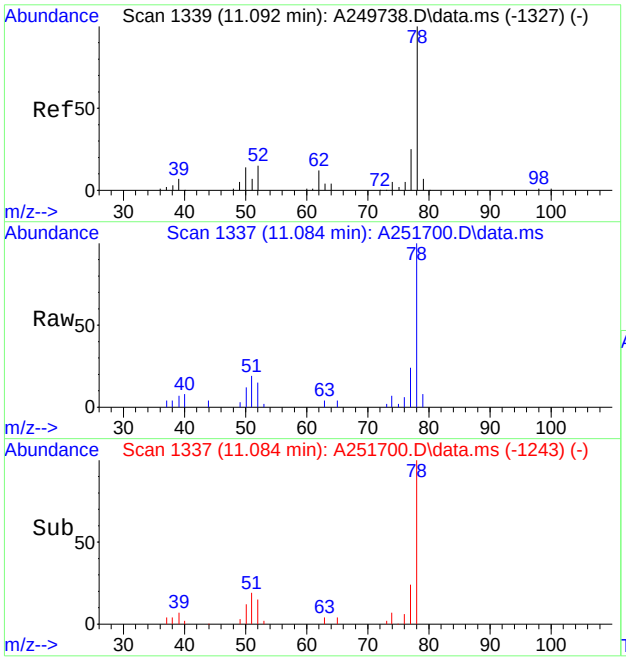


#37
cis-1,2-dichloroethene
Concen: 0.26 ug/L
RT: 9.991 min Scan# 1128
Delta R.T. -0.002 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion: 96 Resp: 549

Ion	Ratio	Lower	Upper
96	100		
61	98.1	91.3	151.3
98	43.7	34.7	94.7

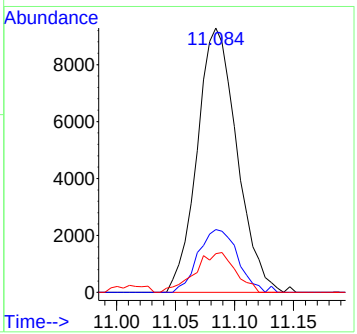


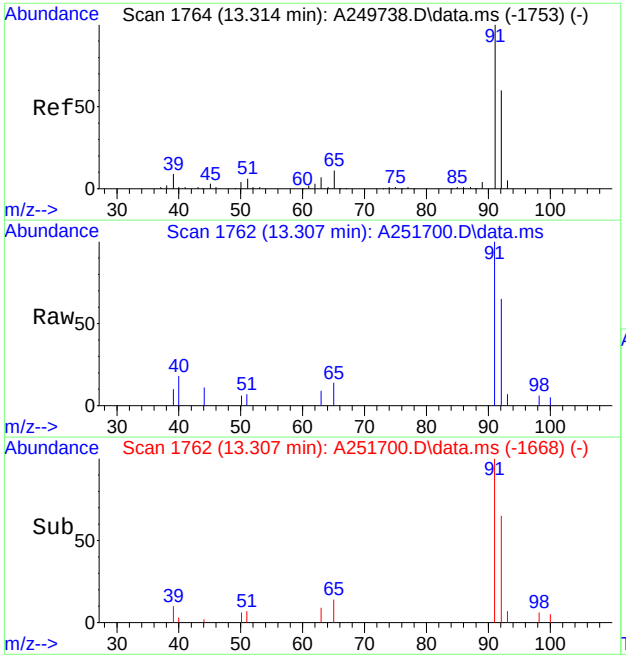


#54
benzene
Concen: 2.90 ug/L
RT: 11.084 min Scan# 1337
Delta R.T. -0.007 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion: 78 Resp: 21778

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	54.7
52	14.7	0.0	45.2

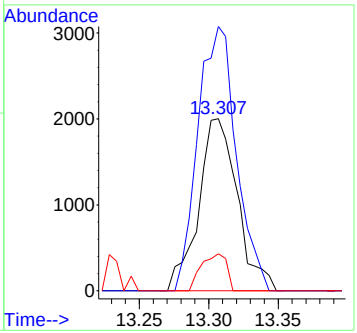


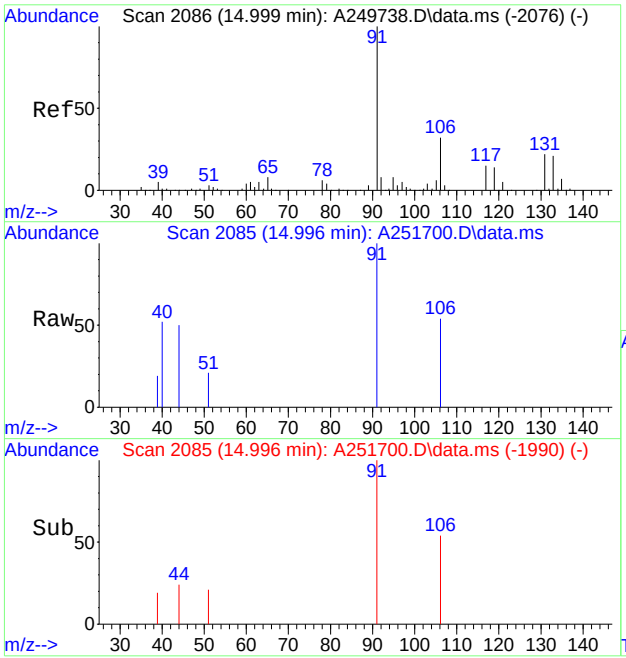


#76
toluene
Concen: 0.94 ug/L
RT: 13.307 min Scan# 1762
Delta R.T. -0.007 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion: 92 Resp: 3896

Ion	Ratio	Lower	Upper
92	100		
91	153.6	147.7	187.7
65	21.6	0.0	37.8

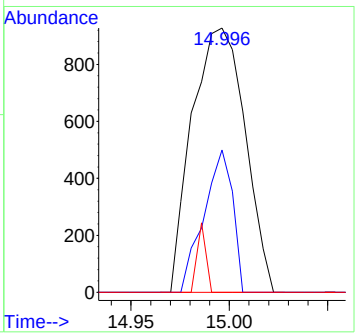


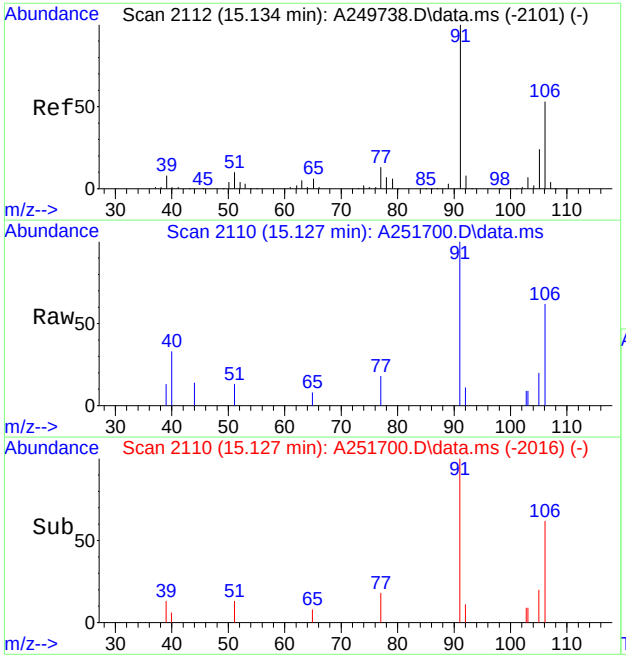


#89
ethylbenzene
Concen: 0.23 ug/L
RT: 14.996 min Scan# 2085
Delta R.T. -0.002 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion: 91 Resp: 1737

Ion	Ratio	Lower	Upper
91	100		
106	53.9	2.0	62.0
77	0.0	0.0	38.0

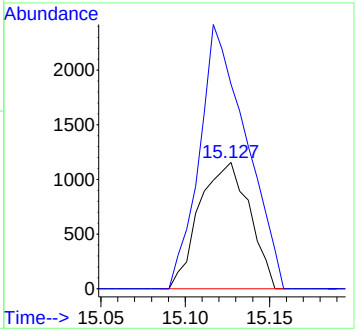


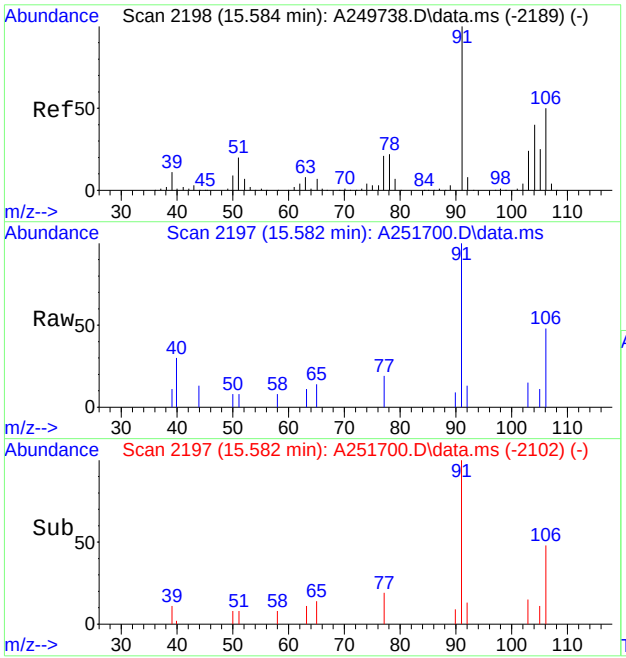


#90
m,p-xylene
Concen: 0.80 ug/L
RT: 15.127 min Scan# 2110
Delta R.T. -0.007 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion:106 Resp: 2387

Ion	Ratio	Lower	Upper
106	100		
91	161.9	157.4	217.4

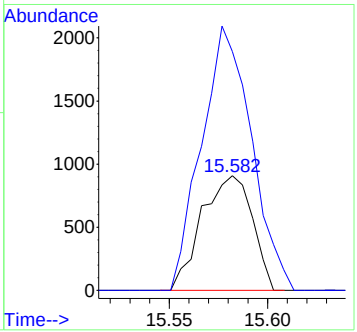




#91
o-xylene
Concen: 0.49 ug/L
RT: 15.582 min Scan# 2197
Delta R.T. -0.002 min
Lab File: A251700.D
Acq: 16 Jul 2019 1:40 pm

Tgt Ion:106 Resp: 1622

Ion	Ratio	Lower	Upper
106	100		
91	208.3	169.7	229.7



Manual Integrations APPROVED (compounds with "m" flag)
MoHui Huang
07/16/19 16:45

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251701.D
Acq On : 16 Jul 2019 2:09 pm
Operator : EddieH
Sample : JC91309-3
Misc : MS36113,VA9741,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 15:05:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.152	65	276133	500.00	ug/L	-0.02
5) pentafluorobenzene	10.537	168	197336	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.499	114	299415	50.00	ug/L	0.00
74) chlorobenzene-d5	14.888	117	230816	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	17.508	152	137400	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	103694	53.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.62%			
53) 1,2-dichloroethane-d4 (s)	11.007	65	109884	51.09	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.18%			
75) toluene-d8 (s)	13.225	98	307788	50.14	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.28%			
99) 4-bromofluorobenzene (s)	16.195	95	104901	49.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.02%			
Target Compounds						Qvalue
9) vinyl chloride	5.265	62	12081	2.82	ug/L	87
26) trans-1,2-dichloroethene	8.638	96	662	0.36	ug/L #	37
37) cis-1,2-dichloroethene	9.987	96	610	0.29	ug/L	85
54) benzene	11.080	78	22573	2.95	ug/L	98
76) toluene	13.303	92	3918	0.96	ug/L	95
89) ethylbenzene	14.993	91	1649	0.22	ug/L	86
90) m,p-xylene	15.113	106	2523m	0.86	ug/L	
91) o-xylene	15.578	106	1926	0.59	ug/L	87

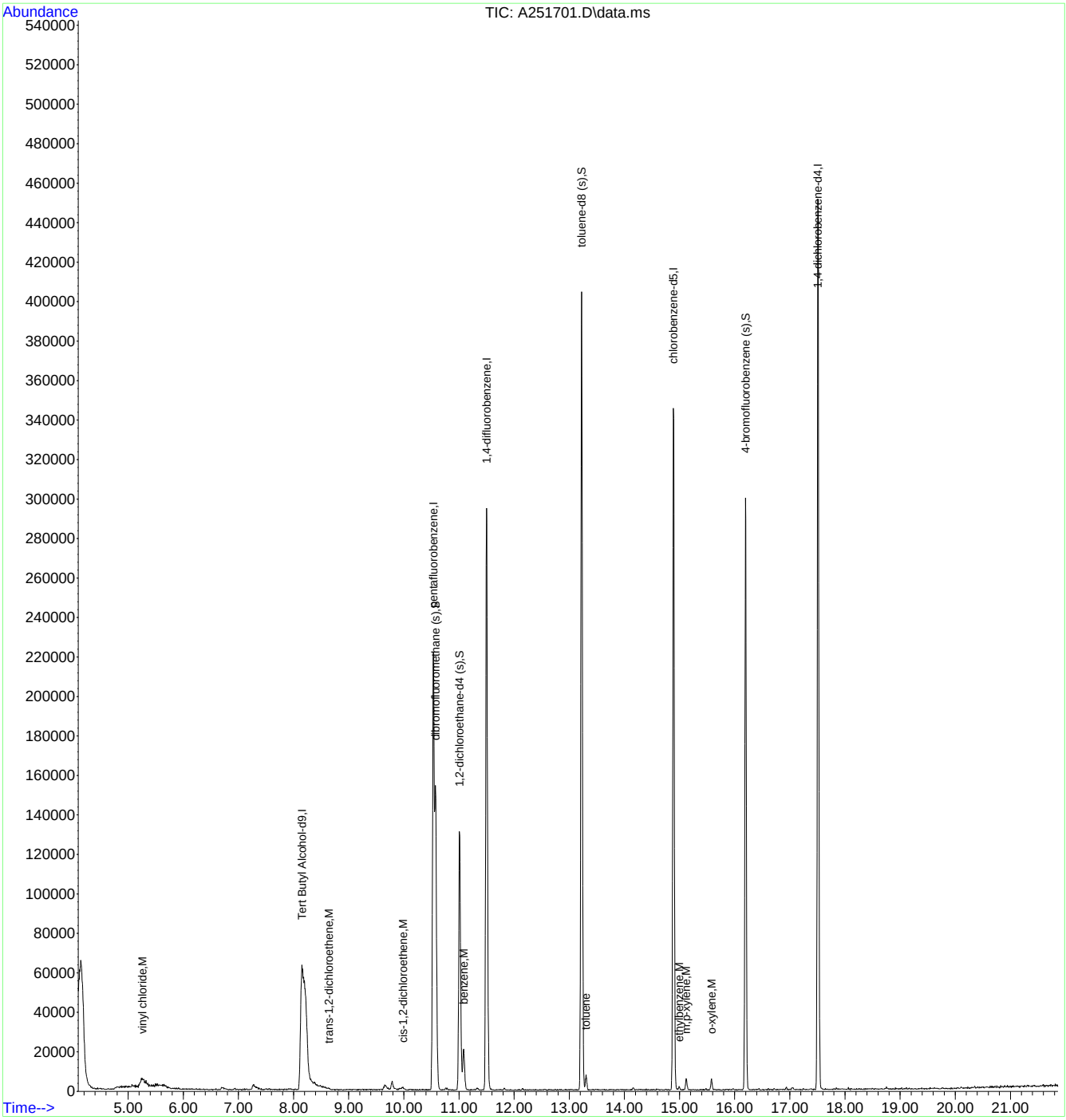
(#) = qualifier out of range (m) = manual integration (+) = signals summed

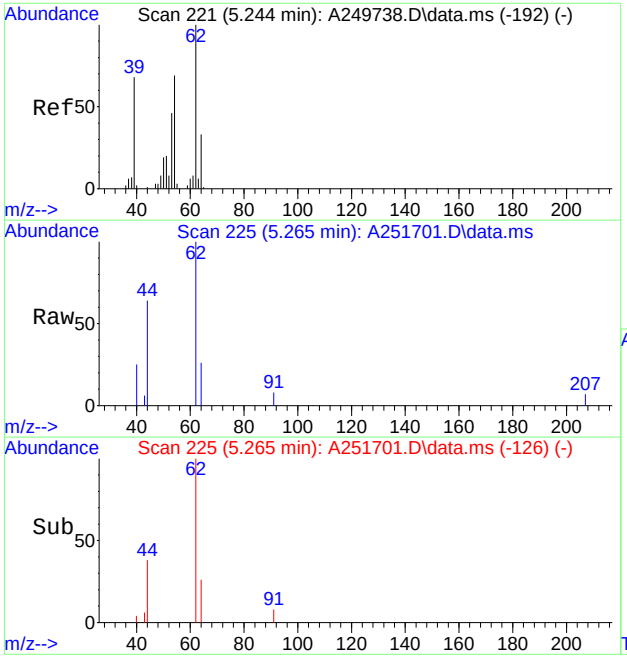
7.1.4
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251701.D
Acq On : 16 Jul 2019 2:09 pm
Operator : EddieH
Sample : JC91309-3
Misc : MS36113,VA9741,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 15:05:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

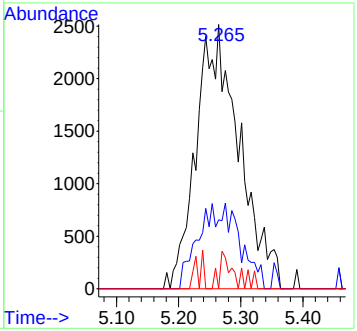


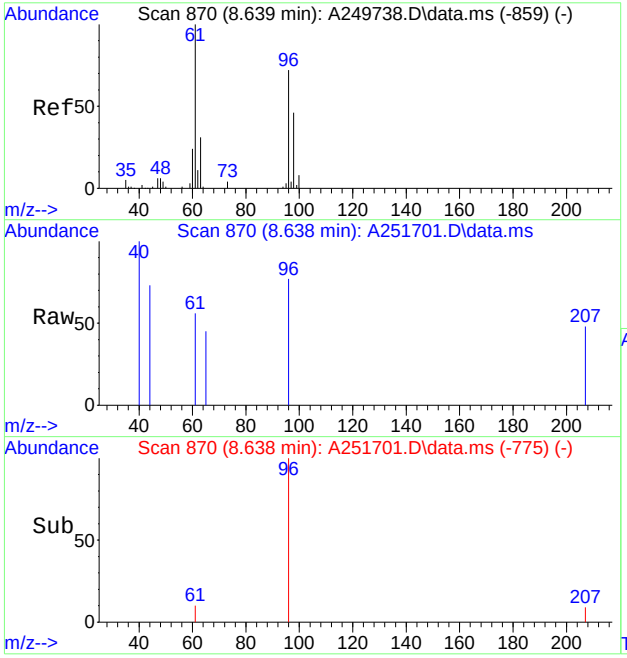


#9
vinyl chloride
Concen: 2.82 ug/L
RT: 5.265 min Scan# 225
Delta R.T. 0.020 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion: 62 Resp: 12081

Ion	Ratio	Lower	Upper
62	100		
64	26.1	2.5	62.5
61	0.0	0.0	37.6

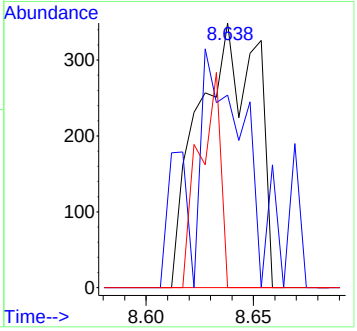


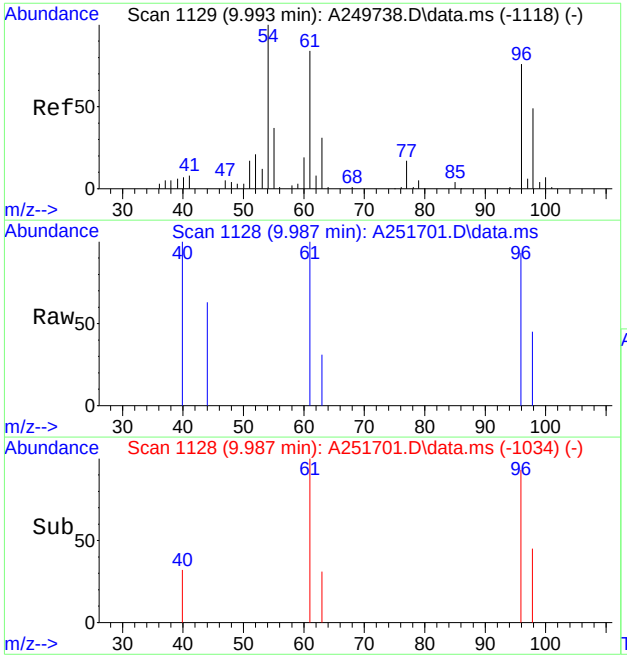


#26
trans-1,2-dichloroethene
Concen: 0.36 ug/L
RT: 8.638 min Scan# 870
Delta R.T. -0.001 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion: 96 Resp: 662

Ion	Ratio	Lower	Upper
96	100		
61	72.8	108.5	168.5#
98	0.0	33.4	93.4#

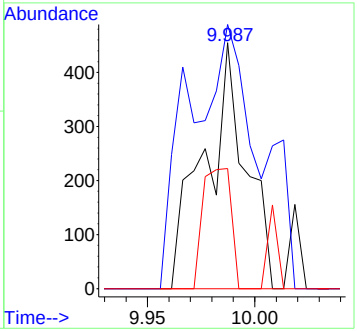


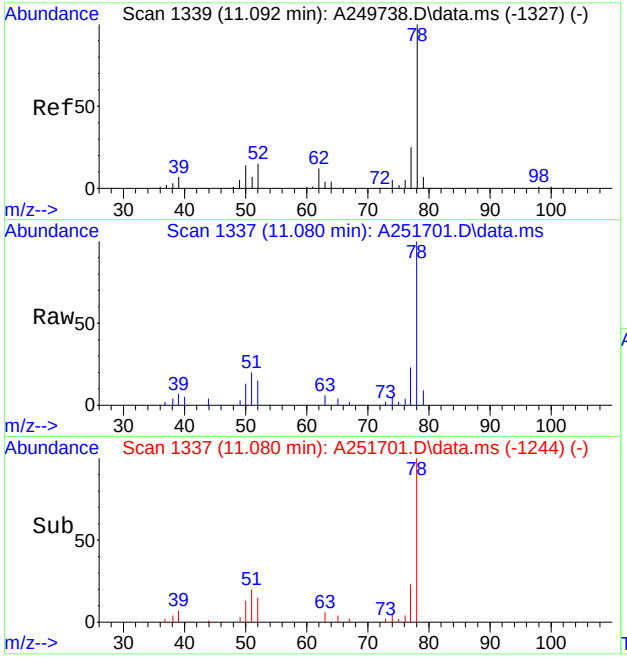


#37
cis-1,2-dichloroethene
Concen: 0.29 ug/L
RT: 9.987 min Scan# 1128
Delta R.T. -0.006 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion: 96 Resp: 610

Ion	Ratio	Lower	Upper
96	100		
61	107.5	91.3	151.3
98	48.8	34.7	94.7

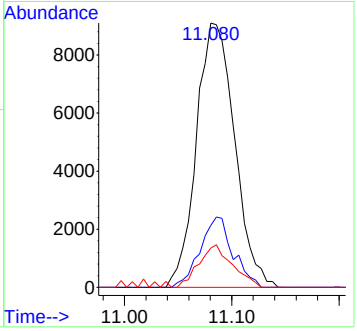


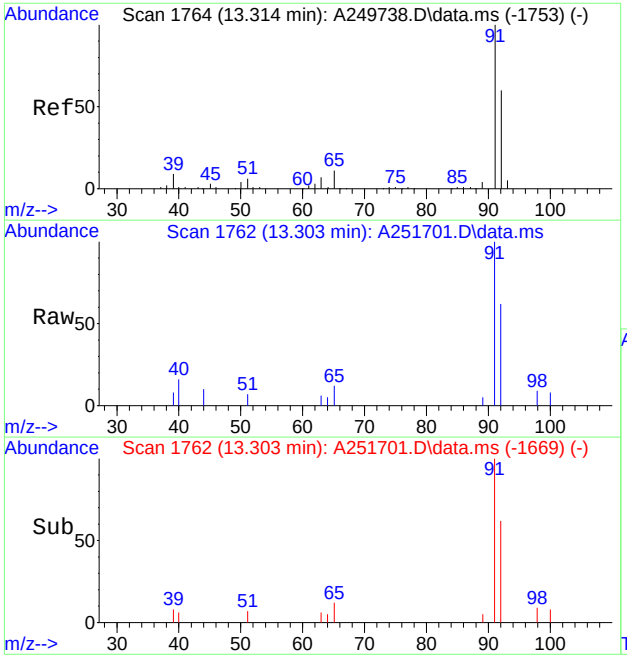


#54
benzene
Concen: 2.95 ug/L
RT: 11.080 min Scan# 1337
Delta R.T. -0.011 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion: 78 Resp: 22573

Ion	Ratio	Lower	Upper
78	100		
77	23.5	0.0	54.7
52	14.9	0.0	45.2

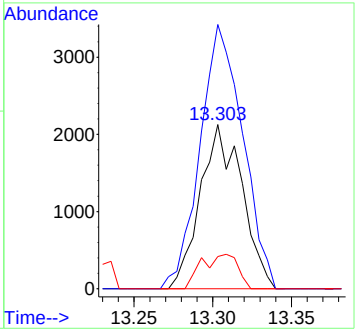


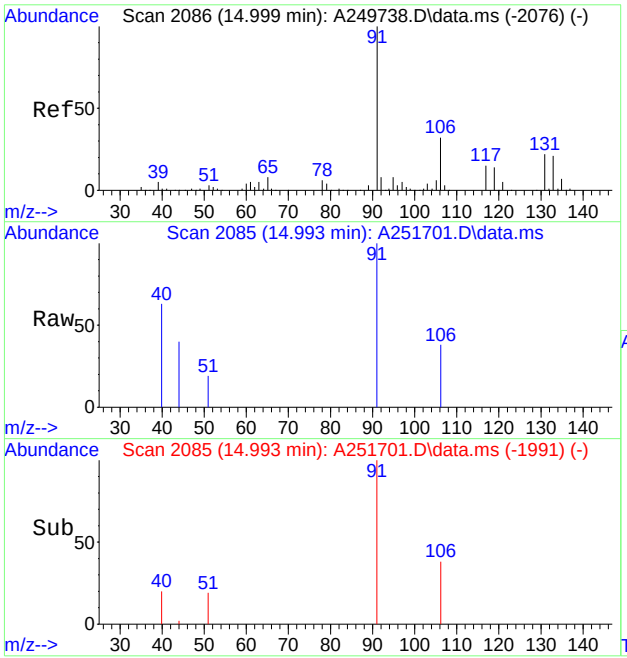


#76
toluene
Concen: 0.96 ug/L
RT: 13.303 min Scan# 1762
Delta R.T. -0.011 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion: 92 Resp: 3918

Ion	Ratio	Lower	Upper
92	100		
91	160.9	147.7	187.7
65	19.6	0.0	37.8

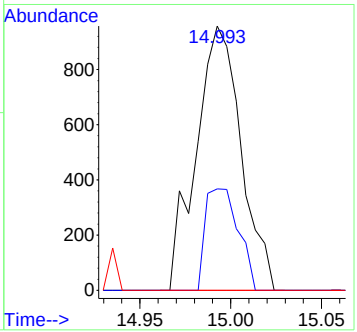


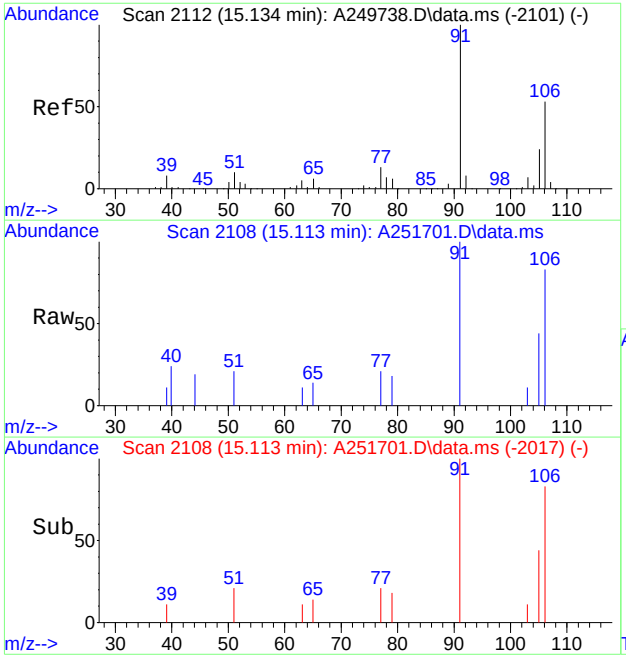


#89
ethylbenzene
Concen: 0.22 ug/L
RT: 14.993 min Scan# 2085
Delta R.T. -0.006 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion: 91 Resp: 1649

Ion	Ratio	Lower	Upper
91	100		
106	38.4	2.0	62.0
77	0.0	0.0	38.0

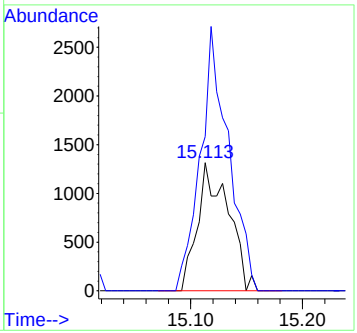


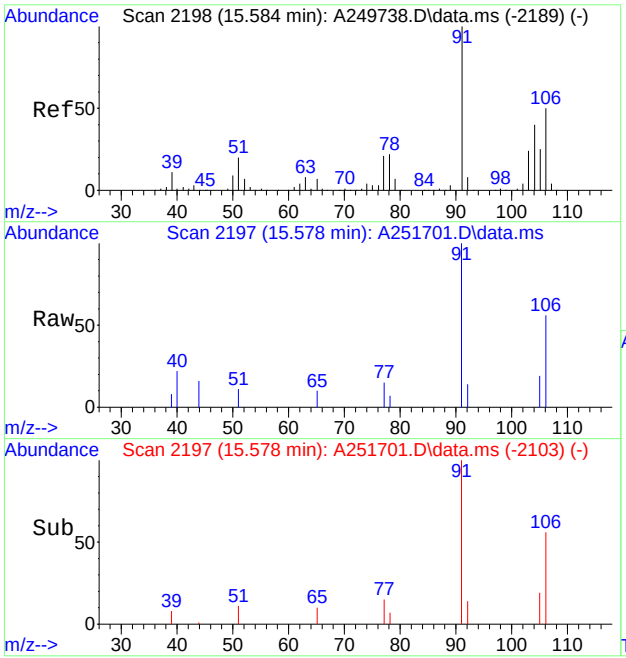


#90
m,p-xylene
Concen: 0.86 ug/L m
RT: 15.113 min Scan# 2108
Delta R.T. -0.022 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion:106 Resp: 2523

Ion	Ratio	Lower	Upper
106	100		
91	120.2	157.4	217.4#

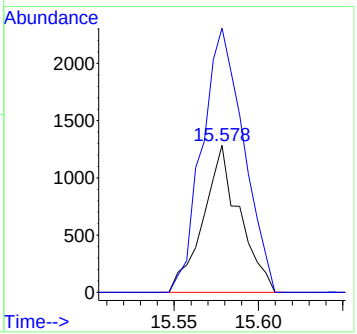




#91
o-xylene
Concen: 0.59 ug/L
RT: 15.578 min Scan# 2197
Delta R.T. -0.006 min
Lab File: A251701.D
Acq: 16 Jul 2019 2:09 pm

Tgt Ion:106 Resp: 1926

Ion	Ratio	Lower	Upper
106	100		
91	179.8	169.7	229.7



Manual Integration Approval Summary

Sample Number: JC91309-3
Lab FileID: A251701.D
Injection Time: 07/16/19 14:09

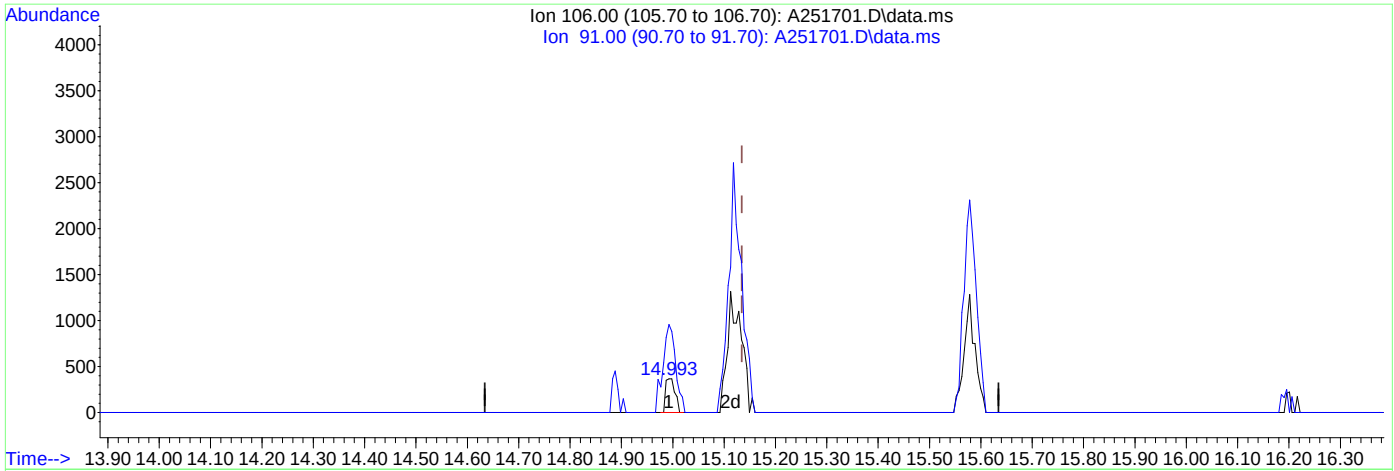
Method: SW846 8260C
Analyst approved: 07/16/19 15:18 Bridget Kelly
Supervisor approved: 07/16/19 16:45 MoHui Huang

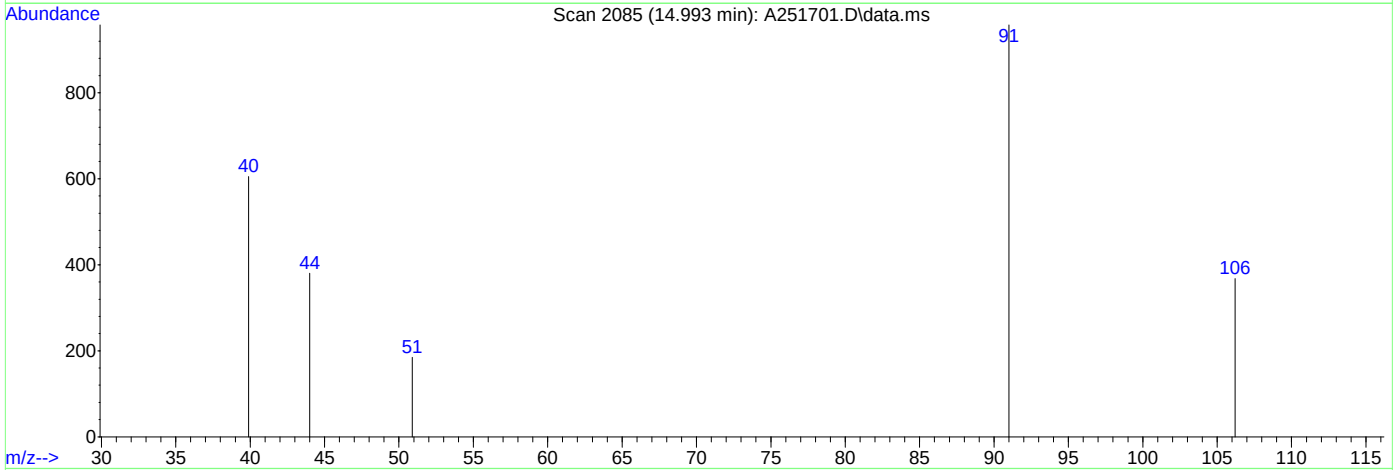
Parameter	CAS	Sig#	R.T. (min.)	Reason
m,p-Xylene			15.11	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9741\
Data File : A251701.D
Acq On : 16 Jul 2019 2:09 pm
Operator : EddieH
Sample : JC91309-3
Misc : MS36113,VA9741,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 14:58:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration





TIC: A251701.D\data.ms

(90) m,p-xylene (M)

14.993min (-0.142) 0.16ug/L

response 465

Ion	Exp%	Act%
106.00	100	100
91.00	187.40	214.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251654.d
Acq On : 15 Jul 2019 1:14 pm
Operator : edwardd
Sample : JC91309-4 Inst : MSA
Misc : MS36113,VA9738,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:22:57 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

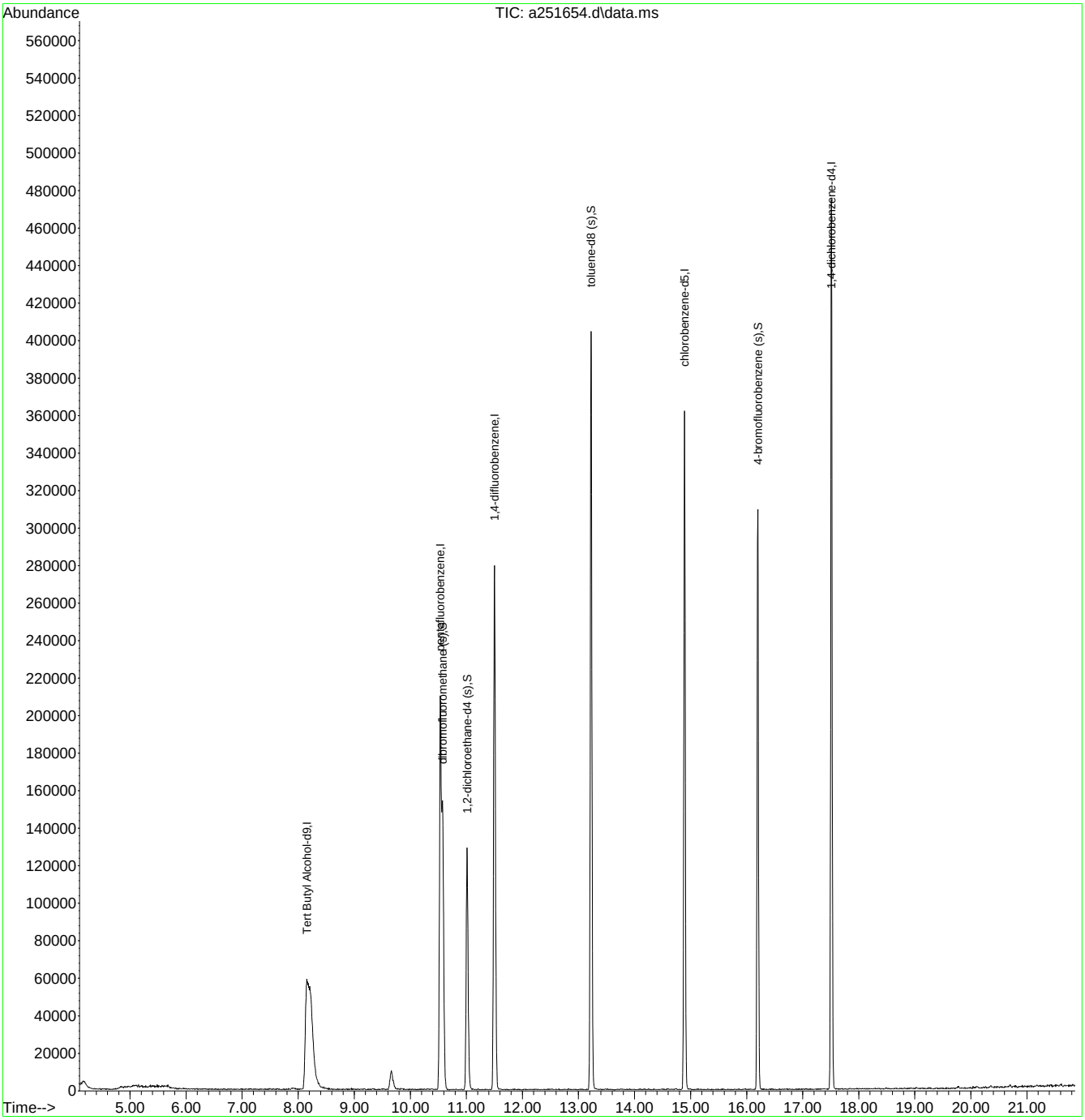
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.155	65	296151	500.00	ug/L	#-0.01
5) pentafluorobenzene	10.535	168	194161	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	295734	50.00	ug/L	0.00
74) chlorobenzene-d5	14.892	117	234050	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.512	152	144713	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.577	113	104534	54.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.24%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	111378	52.42	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.84%			
75) toluene-d8 (s)	13.223	98	311802	50.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.18%			
99) 4-bromofluorobenzene (s)	16.199	95	110256	48.91	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.82%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251654.d
Acq On : 15 Jul 2019 1:14 pm
Operator : edwardd
Sample : JC91309-4 Inst : MSA
Misc : MS36113,VA9738,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:22:57 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251644.d
Acq On : 15 Jul 2019 8:25 am
Operator : edwardd
Sample : mb Inst : MSA
Misc : MS36109,VA9738,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:03:33 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

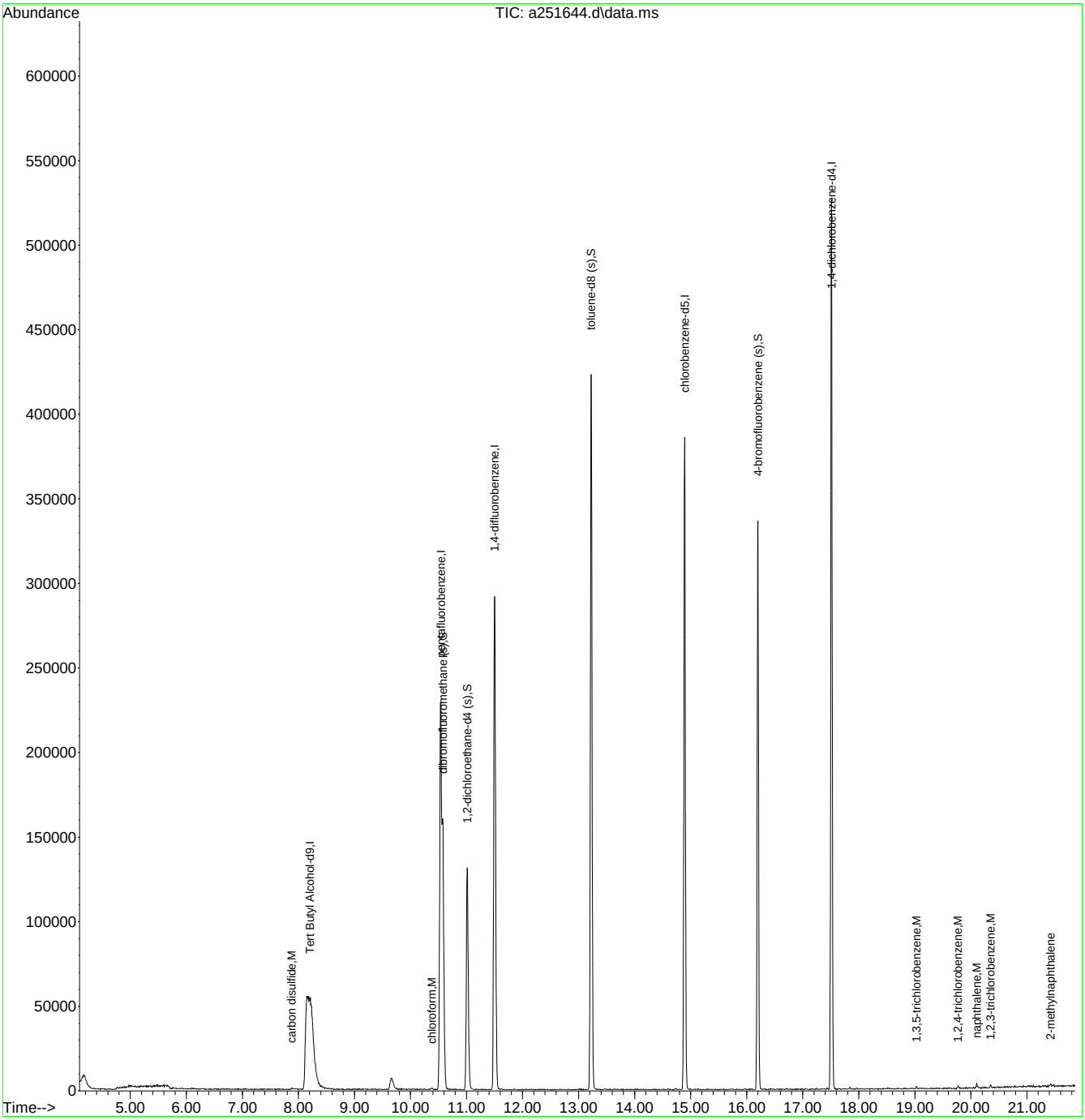
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.203	65	312199	500.00	ug/L	# 0.04
5) pentafluorobenzene	10.541	168	215168	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.498	114	321166	50.00	ug/L	0.00
74) chlorobenzene-d5	14.892	117	256903	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	156789	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.578	113	111080	52.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.76%			
53) 1,2-dichloroethane-d4 (s)	11.012	65	116112	50.32	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.64%			
75) toluene-d8 (s)	13.224	98	334605	48.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.94%			
99) 4-bromofluorobenzene (s)	16.200	95	119944	49.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.22%			
Target Compounds						Qvalue
22) carbon disulfide	7.879	76	1075	0.14	ug/L	73
42) chloroform	10.379	83	803	0.21	ug/L	84
117) 1,3,5-trichlorobenzene	19.029	180	513	0.11	ug/L	80
119) 1,2,4-trichlorobenzene	19.767	180	718	0.17	ug/L #	62
121) naphthalene	20.107	128	2519	0.21	ug/L	68
122) 1,2,3-trichlorobenzene	20.347	180	773	0.18	ug/L #	74
124) 2-methylnaphthalene	21.420	142	875	0.13	ug/L #	72

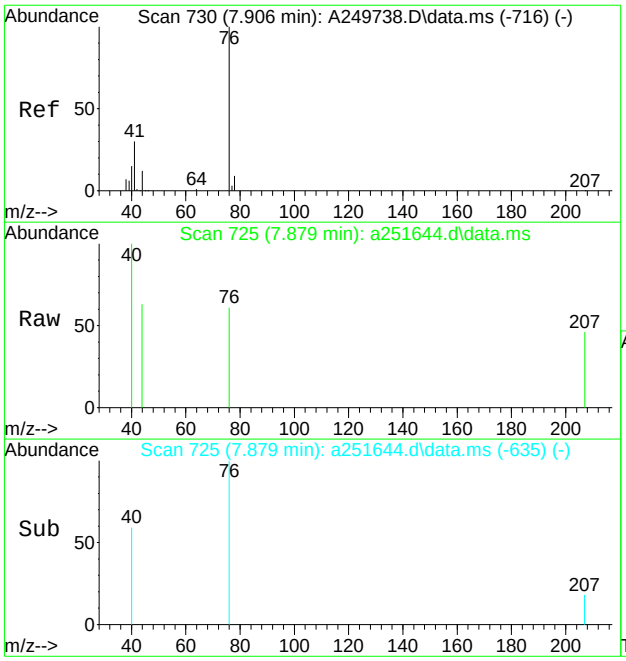
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251644.d
Acq On : 15 Jul 2019 8:25 am
Operator : edwardd
Sample : mb Inst : MSA
Misc : MS36109,VA9738,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:03:33 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

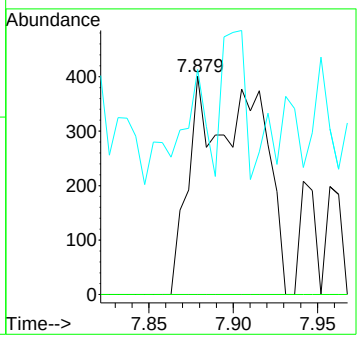


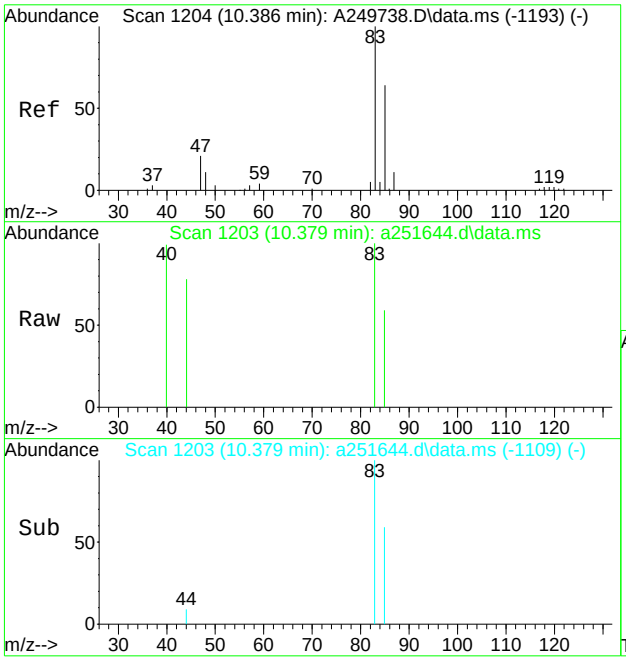


#22
carbon disulfide
Concen: 0.14 ug/L
RT: 7.879 min Scan# 725
Delta R.T. -0.027 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

Tgt Ion: 76 Resp: 1075

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.1
44	22.8	0.0	41.6

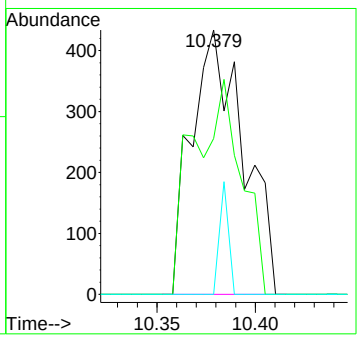


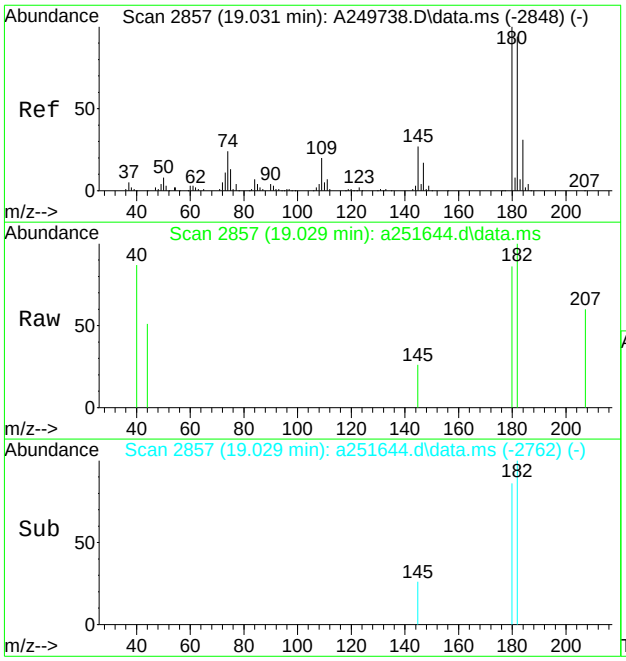


#42
chloroform
Concen: 0.21 ug/L
RT: 10.379 min Scan# 1203
Delta R.T. -0.007 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

Tgt Ion: 83 Resp: 803

Ion	Ratio	Lower	Upper
83	100		
85	59.0	33.5	93.5
47	0.0	0.0	52.4

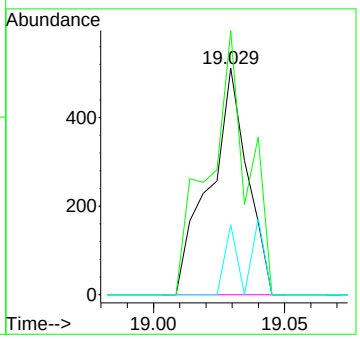


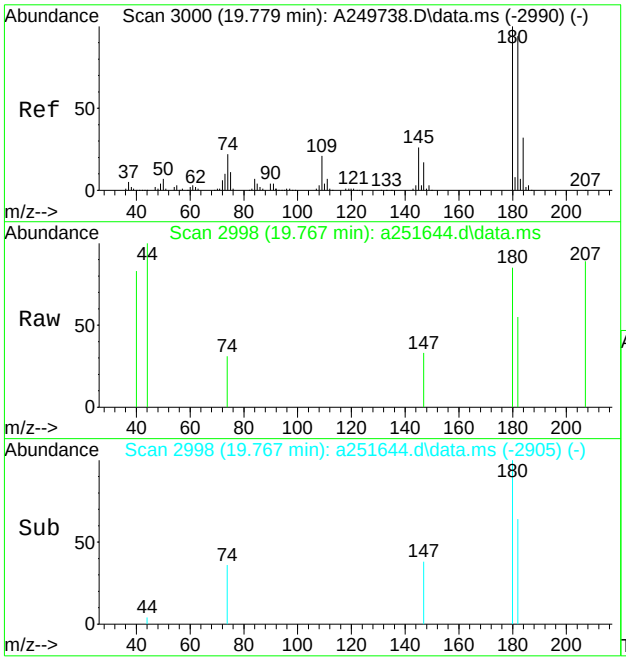


#117
1,3,5-trichlorobenzene
Concen: 0.11 ug/L
RT: 19.029 min Scan# 2857
Delta R.T. -0.001 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

Tgt Ion:180 Resp: 513

Ion	Ratio	Lower	Upper
180	100		
182	116.6	64.2	124.2
145	30.9	0.0	56.7

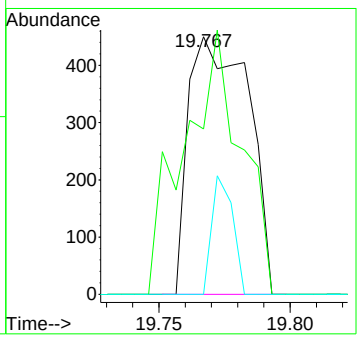


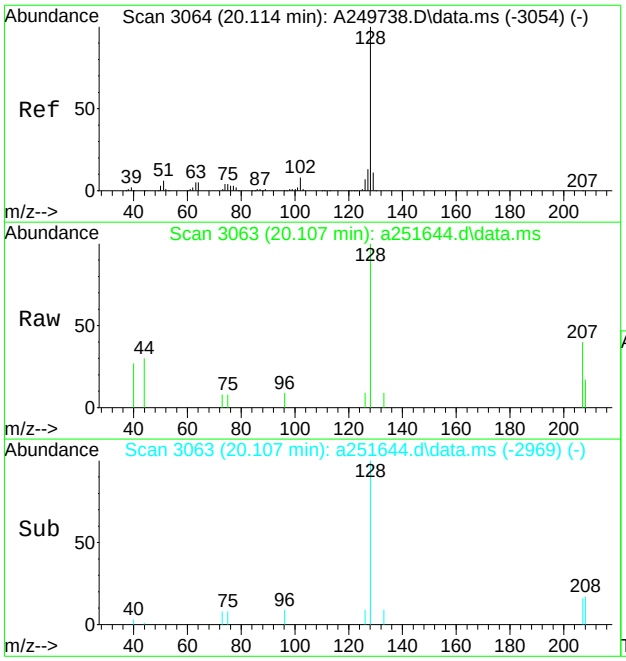


#119
1,2,4-trichlorobenzene
Concen: 0.17 ug/L
RT: 19.767 min Scan# 2998
Delta R.T. -0.012 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

Tgt Ion:180 Resp: 718

Ion	Ratio	Lower	Upper
180	100		
182	64.2	64.1	124.1
184	0.0	1.8	61.8#

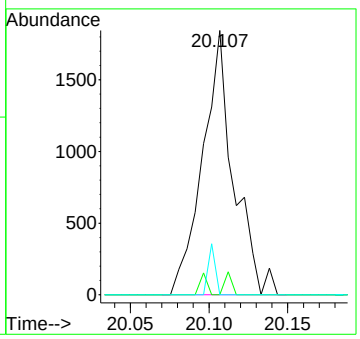


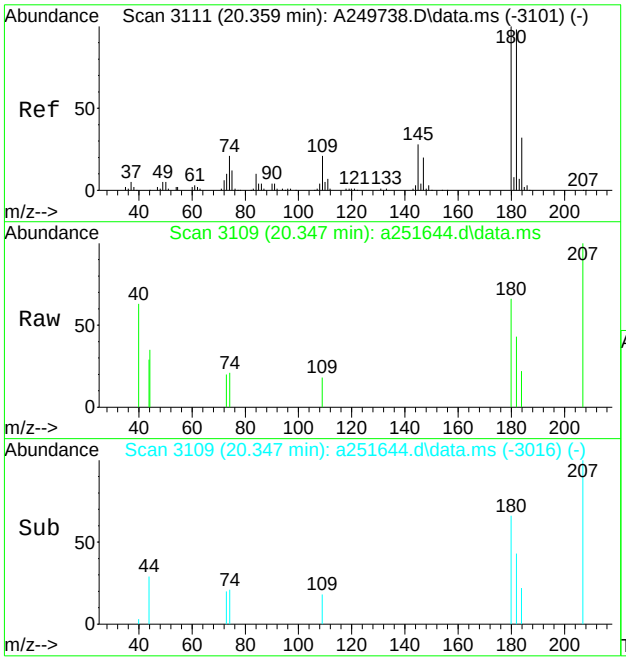


#121
naphthalene
Concen: 0.21 ug/L
RT: 20.107 min Scan# 3063
Delta R.T. -0.007 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

Tgt Ion:128 Resp: 2519

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	41.4
127	0.0	0.0	43.3

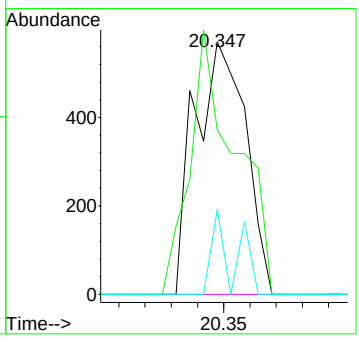




#122
1,2,3-trichlorobenzene
Concen: 0.18 ug/L
RT: 20.347 min Scan# 3109
Delta R.T. -0.012 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

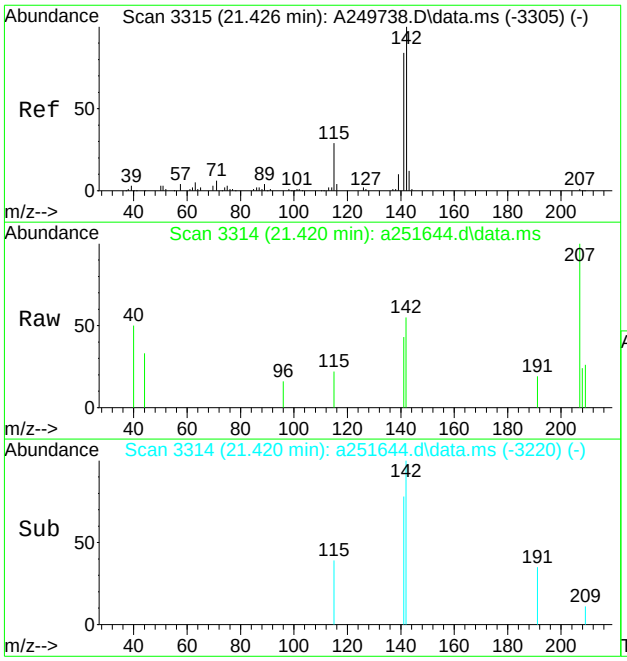
Tgt Ion:180 Resp: 773

Ion	Ratio	Lower	Upper
180	100		
182	65.0	68.3	128.3#
184	33.6	2.3	62.3



7.2.1

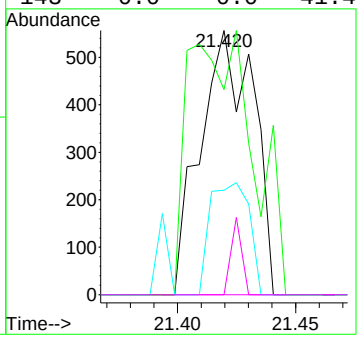
7



#124
2-methylnaphthalene
Concen: 0.13 ug/L
RT: 21.420 min Scan# 3314
Delta R.T. -0.006 min
Lab File: a251644.d
Acq: 15 Jul 2019 8:25 am

Tgt Ion:142 Resp: 875

Ion	Ratio	Lower	Upper
142	100		
141	120.7	67.3	107.3#
115	31.0	0.0	59.0
143	0.0	0.0	41.4



7.2.1

7

Quantitation Report (QT/LSC Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251699.d
Acq On : 16 Jul 2019 1:02 pm
Operator : EddieH
Sample : mb Inst : MSA
Misc : MS36221,VA9741,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:20:56 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

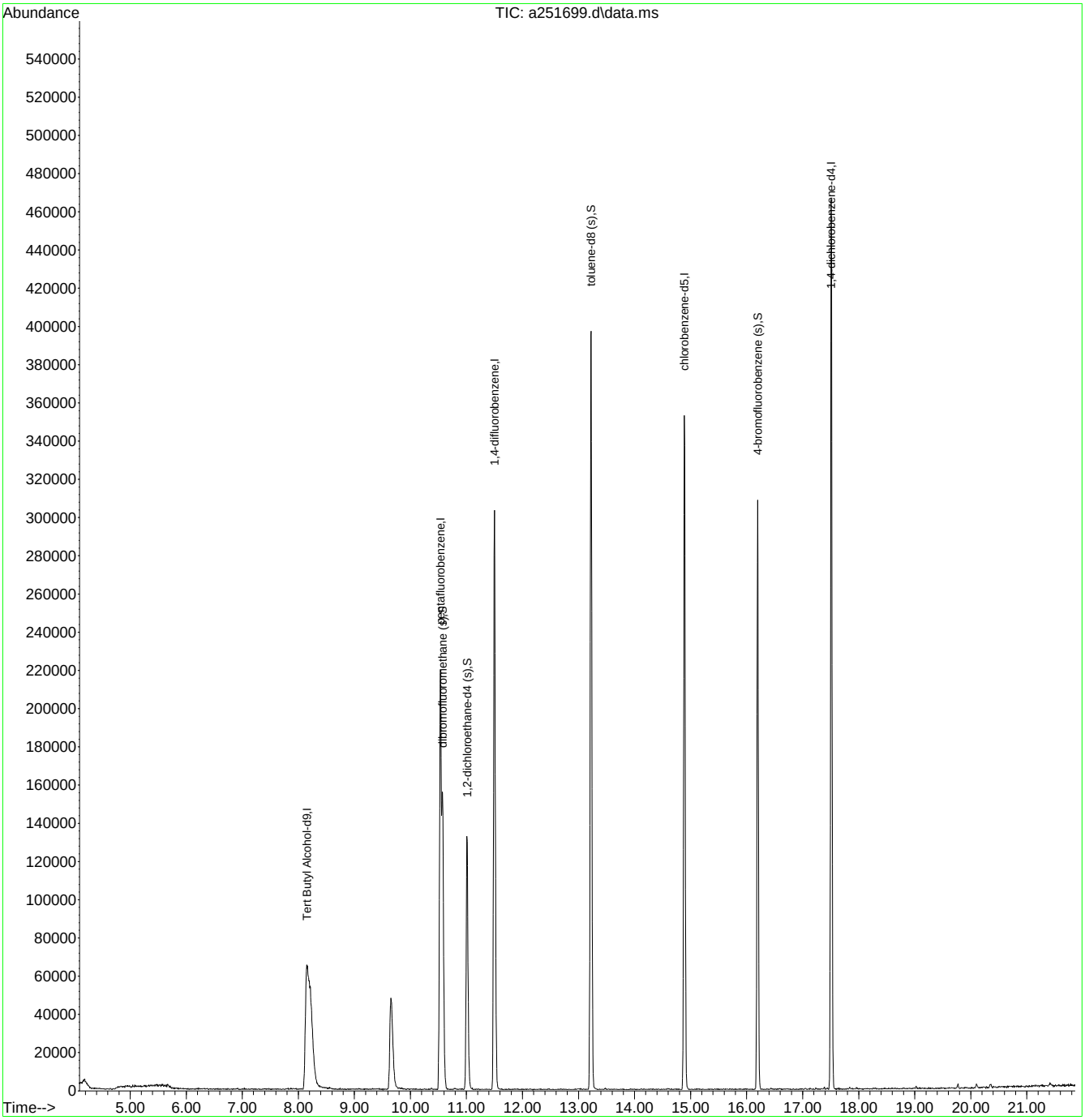
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.152	65	290924	500.00	ug/L	#-0.02
5) pentafluorobenzene	10.537	168	197982	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.500	114	300434	50.00	ug/L	0.00
74) chlorobenzene-d5	14.889	117	233863	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	17.509	152	142019	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.574	113	103866	53.23	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.46%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	111252	51.55	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.10%			
75) toluene-d8 (s)	13.226	98	307936	49.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.02%			
99) 4-bromofluorobenzene (s)	16.196	95	106314	48.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.12%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251699.d
Acq On : 16 Jul 2019 1:02 pm
Operator : EddieH
Sample : mb Inst : MSA
Misc : MS36221,VA9741,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:20:56 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251642.d
Acq On : 15 Jul 2019 7:28 am
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:01:29 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.157	65	339774	500.00	ug/L	-0.01
5) pentafluorobenzene	10.537	168	224880	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.499	114	353821	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	299753	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	152734	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.573	113	115288	52.01	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.02%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	121840	47.93	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 95.86%			
75) toluene-d8 (s)	13.230	98	384898	48.28	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.56%			
99) 4-bromofluorobenzene (s)	16.196	95	130392	54.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.62%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.288	59	162918	232.17	ug/L	98
4) 1,4-dioxane	12.174	88	53073	1167.71	ug/L	99
6) chlorodifluoromethane	4.574	51	182030	41.68	ug/L	95
7) dichlorodifluoromethane	4.559	85	257788	48.53	ug/L	98
8) chloromethane	4.982	50	303613	52.62	ug/L	98
9) vinyl chloride	5.244	62	284052	58.10	ug/L	99
10) 1,3-butadiene	5.270	54	144275	30.97	ug/L	94
11) bromomethane	5.918	94	164271	47.84	ug/L	100
12) chloroethane	6.112	64	122761	49.40	ug/L	100
13) vinyl bromide	6.488	106	147325	44.97	ug/L	100
14) trichlorofluoromethane	6.624	101	242194	47.88	ug/L	100
15) ethyl ether	7.011	74	53870	47.61	ug/L	95
16) acrolein	7.257	56	27387	53.21	ug/L	87
17) freon 113	7.503	151	111162	45.22	ug/L	98
18) 1,1-dichloroethene	7.472	96	102404	42.12	ug/L	97
19) acetone	7.472	58	61493	188.08	ug/L	97
20) acetonitrile	7.916	41	248424	479.93	ug/L	99
21) iodomethane	7.744	142	197427	45.71	ug/L	95
22) carbon disulfide	7.890	76	332262	41.07	ug/L	98
23) methylene chloride	8.225	84	116011	45.81	ug/L	95
24) methyl acetate	7.963	43	106607	46.55	ug/L	98
25) methyl tert butyl ether	8.601	73	354620	49.48	ug/L	100
26) trans-1,2-dichloroethene	8.633	96	99986	47.34	ug/L	97
27) hexane	9.009	57	126412	41.39	ug/L	99
28) di-isopropyl ether	9.229	45	349975	47.68	ug/L	98
29) ethyl tert-butyl ether	9.705	59	343552	48.93	ug/L	96
30) 2-butanone	9.909	72	78447	207.94	ug/L #	83
31) 1,1-dichloroethane	9.240	63	172683	45.48	ug/L	98
32) chloroprene	9.344	53	138584	45.04	ug/L	98
33) acrylonitrile	8.528	53	56117	48.09	ug/L	94
34) vinyl acetate	9.161	86	23071	47.58	ug/L #	89
35) ethyl acetate	9.925	45	21730	51.54	ug/L #	68
36) 2,2-dichloropropane	10.029	77	192773	52.09	ug/L	98
37) cis-1,2-dichloroethene	9.982	96	116342	47.80	ug/L	99
38) methyl acrylate	10.019	85	20941	49.79	ug/L #	91
39) propionitrile	9.993	54	249369	500.30	ug/L	93
40) bromochloromethane	10.291	128	60945	49.07	ug/L	97
41) tetrahydrofuran	10.312	42	50067	46.27	ug/L	98
42) chloroform	10.380	83	179784	45.56	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251642.d
Acq On : 15 Jul 2019 7:28 am
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:01:29 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	10.422	59	111490	55.61	ug/L		95
45)	methacrylonitrile	10.197	67	55046	51.03	ug/L		89
46)	cyclohexane	10.777	84	190626	46.47	ug/L		98
47)	1,1,1-trichloroethane	10.652	97	193762	50.11	ug/L		96
48)	iso-butyl alcohol	10.767	43	179521	481.97	ug/L		89
49)	1,1-dichloropropene	10.829	75	130400	45.14	ug/L		99
50)	carbon tetrachloride	10.866	117	171913	49.74	ug/L		99
51)	tert-amyl alcohol	10.960	73	85476	246.86	ug/L		94
54)	benzene	11.086	78	395316	43.77	ug/L		98
55)	iso-octane	11.180	57	331704	39.13	ug/L		97
56)	tert-amyl methyl ether	11.164	73	352404	45.81	ug/L		98
57)	heptane	11.347	71	74159	44.15	ug/L		94
58)	isopropyl acetate	10.976	87	31626	47.72	ug/L	#	93
59)	1,2-dichloroethane	11.107	62	134744	41.57	ug/L		99
60)	n-butyl alcohol	11.551	56	372505	2398.91	ug/L		96
61)	ethyl acrylate	11.797	55	142203	48.27	ug/L		98
62)	trichloroethene	11.828	95	102116	44.39	ug/L		94
63)	2-nitropropane	12.613	41	45538	46.66	ug/L		88
64)	methylcyclohexane	12.147	83	197040	41.51	ug/L		100
65)	2-chloroethyl vinyl ether	12.650	63	302398	247.46	ug/L		98
66)	methyl methacrylate	12.079	100	32880	50.50	ug/L		96
67)	1,2-dichloropropane	12.132	63	102205	46.89	ug/L		99
68)	dibromomethane	12.247	93	69424	47.32	ug/L		98
69)	bromodichloromethane	12.409	83	145911	48.45	ug/L		98
70)	epichlorohydrin	12.744	57	79749	243.62	ug/L		99
71)	cis-1,3-dichloropropene	12.890	75	163912	50.93	ug/L		97
72)	4-methyl-2-pentanone	12.995	58	254447	188.92	ug/L		95
73)	3-methyl-1-butanol	12.995	55	241401	954.97	ug/L		97
76)	toluene	13.309	92	244489	46.15	ug/L		94
77)	trans-1,3-dichloropropene	13.502	75	140775	51.66	ug/L		98
78)	ethyl methacrylate	13.481	69	135289	49.07	ug/L		93
79)	1,1,2-trichloroethane	13.743	83	76329	50.43	ug/L		97
80)	2-hexanone	13.915	58	209051	186.86	ug/L		99
81)	tetrachloroethene	13.915	166	113788	43.88	ug/L		97
82)	1,3-dichloropropane	13.947	76	141341	48.52	ug/L		98
83)	butyl acetate	13.999	56	80833	48.56	ug/L		97
84)	dibromochloromethane	14.219	129	112424	49.59	ug/L		97
85)	1,2-dibromoethane	14.391	107	107669	51.95	ug/L		99
86)	n-butyl ether	14.867	57	396977	45.64	ug/L		99
87)	chlorobenzene	14.930	112	261111	47.41	ug/L		98
88)	1,1,1,2-tetrachloroethane	14.998	131	131604	47.68	ug/L		99
89)	ethylbenzene	14.993	91	450409	45.77	ug/L		100
90)	m,p-xylene	15.129	106	363085	94.90	ug/L		100
91)	o-xylene	15.578	106	201827	47.68	ug/L		98
92)	styrene	15.589	104	276663	45.46	ug/L		99
93)	butyl acrylate	15.369	55	202240	46.62	ug/L		97
94)	n-amyl acetate	15.605	70	87618	44.92	ug/L		94
95)	bromoform	15.850	173	84722	53.67	ug/L		97
96)	isopropylbenzene	15.971	105	538071	47.00	ug/L		99
97)	cis-1,4-dichloro-2-butene	16.007	75	52994	155.59	ug/L		92
100)	bromobenzene	16.410	156	119058	53.01	ug/L		98
101)	1,1,2,2-tetrachloroethane	16.279	83	159118	54.54	ug/L		100
102)	trans-1,4-dichloro-2-b...	16.316	53	30113	133.12	ug/L		94
103)	1,2,3-trichloropropane	16.379	110	43579	52.16	ug/L		95
104)	n-propylbenzene	16.436	91	549439	50.14	ug/L		98
105)	2-chlorotoluene	16.593	126	127114	52.08	ug/L		99
106)	4-chlorotoluene	16.719	91	292117	51.21	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251642.d
Acq On : 15 Jul 2019 7:28 am
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:01:29 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.609	105	448833	53.11	ug/L	100
108) tert-butylbenzene	16.996	134	99201	50.68	ug/L	95
109) 1,2,4-trimethylbenzene	17.053	105	428744	51.28	ug/L	99
110) sec-butylbenzene	17.242	105	596937	51.74	ug/L	99
111) 1,3-dichlorobenzene	17.440	146	217404	48.83	ug/L	99
112) p-isopropyltoluene	17.383	119	504705	52.50	ug/L	99
113) 1,4-dichlorobenzene	17.540	146	214597	47.62	ug/L	99
114) 1,2-dichlorobenzene	17.963	146	237060	49.13	ug/L	100
115) n-butylbenzene	17.843	92	231656	49.28	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.811	157	52735	51.76	ug/L	93
117) 1,3,5-trichlorobenzene	19.025	180	213521	46.94	ug/L	100
118) 2-ethylhexyl acrylate	19.747	70	19680	8.02	ug/L	92
119) 1,2,4-trichlorobenzene	19.768	180	200235	48.93	ug/L	98
120) hexachlorobutadiene	19.893	225	82490	50.67	ug/L	98
121) naphthalene	20.102	128	568244	47.50	ug/L	99
122) 1,2,3-trichlorobenzene	20.348	180	201496	49.06	ug/L	98
123) hexachloroethane	18.293	201	92402	61.08	ug/L	97
124) 2-methylnaphthalene	21.415	142	142639	22.36	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251642.d
Acq On : 15 Jul 2019 7:28 am
Operator : edwardd
Sample : bs Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:01:29 2019
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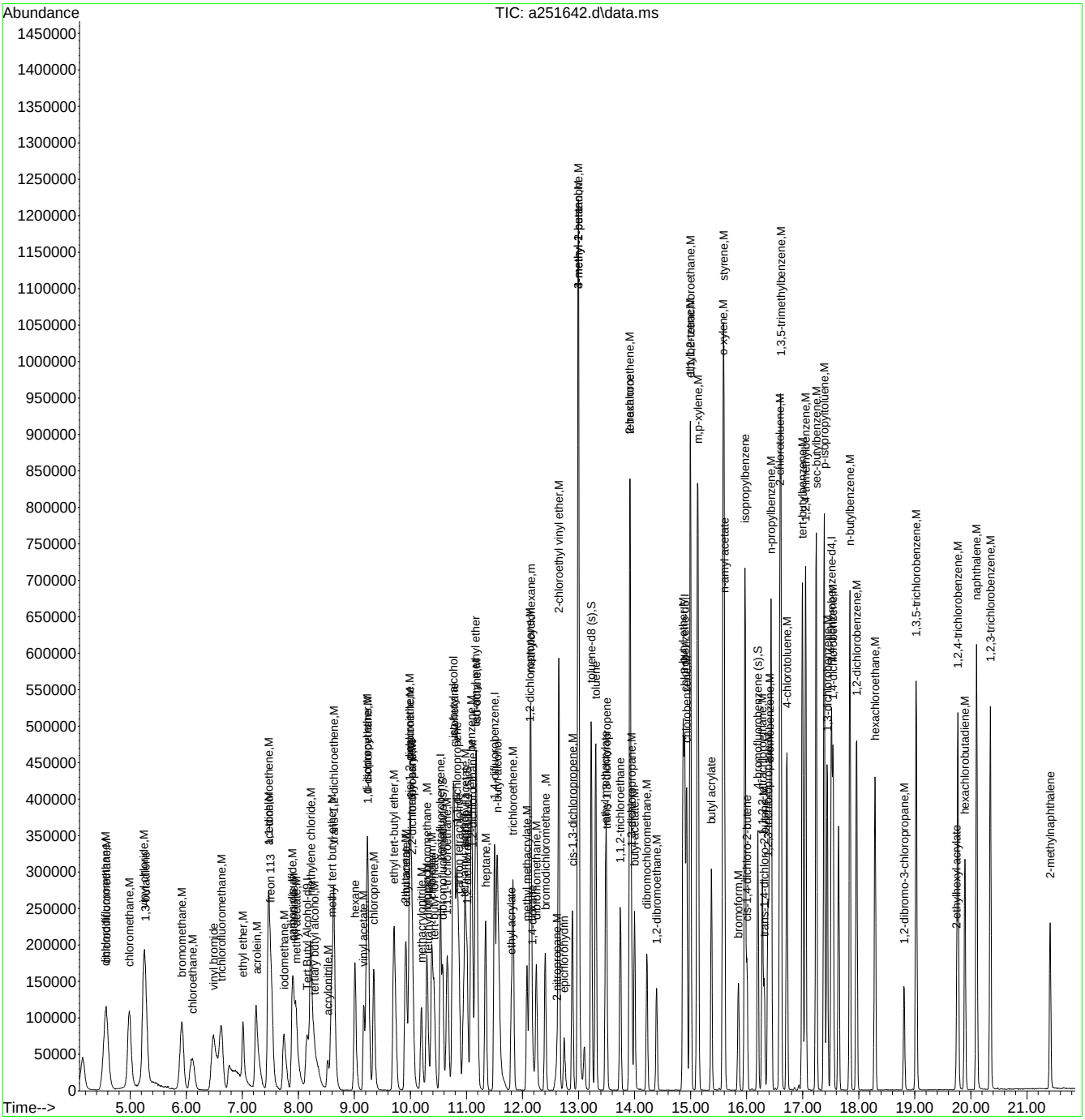
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251697.d
Acq On : 16 Jul 2019 11:56 am
Operator : EddieH
Sample : bs Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:16:39 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	8.159	65	315392	500.00	ug/L		0.00
5) pentafluorobenzene	10.539	168	210675	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.501	114	328507	50.00	ug/L		0.00
74) chlorobenzene-d5	14.890	117	266915	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.510	152	137488	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.575	113	110985	53.45	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.90%				
53) 1,2-dichloroethane-d4 (s)	11.014	65	114939	48.70	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.40%				
75) toluene-d8 (s)	13.227	98	357461	50.36	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.72%				
99) 4-bromofluorobenzene (s)	16.198	95	114827	53.62	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.24%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.284	59	155210	238.28	ug/L		100
4) 1,4-dioxane	12.181	88	52519	1244.86	ug/L		99
6) chlorodifluoromethane	4.587	51	159869	39.07	ug/L		96
7) dichlorodifluoromethane	4.555	85	225638	45.34	ug/L		96
8) chloromethane	5.005	50	274150	50.72	ug/L		98
9) vinyl chloride	5.261	62	253958	55.45	ug/L		97
10) 1,3-butadiene	5.277	54	126709	29.03	ug/L		98
11) bromomethane	5.936	94	150741	46.86	ug/L		98
12) chloroethane	6.114	64	114757	49.30	ug/L		98
13) vinyl bromide	6.501	106	137097	44.67	ug/L		98
14) trichlorofluoromethane	6.637	101	228931	48.31	ug/L		98
15) ethyl ether	7.019	74	53016	50.01	ug/L		93
16) acrolein	7.259	56	27846	57.75	ug/L		91
17) freon 113	7.505	151	98425	42.74	ug/L		100
18) 1,1-dichloroethene	7.474	96	104251	45.77	ug/L		100
19) acetone	7.479	58	58818	192.02	ug/L		93
20) acetonitrile	7.929	41	242137	499.33	ug/L		98
21) iodomethane	7.761	142	200756	49.61	ug/L		97
22) carbon disulfide	7.923	76	326121	43.03	ug/L		99
23) methylene chloride	8.227	84	121643	51.27	ug/L		98
24) methyl acetate	7.965	43	102443	47.75	ug/L		99
25) methyl tert butyl ether	8.603	73	337858	50.32	ug/L		100
26) trans-1,2-dichloroethene	8.635	96	94920	47.98	ug/L		98
27) hexane	9.006	57	103271	36.09	ug/L		100
28) di-isopropyl ether	9.226	45	339407	49.36	ug/L		100
29) ethyl tert-butyl ether	9.707	59	330175	50.19	ug/L		95
30) 2-butanone	9.911	72	70702	200.05	ug/L		98
31) 1,1-dichloroethane	9.241	63	169134	47.55	ug/L		97
32) chloroprene	9.346	53	128846	44.70	ug/L		98
33) acrylonitrile	8.525	53	55623	50.88	ug/L		99
34) vinyl acetate	9.173	86	23138	50.93	ug/L	#	93
35) ethyl acetate	9.927	45	19444	49.23	ug/L	#	48
36) 2,2-dichloropropane	10.026	77	162459	46.86	ug/L		97
37) cis-1,2-dichloroethene	9.989	96	110251	48.35	ug/L		96
38) methyl acrylate	10.016	85	19595	49.73	ug/L	#	87
39) propionitrile	9.989	54	237884	509.44	ug/L		92
40) bromochloromethane	10.293	128	60094	51.65	ug/L		94
41) tetrahydrofuran	10.314	42	46584	45.95	ug/L		98
42) chloroform	10.382	83	172658	46.70	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251697.d
Acq On : 16 Jul 2019 11:56 am
Operator : EddieH
Sample : bs Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:16:39 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	10.418	59	105840	56.35	ug/L		97
45)	methacrylonitrile	10.199	67	52159	51.61	ug/L		83
46)	cyclohexane	10.779	84	179219	46.64	ug/L		97
47)	1,1,1-trichloroethane	10.664	97	181769	50.17	ug/L		96
48)	iso-butyl alcohol	10.779	43	170139	487.58	ug/L	#	81
49)	1,1-dichloropropene	10.831	75	120335	44.46	ug/L		98
50)	carbon tetrachloride	10.863	117	158923	49.08	ug/L		99
51)	tert-amyl alcohol	10.952	73	81121	250.08	ug/L		94
54)	benzene	11.082	78	368538	43.95	ug/L		97
55)	iso-octane	11.187	57	291208	37.00	ug/L		97
56)	tert-amyl methyl ether	11.166	73	336221	47.08	ug/L		98
57)	heptane	11.344	71	57141	36.64	ug/L		93
58)	isopropyl acetate	10.983	87	29137	47.35	ug/L		96
59)	1,2-dichloroethane	11.103	62	127337	42.31	ug/L		99
60)	n-butyl alcohol	11.548	56	352606	2445.74	ug/L		99
61)	ethyl acrylate	11.804	55	133898	48.96	ug/L		99
62)	trichloroethene	11.830	95	94184	44.10	ug/L		97
63)	2-nitropropane	12.615	41	41739	46.06	ug/L		87
64)	methylcyclohexane	12.149	83	174255	39.54	ug/L		100
65)	2-chloroethyl vinyl ether	12.646	63	278220	245.22	ug/L		98
66)	methyl methacrylate	12.081	100	30817	50.98	ug/L		96
67)	1,2-dichloropropane	12.134	63	96596	47.73	ug/L		94
68)	dibromomethane	12.244	93	66247	48.63	ug/L		99
69)	bromodichloromethane	12.406	83	136827	48.94	ug/L		100
70)	epichlorohydrin	12.746	57	72529	238.64	ug/L		99
71)	cis-1,3-dichloropropene	12.892	75	149950	50.18	ug/L		96
72)	4-methyl-2-pentanone	12.997	58	233976	187.10	ug/L		94
73)	3-methyl-1-butanol	12.997	55	222972	950.03	ug/L		96
76)	toluene	13.305	92	221331	46.92	ug/L		99
77)	trans-1,3-dichloropropene	13.499	75	131337	54.12	ug/L		97
78)	ethyl methacrylate	13.483	69	123735	50.40	ug/L		97
79)	1,1,2-trichloroethane	13.745	83	71576	53.11	ug/L		98
80)	2-hexanone	13.917	58	190815	191.54	ug/L		97
81)	tetrachloroethene	13.917	166	98838	42.80	ug/L		97
82)	1,3-dichloropropane	13.943	76	130827	50.43	ug/L		96
83)	butyl acetate	14.001	56	70769	47.75	ug/L		98
84)	dibromochloromethane	14.221	129	103666	51.35	ug/L		98
85)	1,2-dibromoethane	14.393	107	97753	52.96	ug/L		100
86)	n-butyl ether	14.864	57	349694	45.15	ug/L		99
87)	chlorobenzene	14.927	112	234597	47.83	ug/L		99
88)	1,1,1,2-tetrachloroethane	15.000	131	121048	49.26	ug/L		96
89)	ethylbenzene	14.989	91	390950	44.61	ug/L		99
90)	m,p-xylene	15.125	106	309374	90.81	ug/L		99
91)	o-xylene	15.580	106	177091	46.98	ug/L		99
92)	styrene	15.591	104	245790	45.35	ug/L		97
93)	butyl acrylate	15.371	55	183771	47.57	ug/L		97
94)	n-amyl acetate	15.601	70	77311	44.51	ug/L		97
95)	bromoform	15.852	173	75085	53.42	ug/L		96
96)	isopropylbenzene	15.967	105	472715	46.37	ug/L		99
97)	cis-1,4-dichloro-2-butene	16.004	75	45207	149.06	ug/L		96
100)	bromobenzene	16.407	156	104945	51.91	ug/L		98
101)	1,1,2,2-tetrachloroethane	16.276	83	141500	53.88	ug/L		98
102)	trans-1,4-dichloro-2-b...	16.313	53	27202	133.59	ug/L		89
103)	1,2,3-trichloropropane	16.381	110	39809	52.94	ug/L		97
104)	n-propylbenzene	16.438	91	466911	47.33	ug/L		100
105)	2-chlorotoluene	16.590	126	109627	49.89	ug/L		90
106)	4-chlorotoluene	16.715	91	250352	48.75	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251697.d
Acq On : 16 Jul 2019 11:56 am
Operator : EddieH
Sample : bs Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:16:39 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

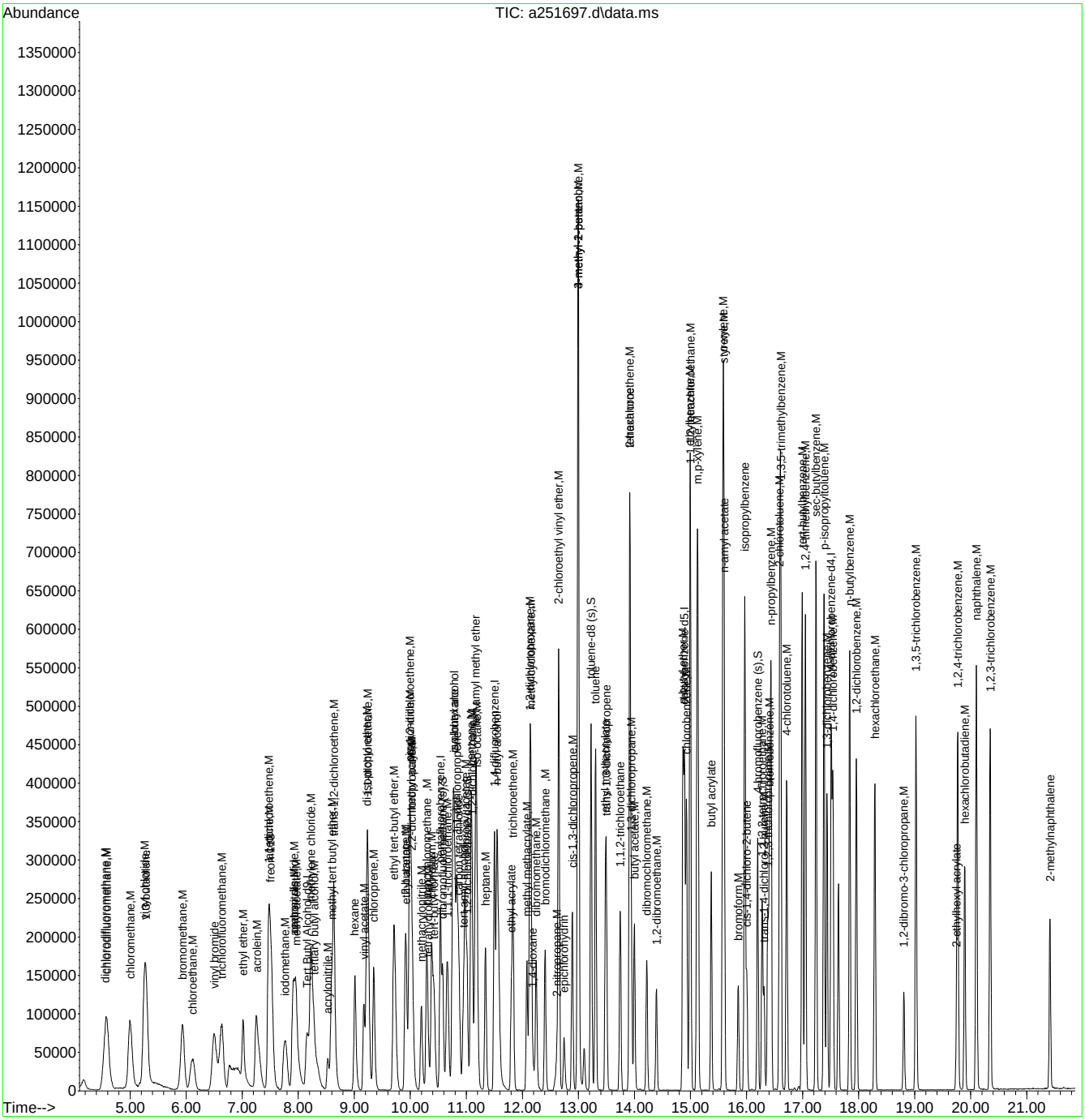
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.611	105	389092	51.15	ug/L	99
108) tert-butylbenzene	16.993	134	92327	52.40	ug/L	99
109) 1,2,4-trimethylbenzene	17.050	105	367602	48.84	ug/L	99
110) sec-butylbenzene	17.238	105	519197	50.00	ug/L	99
111) 1,3-dichlorobenzene	17.437	146	188969	47.15	ug/L	100
112) p-isopropyltoluene	17.385	119	427439	49.39	ug/L	99
113) 1,4-dichlorobenzene	17.542	146	189298	46.66	ug/L	99
114) 1,2-dichlorobenzene	17.960	146	206017	47.43	ug/L	98
115) n-butylbenzene	17.840	92	188897	44.64	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.807	157	46560	50.77	ug/L	95
117) 1,3,5-trichlorobenzene	19.022	180	183118	44.72	ug/L	95
118) 2-ethylhexyl acrylate	19.744	70	20631	9.19	ug/L	93
119) 1,2,4-trichlorobenzene	19.770	180	178677	48.51	ug/L	98
120) hexachlorobutadiene	19.895	225	74168	50.61	ug/L	97
121) naphthalene	20.099	128	517426	48.04	ug/L	99
122) 1,2,3-trichlorobenzene	20.350	180	183894	49.74	ug/L	96
123) hexachloroethane	18.290	201	85858	63.05	ug/L	97
124) 2-methylnaphthalene	21.417	142	134957	23.50	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251697.d
Acq On : 16 Jul 2019 11:56 am
Operator : EddieH
Sample : bs Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:16:39 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251649.d
Acq On : 15 Jul 2019 10:50 am
Operator : edwardd
Sample : JC91309-1ms Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:16:56 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.158	65	308333	500.00	ug/L	-0.01
5) pentafluorobenzene	10.532	168	194600	50.00	ug/L	-0.01
52) 1,4-difluorobenzene	11.500	114	314150	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	267994	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	136268	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.574	113	104747	54.61	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.22%			
53) 1,2-dichloroethane-d4 (s)	11.008	65	110156	48.81	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.62%			
75) toluene-d8 (s)	13.226	98	344842	48.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.76%			
99) 4-bromofluorobenzene (s)	16.196	95	114544	53.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.92%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.283	59	151906	238.55	ug/L	96
4) 1,4-dioxane	12.174	88	52780	1279.68	ug/L	99
6) chlorodifluoromethane	4.585	51	205412	54.35	ug/L	98
7) dichlorodifluoromethane	4.564	85	213281	46.40	ug/L	96
8) chloromethane	4.993	50	243999	48.87	ug/L	97
9) vinyl chloride	5.250	62	317452	75.04	ug/L	97
10) 1,3-butadiene	5.265	54	170603	42.32	ug/L	94
11) bromomethane	5.929	94	135902	45.74	ug/L	100
12) chloroethane	6.102	64	101824	47.35	ug/L	97
13) vinyl bromide	6.489	106	140217	49.47	ug/L	99
14) trichlorofluoromethane	6.620	101	222444	50.82	ug/L	100
15) ethyl ether	7.012	74	49615	50.67	ug/L	96
16) acrolein	7.263	56	42271	94.91	ug/L	90
17) freon 113	7.499	151	116857	54.94	ug/L	100
18) 1,1-dichloroethene	7.472	96	108687	51.66	ug/L	90
19) acetone	7.462	58	59169	209.13	ug/L	94
20) acetonitrile	7.912	41	234289	523.05	ug/L	96
21) iodomethane	7.744	142	200029	53.52	ug/L	98
22) carbon disulfide	7.896	76	337727	48.25	ug/L	99
23) methylene chloride	8.226	84	113644	51.86	ug/L	98
24) methyl acetate	7.959	43	97922	49.41	ug/L	99
25) methyl tert butyl ether	8.597	73	328686	53.00	ug/L	99
26) trans-1,2-dichloroethene	8.633	96	96770	52.95	ug/L	98
27) hexane	9.010	57	135478	51.26	ug/L	99
28) di-isopropyl ether	9.224	45	321099	50.55	ug/L	99
29) ethyl tert-butyl ether	9.706	59	314640	51.78	ug/L	96
30) 2-butanone	9.910	72	73602	225.45	ug/L #	88
31) 1,1-dichloroethane	9.240	63	161732	49.23	ug/L	99
32) chloroprene	9.345	53	132323	49.69	ug/L	99
33) acrylonitrile	8.518	53	51436	50.94	ug/L	97
34) vinyl acetate	9.162	86	21953	52.31	ug/L	99
35) ethyl acetate	9.925	45	18713	51.29	ug/L #	58
36) 2,2-dichloropropane	10.025	77	182336	56.94	ug/L	100
37) cis-1,2-dichloroethene	9.983	96	270621	128.48	ug/L	96
38) methyl acrylate	10.014	85	19598	53.85	ug/L	95
39) propionitrile	9.988	54	226534	525.21	ug/L #	4
40) bromochloromethane	10.291	128	57192	53.22	ug/L	98
41) tetrahydrofuran	10.312	42	45668	48.77	ug/L	98
42) chloroform	10.380	83	167915	49.17	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251649.d
Acq On : 15 Jul 2019 10:50 am
Operator : edwardd
Sample : JC91309-1ms Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:16:56 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.417	59	103001	59.37	ug/L		95
45) methacrylonitrile	10.192	67	50736	54.35	ug/L		84
46) cyclohexane	10.778	84	174227	49.09	ug/L		98
47) 1,1,1-trichloroethane	10.658	97	183926	54.96	ug/L		95
48) iso-butyl alcohol	10.773	43	164380	509.99	ug/L		88
49) 1,1-dichloropropene	10.825	75	121743	48.70	ug/L		96
50) carbon tetrachloride	10.861	117	162812	54.43	ug/L		98
51) tert-amyl alcohol	10.950	73	79442	265.13	ug/L		91
54) benzene	11.086	78	365749	45.61	ug/L		97
55) iso-octane	11.181	57	336756	44.74	ug/L		97
56) tert-amyl methyl ether	11.165	73	321488	47.07	ug/L		100
57) heptane	11.343	71	74073	49.67	ug/L		95
58) isopropyl acetate	10.977	87	28602	48.61	ug/L	#	93
59) 1,2-dichloroethane	11.102	62	125083	43.46	ug/L		99
60) n-butyl alcohol	11.547	56	347549	2520.84	ug/L		96
61) ethyl acrylate	11.798	55	134995	51.61	ug/L		98
62) trichloroethene	11.829	95	95970	46.99	ug/L		97
63) 2-nitropropane	12.614	41	39109	45.13	ug/L		89
64) methylcyclohexane	12.148	83	194993	46.26	ug/L		99
65) 2-chloroethyl vinyl ether	12.645	63	207256	191.02	ug/L		97
66) methyl methacrylate	12.085	100	30021	51.93	ug/L	#	51
67) 1,2-dichloropropane	12.132	63	91762	47.42	ug/L		96
68) dibromomethane	12.247	93	64384	49.43	ug/L		90
69) bromodichloromethane	12.404	83	131170	49.06	ug/L		100
70) epichlorohydrin	12.744	57	73846	254.07	ug/L		100
71) cis-1,3-dichloropropene	12.886	75	148648	52.02	ug/L		97
72) 4-methyl-2-pentanone	12.995	58	226470	189.38	ug/L		97
73) 3-methyl-1-butanol	12.995	55	219034	975.91	ug/L		96
76) toluene	13.304	92	223853	47.26	ug/L		98
77) trans-1,3-dichloropropene	13.497	75	127239	52.22	ug/L		98
78) ethyl methacrylate	13.482	69	122369	49.64	ug/L		95
79) 1,1,2-trichloroethane	13.743	83	69952	51.69	ug/L		99
80) 2-hexanone	13.916	58	192056	192.01	ug/L		99
81) tetrachloroethene	13.916	166	103878	44.80	ug/L		95
82) 1,3-dichloropropane	13.942	76	126851	48.71	ug/L		98
83) butyl acetate	14.000	56	70250	47.21	ug/L		94
84) dibromochloromethane	14.219	129	103058	50.84	ug/L		96
85) 1,2-dibromoethane	14.392	107	100856	54.42	ug/L		98
86) n-butyl ether	14.863	57	346819	44.60	ug/L		99
87) chlorobenzene	14.931	112	236044	47.93	ug/L		97
88) 1,1,1,2-tetrachloroethane	14.999	131	118259	47.93	ug/L		96
89) ethylbenzene	14.993	91	398316	45.27	ug/L		98
90) m,p-xylene	15.124	106	317190	92.73	ug/L		99
91) o-xylene	15.579	106	176619	46.67	ug/L		98
92) styrene	15.590	104	244327	44.90	ug/L		98
93) butyl acrylate	15.370	55	179044	46.16	ug/L		98
94) n-amyl acetate	15.600	70	77955	44.71	ug/L		98
95) bromoform	15.851	173	73863	52.34	ug/L		97
96) isopropylbenzene	15.966	105	480958	46.99	ug/L		100
97) cis-1,4-dichloro-2-butene	16.003	75	44802	147.13	ug/L		89
100) bromobenzene	16.411	156	103828	51.81	ug/L		89
101) 1,1,2,2-tetrachloroethane	16.280	83	142507	54.75	ug/L		98
102) trans-1,4-dichloro-2-b...	16.317	53	27325	135.39	ug/L		97
103) 1,2,3-trichloropropane	16.379	110	39581	53.10	ug/L		97
104) n-propylbenzene	16.437	91	479228	49.01	ug/L		98
105) 2-chlorotoluene	16.594	126	109307	50.19	ug/L		95
106) 4-chlorotoluene	16.714	91	252391	49.59	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251649.d
Acq On : 15 Jul 2019 10:50 am
Operator : edwardd
Sample : JC91309-1ms Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:16:56 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

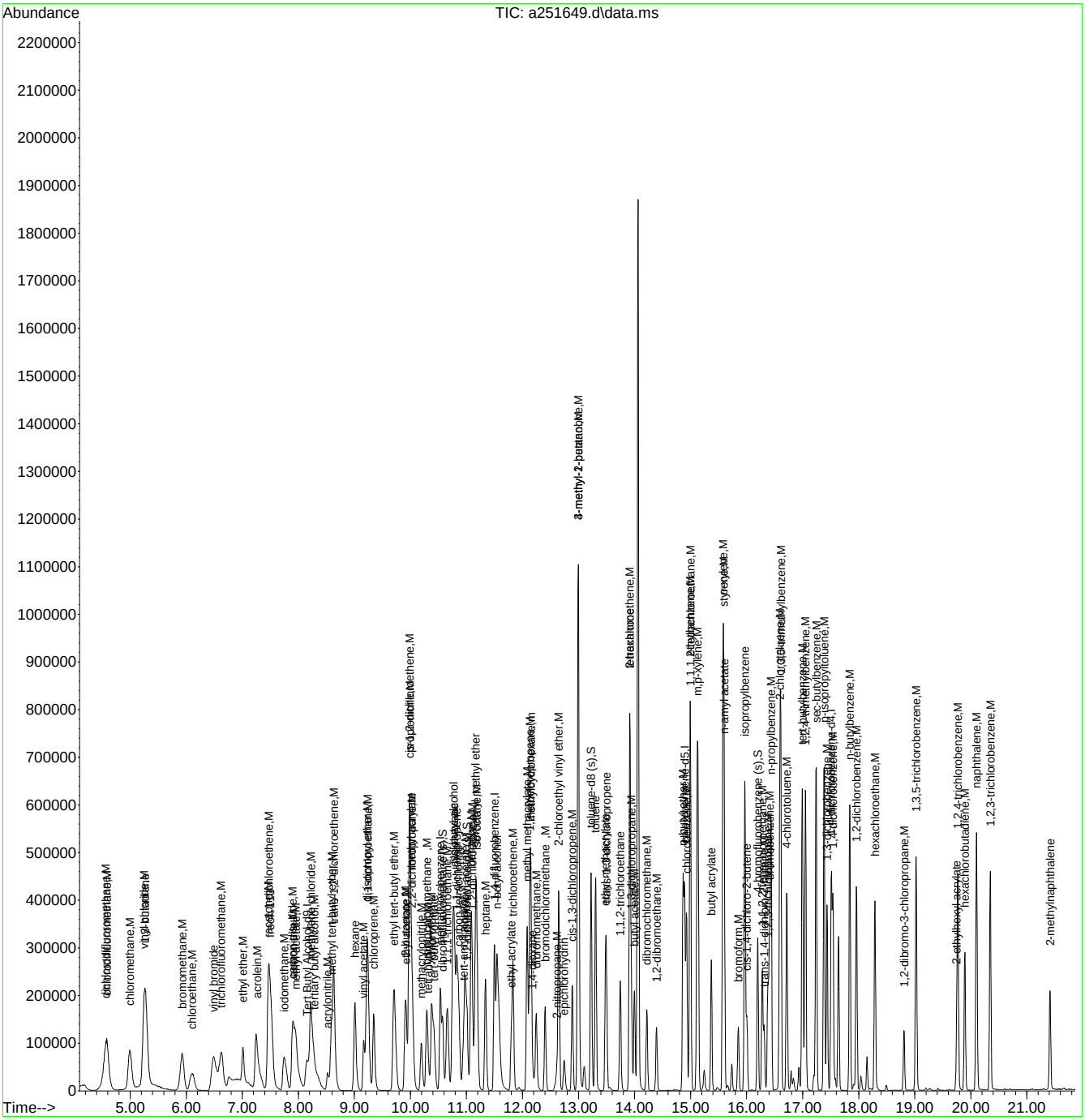
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.609	105	396574	52.60	ug/L	98
108) tert-butylbenzene	16.996	134	91075	52.15	ug/L	97
109) 1,2,4-trimethylbenzene	17.049	105	374869	50.25	ug/L	100
110) sec-butylbenzene	17.242	105	535747	52.05	ug/L	100
111) 1,3-dichlorobenzene	17.436	146	190302	47.91	ug/L	99
112) p-isopropyltoluene	17.383	119	447205	52.14	ug/L	99
113) 1,4-dichlorobenzene	17.540	146	186438	46.37	ug/L	100
114) 1,2-dichlorobenzene	17.959	146	205220	47.67	ug/L	99
115) n-butylbenzene	17.838	92	202693	48.33	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.811	157	46755	51.43	ug/L	95
117) 1,3,5-trichlorobenzene	19.026	180	188443	46.43	ug/L	95
118) 2-ethylhexyl acrylate	19.747	70	21166	9.48	ug/L	91
119) 1,2,4-trichlorobenzene	19.768	180	177353	48.58	ug/L	98
120) hexachlorobutadiene	19.894	225	74658	51.40	ug/L	97
121) naphthalene	20.103	128	509145	47.70	ug/L	100
122) 1,2,3-trichlorobenzene	20.349	180	180525	49.26	ug/L	96
123) hexachloroethane	18.288	201	83104	61.57	ug/L	97
124) 2-methylnaphthalene	21.416	142	128990	22.66	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251649.d
Acq On : 15 Jul 2019 10:50 am
Operator : edwardd
Sample : JC91309-1ms Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 03:16:56 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251650.d
Acq On : 15 Jul 2019 11:18 am
Operator : edwardd
Sample : JC91309-1msd Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 15 18:04:03 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.159	65	294235	500.00	ug/L	0.00
5) pentafluorobenzene	10.539	168	190292	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	300533	50.00	ug/L	0.00
74) chlorobenzene-d5	14.890	117	255691	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.510	152	127487	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.580	113	101780	54.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.52%			
53) 1,2-dichloroethane-d4 (s)	11.009	65	106682	49.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.82%			
75) toluene-d8 (s)	13.227	98	336430	49.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.94%			
99) 4-bromofluorobenzene (s)	16.198	95	111145	55.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.94%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.284	59	152580	251.09	ug/L	95
4) 1,4-dioxane	12.176	88	52081	1323.24	ug/L	96
6) chlorodifluoromethane	4.592	51	205445	55.59	ug/L	97
7) dichlorodifluoromethane	4.555	85	213623	47.52	ug/L	97
8) chloromethane	5.000	50	248552	50.91	ug/L	99
9) vinyl chloride	5.256	62	326701	78.97	ug/L	96
10) 1,3-butadiene	5.277	54	174940	44.37	ug/L	95
11) bromomethane	5.941	94	137370	47.28	ug/L	96
12) chloroethane	6.109	64	103212	49.09	ug/L	95
13) vinyl bromide	6.496	106	139455	50.31	ug/L	100
14) trichlorofluoromethane	6.626	101	227447	53.14	ug/L	98
15) ethyl ether	7.013	74	50623	52.87	ug/L	98
16) acrolein	7.254	56	43796	100.56	ug/L	88
17) freon 113	7.510	151	118008	56.73	ug/L	100
18) 1,1-dichloroethene	7.479	96	111139	54.02	ug/L	89
19) acetone	7.474	58	59984	216.81	ug/L	95
20) acetonitrile	7.923	41	231201	527.84	ug/L	99
21) iodomethane	7.751	142	206795	56.58	ug/L	95
22) carbon disulfide	7.903	76	348362	50.89	ug/L	99
23) methylene chloride	8.227	84	114399	53.38	ug/L	98
24) methyl acetate	7.965	43	97848	50.49	ug/L	99
25) methyl tert butyl ether	8.603	73	330786	54.55	ug/L	100
26) trans-1,2-dichloroethene	8.635	96	97786	54.72	ug/L	95
27) hexane	9.011	57	135148	52.29	ug/L	99
28) di-isopropyl ether	9.231	45	322422	51.91	ug/L	98
29) ethyl tert-butyl ether	9.707	59	317360	53.41	ug/L	96
30) 2-butanone	9.911	72	74957	234.80	ug/L #	80
31) 1,1-dichloroethane	9.241	63	163605	50.93	ug/L	98
32) chloroprene	9.346	53	131467	50.49	ug/L	92
33) acrylonitrile	8.525	53	50747	51.40	ug/L	95
34) vinyl acetate	9.168	86	20401	49.72	ug/L	94
35) ethyl acetate	9.927	45	19186	53.78	ug/L #	58
36) 2,2-dichloropropane	10.021	77	183329	58.55	ug/L	97
37) cis-1,2-dichloroethene	9.984	96	273720	132.89	ug/L	100
38) methyl acrylate	10.021	85	19222	54.01	ug/L #	81
39) propionitrile	9.989	54	225347	534.29	ug/L #	4
40) bromochloromethane	10.293	128	57290	54.51	ug/L	95
41) tetrahydrofuran	10.314	42	45119	49.27	ug/L	96
42) chloroform	10.382	83	168410	50.43	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251650.d
Acq On : 15 Jul 2019 11:18 am
Operator : edwardd
Sample : JC91309-1msd Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 15 18:04:03 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.423	59	103237	60.86	ug/L		95
45) methacrylonitrile	10.193	67	49140	53.83	ug/L		90
46) cyclohexane	10.779	84	175846	50.66	ug/L		99
47) 1,1,1-trichloroethane	10.659	97	185254	56.61	ug/L		95
48) iso-butyl alcohol	10.774	43	161648	512.87	ug/L		90
49) 1,1-dichloropropene	10.826	75	125970	51.53	ug/L		97
50) carbon tetrachloride	10.863	117	167442	57.25	ug/L		99
51) tert-amyl alcohol	10.946	73	81956	279.71	ug/L	#	83
54) benzene	11.088	78	367260	47.87	ug/L		97
55) iso-octane	11.182	57	341451	47.42	ug/L		98
56) tert-amyl methyl ether	11.161	73	325479	49.82	ug/L		98
57) heptane	11.344	71	74056	51.91	ug/L		96
58) isopropyl acetate	10.978	87	28886	51.31	ug/L	#	91
59) 1,2-dichloroethane	11.103	62	124343	45.16	ug/L		98
60) n-butyl alcohol	11.548	56	343693	2605.82	ug/L		96
61) ethyl acrylate	11.799	55	132136	52.81	ug/L		99
62) trichloroethene	11.830	95	96819	49.55	ug/L		99
63) 2-nitropropane	12.615	41	38914	46.94	ug/L		84
64) methylcyclohexane	12.149	83	197742	49.04	ug/L		100
65) 2-chloroethyl vinyl ether	12.646	63	180310	173.72	ug/L		97
66) methyl methacrylate	12.076	100	30447	55.06	ug/L	#	53
67) 1,2-dichloropropane	12.129	63	91167	49.24	ug/L		95
68) dibromomethane	12.249	93	63903	51.28	ug/L		94
69) bromodichloromethane	12.406	83	133490	52.19	ug/L		99
70) epichlorohydrin	12.746	57	74125	266.59	ug/L		98
71) cis-1,3-dichloropropene	12.892	75	150023	54.88	ug/L		96
72) 4-methyl-2-pentanone	12.997	58	225696	197.28	ug/L		96
73) 3-methyl-1-butanol	12.997	55	219460	1022.11	ug/L		97
76) toluene	13.305	92	221612	49.04	ug/L		100
77) trans-1,3-dichloropropene	13.499	75	129272	55.61	ug/L		98
78) ethyl methacrylate	13.483	69	122859	52.24	ug/L		96
79) 1,1,2-trichloroethane	13.745	83	67643	52.39	ug/L		94
80) 2-hexanone	13.917	58	190905	200.04	ug/L		98
81) tetrachloroethene	13.917	166	106104	47.96	ug/L		96
82) 1,3-dichloropropane	13.943	76	128430	51.68	ug/L		96
83) butyl acetate	14.001	56	68306	48.11	ug/L		98
84) dibromochloromethane	14.221	129	101164	52.31	ug/L		97
85) 1,2-dibromoethane	14.393	107	98674	55.81	ug/L		99
86) n-butyl ether	14.864	57	337247	45.45	ug/L		99
87) chlorobenzene	14.927	112	232697	49.53	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.000	131	117335	49.84	ug/L		97
89) ethylbenzene	14.989	91	396994	47.29	ug/L		98
90) m,p-xylene	15.125	106	316655	97.03	ug/L		98
91) o-xylene	15.580	106	176906	48.99	ug/L		98
92) styrene	15.586	104	244856	47.17	ug/L		99
93) butyl acrylate	15.371	55	175900	47.53	ug/L		95
94) n-amyl acetate	15.607	70	76932	46.24	ug/L		92
95) bromoform	15.852	173	72792	54.06	ug/L		99
96) isopropylbenzene	15.967	105	481878	49.34	ug/L		99
97) cis-1,4-dichloro-2-butene	16.004	75	45020	154.96	ug/L		97
100) bromobenzene	16.407	156	103887	55.41	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.276	83	136634	56.11	ug/L		99
102) trans-1,4-dichloro-2-b...	16.313	53	26051	137.97	ug/L		82
103) 1,2,3-trichloropropane	16.381	110	38940	55.84	ug/L		100
104) n-propylbenzene	16.433	91	472320	51.63	ug/L		99
105) 2-chlorotoluene	16.590	126	109722	53.85	ug/L		97
106) 4-chlorotoluene	16.715	91	252035	52.93	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251650.d
Acq On : 15 Jul 2019 11:18 am
Operator : edwardd
Sample : JC91309-1msd Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 15 18:04:03 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

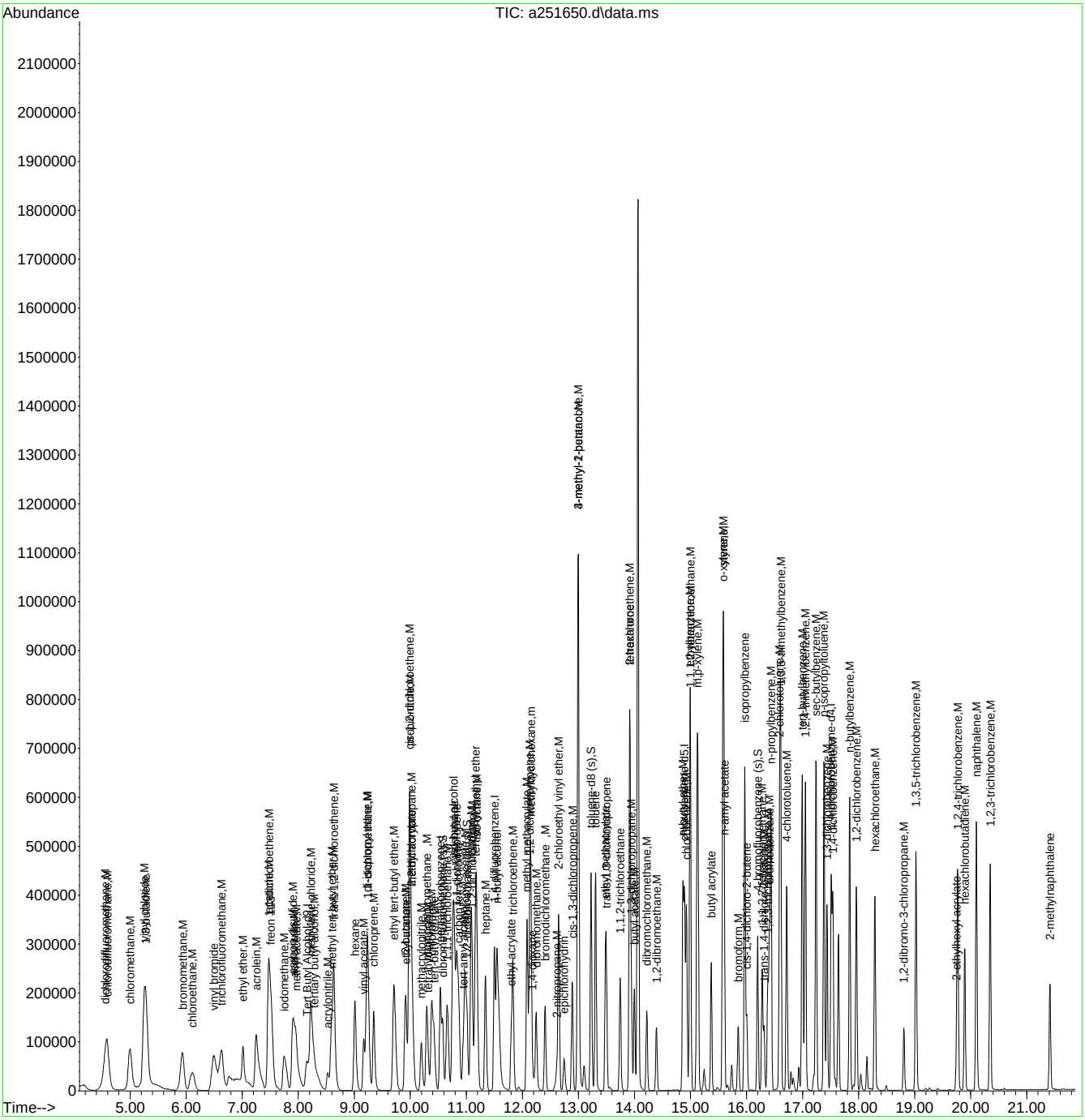
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.611	105	396924	56.27	ug/L	100
108) tert-butylbenzene	16.993	134	90951	55.66	ug/L	98
109) 1,2,4-trimethylbenzene	17.050	105	374279	53.63	ug/L	99
110) sec-butylbenzene	17.238	105	535101	55.57	ug/L	100
111) 1,3-dichlorobenzene	17.437	146	186807	50.26	ug/L	99
112) p-isopropyltoluene	17.380	119	443850	55.31	ug/L	99
113) 1,4-dichlorobenzene	17.542	146	184137	48.95	ug/L	97
114) 1,2-dichlorobenzene	17.960	146	203433	50.51	ug/L	98
115) n-butylbenzene	17.840	92	197584	50.36	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.807	157	46904	55.15	ug/L	96
117) 1,3,5-trichlorobenzene	19.022	180	185292	48.80	ug/L	99
118) 2-ethylhexyl acrylate	19.744	70	21531	10.22	ug/L	94
119) 1,2,4-trichlorobenzene	19.770	180	175006	51.24	ug/L	97
120) hexachlorobutadiene	19.895	225	74561	54.87	ug/L	98
121) naphthalene	20.099	128	509989	51.07	ug/L	99
122) 1,2,3-trichlorobenzene	20.350	180	179639	52.40	ug/L	97
123) hexachloroethane	18.290	201	83910	66.45	ug/L	97
124) 2-methylnaphthalene	21.412	142	136499	25.63	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251650.d
Acq On : 15 Jul 2019 11:18 am
Operator : edwardd
Sample : JC91309-1msd Inst : MSA
Misc : MS36113,VA9738,5,,,,10
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 15 18:04:03 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251703.d
Acq On : 16 Jul 2019 3:08 pm
Operator : EddieH
Sample : JC91586-6ms Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:32 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.160	65	287272	500.00	ug/L	0.00
5) pentafluorobenzene	10.534	168	199543	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	309385	50.00	ug/L	0.00
74) chlorobenzene-d5	14.891	117	255480	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.511	152	129924	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.576	113	104961	53.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.74%			
53) 1,2-dichloroethane-d4 (s)	11.010	65	109942	49.47	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.94%			
75) toluene-d8 (s)	13.228	98	338499	49.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.64%			
99) 4-bromofluorobenzene (s)	16.193	95	110522	54.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.22%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.285	59	143456	241.79	ug/L	100
4) 1,4-dioxane	12.177	88	43308	1127.01	ug/L	98
6) chlorodifluoromethane	4.588	51	157748	40.71	ug/L	96
7) dichlorodifluoromethane	4.556	85	194192	41.20	ug/L	97
8) chloromethane	5.006	50	225347	44.01	ug/L	93
9) vinyl chloride	5.262	62	269051	62.02	ug/L	99
10) 1,3-butadiene	5.278	54	126703	30.65	ug/L	95
11) bromomethane	5.948	94	124610	40.90	ug/L	94
12) chloroethane	6.115	64	95927	43.51	ug/L	98
13) vinyl bromide	6.497	106	121562	41.82	ug/L	99
14) trichlorofluoromethane	6.633	101	192611	42.91	ug/L	97
15) ethyl ether	7.015	74	46849	46.66	ug/L	88
16) acrolein	7.260	56	27849	60.98	ug/L	96
17) freon 113	7.517	151	86788	39.79	ug/L	97
18) 1,1-dichloroethene	7.496	96	95421	44.23	ug/L	94
19) acetone	7.470	58	55226	190.36	ug/L	97
20) acetonitrile	7.919	41	217024	472.51	ug/L	96
21) iodomethane	7.773	142	180752	47.16	ug/L	98
22) carbon disulfide	7.935	76	288331	40.17	ug/L	99
23) methylene chloride	8.228	84	110522	49.18	ug/L	98
24) methyl acetate	7.961	43	93906	46.21	ug/L	99
25) methyl tert butyl ether	8.599	73	303558	47.74	ug/L	99
26) trans-1,2-dichloroethene	8.636	96	81784	43.64	ug/L	96
27) hexane	9.007	57	103089	38.04	ug/L	99
28) di-isopropyl ether	9.227	45	292190	44.86	ug/L	99
29) ethyl tert-butyl ether	9.708	59	287344	46.12	ug/L	96
30) 2-butanone	9.912	72	72292	215.96	ug/L #	86
31) 1,1-dichloroethane	9.237	63	142625	42.34	ug/L	99
32) chloroprene	9.347	53	107666	39.43	ug/L	97
33) acrylonitrile	8.526	53	49770	48.07	ug/L	95
34) vinyl acetate	9.169	86	20463	47.56	ug/L	95
35) ethyl acetate	9.922	45	17494	46.76	ug/L #	80
36) 2,2-dichloropropane	10.027	77	144088	43.88	ug/L	99
37) cis-1,2-dichloroethene	9.985	96	704143	326.01	ug/L	99
38) methyl acrylate	10.011	85	18056	48.38	ug/L #	88
39) propionitrile	9.990	54	218939	495.03	ug/L #	1
40) bromochloromethane	10.294	128	51622	46.84	ug/L	99
41) tetrahydrofuran	10.310	42	42954	44.73	ug/L	98
42) chloroform	10.383	83	146305	41.78	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251703.d
Acq On : 16 Jul 2019 3:08 pm
Operator : EddieH
Sample : JC91586-6ms Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:32 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.419	59	82564	46.41	ug/L		97
45) methacrylonitrile	10.194	67	46235	48.30	ug/L		88
46) cyclohexane	10.780	84	143879	39.53	ug/L		97
47) 1,1,1-trichloroethane	10.655	97	146956	42.83	ug/L		97
48) iso-butyl alcohol	10.770	43	150442	455.18	ug/L	#	79
49) 1,1-dichloropropene	10.827	75	101517	39.60	ug/L		97
50) carbon tetrachloride	10.859	117	130798	42.65	ug/L		99
51) tert-amyl alcohol	10.948	73	74803	243.46	ug/L		89
54) benzene	11.084	78	309013	39.13	ug/L		99
55) iso-octane	11.183	57	270541	36.50	ug/L		97
56) tert-amyl methyl ether	11.162	73	297281	44.20	ug/L		100
57) heptane	11.340	71	56209	38.27	ug/L		95
58) isopropyl acetate	10.974	87	27034	46.65	ug/L	#	90
59) 1,2-dichloroethane	11.105	62	114203	40.29	ug/L		99
60) n-butyl alcohol	11.549	56	321291	2366.27	ug/L		97
61) ethyl acrylate	11.800	55	124076	48.17	ug/L		99
62) trichloroethene	11.832	95	231739	115.21	ug/L		97
63) 2-nitropropane	12.611	41	29164	34.18	ug/L		81
64) methylcyclohexane	12.151	83	151227	36.43	ug/L		99
66) methyl methacrylate	12.083	100	27992	49.17	ug/L		93
67) 1,2-dichloropropane	12.130	63	82287	43.18	ug/L		96
68) dibromomethane	12.245	93	60509	47.17	ug/L		97
69) bromodichloromethane	12.407	83	117955	44.79	ug/L		98
70) epichlorohydrin	12.747	57	67491	235.79	ug/L		99
71) cis-1,3-dichloropropene	12.888	75	130611	46.41	ug/L		99
72) 4-methyl-2-pentanone	12.993	58	209239	177.66	ug/L		97
73) 3-methyl-1-butanol	12.993	55	202787	917.43	ug/L		96
76) toluene	13.306	92	184212	40.80	ug/L		98
77) trans-1,3-dichloropropene	13.500	75	114438	49.27	ug/L		99
78) ethyl methacrylate	13.484	69	109274	46.50	ug/L		96
79) 1,1,2-trichloroethane	13.746	83	63382	49.13	ug/L		98
80) 2-hexanone	13.918	58	175610	184.17	ug/L		100
81) tetrachloroethene	13.918	166	640372	289.72	ug/L		97
82) 1,3-dichloropropane	13.944	76	117537	47.34	ug/L		98
83) butyl acetate	13.997	56	64179	45.24	ug/L		99
84) dibromochloromethane	14.216	129	91584	47.40	ug/L		97
85) 1,2-dibromoethane	14.394	107	92346	52.27	ug/L		99
86) n-butyl ether	14.865	57	285635	38.53	ug/L		99
87) chlorobenzene	14.928	112	200706	42.75	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.001	131	102702	43.66	ug/L		99
89) ethylbenzene	14.990	91	323276	38.54	ug/L		99
90) m,p-xylene	15.121	106	257196	78.87	ug/L		99
91) o-xylene	15.576	106	146661	40.65	ug/L		98
92) styrene	15.587	104	202675	39.07	ug/L		98
93) butyl acrylate	15.372	55	165624	44.79	ug/L		98
94) n-amyl acetate	15.602	70	70314	42.30	ug/L		99
95) bromoform	15.853	173	66573	49.48	ug/L		99
96) isopropylbenzene	15.969	105	385426	39.50	ug/L		99
97) cis-1,4-dichloro-2-butene	16.005	75	40085	138.09	ug/L		96
100) bromobenzene	16.408	156	90242	47.23	ug/L		98
101) 1,1,2,2-tetrachloroethane	16.277	83	125977	50.76	ug/L		98
102) trans-1,4-dichloro-2-b...	16.314	53	24628	127.99	ug/L		93
103) 1,2,3-trichloropropane	16.382	110	35450	49.88	ug/L		96
104) n-propylbenzene	16.434	91	384951	41.29	ug/L		100
105) 2-chlorotoluene	16.591	126	90086	43.39	ug/L		93
106) 4-chlorotoluene	16.716	91	211598	43.61	ug/L		98
107) 1,3,5-trimethylbenzene	16.612	105	315592	43.90	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251703.d
Acq On : 16 Jul 2019 3:08 pm
Operator : EddieH
Sample : JC91586-6ms Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:32 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

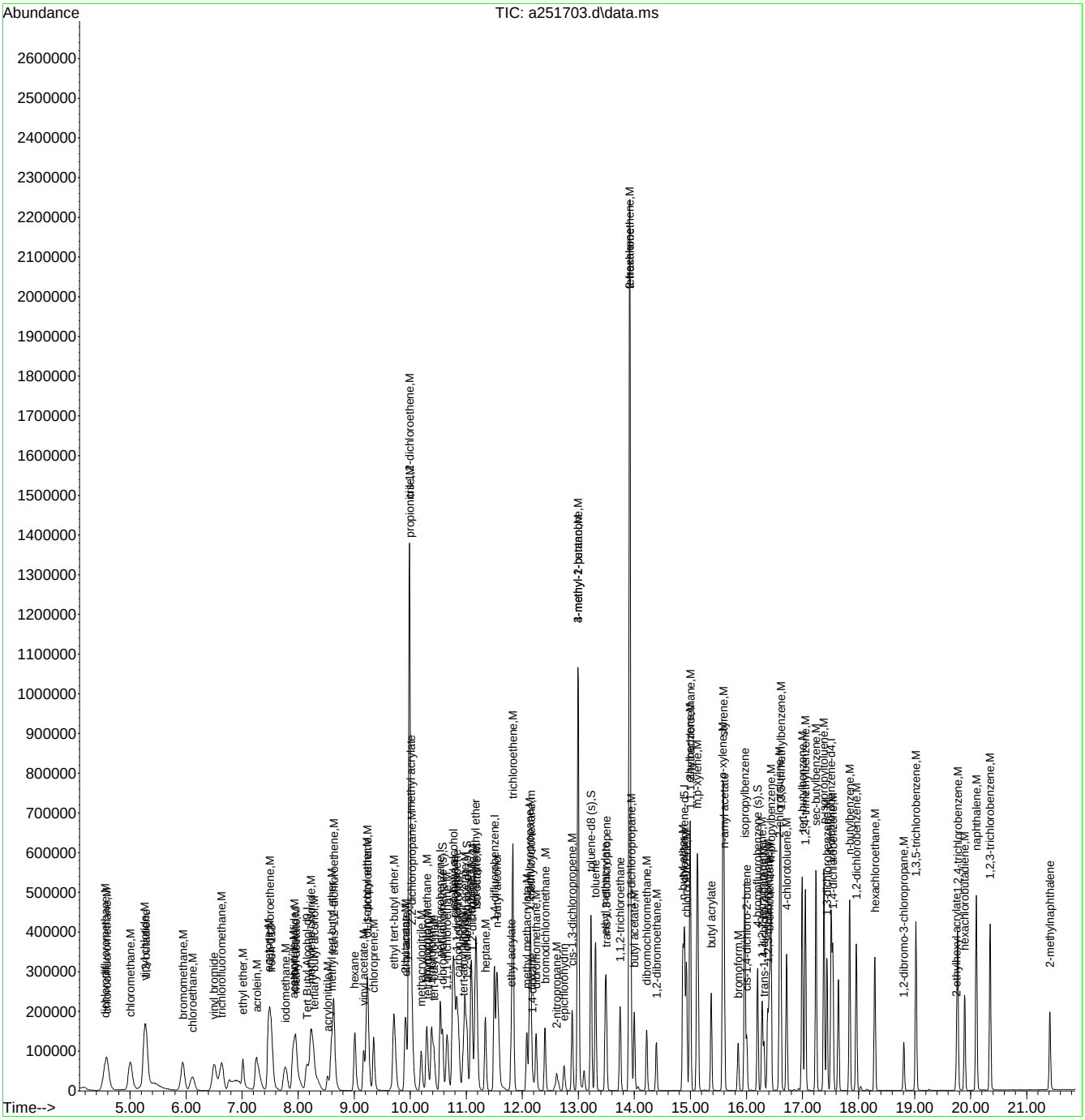
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
108) tert-butylbenzene	16.994	134	74320	44.63	ug/L	#	87
109) 1,2,4-trimethylbenzene	17.051	105	304244	42.78	ug/L		100
110) sec-butylbenzene	17.239	105	424402	43.25	ug/L		100
111) 1,3-dichlorobenzene	17.438	146	164596	43.46	ug/L		99
112) p-isopropyltoluene	17.381	119	354222	43.31	ug/L		99
113) 1,4-dichlorobenzene	17.543	146	164235	42.84	ug/L		97
114) 1,2-dichlorobenzene	17.961	146	178079	43.39	ug/L		99
115) n-butylbenzene	17.841	92	161379	40.36	ug/L		97
116) 1,2-dibromo-3-chloropr...	18.808	157	42335	48.85	ug/L		92
117) 1,3,5-trichlorobenzene	19.023	180	159252	41.16	ug/L		99
118) 2-ethylhexyl acrylate	19.745	70	18431	8.74	ug/L		96
119) 1,2,4-trichlorobenzene	19.771	180	155391	44.64	ug/L		98
120) hexachlorobutadiene	19.891	225	60450	43.65	ug/L		97
121) naphthalene	20.100	128	462315	45.43	ug/L		98
122) 1,2,3-trichlorobenzene	20.346	180	162487	46.51	ug/L		95
123) hexachloroethane	18.291	201	71938	55.90	ug/L		97
124) 2-methylnaphthalene	21.413	142	119931	22.10	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251703.d
Acq On : 16 Jul 2019 3:08 pm
Operator : EddieH
Sample : JC91586-6ms Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:32 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251704.d
Acq On : 16 Jul 2019 3:37 pm
Operator : EddieH
Sample : JC91586-6msd Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:43 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.163	65	286507	500.00	ug/L	0.00
5) pentafluorobenzene	10.538	168	199277	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.500	114	305815	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	256419	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	130030	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.574	113	102429	52.15	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.30%			
53) 1,2-dichloroethane-d4 (s)	11.014	65	106630	48.54	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.08%			
75) toluene-d8 (s)	13.226	98	334112	48.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.98%			
99) 4-bromofluorobenzene (s)	16.197	95	109624	54.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.24%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.278	59	143762	242.96	ug/L	96
4) 1,4-dioxane	12.175	88	46057	1201.75	ug/L	99
6) chlorodifluoromethane	4.580	51	159810	41.29	ug/L	99
7) dichlorodifluoromethane	4.554	85	195661	41.57	ug/L	97
8) chloromethane	4.999	50	226380	44.27	ug/L	95
9) vinyl chloride	5.260	62	275589	63.62	ug/L	96
10) 1,3-butadiene	5.281	54	127990	31.00	ug/L	97
11) bromomethane	5.935	94	126130	41.45	ug/L	98
12) chloroethane	6.118	64	94171	42.77	ug/L	93
13) vinyl bromide	6.495	106	122098	42.06	ug/L	99
14) trichlorofluoromethane	6.641	101	196090	43.75	ug/L	99
15) ethyl ether	7.012	74	46982	46.85	ug/L	92
16) acrolein	7.253	56	28494	62.48	ug/L	83
17) freon 113	7.504	151	86716	39.81	ug/L	98
18) 1,1-dichloroethene	7.494	96	96669	44.87	ug/L	85
19) acetone	7.473	58	55461	191.42	ug/L	99
20) acetonitrile	7.907	41	214669	468.00	ug/L	95
21) iodomethane	7.771	142	183892	48.04	ug/L	98
22) carbon disulfide	7.938	76	292828	40.85	ug/L	100
23) methylene chloride	8.236	84	113388	50.53	ug/L	96
24) methyl acetate	7.959	43	94169	46.40	ug/L	99
25) methyl tert butyl ether	8.597	73	308352	48.56	ug/L	99
26) trans-1,2-dichloroethene	8.634	96	82324	43.99	ug/L	96
27) hexane	9.010	57	100529	37.14	ug/L	99
28) di-isopropyl ether	9.225	45	292300	44.94	ug/L	98
29) ethyl tert-butyl ether	9.711	59	290236	46.65	ug/L	96
30) 2-butanone	9.905	72	71059	212.56	ug/L #	82
31) 1,1-dichloroethane	9.241	63	140310	41.70	ug/L	98
32) chloroprene	9.350	53	105122	38.55	ug/L	98
33) acrylonitrile	8.519	53	51082	49.40	ug/L	94
34) vinyl acetate	9.167	86	21151	49.22	ug/L	94
35) ethyl acetate	9.926	45	18195	48.70	ug/L #	49
36) 2,2-dichloropropane	10.025	77	142331	43.40	ug/L	99
37) cis-1,2-dichloroethene	9.983	96	703084	325.95	ug/L	98
38) methyl acrylate	10.009	85	17312	46.45	ug/L #	90
39) propionitrile	9.988	54	214468	485.57	ug/L #	1
40) bromochloromethane	10.287	128	51715	46.99	ug/L	95
41) tetrahydrofuran	10.307	42	43867	45.74	ug/L	99
42) chloroform	10.381	83	146070	41.77	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251704.d
Acq On : 16 Jul 2019 3:37 pm
Operator : EddieH
Sample : JC91586-6msd Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:43 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	10.412	59	79118	44.54	ug/L		97
45)	methacrylonitrile	10.198	67	46908	49.07	ug/L		86
46)	cyclohexane	10.773	84	141484	38.93	ug/L		95
47)	1,1,1-trichloroethane	10.653	97	150671	43.97	ug/L		98
48)	iso-butyl alcohol	10.773	43	151631	459.39	ug/L	#	80
49)	1,1-dichloropropene	10.825	75	98913	38.64	ug/L		94
50)	carbon tetrachloride	10.862	117	131190	42.83	ug/L		99
51)	tert-amyl alcohol	10.951	73	76232	248.45	ug/L		91
54)	benzene	11.082	78	312449	40.02	ug/L		96
55)	iso-octane	11.181	57	268578	36.66	ug/L		96
56)	tert-amyl methyl ether	11.160	73	302404	45.48	ug/L		98
57)	heptane	11.343	71	56124	38.66	ug/L		93
58)	isopropyl acetate	10.977	87	26450	46.18	ug/L		95
59)	1,2-dichloroethane	11.108	62	115301	41.16	ug/L		99
60)	n-butyl alcohol	11.547	56	324661	2419.01	ug/L		98
61)	ethyl acrylate	11.803	55	123885	48.66	ug/L		98
62)	trichloroethene	11.829	95	224865	113.10	ug/L		98
63)	2-nitropropane	12.614	41	28839	34.19	ug/L	#	80
64)	methylcyclohexane	12.143	83	150628	36.71	ug/L		100
66)	methyl methacrylate	12.080	100	27701	49.23	ug/L		89
67)	1,2-dichloropropane	12.128	63	79842	42.38	ug/L		99
68)	dibromomethane	12.243	93	58865	46.42	ug/L		97
69)	bromodichloromethane	12.405	83	117697	45.22	ug/L		98
70)	epichlorohydrin	12.739	57	68571	242.35	ug/L		99
71)	cis-1,3-dichloropropene	12.891	75	131915	47.42	ug/L		96
72)	4-methyl-2-pentanone	12.996	58	209024	179.55	ug/L		97
73)	3-methyl-1-butanol	12.991	55	202918	928.74	ug/L		98
76)	toluene	13.304	92	182958	40.37	ug/L		100
77)	trans-1,3-dichloropropene	13.498	75	118804	50.96	ug/L		98
78)	ethyl methacrylate	13.482	69	111052	47.08	ug/L		95
79)	1,1,2-trichloroethane	13.744	83	63814	49.29	ug/L		96
80)	2-hexanone	13.916	58	179035	187.07	ug/L		95
81)	tetrachloroethene	13.916	166	632995	285.33	ug/L		98
82)	1,3-dichloropropane	13.942	76	119064	47.78	ug/L		94
83)	butyl acetate	13.995	56	66427	46.65	ug/L		96
84)	dibromochloromethane	14.220	129	93948	48.44	ug/L		97
85)	1,2-dibromoethane	14.392	107	93872	52.94	ug/L		97
86)	n-butyl ether	14.863	57	289152	38.86	ug/L		99
87)	chlorobenzene	14.926	112	201196	42.70	ug/L		98
88)	1,1,1,2-tetrachloroethane	14.999	131	101285	42.90	ug/L		98
89)	ethylbenzene	14.994	91	323108	38.38	ug/L		97
90)	m,p-xylene	15.124	106	255266	77.99	ug/L		92
91)	o-xylene	15.579	106	143623	39.66	ug/L		100
92)	styrene	15.590	104	206331	39.63	ug/L		97
93)	butyl acrylate	15.370	55	167355	45.10	ug/L		99
94)	n-amyl acetate	15.606	70	71002	42.56	ug/L		96
95)	bromoform	15.851	173	69450	51.43	ug/L		97
96)	isopropylbenzene	15.966	105	382505	39.06	ug/L		99
97)	cis-1,4-dichloro-2-butene	16.003	75	41918	143.87	ug/L		97
100)	bromobenzene	16.406	156	91483	47.84	ug/L		98
101)	1,1,2,2-tetrachloroethane	16.280	83	127276	51.25	ug/L		98
102)	trans-1,4-dichloro-2-b...	16.312	53	25943	134.71	ug/L		96
103)	1,2,3-trichloropropane	16.380	110	35459	49.86	ug/L		96
104)	n-propylbenzene	16.437	91	380531	40.79	ug/L		100
105)	2-chlorotoluene	16.589	126	90841	43.71	ug/L		95
106)	4-chlorotoluene	16.714	91	213619	43.99	ug/L		99
107)	1,3,5-trimethylbenzene	16.610	105	311602	43.31	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251704.d
Acq On : 16 Jul 2019 3:37 pm
Operator : EddieH
Sample : JC91586-6msd Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:43 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

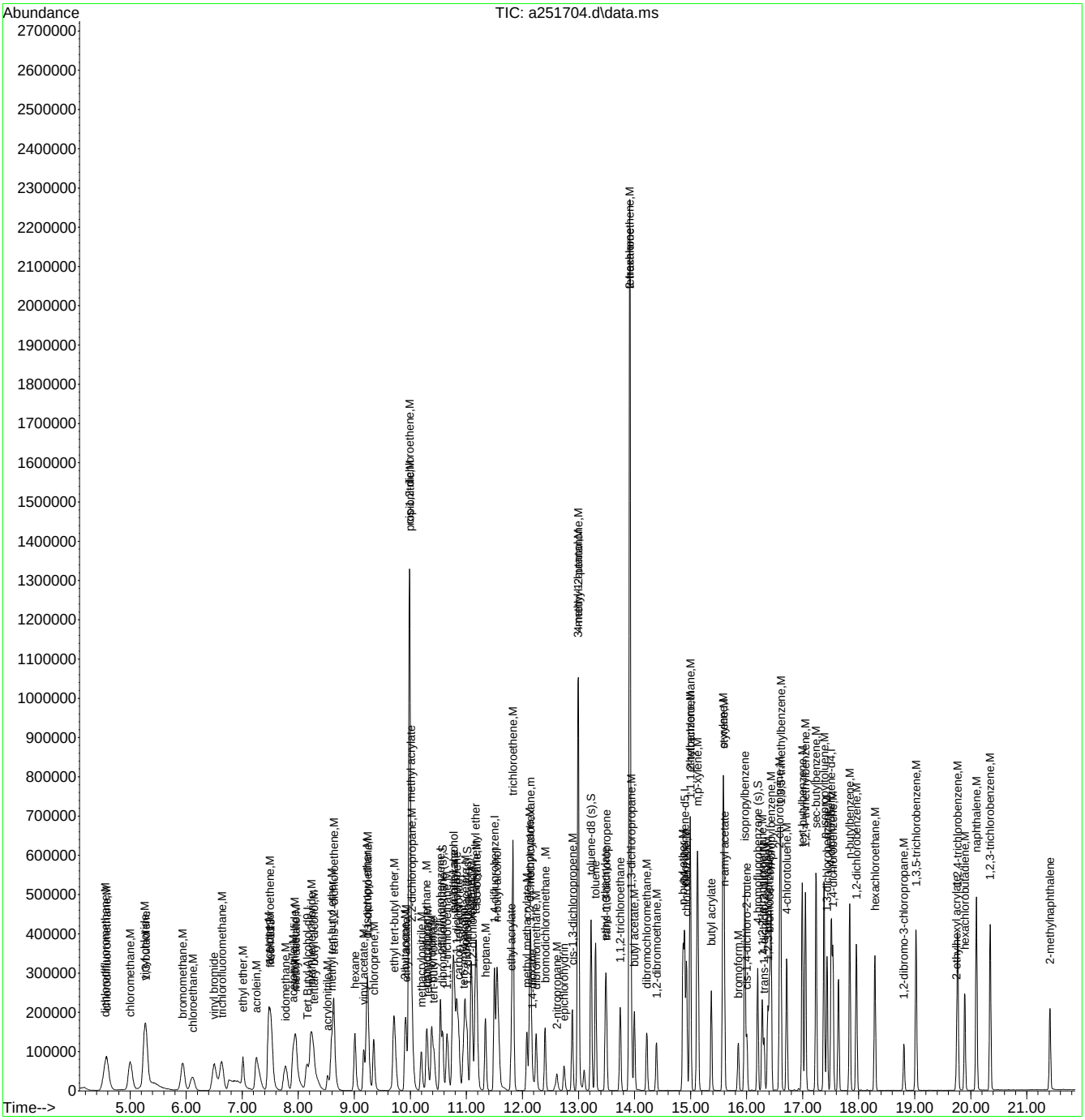
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.997	134	76167	45.70	ug/L	98
109) 1,2,4-trimethylbenzene	17.049	105	305196	42.87	ug/L	99
110) sec-butylbenzene	17.237	105	428433	43.62	ug/L	99
111) 1,3-dichlorobenzene	17.436	146	163714	43.19	ug/L	99
112) p-isopropyltoluene	17.384	119	351706	42.97	ug/L	99
113) 1,4-dichlorobenzene	17.541	146	165434	43.12	ug/L	99
114) 1,2-dichlorobenzene	17.959	146	180051	43.83	ug/L	96
115) n-butylbenzene	17.839	92	158697	39.66	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.806	157	42388	48.87	ug/L	97
117) 1,3,5-trichlorobenzene	19.026	180	157729	40.73	ug/L	98
118) 2-ethylhexyl acrylate	19.748	70	18692	8.84	ug/L	97
119) 1,2,4-trichlorobenzene	19.764	180	154508	44.35	ug/L	98
120) hexachlorobutadiene	19.894	225	62517	45.11	ug/L	98
121) naphthalene	20.104	128	467929	45.94	ug/L	99
122) 1,2,3-trichlorobenzene	20.344	180	165223	47.25	ug/L	94
123) hexachloroethane	18.289	201	72821	56.54	ug/L	96
124) 2-methylnaphthalene	21.411	142	128069	23.58	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251704.d
Acq On : 16 Jul 2019 3:37 pm
Operator : EddieH
Sample : JC91586-6msd Inst : MSA
Misc : MS36221,VA9741,5,,,,5
ALS Vial : 10 Sample Multiplier: 1

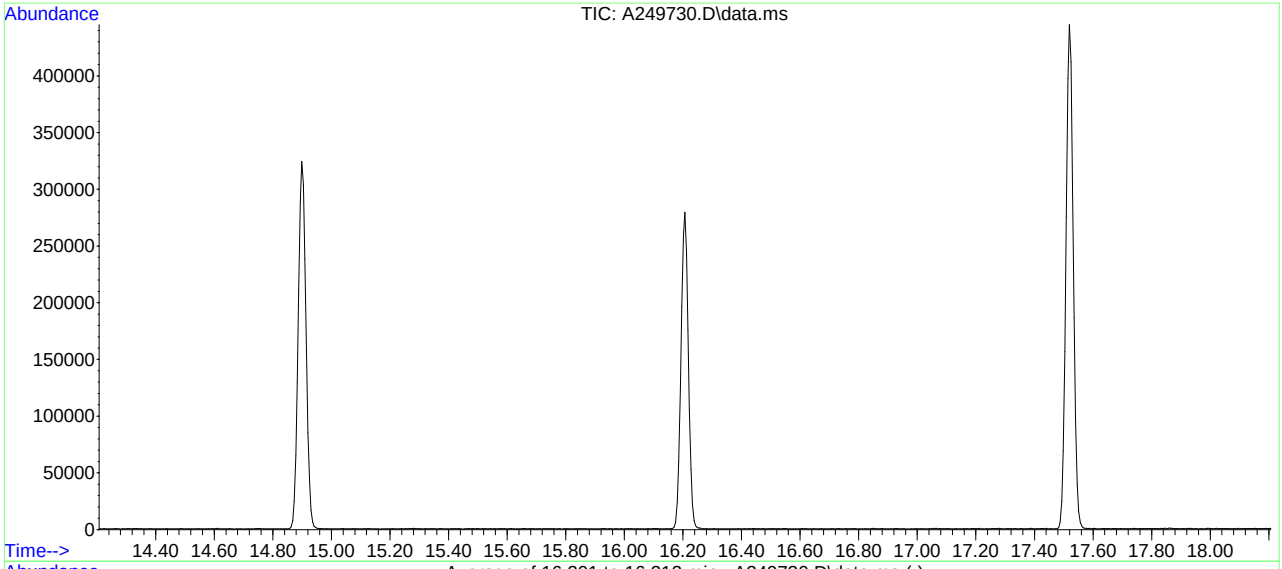
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:56:43 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9645\A249730.D Vial: 1
Acq On : 11 May 2019 2:52 pm Operator: PrashanS
Sample : BFB Inst : MSA
Misc : MS34541,VA9645,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019



AutoFind: Scans 2316, 2317, 2318; Background Corrected with Scan 2307

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	8968	PASS
75	95	30	60	47.2	24730	PASS
95	95	100	100	100.0	52402	PASS
96	95	5	9	6.7	3491	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.1	49818	PASS
175	174	5	9	8.1	4035	PASS
176	174	95	101	97.5	48597	PASS
177	176	5	9	6.8	3296	PASS

A249730.D MA9645.M Tue May 14 14:01:29 2019 RPT1

Average of 16.201 to 16.212 min.: A249730.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	435	52.00	60	69.95	342	80.90	1231
37.10	2409	56.00	704	72.05	388	81.95	303
38.10	2281	57.10	1127	73.00	2203	87.00	2321
39.10	829	60.00	464	74.05	8060	88.00	2105
44.00	331	61.00	2273	75.00	24730	90.90	204
45.00	450	62.00	2162	76.00	1930	91.10	59
47.05	674	63.00	1760	77.00	327	92.00	1245
48.05	305	64.10	69	77.95	160	93.00	1937
49.00	2029	67.10	71	78.20	82	94.00	6272
50.05	8968	68.00	4803	78.95	1202	95.00	52402
51.05	2980	69.00	5104	79.95	477	96.00	3491

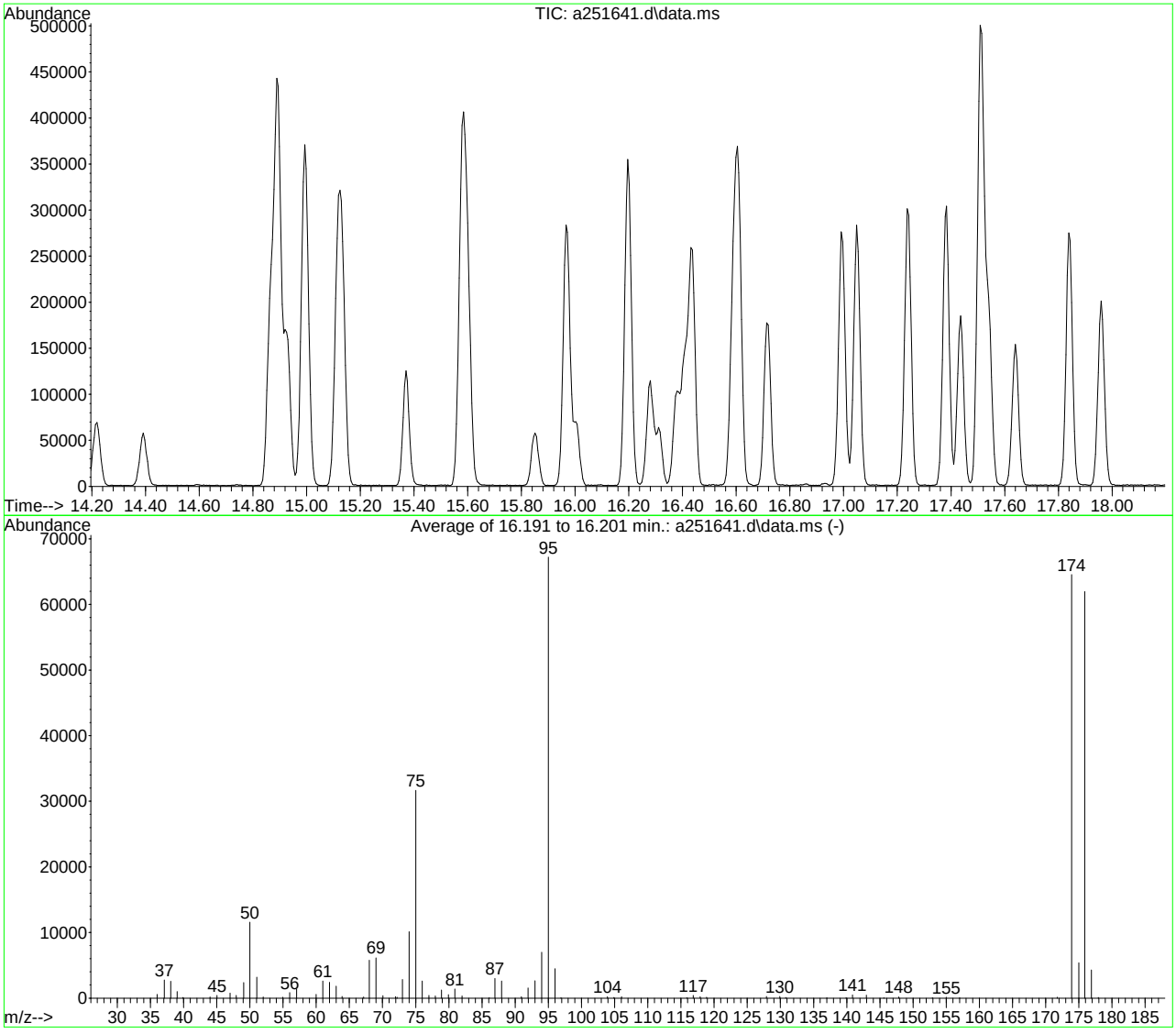
Average of 16.201 to 16.212 min.: A249730.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.10	56	140.90	498				
103.95	213	142.90	400				
105.80	166	148.00	57				
115.10	56	172.30	87				
115.90	138	173.90	49818				
116.95	252	175.00	4035				
117.90	237	175.95	48597				
118.90	314	176.90	3296				
127.90	117						
128.90	52						
129.85	188						

SW-846 Method 8260

Data File : C:\msdchem\1\data\kr...1619\va9738\a251641.d Vial: 2
Acq On : 15 Jul 2019 6:50 am Operator: JAYC
Sample : bfb Inst : MSA
Misc : MS4986,VA9738,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019



AutoFind: Scans 2314, 2315, 2316; Background Corrected with Scan 2305

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	11575	PASS
75	95	30	60	47.1	31640	PASS
95	95	100	100	100.0	67200	PASS
96	95	5	9	6.7	4507	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.1	64568	PASS
175	174	5	9	8.4	5392	PASS
176	174	95	101	95.9	61952	PASS
177	176	5	9	6.9	4286	PASS

a251641.d MA9645.M Tue Jul 16 02:57:02 2019

Average of 16.191 to 16.201 min.: a251641.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	558	51.05	3206	68.00	5791	78.90	1243
37.10	2752	52.00	192	69.00	6150	79.95	512
38.05	2548	54.95	131	70.05	366	80.90	1390
39.05	1006	56.00	824	71.95	214	82.00	336
39.90	110	57.05	1387	72.20	141	86.10	52
44.00	167	60.00	554	73.00	2833	86.95	3001
45.05	410	61.00	2599	74.00	10142	87.95	2598
47.00	780	62.00	2411	75.00	31640	90.95	236
47.95	427	63.00	1819	76.00	2620	91.95	1551
49.05	2373	63.90	265	77.00	429	93.00	2632
50.00	11575	67.15	174	77.95	329	94.00	6992

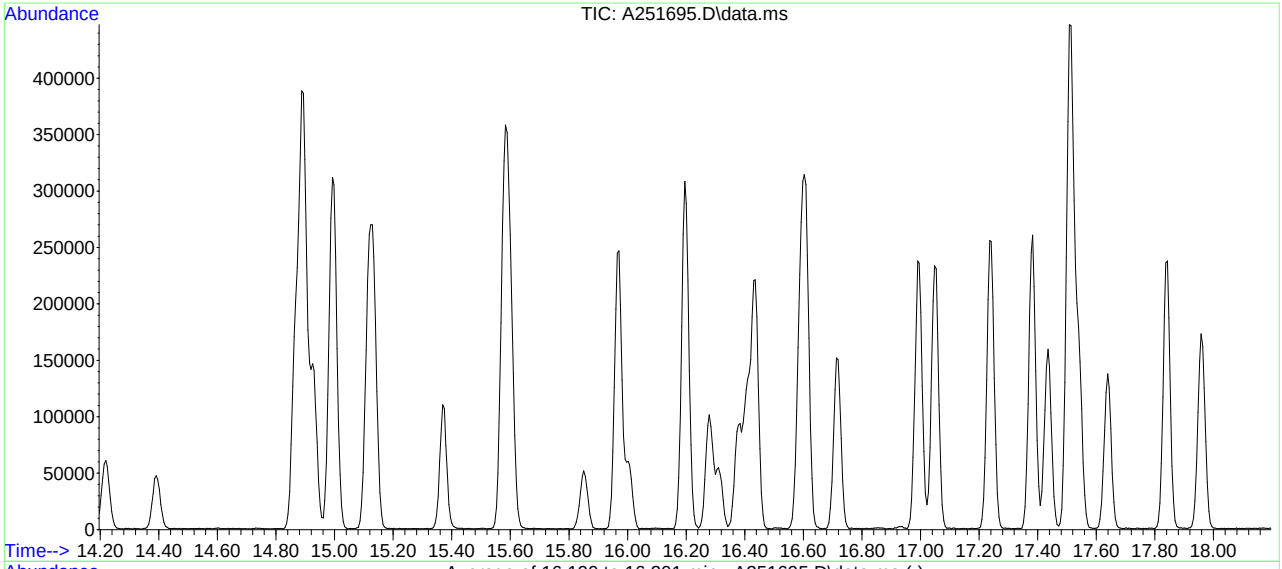
Average of 16.191 to 16.201 min.: a251641.d\data.ms
bfb
Modified:subtracted

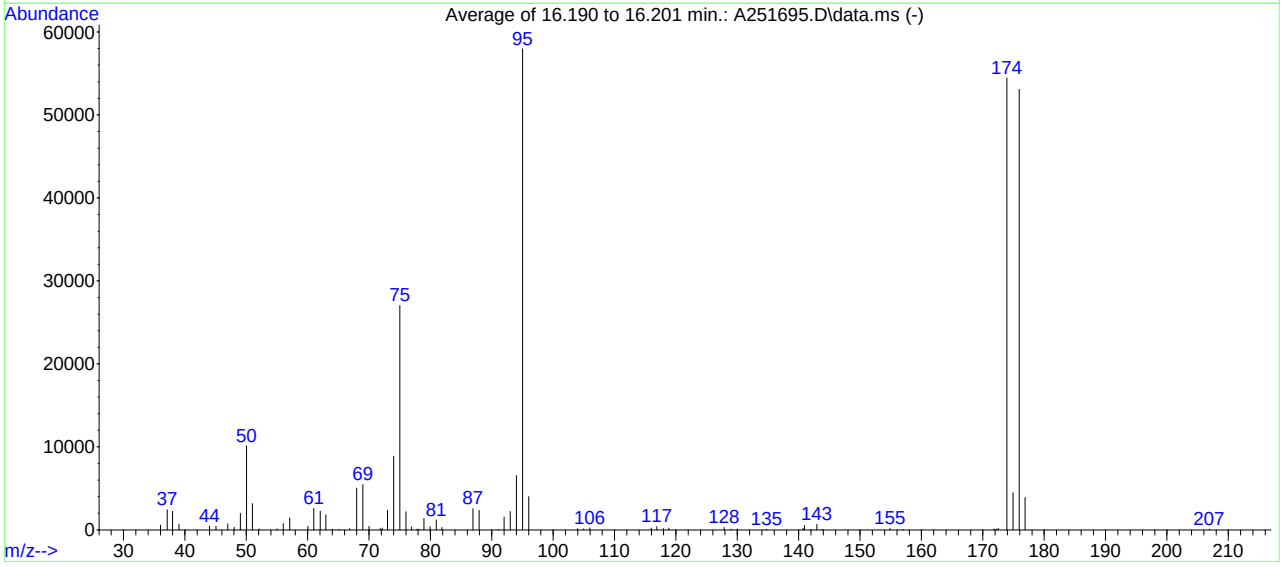
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	67200	129.90	253	171.75	155		
96.00	4507	130.80	119	173.90	64568		
96.90	72	137.00	56	175.00	5392		
103.90	227	139.90	61	175.90	61952		
104.90	85	140.85	475	176.90	4286		
106.05	210	142.95	471	177.95	117		
115.90	63	145.60	76				
116.85	413	147.85	182				
117.90	218	152.90	59				
118.85	146	155.00	140				
127.90	252	157.00	79				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9741\A251695.D Vial: 3
Acq On : 16 Jul 2019 10:37 am Operator: EddieH
Sample : bfb Inst : MSA
Misc : MS36109,VA9741,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9645.M (RTE Integrator)
Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019





AutoFind: Scans 2314, 2315, 2316; Background Corrected with Scan 2305

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	10121	PASS
75	95	30	60	46.6	27040	PASS
95	95	100	100	100.0	57965	PASS
96	95	5	9	6.9	4012	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.9	54456	PASS
175	174	5	9	8.2	4461	PASS
176	174	95	101	97.5	53088	PASS
177	176	5	9	7.3	3895	PASS

A251695.D MA9645.M Tue Jul 16 15:00:04 2019 RPT1

Average of 16.190 to 16.201 min.: A251695.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	572	52.10	133	68.00	5011	78.10	96
37.10	2432	55.00	104	69.00	5443	78.95	1376
38.00	2257	56.00	752	70.00	408	79.95	400
39.05	683	57.05	1430	71.80	152	80.95	1189
44.00	432	60.05	421	72.15	233	81.85	275
45.05	435	61.00	2592	73.00	2354	86.95	2552
47.00	712	62.05	2240	74.00	8861	87.95	2337
48.05	326	62.95	1802	75.00	27040	91.10	69
49.05	1980	64.00	100	76.00	2168	92.00	1533
50.05	10121	65.10	56	76.95	364	93.00	2215
51.00	3157	66.85	143	77.80	90	94.00	6529

Average of 16.190 to 16.201 min.: A251695.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	57965	130.00	125	172.50	181		
96.00	4012	134.80	54	173.90	54456		
103.95	152	140.70	181	174.90	4461		
104.95	125	140.95	514	175.90	53088		
105.95	231	142.00	50	176.90	3895		
115.95	215	142.95	654	206.90	70		
116.90	380	143.80	55				
117.95	151	154.85	172				
118.85	217	157.00	57				
127.85	287	171.80	112				
129.00	81	172.20	90				

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249731.D
Acq On : 11 May 2019 3:31 pm
Operator : PrashanS
Sample : IC9645-0.2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 14:03:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

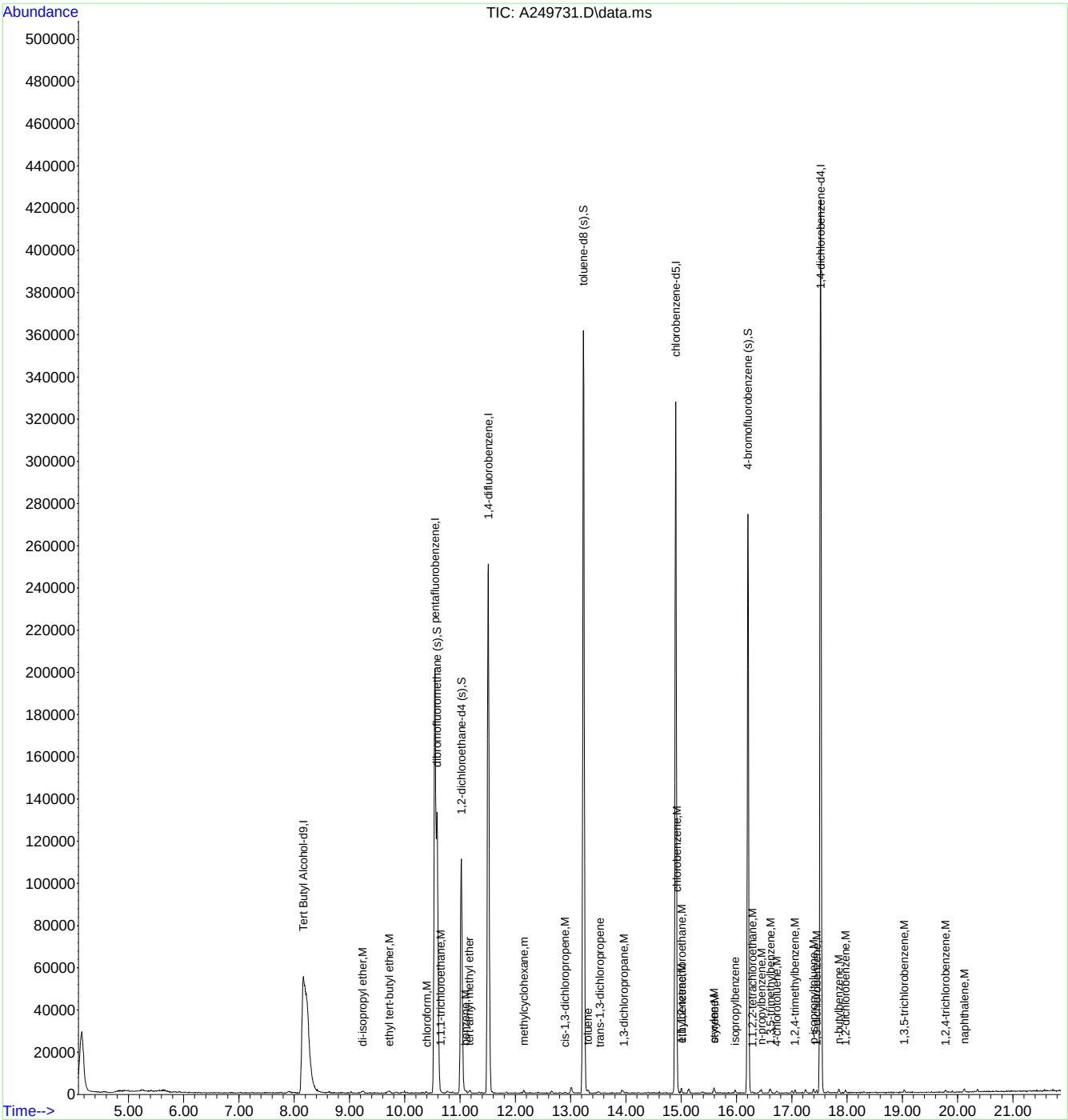
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.169	65	258313	500.00	ug/L		0.00
5) pentafluorobenzene	10.544	168	184209	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	255179	50.00	ug/L		0.00
74) chlorobenzene-d5	14.901	117	210166	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.521	152	127254	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.586	113	87809	48.32	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.64%				
53) 1,2-dichloroethane-d4 (s)	11.025	65	93358	52.21	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.42%				
75) toluene-d8 (s)	13.232	98	280449	50.99	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.98%				
99) 4-bromofluorobenzene (s)	16.208	95	97089	47.70	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.40%				
Target Compounds							Qvalue
28) di-isopropyl ether	9.231	45	1039	0.17	ug/L		63
29) ethyl tert-butyl ether	9.717	59	1001	0.17	ug/L	#	71
42) chloroform	10.392	83	728	0.24	ug/L	#	28
47) 1,1,1-trichloroethane	10.654	97	521	0.16	ug/L	#	69
54) benzene	11.093	78	1164	0.18	ug/L		55
56) tert-amyl methyl ether	11.166	73	989	0.18	ug/L	#	63
64) methylcyclohexane	12.155	83	624	0.18	ug/L	#	71
71) cis-1,3-dichloropropene	12.892	75	387	0.16	ug/L	#	35
76) toluene	13.311	92	674	0.19	ug/L		92
77) trans-1,3-dichloropropene	13.525	75	340	0.17	ug/L	#	49
82) 1,3-dichloropropane	13.959	76	348	0.17	ug/L	#	48
87) chlorobenzene	14.927	112	683	0.18	ug/L	#	42
88) 1,1,1,2-tetrachloroethane	15.005	131	382	0.21	ug/L		82
89) ethylbenzene	15.000	91	1410	0.21	ug/L		92
91) o-xylene	15.586	106	577	0.20	ug/L	#	69
92) styrene	15.601	104	896	0.22	ug/L		93
96) isopropylbenzene	15.978	105	1475	0.19	ug/L		90
101) 1,1,2,2-tetrachloroethane	16.292	83	485	0.19	ug/L		90
104) n-propylbenzene	16.443	91	2041	0.22	ug/L		81
106) 4-chlorotoluene	16.731	91	969	0.21	ug/L		88
107) 1,3,5-trimethylbenzene	16.621	105	1273	0.17	ug/L		80
109) 1,2,4-trimethylbenzene	17.055	105	1444	0.20	ug/L		81
111) 1,3-dichlorobenzene	17.448	146	833	0.23	ug/L		83
112) p-isopropyltoluene	17.390	119	1507	0.18	ug/L		87
114) 1,2-dichlorobenzene	17.976	146	957	0.25	ug/L		99
115) n-butylbenzene	17.850	92	763	0.20	ug/L	#	77
117) 1,3,5-trichlorobenzene	19.032	180	868	0.24	ug/L		86
119) 1,2,4-trichlorobenzene	19.775	180	706	0.21	ug/L	#	65
121) naphthalene	20.120	128	2426	0.24	ug/L		68

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249731.D
Acq On : 11 May 2019 3:31 pm
Operator : PrashanS
Sample : IC9645-0.2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 14:03:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 05/14/19 19:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.164	65	260411	500.00	ug/L		0.00
5) pentafluorobenzene	10.544	168	186658	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	265769	50.00	ug/L		0.00
74) chlorobenzene-d5	14.900	117	208332	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.521	152	132792	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.586	113	92857	50.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%				
53) 1,2-dichloroethane-d4 (s)	11.020	65	96739	51.95	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 103.90%				
75) toluene-d8 (s)	13.232	98	285534	52.37	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.74%				
99) 4-bromofluorobenzene (s)	16.203	95	98894	46.56	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.12%				
Target Compounds							Qvalue
7) dichlorodifluoromethane	4.545	85	1804	0.39	ug/L	#	49
8) chloromethane	5.005	50	2265	0.51	ug/L		91
9) vinyl chloride	5.261	62	1831m	0.44	ug/L		
11) bromomethane	5.936	94	1460	0.52	ug/L		89
12) chloroethane	6.119	64	957	0.45	ug/L	#	46
13) vinyl bromide	6.501	106	1026	0.37	ug/L	#	81
21) iodomethane	7.751	142	1522	0.42	ug/L	#	46
22) carbon disulfide	7.918	76	3722	0.59	ug/L		85
23) methylene chloride	8.227	84	846	0.40	ug/L	#	54
25) methyl tert butyl ether	8.609	73	2591	0.43	ug/L	#	53
26) trans-1,2-dichloroethene	8.640	96	773	0.43	ug/L		88
27) hexane	9.006	57	1113	0.44	ug/L	#	86
28) di-isopropyl ether	9.226	45	2944	0.48	ug/L		88
29) ethyl tert-butyl ether	9.712	59	2594	0.44	ug/L		88
31) 1,1-dichloroethane	9.252	63	1370	0.44	ug/L		89
32) chloroprene	9.372	53	1212	0.46	ug/L		69
36) 2,2-dichloropropane	10.036	77	1253	0.41	ug/L	#	48
37) cis-1,2-dichloroethene	10.000	96	858	0.42	ug/L		91
39) propionitrile	10.005	54	1543	3.49	ug/L	#	68
40) bromochloromethane	10.293	128	379	0.36	ug/L	#	42
42) chloroform	10.382	83	1761	0.57	ug/L		77
46) cyclohexane	10.784	84	1533	0.44	ug/L		90
47) 1,1,1-trichloroethane	10.675	97	1522	0.46	ug/L		87
49) 1,1-dichloropropene	10.831	75	1066	0.44	ug/L	#	63
50) carbon tetrachloride	10.868	117	1219	0.42	ug/L	#	76
54) benzene	11.098	78	3410	0.52	ug/L		91
55) iso-octane	11.187	57	2771	0.41	ug/L		89
56) tert-amyl methyl ether	11.161	73	2762	0.48	ug/L	#	71
57) heptane	11.349	71	488	0.38	ug/L	#	85
59) 1,2-dichloroethane	11.109	62	1505	0.67	ug/L		90
62) trichloroethene	11.830	95	821	0.50	ug/L		85
64) methylcyclohexane	12.149	83	1699	0.48	ug/L		92
67) 1,2-dichloropropane	12.144	63	716	0.44	ug/L		64
69) bromodichloromethane	12.411	83	1082	0.48	ug/L		73
71) cis-1,3-dichloropropene	12.892	75	995	0.39	ug/L		94
72) 4-methyl-2-pentanone	13.007	58	1643	1.57	ug/L		90
76) toluene	13.310	92	2007	0.56	ug/L	#	72
77) trans-1,3-dichloropropene	13.514	75	882	0.44	ug/L	#	66
78) ethyl methacrylate	13.499	69	803	0.41	ug/L		76
79) 1,1,2-trichloroethane	13.755	83	456	0.42	ug/L	#	73
80) 2-hexanone	13.933	58	1454	1.88	ug/L	#	81

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration

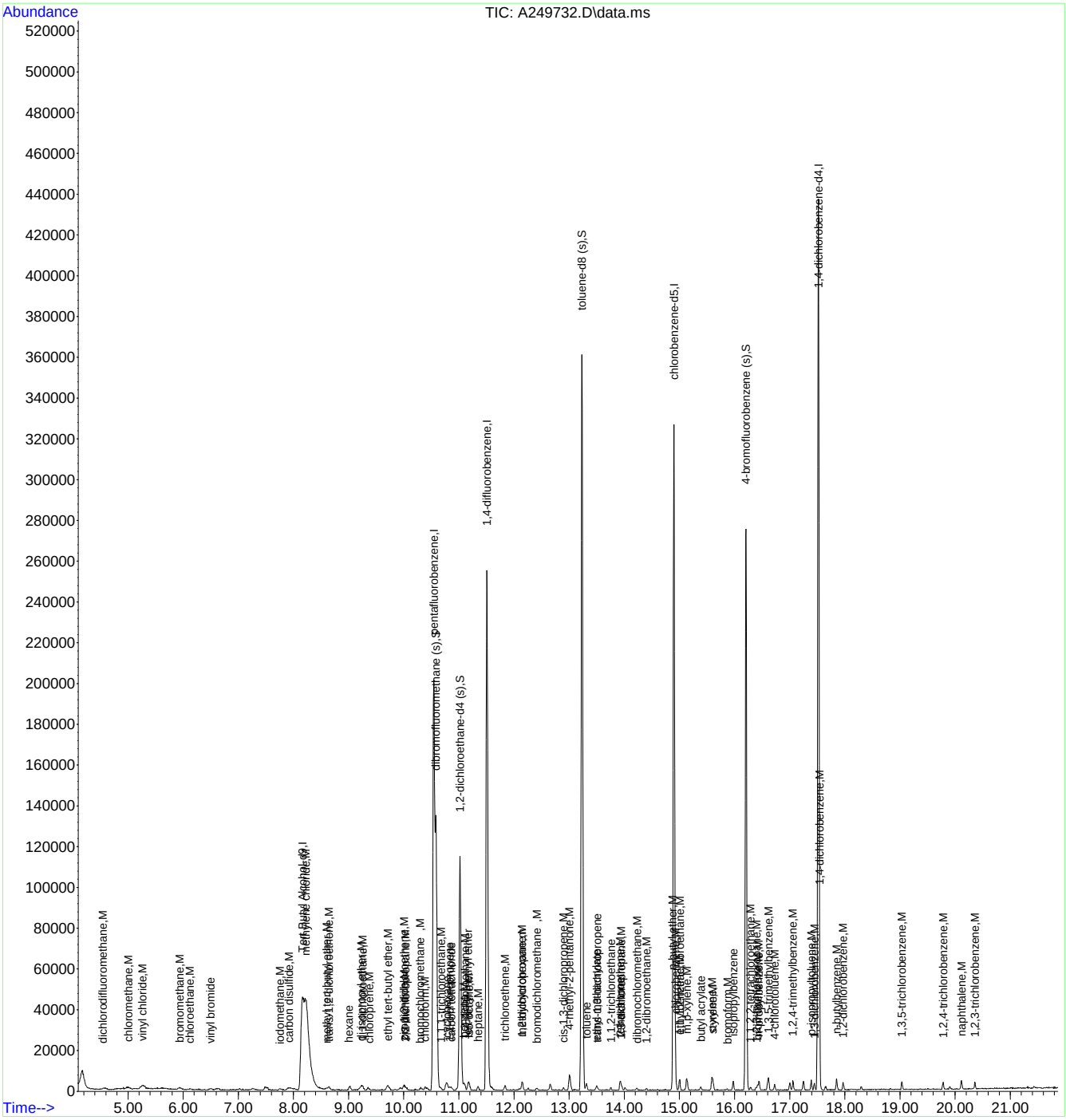
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
81) tetrachloroethene	13.917	166	927	0.53 ug/L	78
82) 1,3-dichloropropane	13.949	76	947	0.46 ug/L	88
84) dibromochloromethane	14.226	129	824	0.52 ug/L	74
85) 1,2-dibromoethane	14.398	107	536	0.36 ug/L	97
86) n-butyl ether	14.869	57	3042	0.52 ug/L #	65
87) chlorobenzene	14.937	112	1877	0.49 ug/L	96
88) 1,1,1,2-tetrachloroethane	15.010	131	905	0.49 ug/L	86
89) ethylbenzene	15.005	91	3569	0.54 ug/L	94
90) m,p-xylene	15.131	106	2589	0.99 ug/L	87
91) o-xylene	15.586	106	1442	0.50 ug/L #	76
92) styrene	15.601	104	2145	0.53 ug/L	96
93) butyl acrylate	15.382	55	1311	0.45 ug/L	81
95) bromoform	15.873	173	461	0.42 ug/L	86
96) isopropylbenzene	15.978	105	3927	0.50 ug/L	96
100) bromobenzene	16.417	156	888	0.45 ug/L	86
101) 1,1,2,2-tetrachloroethane	16.286	83	1132	0.43 ug/L	86
103) 1,2,3-trichloropropane	16.391	110	349	0.47 ug/L #	22
104) n-propylbenzene	16.443	91	4164	0.43 ug/L	98
106) 4-chlorotoluene	16.731	91	2347	0.48 ug/L	80
107) 1,3,5-trimethylbenzene	16.616	105	3257	0.41 ug/L	88
109) 1,2,4-trimethylbenzene	17.055	105	3324	0.44 ug/L	89
111) 1,3-dichlorobenzene	17.448	146	1819	0.48 ug/L	98
112) p-isopropyltoluene	17.390	119	3730	0.42 ug/L	91
113) 1,4-dichlorobenzene	17.547	146	2066	0.55 ug/L	81
114) 1,2-dichlorobenzene	17.965	146	1879	0.46 ug/L	92
115) n-butylbenzene	17.850	92	1924	0.47 ug/L	96
117) 1,3,5-trichlorobenzene	19.038	180	1905	0.50 ug/L	88
119) 1,2,4-trichlorobenzene	19.785	180	1671	0.47 ug/L	94
121) naphthalene	20.115	128	4580	0.44 ug/L	95
122) 1,2,3-trichlorobenzene	20.361	180	1617	0.45 ug/L	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 14:04:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: VA9645-IC9645
Lab FileID: A249732.D
Injection Time: 05/11/19 16:00

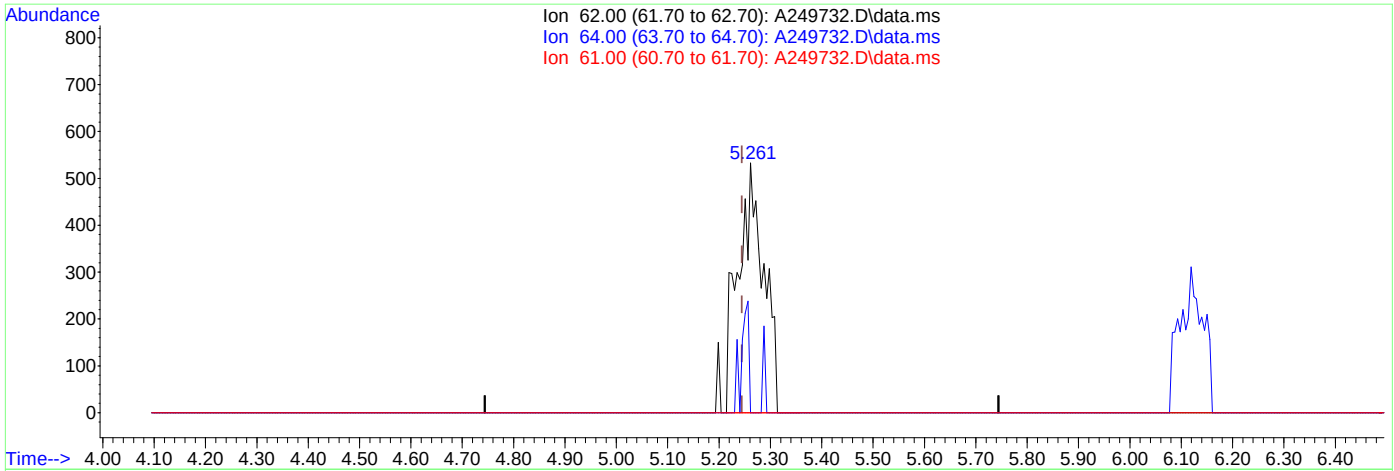
Method: SW846 8260C
Analyst approved: 05/14/19 14:16 Bridget Kelly
Supervisor approved: 05/14/19 19:25 Kanya Veerawat

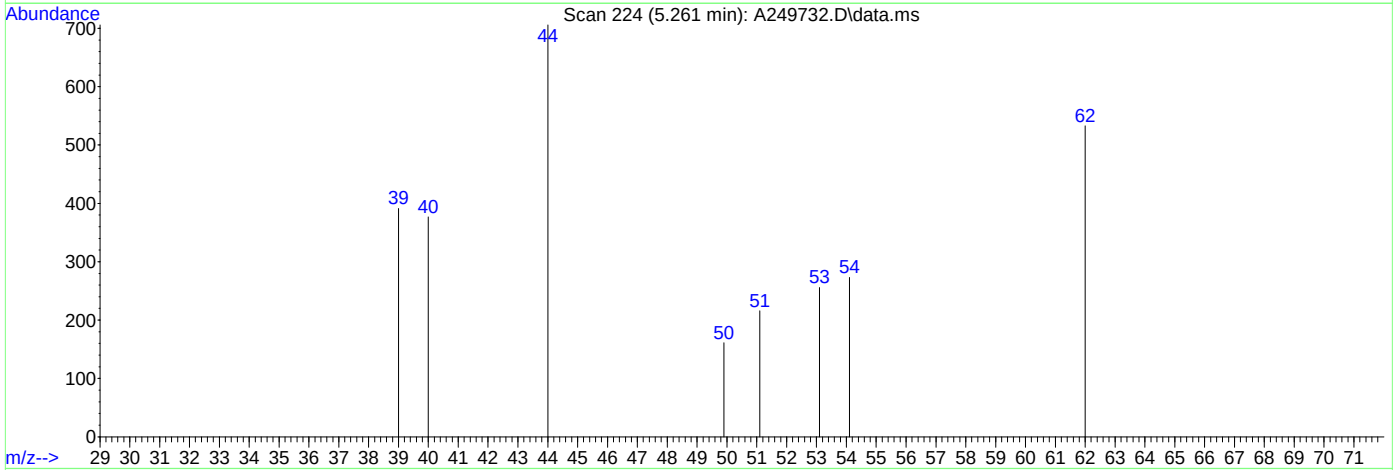
Parameter	CAS	Sig#	R.T. (min.)	Reason
Vinyl chloride	75-01-4		5.26	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 15:54:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 15:54:31 2019
QLast Update : Mon May 13 15:54:31 2019
Response via : Initial Calibration





TIC: A249732.D\data.ms

(9) vinyl chloride (M)

5.261min (+0.017) 0.44ug/L m

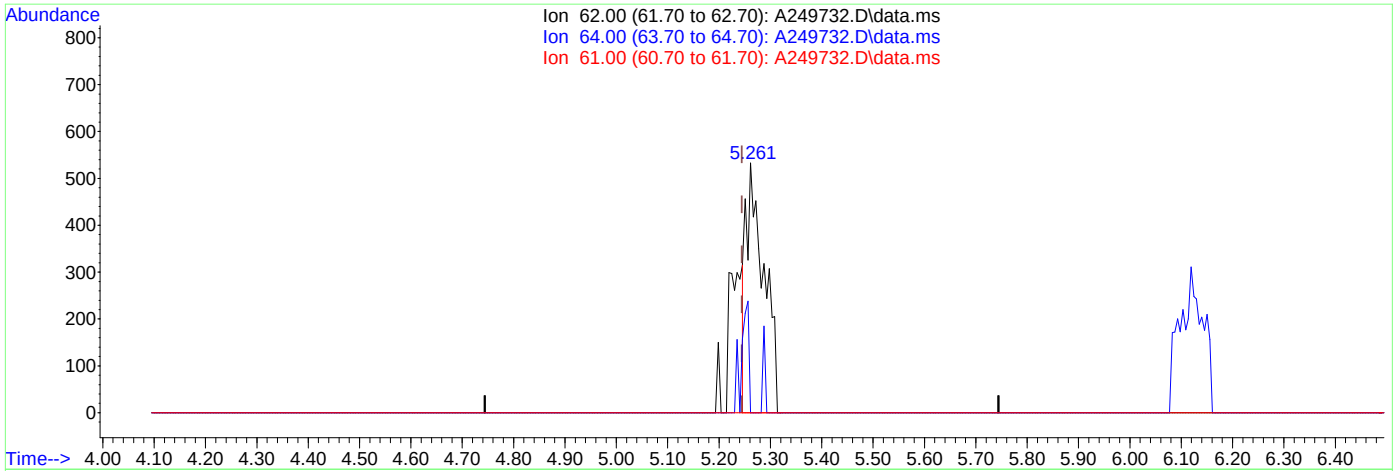
response 1831

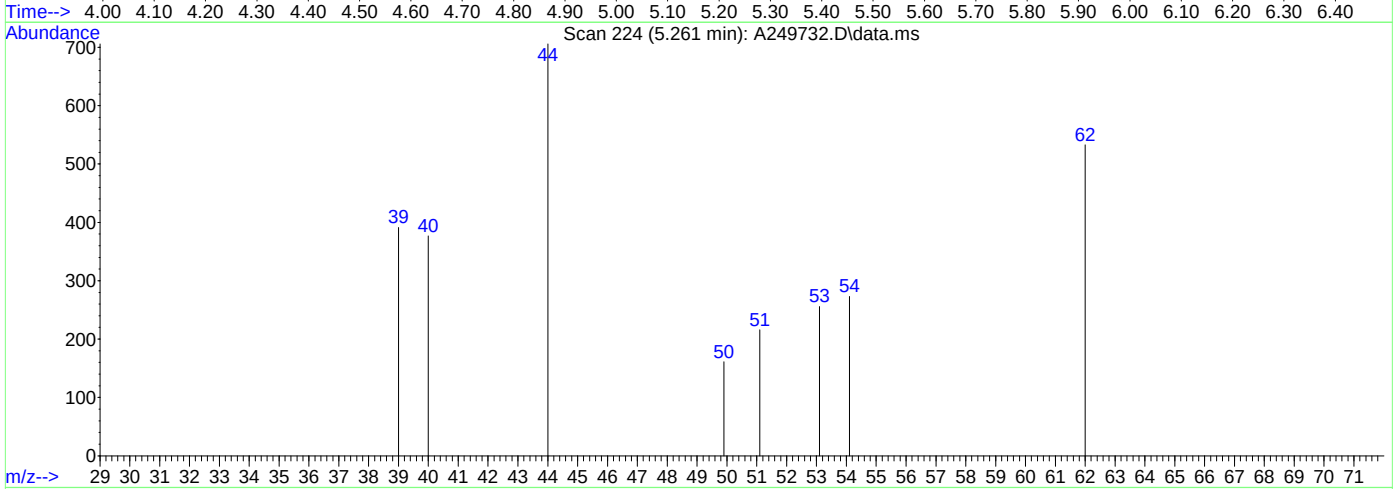
Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
61.00	7.60	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : A249732.D
Acq On : 11 May 2019 4:00 pm
Operator : PrashanS
Sample : IC9645-0.5
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:41:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration





TIC: A249732.D\data.ms

(9) vinyl chloride (M)

5.261min (+0.017) 0.32ug/L

response 1280

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
61.00	7.60	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.158	65	254718	500.00	ug/L	-0.01
5) pentafluorobenzene	10.543	168	177591	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	252192	50.00	ug/L	0.00
74) chlorobenzene-d5	14.899	117	201715	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.520	152	126829	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.585	113	87984	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.44%			
53) 1,2-dichloroethane-d4 (s)	11.019	65	93065	52.66	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.32%			
75) toluene-d8 (s)	13.231	98	275679	52.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.44%			
99) 4-bromofluorobenzene (s)	16.207	95	95526	47.09	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.18%			
Target Compounds						Qvalue
6) chlorodifluoromethane	4.586	51	3254	0.95	ug/L	70
7) dichlorodifluoromethane	4.533	85	3822	0.88	ug/L	89
8) chloromethane	4.988	50	4042	0.96	ug/L	85
9) vinyl chloride	5.250	62	3832	0.96	ug/L	95
10) 1,3-butadiene	5.266	54	3814	1.11	ug/L #	85
11) bromomethane	5.919	94	2771	1.03	ug/L	77
12) chloroethane	6.087	64	1682	0.83	ug/L #	46
13) vinyl bromide	6.479	106	2466	0.92	ug/L #	81
14) trichlorofluoromethane	6.615	101	3743	0.93	ug/L	96
15) ethyl ether	7.028	74	721	0.77	ug/L	86
17) freon 113	7.499	151	1783	0.91	ug/L #	92
18) 1,1-dichloroethene	7.478	96	1658	0.88	ug/L	92
20) acetonitrile	7.949	41	3805	9.16	ug/L	78
21) iodomethane	7.755	142	3369	0.99	ug/L	81
22) carbon disulfide	7.907	76	6483	1.08	ug/L	87
23) methylene chloride	8.226	84	1912	0.96	ug/L	81
25) methyl tert butyl ether	8.602	73	5367	0.94	ug/L	75
26) trans-1,2-dichloroethene	8.639	96	1527	0.89	ug/L #	70
27) hexane	9.010	57	2466	1.02	ug/L #	92
28) di-isopropyl ether	9.235	45	5771	0.99	ug/L	79
29) ethyl tert-butyl ether	9.711	59	5569	0.98	ug/L	96
30) 2-butanone	9.920	72	862	2.70	ug/L #	14
31) 1,1-dichloroethane	9.246	63	3162	1.07	ug/L	88
32) chloroprene	9.350	53	2153	0.87	ug/L	86
36) 2,2-dichloropropane	10.020	77	3063	1.06	ug/L	80
37) cis-1,2-dichloroethene	9.988	96	1806	0.93	ug/L	85
39) propionitrile	10.004	54	3467	8.23	ug/L	81
40) bromochloromethane	10.297	128	914	0.90	ug/L	88
41) tetrahydrofuran	10.328	42	853	1.01	ug/L #	33
42) chloroform	10.391	83	2928	1.00	ug/L	74
43) tert-butyl formate	10.433	59	1200	0.73	ug/L	88
46) cyclohexane	10.783	84	2922	0.89	ug/L	96
47) 1,1,1-trichloroethane	10.668	97	3009	0.96	ug/L	98
48) iso-butyl alcohol	10.789	43	2472	8.06	ug/L #	59
49) 1,1-dichloropropene	10.830	75	2115	0.93	ug/L #	73
50) carbon tetrachloride	10.862	117	2514	0.92	ug/L	89
54) benzene	11.097	78	6672	1.06	ug/L	94
55) iso-octane	11.181	57	5346	0.84	ug/L	93
56) tert-amyl methyl ether	11.160	73	5522	1.01	ug/L	87
57) heptane	11.343	71	1182	0.98	ug/L	92
59) 1,2-dichloroethane	11.113	62	2491	1.17	ug/L	74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

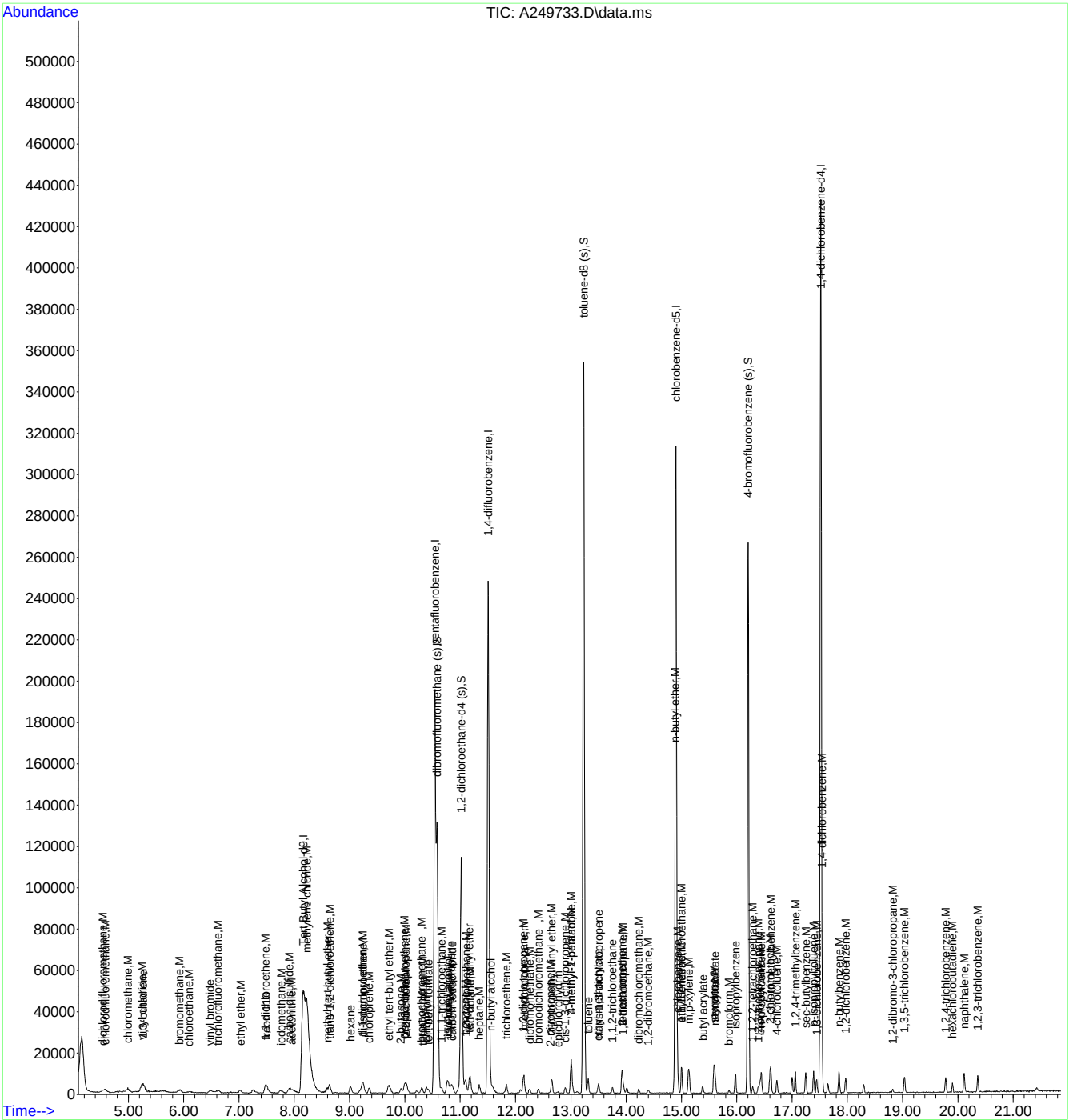
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
60) n-butyl alcohol	11.557	56	4631	38.95	ug/L	#	62
62) trichloroethene	11.835	95	1668	1.07	ug/L		86
63) 2-nitropropane	12.624	41	547	0.74	ug/L	#	59
64) methylcyclohexane	12.154	83	3248	0.96	ug/L		97
65) 2-chloroethyl vinyl ether	12.656	63	3586	3.84	ug/L		87
67) 1,2-dichloropropane	12.138	63	1460	0.94	ug/L		94
68) dibromomethane	12.258	93	844	0.81	ug/L		91
69) bromodichloromethane	12.410	83	1965	0.92	ug/L		86
70) epichlorohydrin	12.771	57	850	3.37	ug/L	#	56
71) cis-1,3-dichloropropene	12.902	75	2161	0.89	ug/L		95
72) 4-methyl-2-pentanone	13.001	58	3438	3.46	ug/L		94
73) 3-methyl-1-butanol	13.006	55	2922	15.24	ug/L		98
76) toluene	13.309	92	3469	0.99	ug/L	#	83
77) trans-1,3-dichloropropene	13.508	75	1719	0.89	ug/L		83
78) ethyl methacrylate	13.487	69	1790	0.94	ug/L		78
79) 1,1,2-trichloroethane	13.749	83	910	0.87	ug/L		87
80) 2-hexanone	13.927	58	2783	3.72	ug/L		92
81) tetrachloroethene	13.921	166	1738	1.03	ug/L		91
82) 1,3-dichloropropane	13.948	76	2039	1.01	ug/L		86
84) dibromochloromethane	14.225	129	1417	0.93	ug/L		82
85) 1,2-dibromoethane	14.397	107	1306	0.91	ug/L		98
86) n-butyl ether	14.879	57	5881	1.04	ug/L		66
87) chlorobenzene	14.936	112	3621	0.97	ug/L		92
88) 1,1,1,2-tetrachloroethane	15.004	131	1895	1.06	ug/L		76
89) ethylbenzene	14.999	91	6507	1.01	ug/L		98
90) m,p-xylene	15.130	106	5022	1.98	ug/L		85
91) o-xylene	15.585	106	2745	0.98	ug/L	#	79
92) styrene	15.600	104	3952	1.00	ug/L		94
93) butyl acrylate	15.381	55	2895	1.03	ug/L		92
94) n-amyl acetate	15.611	70	1288	1.05	ug/L	#	72
95) bromoform	15.857	173	961	0.90	ug/L		92
96) isopropylbenzene	15.977	105	7520	0.98	ug/L		99
100) bromobenzene	16.421	156	1717	0.90	ug/L		93
101) 1,1,2,2-tetrachloroethane	16.285	83	2295	0.92	ug/L		98
103) 1,2,3-trichloropropane	16.385	110	632	0.89	ug/L		91
104) n-propylbenzene	16.442	91	8552	0.93	ug/L		93
105) 2-chlorotoluene	16.599	126	1764	0.85	ug/L		88
106) 4-chlorotoluene	16.725	91	4496	0.95	ug/L		96
107) 1,3,5-trimethylbenzene	16.615	105	6363	0.84	ug/L		92
109) 1,2,4-trimethylbenzene	17.059	105	5909	0.83	ug/L		98
110) sec-butylbenzene	17.248	105	8259	0.81	ug/L		96
111) 1,3-dichlorobenzene	17.447	146	3640	1.01	ug/L		95
112) p-isopropyltoluene	17.389	119	6931	0.82	ug/L		98
113) 1,4-dichlorobenzene	17.546	146	3925	1.10	ug/L		96
114) 1,2-dichlorobenzene	17.970	146	3858	1.00	ug/L		96
115) n-butylbenzene	17.849	92	3621	0.93	ug/L	#	81
116) 1,2-dibromo-3-chloropr...	18.822	157	755	0.86	ug/L		73
117) 1,3,5-trichlorobenzene	19.031	180	3760	1.04	ug/L		91
119) 1,2,4-trichlorobenzene	19.774	180	3303	0.97	ug/L		90
120) hexachlorobutadiene	19.905	225	1309	0.98	ug/L		92
121) naphthalene	20.119	128	9095	0.90	ug/L		90
122) 1,2,3-trichlorobenzene	20.354	180	3317	0.96	ug/L		89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249733.D
Acq On : 11 May 2019 4:29 pm
Operator : PrashanS
Sample : IC9645-1
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 14:06:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:12 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	263274	500.00	ug/L		0.00
5) pentafluorobenzene	10.545	168	178613	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.508	114	253312	50.00	ug/L		0.00
74) chlorobenzene-d5	14.902	117	204829	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.522	152	129955	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.587	113	88656	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
53) 1,2-dichloroethane-d4 (s)	11.021	65	93088	52.44	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.88%				
75) toluene-d8 (s)	13.234	98	279012	52.05	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.10%				
99) 4-bromofluorobenzene (s)	16.204	95	96249	46.30	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.60%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.354	59	5287	9.88	ug/L		84
4) 1,4-dioxane	12.172	88	1437	38.25	ug/L	#	65
6) chlorodifluoromethane	4.588	51	7286	2.11	ug/L		90
7) dichlorodifluoromethane	4.573	85	8956	2.04	ug/L		91
8) chloromethane	5.002	50	8925	2.11	ug/L		90
9) vinyl chloride	5.263	62	7903	1.97	ug/L		82
10) 1,3-butadiene	5.253	54	8326	2.41	ug/L	#	79
11) bromomethane	5.938	94	5585	2.07	ug/L		82
12) chloroethane	6.121	64	3942	1.94	ug/L		75
13) vinyl bromide	6.476	106	5500	2.05	ug/L	#	91
14) trichlorofluoromethane	6.623	101	8171	2.02	ug/L		73
15) ethyl ether	7.026	74	1692	1.79	ug/L	#	68
17) freon 113	7.491	151	3899	1.98	ug/L	#	91
18) 1,1-dichloroethene	7.486	96	3961	2.10	ug/L		89
19) acetone	7.486	58	1984	7.29	ug/L		89
20) acetonitrile	7.962	41	8577	20.52	ug/L		88
21) iodomethane	7.753	142	6780	1.97	ug/L		90
22) carbon disulfide	7.904	76	13281	2.21	ug/L		93
23) methylene chloride	8.229	84	4129	2.05	ug/L		85
24) methyl acetate	7.977	43	3331	1.76	ug/L	#	60
25) methyl tert butyl ether	8.605	73	11769	2.05	ug/L		92
26) trans-1,2-dichloroethene	8.647	96	3339	1.94	ug/L		90
27) hexane	9.018	57	5260	2.17	ug/L		97
28) di-isopropyl ether	9.227	45	12247	2.09	ug/L		89
29) ethyl tert-butyl ether	9.703	59	11504	2.02	ug/L		99
30) 2-butanone	9.918	72	2243	6.99	ug/L	#	40
31) 1,1-dichloroethane	9.254	63	6217	2.09	ug/L		90
32) chloroprene	9.358	53	5027	2.01	ug/L		86
36) 2,2-dichloropropane	10.033	77	6264	2.15	ug/L		94
37) cis-1,2-dichloroethene	9.991	96	3913	2.00	ug/L		78
39) propionitrile	10.012	54	7799	18.41	ug/L		80
40) bromochloromethane	10.300	128	1994	1.96	ug/L		88
41) tetrahydrofuran	10.326	42	1846	2.17	ug/L		80
42) chloroform	10.389	83	6550	2.23	ug/L		98
43) tert-butyl formate	10.425	59	3330	2.02	ug/L		88
45) methacrylonitrile	10.211	67	1434	1.62	ug/L	#	67
46) cyclohexane	10.781	84	6780	2.05	ug/L		97
47) 1,1,1-trichloroethane	10.655	97	6435	2.05	ug/L		98
48) iso-butyl alcohol	10.776	43	5695	18.46	ug/L		94
49) 1,1-dichloropropene	10.838	75	4648	2.02	ug/L		95
50) carbon tetrachloride	10.859	117	5976	2.16	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
54) benzene	11.095	78	13725	2.18	ug/L		93
55) iso-octane	11.184	57	11607	1.82	ug/L		95
56) tert-amyl methyl ether	11.168	73	11276	2.06	ug/L		95
57) heptane	11.351	71	2389	1.97	ug/L		91
58) isopropyl acetate	10.990	87	895	1.86	ug/L	#	58
59) 1,2-dichloroethane	11.116	62	4631	2.17	ug/L		91
60) n-butyl alcohol	11.555	56	10881	91.10	ug/L		97
61) ethyl acrylate	11.816	55	3558	1.61	ug/L		78
62) trichloroethene	11.837	95	3546	2.26	ug/L		93
63) 2-nitropropane	12.627	41	1436	1.93	ug/L		94
64) methylcyclohexane	12.151	83	7441	2.19	ug/L		98
65) 2-chloroethyl vinyl ether	12.653	63	7885	8.41	ug/L		95
66) methyl methacrylate	12.078	100	788	1.56	ug/L	#	29
67) 1,2-dichloropropane	12.141	63	3129	2.01	ug/L		92
68) dibromomethane	12.256	93	2210	2.12	ug/L		95
69) bromodichloromethane	12.407	83	4411	2.06	ug/L		84
70) epichlorohydrin	12.763	57	2352	9.28	ug/L	#	56
71) cis-1,3-dichloropropene	12.899	75	4790	1.96	ug/L		96
72) 4-methyl-2-pentanone	13.004	58	7889	7.90	ug/L		98
73) 3-methyl-1-butanol	13.009	55	7207	37.43	ug/L		98
76) toluene	13.317	92	7848	2.21	ug/L		94
77) trans-1,3-dichloropropene	13.511	75	3473	1.77	ug/L		90
78) ethyl methacrylate	13.490	69	3894	2.02	ug/L		96
79) 1,1,2-trichloroethane	13.752	83	2224	2.10	ug/L		91
80) 2-hexanone	13.929	58	6377	8.38	ug/L		93
81) tetrachloroethene	13.924	166	3744	2.19	ug/L		87
82) 1,3-dichloropropane	13.950	76	3941	1.93	ug/L		96
83) butyl acetate	14.018	56	2320	2.08	ug/L	#	71
84) dibromochloromethane	14.227	129	3032	1.96	ug/L		96
85) 1,2-dibromoethane	14.405	107	2964	2.04	ug/L		77
86) n-butyl ether	14.871	57	12462	2.16	ug/L		84
87) chlorobenzene	14.934	112	7571	2.00	ug/L		94
88) 1,1,1,2-tetrachloroethane	15.007	131	4079	2.26	ug/L		87
89) ethylbenzene	14.996	91	14013	2.14	ug/L		98
90) m,p-xylene	15.132	106	10485	4.07	ug/L		86
91) o-xylene	15.587	106	6045	2.13	ug/L		99
92) styrene	15.598	104	8134	2.03	ug/L		94
93) butyl acrylate	15.378	55	6600	2.32	ug/L		97
94) n-amyl acetate	15.613	70	2963	2.38	ug/L		95
95) bromoform	15.859	173	2304	2.13	ug/L		92
96) isopropylbenzene	15.980	105	16596	2.14	ug/L		97
100) bromobenzene	16.424	156	3489	1.79	ug/L	#	79
101) 1,1,2,2-tetrachloroethane	16.288	83	4862	1.90	ug/L		97
103) 1,2,3-trichloropropane	16.393	110	1297	1.79	ug/L		90
104) n-propylbenzene	16.445	91	17799	1.89	ug/L		100
105) 2-chlorotoluene	16.602	126	3809	1.79	ug/L		93
106) 4-chlorotoluene	16.722	91	9516	1.97	ug/L		92
107) 1,3,5-trimethylbenzene	16.618	105	13458	1.74	ug/L		94
108) tert-butylbenzene	16.999	134	2680	1.54	ug/L	#	81
109) 1,2,4-trimethylbenzene	17.057	105	13657	1.87	ug/L		97
110) sec-butylbenzene	17.245	105	18033	1.73	ug/L		98
111) 1,3-dichlorobenzene	17.449	146	7401	2.01	ug/L		89
112) p-isopropyltoluene	17.392	119	15472	1.79	ug/L		95
113) 1,4-dichlorobenzene	17.554	146	7650	2.09	ug/L		94
114) 1,2-dichlorobenzene	17.967	146	8133	2.05	ug/L		88
115) n-butylbenzene	17.852	92	8232	2.07	ug/L		95
116) 1,2-dibromo-3-chloropr...	18.814	157	1683	1.87	ug/L		89
117) 1,3,5-trichlorobenzene	19.029	180	7521	2.03	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

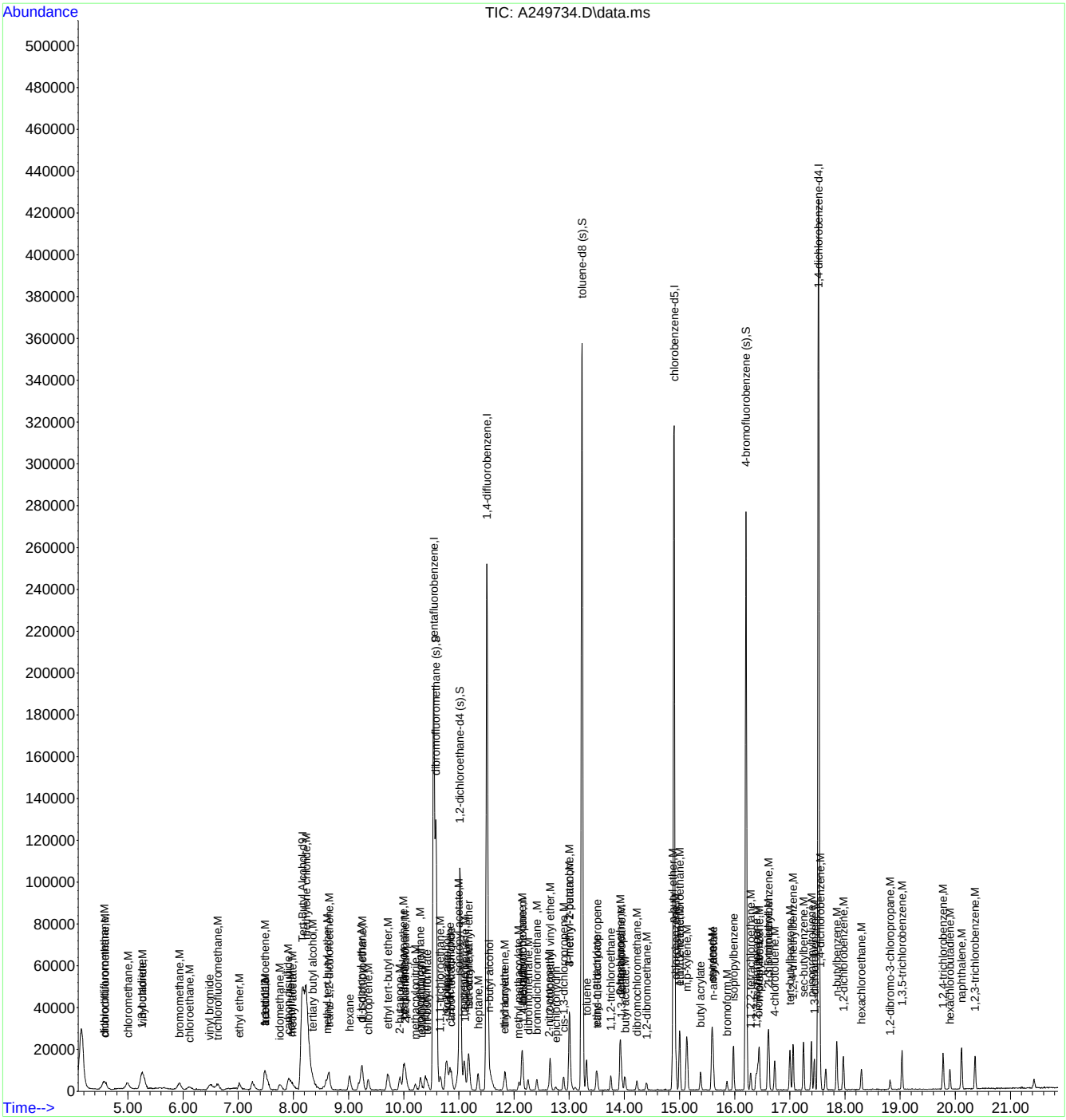
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
119) 1,2,4-trichlorobenzene	19.782	180	6756	1.94	ug/L	97
120) hexachlorobutadiene	19.907	225	2487	1.82	ug/L	97
121) naphthalene	20.117	128	18951	1.84	ug/L	98
122) 1,2,3-trichlorobenzene	20.357	180	6366	1.79	ug/L	89
123) hexachloroethane	18.297	201	2002	1.47	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249734.D
Acq On : 11 May 2019 4:57 pm
Operator : PrashanS
Sample : IC9645-2
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 14 14:08:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.162	65	262607	500.00	ug/L		0.00
5) pentafluorobenzene	10.547	168	179352	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.510	114	255002	50.00	ug/L		0.00
74) chlorobenzene-d5	14.899	117	207144	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	127381	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.584	113	88881	50.23	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.46%				
53) 1,2-dichloroethane-d4 (s)	11.023	65	93774	52.48	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 104.96%				
75) toluene-d8 (s)	13.230	98	282363	52.09	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.18%				
99) 4-bromofluorobenzene (s)	16.206	95	93999	46.14	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.28%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.314	59	11581	21.69	ug/L		93
4) 1,4-dioxane	12.184	88	3536	94.35	ug/L		77
6) chlorodifluoromethane	4.574	51	14920	4.31	ug/L		98
7) dichlorodifluoromethane	4.553	85	16860	3.83	ug/L		98
8) chloromethane	4.998	50	16045	3.77	ug/L		98
9) vinyl chloride	5.265	62	14568	3.61	ug/L		90
10) 1,3-butadiene	5.280	54	17120	4.94	ug/L		95
11) bromomethane	5.934	94	10642	3.92	ug/L		97
12) chloroethane	6.112	64	8071	3.95	ug/L		95
13) vinyl bromide	6.483	106	10169	3.77	ug/L	#	11
14) trichlorofluoromethane	6.640	101	15668	3.86	ug/L		94
15) ethyl ether	7.017	74	3919	4.12	ug/L	#	82
17) freon 113	7.503	151	8224	4.17	ug/L	#	92
18) 1,1-dichloroethene	7.482	96	8473	4.47	ug/L		84
19) acetone	7.493	58	4107	15.02	ug/L	#	78
20) acetonitrile	7.927	41	17304	41.23	ug/L		97
21) iodomethane	7.754	142	14557	4.22	ug/L		95
22) carbon disulfide	7.906	76	27998	4.63	ug/L		95
23) methylene chloride	8.230	84	9039	4.48	ug/L		95
24) methyl acetate	7.969	43	8359	4.41	ug/L	#	85
25) methyl tert butyl ether	8.602	73	24603	4.27	ug/L		100
26) trans-1,2-dichloroethene	8.638	96	7426	4.29	ug/L		92
27) hexane	9.025	57	10235	4.20	ug/L		98
28) di-isopropyl ether	9.234	45	25512	4.33	ug/L		91
29) ethyl tert-butyl ether	9.710	59	24166	4.23	ug/L		97
30) 2-butanone	9.925	72	5063	15.71	ug/L	#	87
31) 1,1-dichloroethane	9.245	63	13422	4.48	ug/L		92
32) chloroprene	9.350	53	10540	4.20	ug/L		95
33) acrylonitrile	8.539	53	4158	4.46	ug/L		87
34) vinyl acetate	9.187	86	1579	4.12	ug/L	#	32
35) ethyl acetate	9.930	45	1243	3.41	ug/L	#	2
36) 2,2-dichloropropane	10.029	77	13071	4.46	ug/L		98
37) cis-1,2-dichloroethene	9.998	96	8632	4.38	ug/L		88
38) methyl acrylate	10.024	85	1136	3.21	ug/L	#	25
39) propionitrile	10.009	54	17736	41.70	ug/L		88
40) bromochloromethane	10.301	128	4460	4.37	ug/L		96
41) tetrahydrofuran	10.328	42	3717	4.36	ug/L		93
42) chloroform	10.385	83	13570	4.59	ug/L		99
43) tert-butyl formate	10.427	59	6899	4.16	ug/L		94
45) methacrylonitrile	10.202	67	3513	3.95	ug/L	#	75
46) cyclohexane	10.777	84	13089	3.93	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) 1,1,1-trichloroethane	10.668	97	13445	4.26	ug/L		96
48) iso-butyl alcohol	10.777	43	12726	41.07	ug/L		99
49) 1,1-dichloropropene	10.840	75	10518	4.56	ug/L		91
50) carbon tetrachloride	10.866	117	12087	4.36	ug/L		99
51) tert-amyl alcohol	10.971	73	5732	20.11	ug/L		90
54) benzene	11.091	78	28322	4.46	ug/L		97
55) iso-octane	11.180	57	26062	4.05	ug/L		93
56) tert-amyl methyl ether	11.164	73	24597	4.46	ug/L		99
57) heptane	11.342	71	5592	4.59	ug/L		96
58) isopropyl acetate	10.987	87	1967	4.07	ug/L	#	71
59) 1,2-dichloroethane	11.112	62	9786	4.55	ug/L		96
60) n-butyl alcohol	11.557	56	23844	198.31	ug/L		97
61) ethyl acrylate	11.813	55	8455	3.81	ug/L		96
62) trichloroethene	11.834	95	7151	4.53	ug/L		83
63) 2-nitropropane	12.629	41	3029	4.04	ug/L		86
64) methylcyclohexane	12.158	83	14625	4.28	ug/L		95
65) 2-chloroethyl vinyl ether	12.655	63	17243	18.27	ug/L		96
66) methyl methacrylate	12.085	100	1802	3.54	ug/L	#	83
67) 1,2-dichloropropane	12.137	63	6831	4.35	ug/L		94
68) dibromomethane	12.257	93	4623	4.40	ug/L		92
69) bromodichloromethane	12.414	83	9376	4.35	ug/L		93
70) epichlorohydrin	12.754	57	4898	19.19	ug/L	#	92
71) cis-1,3-dichloropropene	12.901	75	9792	3.99	ug/L		93
72) 4-methyl-2-pentanone	13.005	58	17967	17.88	ug/L		92
73) 3-methyl-1-butanol	13.000	55	15638	80.67	ug/L		100
76) toluene	13.314	92	16213	4.52	ug/L		93
77) trans-1,3-dichloropropene	13.507	75	8252	4.17	ug/L		100
78) ethyl methacrylate	13.492	69	8358	4.28	ug/L		95
79) 1,1,2-trichloroethane	13.748	83	4620	4.31	ug/L		92
80) 2-hexanone	13.921	58	14021	18.23	ug/L		92
81) tetrachloroethene	13.921	166	8074	4.67	ug/L		92
82) 1,3-dichloropropane	13.952	76	8767	4.25	ug/L		93
83) butyl acetate	14.004	56	5124	4.55	ug/L		82
84) dibromochloromethane	14.224	129	6734	4.30	ug/L		97
85) 1,2-dibromoethane	14.402	107	6246	4.26	ug/L		99
86) n-butyl ether	14.873	57	26897	4.61	ug/L		93
87) chlorobenzene	14.935	112	17077	4.46	ug/L		92
88) 1,1,1,2-tetrachloroethane	15.009	131	8640	4.73	ug/L		97
89) ethylbenzene	14.998	91	29448	4.45	ug/L		97
90) m,p-xylene	15.134	106	22802	8.76	ug/L		91
91) o-xylene	15.589	106	12891	4.48	ug/L		98
92) styrene	15.600	104	18911	4.67	ug/L		89
93) butyl acrylate	15.380	55	13688	4.76	ug/L		95
94) n-amyl acetate	15.615	70	6310	5.01	ug/L		91
95) bromoform	15.856	173	5079	4.65	ug/L		96
96) isopropylbenzene	15.976	105	35397	4.51	ug/L		97
97) cis-1,4-dichloro-2-butene	16.013	75	460	1.73	ug/L		89
100) bromobenzene	16.415	156	7876	4.12	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.290	83	10043	4.00	ug/L		99
102) trans-1,4-dichloro-2-b...	16.332	53	260	1.12	ug/L		82
103) 1,2,3-trichloropropane	16.389	110	2833	3.99	ug/L		91
104) n-propylbenzene	16.447	91	37539	4.06	ug/L		97
105) 2-chlorotoluene	16.598	126	8244	3.96	ug/L		98
106) 4-chlorotoluene	16.724	91	19623	4.15	ug/L		99
107) 1,3,5-trimethylbenzene	16.619	105	28604	3.77	ug/L		99
108) tert-butylbenzene	17.006	134	6119	3.60	ug/L		92
109) 1,2,4-trimethylbenzene	17.059	105	29062	4.05	ug/L		94
110) sec-butylbenzene	17.247	105	37122	3.63	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

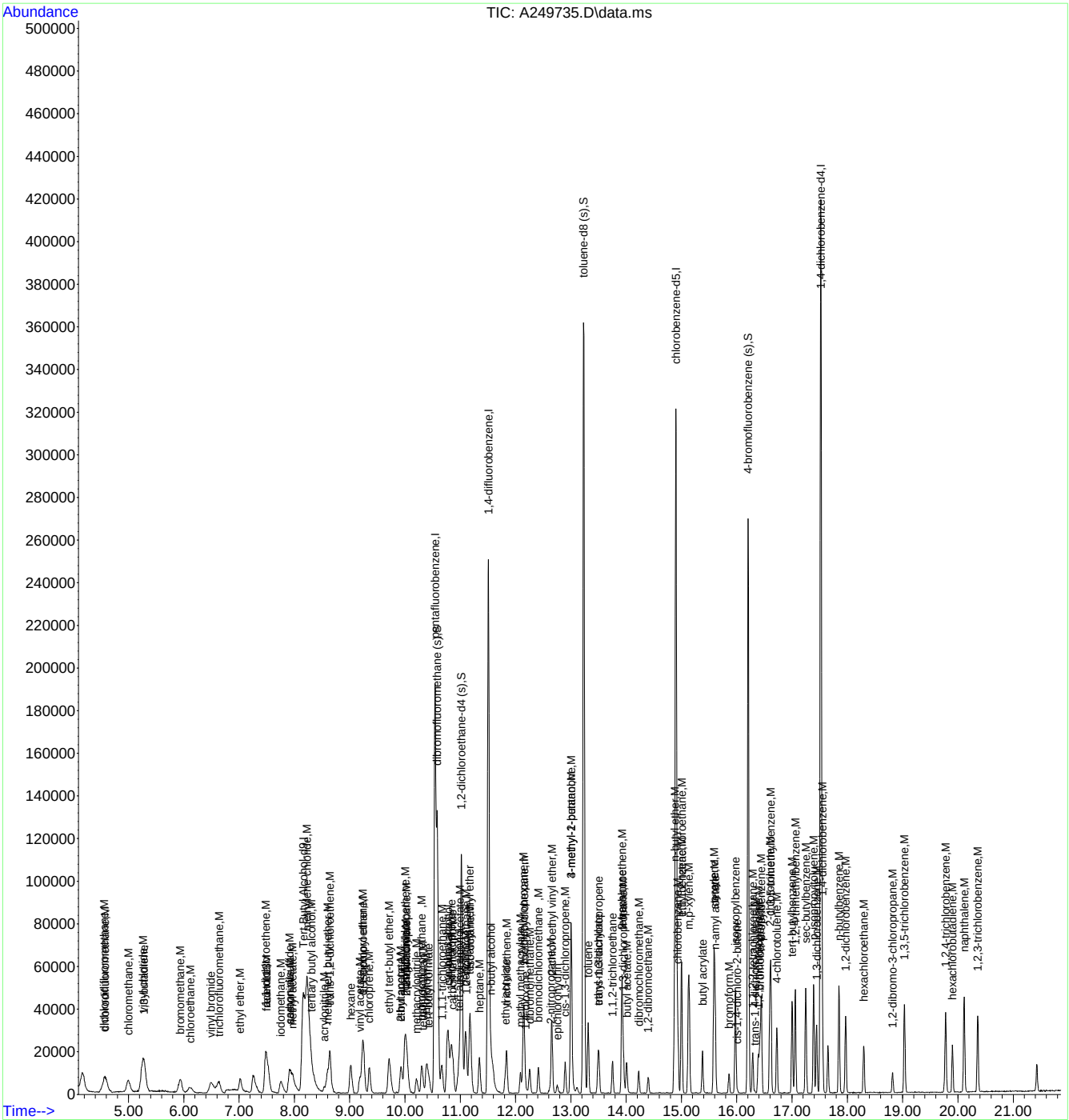
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	17.446	146	16264	4.51	ug/L	96
112) p-isopropyltoluene	17.393	119	33232	3.93	ug/L	99
113) 1,4-dichlorobenzene	17.550	146	16140	4.49	ug/L	97
114) 1,2-dichlorobenzene	17.969	146	17160	4.41	ug/L	96
115) n-butylbenzene	17.848	92	16779	4.30	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.821	157	3306	3.75	ug/L	92
117) 1,3,5-trichlorobenzene	19.031	180	16266	4.48	ug/L	98
119) 1,2,4-trichlorobenzene	19.778	180	14363	4.20	ug/L	92
120) hexachlorobutadiene	19.899	225	5578	4.17	ug/L	96
121) naphthalene	20.113	128	40791	4.04	ug/L	98
122) 1,2,3-trichlorobenzene	20.359	180	14531	4.18	ug/L	93
123) hexachloroethane	18.298	201	4494	3.38	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249735.D
Acq On : 11 May 2019 5:26 pm
Operator : PrashanS
Sample : IC9645-4
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 14 14:10:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.163	65	253775	500.00	ug/L		0.00
5) pentafluorobenzene	10.548	168	176294	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.511	114	251469	50.00	ug/L		0.00
74) chlorobenzene-d5	14.900	117	202169	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.520	152	120535	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.585	113	87033	50.04	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%				
53) 1,2-dichloroethane-d4 (s)	11.019	65	92853	52.69	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.38%				
75) toluene-d8 (s)	13.231	98	276784	52.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.62%				
99) 4-bromofluorobenzene (s)	16.207	95	91098	47.25	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.50%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.278	59	20122	39.01	ug/L		93
4) 1,4-dioxane	12.185	88	6626	182.95	ug/L		98
6) chlorodifluoromethane	4.581	51	27077	7.96	ug/L		95
7) dichlorodifluoromethane	4.555	85	34296	7.92	ug/L		97
8) chloromethane	4.994	50	33254	7.95	ug/L		93
9) vinyl chloride	5.250	62	30748	7.76	ug/L		95
10) 1,3-butadiene	5.271	54	29441	8.64	ug/L		94
11) bromomethane	5.935	94	21267	7.97	ug/L		94
12) chloroethane	6.124	64	16491	8.21	ug/L		97
13) vinyl bromide	6.495	106	21603	8.16	ug/L		98
14) trichlorofluoromethane	6.626	101	32253	8.08	ug/L		93
15) ethyl ether	7.018	74	7092	7.59	ug/L		87
16) acrolein	7.274	56	2784	6.70	ug/L		95
17) freon 113	7.504	151	15187	7.82	ug/L		98
18) 1,1-dichloroethene	7.483	96	14820	7.95	ug/L		87
19) acetone	7.483	58	7764	28.89	ug/L		97
20) acetonitrile	7.928	41	31747	76.95	ug/L		91
21) iodomethane	7.750	142	27384	8.07	ug/L		93
22) carbon disulfide	7.907	76	47587	8.01	ug/L		98
23) methylene chloride	8.237	84	16161	8.14	ug/L		95
24) methyl acetate	7.970	43	13499	7.24	ug/L		98
25) methyl tert butyl ether	8.613	73	43853	7.75	ug/L		98
26) trans-1,2-dichloroethene	8.639	96	12962	7.61	ug/L		98
27) hexane	9.016	57	18717	7.82	ug/L		99
28) di-isopropyl ether	9.230	45	45415	7.84	ug/L		96
29) ethyl tert-butyl ether	9.717	59	43480	7.74	ug/L		92
30) 2-butanone	9.926	72	8725	27.54	ug/L		96
31) 1,1-dichloroethane	9.251	63	23108	7.85	ug/L		92
32) chloroprene	9.356	53	19302	7.83	ug/L		98
33) acrylonitrile	8.540	53	6389	6.97	ug/L		94
34) vinyl acetate	9.188	86	2795	7.42	ug/L	#	38
35) ethyl acetate	9.931	45	2243	6.26	ug/L	#	60
36) 2,2-dichloropropane	10.030	77	23064	8.01	ug/L		95
37) cis-1,2-dichloroethene	9.994	96	15265	7.89	ug/L		93
38) methyl acrylate	10.025	85	2396	6.89	ug/L	#	71
39) propionitrile	10.010	54	31047	74.26	ug/L		86
40) bromochloromethane	10.297	128	7883	7.85	ug/L		96
41) tetrahydrofuran	10.323	42	6146	7.33	ug/L		97
42) chloroform	10.391	83	23863	8.22	ug/L		96
43) tert-butyl formate	10.428	59	11854	7.27	ug/L		95
45) methacrylonitrile	10.208	67	6357	7.28	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.778	84	25835	7.90	ug/L		97
47) 1,1,1-trichloroethane	10.663	97	23760	7.65	ug/L		99
48) iso-butyl alcohol	10.784	43	22312	73.26	ug/L		98
49) 1,1-dichloropropene	10.836	75	17759	7.83	ug/L		98
50) carbon tetrachloride	10.867	117	21090	7.74	ug/L		98
51) tert-amyl alcohol	10.951	73	9985	35.65	ug/L	#	86
54) benzene	11.092	78	50233	8.03	ug/L		98
55) iso-octane	11.186	57	46702	7.37	ug/L		96
56) tert-amyl methyl ether	11.165	73	44004	8.08	ug/L		97
57) heptane	11.348	71	9705	8.08	ug/L		91
58) isopropyl acetate	10.982	87	3413	7.15	ug/L	#	80
59) 1,2-dichloroethane	11.118	62	17408	8.20	ug/L		98
60) n-butyl alcohol	11.558	56	41583	350.71	ug/L		98
61) ethyl acrylate	11.809	55	15733	7.19	ug/L		99
62) trichloroethene	11.840	95	12646	8.13	ug/L		92
63) 2-nitropropane	12.619	41	5212	7.05	ug/L	#	66
64) methylcyclohexane	12.154	83	26342	7.82	ug/L		99
65) 2-chloroethyl vinyl ether	12.656	63	32026	34.42	ug/L		95
66) methyl methacrylate	12.091	100	3228	6.43	ug/L	#	87
67) 1,2-dichloropropane	12.143	63	12280	7.93	ug/L		98
68) dibromomethane	12.253	93	8280	7.99	ug/L		87
69) bromodichloromethane	12.415	83	16614	7.82	ug/L		93
70) epichlorohydrin	12.750	57	8836	35.11	ug/L		99
71) cis-1,3-dichloropropene	12.902	75	18072	7.46	ug/L		96
72) 4-methyl-2-pentanone	13.006	58	29525	29.79	ug/L		98
73) 3-methyl-1-butanol	13.001	55	27218	142.38	ug/L		99
76) toluene	13.315	92	27510	7.86	ug/L		96
77) trans-1,3-dichloropropene	13.508	75	14984	7.75	ug/L		95
78) ethyl methacrylate	13.493	69	14729	7.73	ug/L		95
79) 1,1,2-trichloroethane	13.749	83	8077	7.73	ug/L		95
80) 2-hexanone	13.922	58	24000	31.97	ug/L		99
81) tetrachloroethene	13.922	166	13425	7.96	ug/L		96
82) 1,3-dichloropropane	13.953	76	15735	7.81	ug/L		98
83) butyl acetate	14.011	56	8719	7.93	ug/L		89
84) dibromochloromethane	14.230	129	11584	7.58	ug/L		93
85) 1,2-dibromoethane	14.403	107	11466	8.01	ug/L		94
86) n-butyl ether	14.874	57	44948	7.90	ug/L		95
87) chlorobenzene	14.931	112	28905	7.74	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.010	131	14820	8.31	ug/L		97
89) ethylbenzene	14.999	91	50408	7.80	ug/L		97
90) m,p-xylene	15.130	106	40452	15.92	ug/L		96
91) o-xylene	15.585	106	21694	7.73	ug/L		98
92) styrene	15.595	104	31119	7.88	ug/L		97
93) butyl acrylate	15.381	55	24416	8.69	ug/L		97
94) n-amyl acetate	15.611	70	10693	8.70	ug/L		88
95) bromoform	15.857	173	8444	7.92	ug/L		98
96) isopropylbenzene	15.977	105	60966	7.95	ug/L		97
97) cis-1,4-dichloro-2-butene	16.014	75	952	3.67	ug/L	#	83
100) bromobenzene	16.416	156	13438	7.43	ug/L		97
101) 1,1,2,2-tetrachloroethane	16.291	83	17066	7.18	ug/L		95
102) trans-1,4-dichloro-2-b...	16.317	53	778	3.54	ug/L		92
103) 1,2,3-trichloropropane	16.390	110	5171	7.70	ug/L		88
104) n-propylbenzene	16.443	91	64088	7.33	ug/L		99
105) 2-chlorotoluene	16.599	126	13911	7.07	ug/L		96
106) 4-chlorotoluene	16.725	91	33793	7.55	ug/L		95
107) 1,3,5-trimethylbenzene	16.615	105	49455	6.88	ug/L		98
108) tert-butylbenzene	17.002	134	10986	6.82	ug/L		97
109) 1,2,4-trimethylbenzene	17.060	105	48932	7.21	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

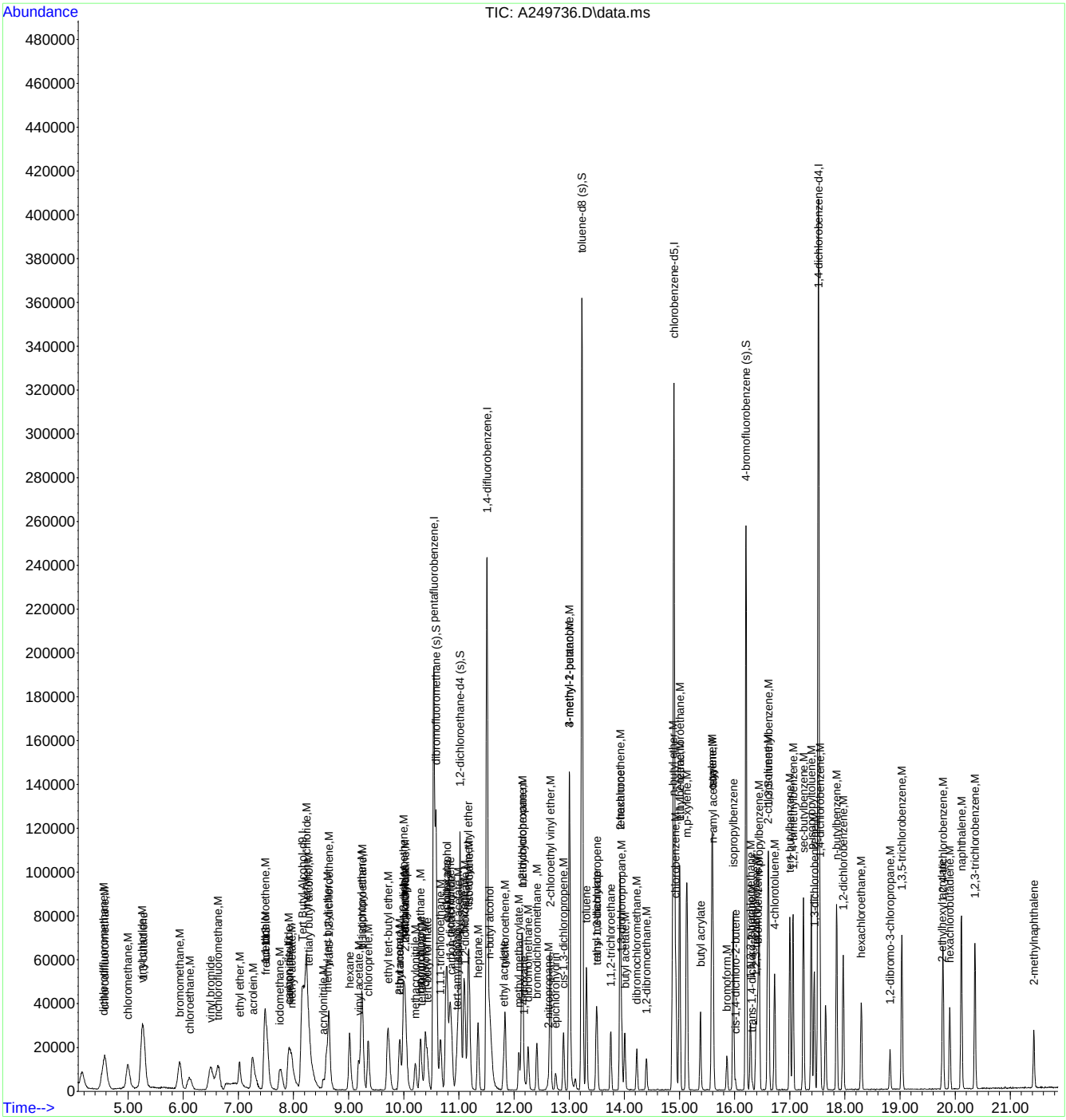
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.248	105	66872	6.92	ug/L	99
111) 1,3-dichlorobenzene	17.447	146	25845	7.57	ug/L	99
112) p-isopropyltoluene	17.389	119	56453	7.05	ug/L	99
113) 1,4-dichlorobenzene	17.551	146	26505	7.80	ug/L	98
114) 1,2-dichlorobenzene	17.970	146	28094	7.63	ug/L	96
115) n-butylbenzene	17.849	92	27811	7.54	ug/L	94
116) 1,2-dibromo-3-chloropr...	18.817	157	6539	7.84	ug/L	95
117) 1,3,5-trichlorobenzene	19.037	180	26724	7.78	ug/L	94
118) 2-ethylhexyl acrylate	19.758	70	2085	1.17	ug/L	92
119) 1,2,4-trichlorobenzene	19.779	180	24795	7.67	ug/L	97
120) hexachlorobutadiene	19.905	225	9689	7.66	ug/L	96
121) naphthalene	20.114	128	72877	7.63	ug/L	99
122) 1,2,3-trichlorobenzene	20.355	180	25408	7.72	ug/L	89
123) hexachloroethane	18.294	201	7933	6.30	ug/L	98
124) 2-methylnaphthalene	21.427	142	15451	2.99	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249736.D
Acq On : 11 May 2019 5:55 pm
Operator : PrashanS
Sample : IC9645-8
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 16:10:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.165	65	261175	500.00	ug/L	0.00
5) pentafluorobenzene	10.544	168	179570	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.507	114	258618	50.00	ug/L	0.00
74) chlorobenzene-d5	14.901	117	218814	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.521	152	124956	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.586	113	89318	50.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
53) 1,2-dichloroethane-d4 (s)	11.020	65	92568	51.08	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.16%			
75) toluene-d8 (s)	13.233	98	295711	51.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.28%			
99) 4-bromofluorobenzene (s)	16.203	95	95886	47.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.96%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.290	59	54540	102.73	ug/L	93
4) 1,4-dioxane	12.181	88	18238	489.31	ug/L	97
6) chlorodifluoromethane	4.582	51	69080	19.94	ug/L	94
7) dichlorodifluoromethane	4.540	85	86905	19.69	ug/L	92
8) chloromethane	4.985	50	81843	19.21	ug/L	97
9) vinyl chloride	5.251	62	78233	19.39	ug/L	96
10) 1,3-butadiene	5.278	54	72739	20.97	ug/L	96
11) bromomethane	5.926	94	53027	19.52	ug/L	97
12) chloroethane	6.104	64	39155	19.13	ug/L	97
13) vinyl bromide	6.496	106	53133	19.70	ug/L	99
14) trichlorofluoromethane	6.622	101	79625	19.57	ug/L	93
15) ethyl ether	7.024	74	19029	20.00	ug/L	93
16) acrolein	7.265	56	7836	18.50	ug/L	94
17) freon 113	7.511	151	39212	19.83	ug/L	99
18) 1,1-dichloroethene	7.474	96	38010	20.02	ug/L	96
19) acetone	7.479	58	21108	77.10	ug/L	91
20) acetonitrile	7.924	41	84342	200.71	ug/L	97
21) iodomethane	7.762	142	68179	19.73	ug/L	98
22) carbon disulfide	7.903	76	120774	19.95	ug/L	98
23) methylene chloride	8.227	84	39875	19.73	ug/L	95
24) methyl acetate	7.966	43	35941	18.92	ug/L	99
25) methyl tert butyl ether	8.604	73	115022	19.96	ug/L	99
26) trans-1,2-dichloroethene	8.640	96	34867	20.10	ug/L	98
27) hexane	9.012	57	47953	19.66	ug/L	98
28) di-isopropyl ether	9.237	45	118138	20.01	ug/L	100
29) ethyl tert-butyl ether	9.713	59	114572	20.01	ug/L	94
30) 2-butanone	9.922	72	24919	77.21	ug/L	98
31) 1,1-dichloroethane	9.247	63	61286	20.45	ug/L	99
32) chloroprene	9.352	53	49943	19.90	ug/L	97
33) acrylonitrile	8.536	53	18423	19.74	ug/L	94
34) vinyl acetate	9.179	86	7602	19.82	ug/L	98
35) ethyl acetate	9.938	45	6366	17.43	ug/L #	40
36) 2,2-dichloropropane	10.037	77	58867	20.06	ug/L	93
37) cis-1,2-dichloroethene	9.995	96	40005	20.29	ug/L	95
38) methyl acrylate	10.021	85	6432	18.16	ug/L	96
39) propionitrile	10.006	54	83191	195.36	ug/L	92
40) bromochloromethane	10.298	128	20739	20.28	ug/L	98
41) tetrahydrofuran	10.319	42	16949	19.85	ug/L	99
42) chloroform	10.387	83	60191	20.35	ug/L	93
43) tert-butyl formate	10.429	59	32831	19.76	ug/L	97
45) methacrylonitrile	10.204	67	17345	19.50	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.780	84	63628	19.09	ug/L		97
47) 1,1,1-trichloroethane	10.665	97	62736	19.84	ug/L		98
48) iso-butyl alcohol	10.790	43	60001	193.42	ug/L		84
49) 1,1-dichloropropene	10.837	75	45407	19.66	ug/L		99
50) carbon tetrachloride	10.863	117	55438	19.97	ug/L		99
51) tert-amyl alcohol	10.957	73	28305	99.20	ug/L		94
54) benzene	11.093	78	132749	20.63	ug/L		100
55) iso-octane	11.188	57	127685	19.58	ug/L		97
56) tert-amyl methyl ether	11.167	73	116532	20.82	ug/L		98
57) heptane	11.344	71	25479	20.63	ug/L		98
58) isopropyl acetate	10.984	87	10103	20.59	ug/L		98
59) 1,2-dichloroethane	11.114	62	45414	20.81	ug/L		99
60) n-butyl alcohol	11.554	56	120066	984.64	ug/L		99
61) ethyl acrylate	11.810	55	44173	19.62	ug/L		98
62) trichloroethene	11.836	95	32601	20.38	ug/L		98
63) 2-nitropropane	12.626	41	14211	18.69	ug/L		97
64) methylcyclohexane	12.150	83	71060	20.51	ug/L		99
65) 2-chloroethyl vinyl ether	12.652	63	90162	94.21	ug/L		97
66) methyl methacrylate	12.092	100	9602	18.60	ug/L		93
67) 1,2-dichloropropane	12.139	63	32696	20.53	ug/L		98
68) dibromomethane	12.255	93	21421	20.09	ug/L		95
69) bromodichloromethane	12.411	83	44309	20.29	ug/L		95
70) epichlorohydrin	12.757	57	24951	96.40	ug/L		97
71) cis-1,3-dichloropropene	12.903	75	48750	19.58	ug/L		99
72) 4-methyl-2-pentanone	13.002	58	82617	81.05	ug/L		100
73) 3-methyl-1-butanol	13.002	55	79596	404.87	ug/L		98
76) toluene	13.311	92	77020	20.34	ug/L		98
77) trans-1,3-dichloropropene	13.510	75	41606	19.89	ug/L		96
78) ethyl methacrylate	13.489	69	41755	20.25	ug/L		96
79) 1,1,2-trichloroethane	13.750	83	22906	20.25	ug/L		96
80) 2-hexanone	13.923	58	67258	82.77	ug/L		97
81) tetrachloroethene	13.923	166	37699	20.66	ug/L		99
82) 1,3-dichloropropane	13.954	76	43784	20.08	ug/L		94
83) butyl acetate	14.007	56	24577	20.66	ug/L		96
84) dibromochloromethane	14.226	129	33288	20.11	ug/L		99
85) 1,2-dibromoethane	14.399	107	31063	20.05	ug/L		97
86) n-butyl ether	14.870	57	127932	20.77	ug/L		98
87) chlorobenzene	14.938	112	80339	19.87	ug/L		96
88) 1,1,1,2-tetrachloroethane	15.006	131	40337	20.90	ug/L		97
89) ethylbenzene	15.000	91	141457	20.23	ug/L		98
90) m,p-xylene	15.136	106	113198	41.17	ug/L		99
91) o-xylene	15.586	106	63318	20.84	ug/L		97
92) styrene	15.597	104	86845	20.31	ug/L		99
93) butyl acrylate	15.377	55	67118	22.08	ug/L		97
94) n-amyl acetate	15.612	70	29735	22.36	ug/L		93
95) bromoform	15.858	173	23848	20.66	ug/L		99
96) isopropylbenzene	15.978	105	174418	21.02	ug/L		98
97) cis-1,4-dichloro-2-butene	16.020	75	3971	14.15	ug/L	#	83
100) bromobenzene	16.418	156	36006	19.20	ug/L		98
101) 1,1,2,2-tetrachloroethane	16.287	83	47993	19.49	ug/L		96
102) trans-1,4-dichloro-2-b...	16.324	53	3116	13.68	ug/L		92
103) 1,2,3-trichloropropane	16.392	110	14068	20.21	ug/L		98
104) n-propylbenzene	16.444	91	178458	19.68	ug/L		99
105) 2-chlorotoluene	16.596	126	39663	19.44	ug/L		94
106) 4-chlorotoluene	16.726	91	91682	19.76	ug/L		98
107) 1,3,5-trimethylbenzene	16.616	105	141795	19.03	ug/L		97
108) tert-butylbenzene	17.003	134	32032	19.19	ug/L		98
109) 1,2,4-trimethylbenzene	17.056	105	137638	19.55	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

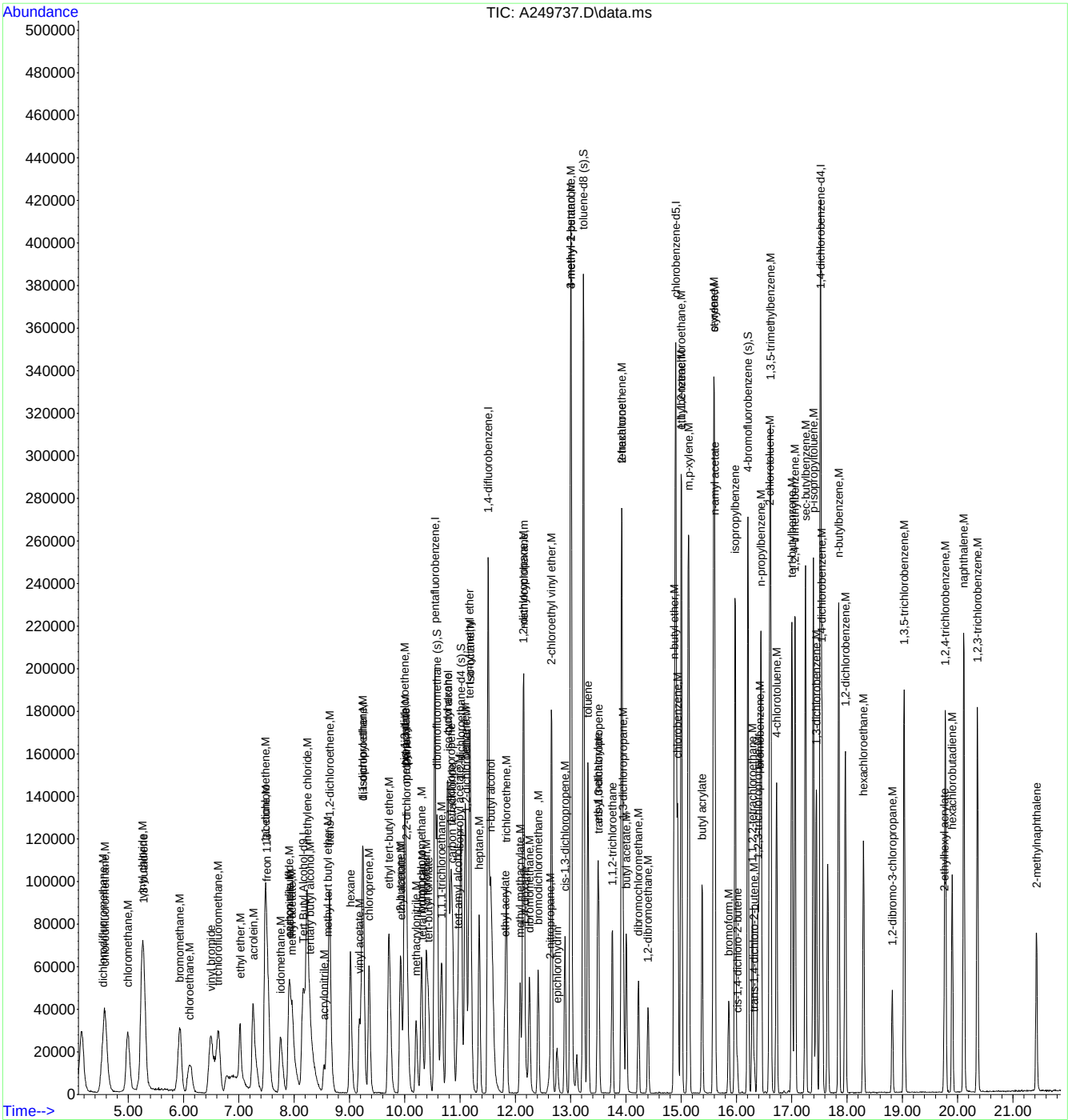
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.249	105	191349	19.09	ug/L	99
111) 1,3-dichlorobenzene	17.443	146	70836	20.03	ug/L	98
112) p-isopropyltoluene	17.391	119	162010	19.51	ug/L	99
113) 1,4-dichlorobenzene	17.547	146	70967	20.14	ug/L	99
114) 1,2-dichlorobenzene	17.971	146	76100	19.93	ug/L	99
115) n-butylbenzene	17.851	92	77776	20.34	ug/L	95
116) 1,2-dibromo-3-chloropr...	18.818	157	16903	19.56	ug/L	98
117) 1,3,5-trichlorobenzene	19.033	180	71235	20.02	ug/L	97
118) 2-ethylhexyl acrylate	19.755	70	5742	3.11	ug/L	85
119) 1,2,4-trichlorobenzene	19.775	180	67071	20.00	ug/L	99
120) hexachlorobutadiene	19.901	225	25494	19.44	ug/L	96
121) naphthalene	20.110	128	196661	19.86	ug/L	99
122) 1,2,3-trichlorobenzene	20.356	180	68363	20.05	ug/L	96
123) hexachloroethane	18.301	201	23961	18.35	ug/L	99
124) 2-methylnaphthalene	21.423	142	47795	8.93	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249737.D
Acq On : 11 May 2019 6:24 pm
Operator : PrashanS
Sample : IC9645-20
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 16:10:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.168	65	265515	500.00	ug/L	0.00
5) pentafluorobenzene	10.542	168	180291	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.505	114	268324	50.00	ug/L	0.00
74) chlorobenzene-d5	14.899	117	234769	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.519	152	124467	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.584	113	88935	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
53) 1,2-dichloroethane-d4 (s)	11.018	65	94010	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
75) toluene-d8 (s)	13.231	98	307195	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
99) 4-bromofluorobenzene (s)	16.201	95	99542	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.288	59	135198	250.49	ug/L	100
4) 1,4-dioxane	12.185	88	47365	1250.00	ug/L	100
6) chlorodifluoromethane	4.575	51	173885	50.00	ug/L	100
7) dichlorodifluoromethane	4.538	85	221531	50.00	ug/L	100
8) chloromethane	4.983	50	271106	63.39	ug/L	100
9) vinyl chloride	5.244	62	202575	50.00	ug/L	100
10) 1,3-butadiene	5.265	54	174152	50.00	ug/L	100
11) bromomethane	5.924	94	136363	50.00	ug/L	100
12) chloroethane	6.102	64	102771	50.00	ug/L	100
13) vinyl bromide	6.479	106	135407	50.00	ug/L	100
14) trichlorofluoromethane	6.625	101	204235	50.00	ug/L	100
15) ethyl ether	7.012	74	47757	50.00	ug/L	100
16) acrolein	7.263	56	21263	50.00	ug/L	100
17) freon 113	7.504	151	99243	50.00	ug/L	100
18) 1,1-dichloroethene	7.472	96	95332	50.00	ug/L	100
19) acetone	7.478	58	54972	200.00	ug/L	100
20) acetonitrile	7.927	41	210071	497.92	ug/L	100
21) iodomethane	7.755	142	173503	50.00	ug/L	100
22) carbon disulfide	7.906	76	303955	50.00	ug/L	100
23) methylene chloride	8.225	84	101460	50.00	ug/L	100
24) methyl acetate	7.964	43	95367	50.00	ug/L	100
25) methyl tert butyl ether	8.602	73	289278	50.00	ug/L	100
26) trans-1,2-dichloroethene	8.639	96	87063	50.00	ug/L	100
27) hexane	9.015	57	122450	50.00	ug/L	100
28) di-isopropyl ether	9.230	45	296328	50.00	ug/L	100
29) ethyl tert-butyl ether	9.716	59	287428	50.00	ug/L	100
30) 2-butanone	9.915	72	64807	200.00	ug/L	100
31) 1,1-dichloroethane	9.245	63	150460	50.00	ug/L	100
32) chloroprene	9.350	53	126005	50.00	ug/L	100
33) acrylonitrile	8.529	53	46843	50.00	ug/L	100
34) vinyl acetate	9.172	86	19253	50.00	ug/L	100
35) ethyl acetate	9.925	45	18332	50.00	ug/L	100
36) 2,2-dichloropropane	10.030	77	147291	50.00	ug/L	100
37) cis-1,2-dichloroethene	9.993	96	98957	50.00	ug/L	100
38) methyl acrylate	10.025	85	17781	50.00	ug/L	100
39) propionitrile	9.998	54	213771	500.00	ug/L	100
40) bromochloromethane	10.297	128	51335	50.00	ug/L	100
41) tetrahydrofuran	10.318	42	42873	50.00	ug/L	100
42) chloroform	10.386	83	148452	50.00	ug/L	100
43) tert-butyl formate	10.427	59	83397	50.00	ug/L	100
45) methacrylonitrile	10.202	67	44661	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.783	84	167308	50.00	ug/L	100
47) 1,1,1-trichloroethane	10.663	97	158732	50.00	ug/L	100
48) iso-butyl alcohol	10.778	43	155729	500.00	ug/L	100
49) 1,1-dichloropropene	10.830	75	115916	50.00	ug/L	100
50) carbon tetrachloride	10.867	117	139352	50.00	ug/L	100
51) tert-amyl alcohol	10.961	73	71616	250.00	ug/L	100
54) benzene	11.092	78	333746	50.00	ug/L	100
55) iso-octane	11.191	57	338231	50.00	ug/L	100
56) tert-amyl methyl ether	11.165	73	290423	50.00	ug/L	100
57) heptane	11.343	71	64085	50.00	ug/L	100
58) isopropyl acetate	10.982	87	25458	50.00	ug/L	100
59) 1,2-dichloroethane	11.113	62	113202	50.00	ug/L	100
60) n-butyl alcohol	11.557	56	316287	2500.00	ug/L	100
61) ethyl acrylate	11.808	55	116817	50.00	ug/L	100
62) trichloroethene	11.834	95	82972	50.00	ug/L	100
63) 2-nitropropane	12.624	41	39451	50.00	ug/L	100
64) methylcyclohexane	12.153	83	179728	50.00	ug/L	100
65) 2-chloroethyl vinyl ether	12.655	63	248228	250.00	ug/L	100
66) methyl methacrylate	12.085	100	26784	50.00	ug/L	100
67) 1,2-dichloropropane	12.138	63	82624	50.00	ug/L	100
68) dibromomethane	12.253	93	55306	50.00	ug/L	100
69) bromodichloromethane	12.415	83	113298	50.00	ug/L	100
70) epichlorohydrin	12.750	57	67136	250.00	ug/L	100
71) cis-1,3-dichloropropene	12.896	75	129193	50.00	ug/L	100
72) 4-methyl-2-pentanone	13.006	58	211513	200.00	ug/L	100
73) 3-methyl-1-butanol	13.001	55	203975	1000.00	ug/L	100
76) toluene	13.314	92	203166	50.00	ug/L	100
77) trans-1,3-dichloropropene	13.508	75	112228	50.00	ug/L	100
78) ethyl methacrylate	13.487	69	110593	50.00	ug/L	100
79) 1,1,2-trichloroethane	13.754	83	60685	50.00	ug/L	100
80) 2-hexanone	13.926	58	174374	200.00	ug/L	100
81) tetrachloroethene	13.921	166	97882	50.00	ug/L	100
82) 1,3-dichloropropane	13.952	76	116985	50.00	ug/L	100
83) butyl acetate	14.005	56	63825	50.00	ug/L	100
84) dibromochloromethane	14.224	129	88791	50.00	ug/L	100
85) 1,2-dibromoethane	14.397	107	83114	50.00	ug/L	100
86) n-butyl ether	14.873	57	330359	50.00	ug/L	100
87) chlorobenzene	14.936	112	216853	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	15.004	131	103547	50.00	ug/L	100
89) ethylbenzene	14.999	91	375116	50.00	ug/L	100
90) m,p-xylene	15.134	106	295033	100.00	ug/L	100
91) o-xylene	15.584	106	163011	50.00	ug/L	100
92) styrene	15.595	104	229388	50.00	ug/L	100
93) butyl acrylate	15.375	55	163103	50.00	ug/L	100
94) n-amyl acetate	15.610	70	71331	50.00	ug/L	100
95) bromoform	15.861	173	61911	50.00	ug/L	100
96) isopropylbenzene	15.977	105	445077	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	16.013	75	15057	50.00	ug/L	100
100) bromobenzene	16.416	156	93377	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	16.290	83	122654	50.00	ug/L	100
102) trans-1,4-dichloro-2-b...	16.322	53	11343	50.00	ug/L	100
103) 1,2,3-trichloropropane	16.390	110	34676	50.00	ug/L	100
104) n-propylbenzene	16.442	91	451714	50.00	ug/L	100
105) 2-chlorotoluene	16.599	126	101639	50.00	ug/L	100
106) 4-chlorotoluene	16.724	91	231027	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	16.615	105	371131	50.00	ug/L	100
108) tert-butylbenzene	17.002	134	83150	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	17.059	105	350556	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

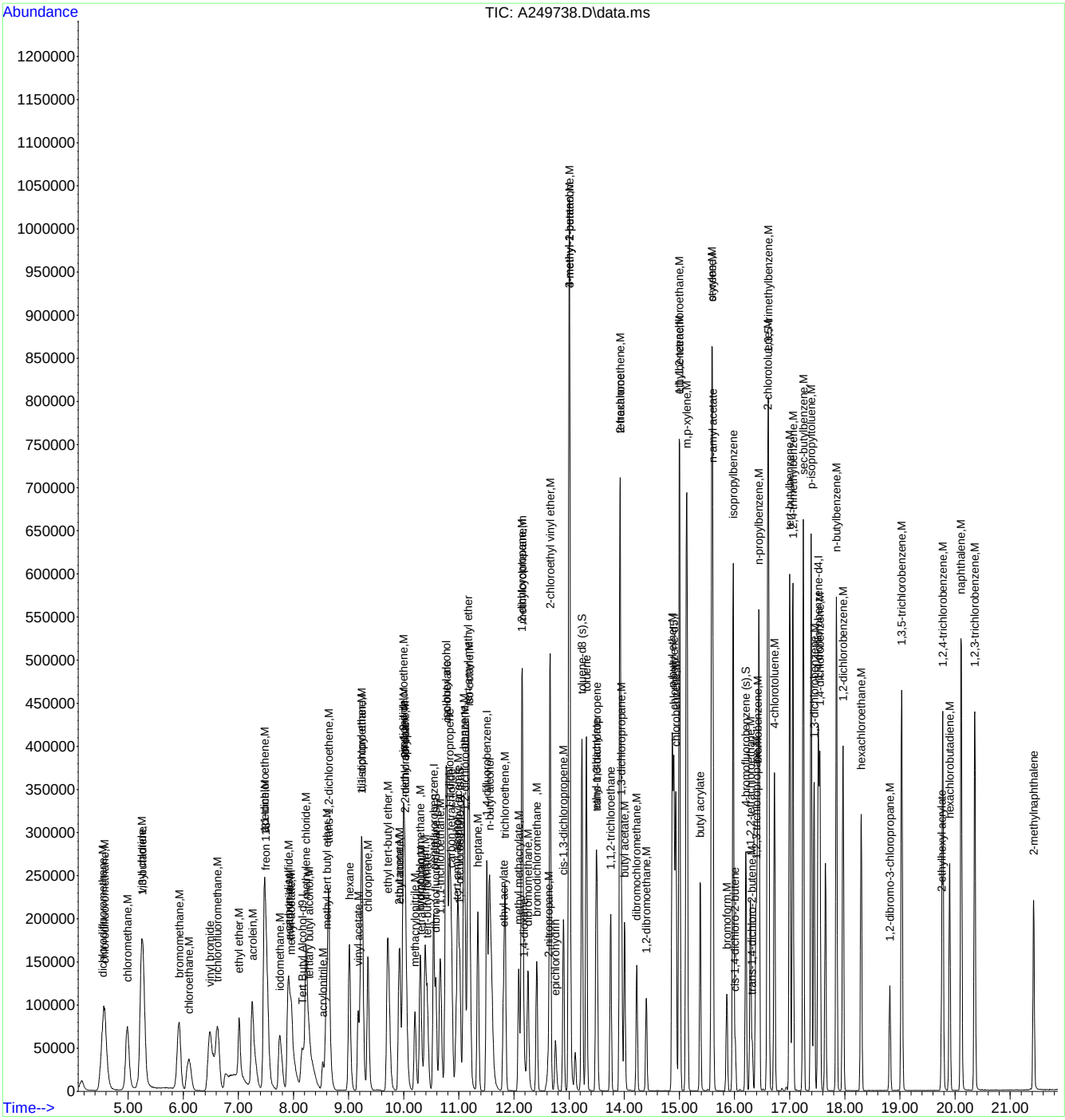
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	499103	50.00	ug/L	100
111) 1,3-dichlorobenzene	17.446	146	176170	50.00	ug/L	100
112) p-isopropyltoluene	17.389	119	413493	50.00	ug/L	100
113) 1,4-dichlorobenzene	17.551	146	175529	50.00	ug/L	100
114) 1,2-dichlorobenzene	17.969	146	190207	50.00	ug/L	100
115) n-butylbenzene	17.849	92	190429	50.00	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.817	157	43041	50.00	ug/L	100
117) 1,3,5-trichlorobenzene	19.031	180	177255	50.00	ug/L	100
118) 2-ethylhexyl acrylate	19.753	70	18405	10.00	ug/L	100
119) 1,2,4-trichlorobenzene	19.779	180	166997	50.00	ug/L	100
120) hexachlorobutadiene	19.904	225	65310	50.00	ug/L	100
121) naphthalene	20.114	128	493153	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	20.359	180	169845	50.00	ug/L	100
123) hexachloroethane	18.299	201	65036	50.00	ug/L	100
124) 2-methylnaphthalene	21.426	142	133281	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249738.D
Acq On : 11 May 2019 6:53 pm
Operator : PrashanS
Sample : ICC9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 16:11:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.172	65	266712	500.00	ug/L		0.00
5) pentafluorobenzene	10.542	168	185896	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.509	114	282488	50.00	ug/L		0.00
74) chlorobenzene-d5	14.898	117	259855	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	125619	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.589	113	91982	50.15	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.30%				
53) 1,2-dichloroethane-d4 (s)	11.023	65	97445	49.23	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.46%				
75) toluene-d8 (s)	13.230	98	325098	47.81	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.62%				
99) 4-bromofluorobenzene (s)	16.206	95	107484	53.49	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.98%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.293	59	282948	521.89	ug/L		96
4) 1,4-dioxane	12.179	88	100368	2636.90	ug/L		100
6) chlorodifluoromethane	4.584	51	364779	101.73	ug/L		97
7) dichlorodifluoromethane	4.548	85	489915	107.24	ug/L		98
8) chloromethane	4.987	50	583507	132.31	ug/L		96
9) vinyl chloride	5.243	62	446566	106.90	ug/L		99
10) 1,3-butadiene	5.275	54	354023	98.58	ug/L		99
11) bromomethane	5.923	94	299424	106.48	ug/L		99
12) chloroethane	6.112	64	228079	107.62	ug/L		98
13) vinyl bromide	6.478	106	305350	109.35	ug/L		100
14) trichlorofluoromethane	6.619	101	450874	107.05	ug/L		99
15) ethyl ether	7.022	74	97917	99.42	ug/L		97
16) acrolein	7.268	56	46438	105.91	ug/L		96
17) freon 113	7.508	151	212777	103.97	ug/L		99
18) 1,1-dichloroethene	7.477	96	210328	106.99	ug/L		100
19) acetone	7.477	58	114928	405.53	ug/L		97
20) acetonitrile	7.927	41	442507	1017.22	ug/L		99
21) iodomethane	7.759	142	380358	106.31	ug/L		99
22) carbon disulfide	7.911	76	656775	104.78	ug/L		99
23) methylene chloride	8.230	84	219461	104.89	ug/L		99
24) methyl acetate	7.963	43	191835	97.54	ug/L		99
25) methyl tert butyl ether	8.606	73	625971	104.93	ug/L		99
26) trans-1,2-dichloroethene	8.638	96	182109	101.43	ug/L		96
27) hexane	9.014	57	258839	102.50	ug/L		100
28) di-isopropyl ether	9.234	45	629934	103.09	ug/L		99
29) ethyl tert-butyl ether	9.720	59	620417	104.67	ug/L		98
30) 2-butanone	9.919	72	141373	423.13	ug/L		95
31) 1,1-dichloroethane	9.245	63	314904	101.49	ug/L		97
32) chloroprene	9.354	53	263935	101.57	ug/L		99
33) acrylonitrile	8.533	53	99080	102.57	ug/L		92
34) vinyl acetate	9.177	86	41857	105.43	ug/L		98
35) ethyl acetate	9.935	45	39797	105.27	ug/L	#	64
36) 2,2-dichloropropane	10.034	77	309707	101.96	ug/L		97
37) cis-1,2-dichloroethene	9.992	96	208610	102.23	ug/L		97
38) methyl acrylate	10.019	85	38723	105.61	ug/L	#	79
39) propionitrile	10.003	54	453565	1028.88	ug/L		90
40) bromochloromethane	10.301	128	110378	104.27	ug/L		98
41) tetrahydrofuran	10.317	42	90086	101.89	ug/L		100
42) chloroform	10.390	83	313179	102.30	ug/L		97
43) tert-butyl formate	10.427	59	178804	103.97	ug/L		98
45) methacrylonitrile	10.207	67	97104	105.43	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.782	84	378542	109.72	ug/L		96
47) 1,1,1-trichloroethane	10.662	97	338960	103.55	ug/L		99
48) iso-butyl alcohol	10.782	43	337885	1052.14	ug/L		94
49) 1,1-dichloropropene	10.834	75	251340	105.15	ug/L		97
50) carbon tetrachloride	10.866	117	299581	104.25	ug/L		99
51) tert-amyl alcohol	10.960	73	147878	500.65	ug/L		99
54) benzene	11.091	78	726284	103.35	ug/L		100
55) iso-octane	11.190	57	760095	106.73	ug/L		97
56) tert-amyl methyl ether	11.169	73	625081	102.22	ug/L		99
57) heptane	11.342	71	141528	104.89	ug/L		97
58) isopropyl acetate	10.981	87	56615	105.62	ug/L	#	91
59) 1,2-dichloroethane	11.112	62	242192	101.61	ug/L		98
60) n-butyl alcohol	11.556	56	668277	5017.35	ug/L		100
61) ethyl acrylate	11.807	55	258017	104.90	ug/L		99
62) trichloroethene	11.839	95	186784	106.91	ug/L		98
63) 2-nitropropane	12.623	41	83834	100.92	ug/L		90
64) methylcyclohexane	12.152	83	392005	103.59	ug/L		99
65) 2-chloroethyl vinyl ether	12.655	63	566372	541.81	ug/L		99
66) methyl methacrylate	12.090	100	58535	103.79	ug/L		92
67) 1,2-dichloropropane	12.137	63	183737	105.61	ug/L		100
68) dibromomethane	12.252	93	122911	105.55	ug/L		98
69) bromodichloromethane	12.414	83	249825	104.72	ug/L		99
70) epichlorohydrin	12.754	57	143515	507.62	ug/L		99
71) cis-1,3-dichloropropene	12.900	75	289565	106.45	ug/L		97
72) 4-methyl-2-pentanone	13.005	58	456174	409.72	ug/L		96
73) 3-methyl-1-butanol	13.005	55	430217	2003.41	ug/L		98
76) toluene	13.314	92	448283	99.67	ug/L		99
77) trans-1,3-dichloropropene	13.507	75	255043	102.66	ug/L		98
78) ethyl methacrylate	13.491	69	247587	101.13	ug/L		98
79) 1,1,2-trichloroethane	13.753	83	135915	101.17	ug/L		97
80) 2-hexanone	13.926	58	387541	401.58	ug/L		97
81) tetrachloroethene	13.920	166	217425	100.34	ug/L		98
82) 1,3-dichloropropane	13.952	76	263008	101.56	ug/L		97
83) butyl acetate	14.004	56	140998	99.79	ug/L		99
84) dibromochloromethane	14.229	129	202551	103.05	ug/L		97
85) 1,2-dibromoethane	14.401	107	192775	104.77	ug/L		100
86) n-butyl ether	14.872	57	736189	100.67	ug/L		99
87) chlorobenzene	14.935	112	497877	103.71	ug/L		98
88) 1,1,1,2-tetrachloroethane	15.008	131	230579	100.59	ug/L		99
89) ethylbenzene	14.998	91	841371	101.32	ug/L		98
90) m,p-xylene	15.134	106	675538	206.87	ug/L		99
91) o-xylene	15.589	106	370543	102.68	ug/L		97
92) styrene	15.594	104	523372	103.07	ug/L		98
93) butyl acrylate	15.379	55	353807	97.99	ug/L		99
94) n-amyl acetate	15.610	70	151408	95.88	ug/L		98
95) bromoform	15.861	173	138280	100.90	ug/L		99
96) isopropylbenzene	15.976	105	987071	100.18	ug/L		100
97) cis-1,4-dichloro-2-butene	16.012	75	39593	118.78	ug/L		93
100) bromobenzene	16.420	156	209539	111.17	ug/L		94
101) 1,1,2,2-tetrachloroethane	16.290	83	268271	108.36	ug/L		99
102) trans-1,4-dichloro-2-b...	16.321	53	27906	121.88	ug/L		97
103) 1,2,3-trichloropropane	16.389	110	76242	108.93	ug/L		99
104) n-propylbenzene	16.441	91	998292	109.49	ug/L		98
105) 2-chlorotoluene	16.598	126	231248	112.72	ug/L		95
106) 4-chlorotoluene	16.724	91	512969	110.00	ug/L		99
107) 1,3,5-trimethylbenzene	16.619	105	829816	110.77	ug/L		98
108) tert-butylbenzene	17.001	134	189604	112.97	ug/L		99
109) 1,2,4-trimethylbenzene	17.058	105	787781	111.33	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

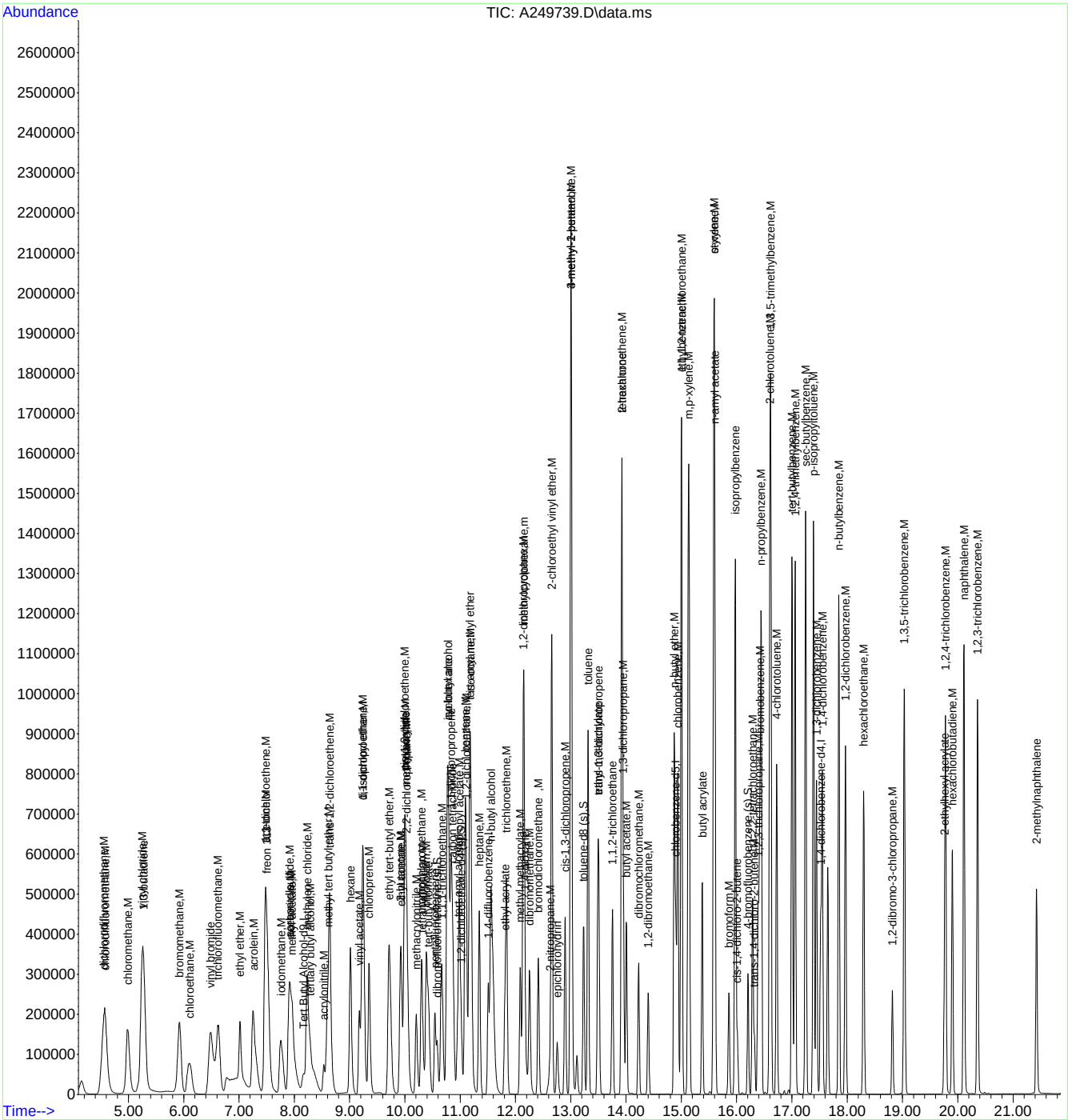
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
110) sec-butylbenzene	17.247	105	1113971	110.57 ug/L	99
111) 1,3-dichlorobenzene	17.445	146	377615	106.19 ug/L	99
112) p-isopropyltoluene	17.388	119	940249	112.65 ug/L	99
113) 1,4-dichlorobenzene	17.550	146	374743	105.77 ug/L	99
114) 1,2-dichlorobenzene	17.968	146	412603	107.47 ug/L	99
115) n-butylbenzene	17.848	92	416580	108.38 ug/L	100
116) 1,2-dibromo-3-chloropr...	18.816	157	90790	104.50 ug/L	96
117) 1,3,5-trichlorobenzene	19.035	180	384365	107.43 ug/L	97
118) 2-ethylhexyl acrylate	19.757	70	45578	24.54 ug/L	96
119) 1,2,4-trichlorobenzene	19.778	180	358670	106.40 ug/L	98
120) hexachlorobutadiene	19.904	225	151592	114.99 ug/L	99
121) naphthalene	20.113	128	1052500	105.73 ug/L	99
122) 1,2,3-trichlorobenzene	20.359	180	373638	108.99 ug/L	97
123) hexachloroethane	18.298	201	154937	118.02 ug/L	98
124) 2-methylnaphthalene	21.426	142	309744	57.57 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249739.D
Acq On : 11 May 2019 7:21 pm
Operator : PrashanS
Sample : IC9645-100
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 13 16:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Tert Butyl Alcohol-d9	8.173	65	263697	500.00	ug/L		0.00
5) pentafluorobenzene	10.542	168	191958	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.509	114	301221	50.00	ug/L		0.00
74) chlorobenzene-d5	14.904	117	283024	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.519	152	136920	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.589	113	93593	49.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%				
53) 1,2-dichloroethane-d4 (s)	11.018	65	101031	47.87	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 95.74%				
75) toluene-d8 (s)	13.235	98	345375	46.63	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.26%				
99) 4-bromofluorobenzene (s)	16.206	95	119187	54.42	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.84%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.293	59	531294	991.15	ug/L		90
4) 1,4-dioxane	12.184	88	170220	4523.21	ug/L		99
6) chlorodifluoromethane	4.580	51	710498	191.88	ug/L		97
7) dichlorodifluoromethane	4.543	85	911081	193.13	ug/L		99
8) chloromethane	4.982	50	1102514	242.10	ug/L		97
9) vinyl chloride	5.244	62	842561	195.32	ug/L		98
10) 1,3-butadiene	5.265	54	675662	182.20	ug/L		97
11) bromomethane	5.924	94	561489	193.37	ug/L		97
12) chloroethane	6.107	64	428874	195.97	ug/L		98
13) vinyl bromide	6.494	106	579303	200.91	ug/L		100
14) trichlorofluoromethane	6.619	101	852468	196.01	ug/L		99
15) ethyl ether	7.017	74	195988	192.72	ug/L		95
16) acrolein	7.268	56	93306	206.07	ug/L		95
17) freon 113	7.508	151	417880	197.74	ug/L		99
18) 1,1-dichloroethene	7.482	96	433010	213.30	ug/L		96
19) acetone	7.477	58	221447	756.70	ug/L		100
20) acetonitrile	7.927	41	824825	1836.21	ug/L		98
21) iodomethane	7.754	142	775886	210.00	ug/L		99
22) carbon disulfide	7.911	76	1333356	206.00	ug/L		98
23) methylene chloride	8.230	84	450761	208.64	ug/L		96
24) methyl acetate	7.963	43	377629	185.95	ug/L		98
25) methyl tert butyl ether	8.607	73	1255601	203.83	ug/L		97
26) trans-1,2-dichloroethene	8.638	96	368074	198.54	ug/L		98
27) hexane	9.015	57	510753	195.88	ug/L		99
28) di-isopropyl ether	9.234	45	1245940	197.45	ug/L		100
29) ethyl tert-butyl ether	9.716	59	1229912	200.95	ug/L		96
30) 2-butanone	9.925	72	290773	842.81	ug/L		98
31) 1,1-dichloroethane	9.245	63	624569	194.94	ug/L		98
32) chloroprene	9.355	53	518510	193.24	ug/L		97
33) acrylonitrile	8.534	53	197731	198.23	ug/L		93
34) vinyl acetate	9.177	86	86447	210.86	ug/L		99
35) ethyl acetate	9.935	45	75986	194.65	ug/L	#	73
36) 2,2-dichloropropane	10.035	77	611474	194.96	ug/L		99
37) cis-1,2-dichloroethene	9.993	96	418743	198.72	ug/L		97
38) methyl acrylate	10.024	85	80350	212.21	ug/L	#	83
39) propionitrile	10.003	54	905278	1988.71	ug/L		90
40) bromochloromethane	10.301	128	218861	200.21	ug/L		98
41) tetrahydrofuran	10.322	42	179160	196.24	ug/L		98
42) chloroform	10.390	83	618767	195.74	ug/L		97
43) tert-butyl formate	10.427	59	353413	199.01	ug/L		97
45) methacrylonitrile	10.207	67	197815	208.00	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.788	84	733174	205.79	ug/L		96
47) 1,1,1-trichloroethane	10.667	97	677875	200.55	ug/L		98
48) iso-butyl alcohol	10.788	43	649845	1959.65	ug/L		89
49) 1,1-dichloropropene	10.835	75	499367	202.31	ug/L		96
50) carbon tetrachloride	10.866	117	597791	201.45	ug/L		99
51) tert-amyl alcohol	10.960	73	281874	924.17	ug/L		96
54) benzene	11.091	78	1461544	195.05	ug/L		99
55) iso-octane	11.196	57	1511231	199.00	ug/L		98
56) tert-amyl methyl ether	11.170	73	1252842	192.14	ug/L		99
57) heptane	11.347	71	278811	193.78	ug/L		97
58) isopropyl acetate	10.986	87	112349	196.56	ug/L	#	92
59) 1,2-dichloroethane	11.112	62	485931	191.19	ug/L		99
60) n-butyl alcohol	11.557	56	1278121	8999.22	ug/L		98
61) ethyl acrylate	11.808	55	528115	201.36	ug/L		100
62) trichloroethene	11.839	95	380915	204.48	ug/L		97
63) 2-nitropropane	12.629	41	171466	193.58	ug/L		90
64) methylcyclohexane	12.153	83	792062	196.29	ug/L		99
65) 2-chloroethyl vinyl ether	12.660	63	1178174	1057.00	ug/L		99
66) methyl methacrylate	12.090	100	122261	203.31	ug/L		94
67) 1,2-dichloropropane	12.142	63	379705	204.68	ug/L		100
68) dibromomethane	12.252	93	253088	203.82	ug/L		98
69) bromodichloromethane	12.414	83	521464	205.00	ug/L		99
70) epichlorohydrin	12.759	57	294720	977.62	ug/L		100
71) cis-1,3-dichloropropene	12.901	75	600947	207.18	ug/L		97
72) 4-methyl-2-pentanone	13.005	58	921420	776.11	ug/L		90
73) 3-methyl-1-butanol	13.005	55	832326	3634.89	ug/L		97
76) toluene	13.314	92	924949	188.82	ug/L		98
77) trans-1,3-dichloropropene	13.507	75	523775	193.57	ug/L		99
78) ethyl methacrylate	13.492	69	509973	191.25	ug/L		97
79) 1,1,2-trichloroethane	13.753	83	278615	190.42	ug/L		98
80) 2-hexanone	13.926	58	800607	761.70	ug/L		96
81) tetrachloroethene	13.926	166	444070	188.16	ug/L		99
82) 1,3-dichloropropane	13.952	76	548088	194.32	ug/L		97
83) butyl acetate	14.004	56	291702	189.56	ug/L		97
84) dibromochloromethane	14.229	129	423368	197.76	ug/L		98
85) 1,2-dibromoethane	14.402	107	404905	202.05	ug/L		99
86) n-butyl ether	14.872	57	1495434	187.75	ug/L		100
87) chlorobenzene	14.935	112	1051588	201.13	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.008	131	477888	191.42	ug/L		99
89) ethylbenzene	14.998	91	1735733	191.91	ug/L		97
90) m,p-xylene	15.134	106	1408230	395.93	ug/L		96
91) o-xylene	15.589	106	775864	197.40	ug/L		95
92) styrene	15.599	104	1137035	205.58	ug/L		98
93) butyl acrylate	15.380	55	721095	183.37	ug/L		97
94) n-amyl acetate	15.610	70	311942	181.38	ug/L		95
95) bromoform	15.861	173	293535	196.64	ug/L		100
96) isopropylbenzene	15.976	105	1992241	185.65	ug/L		98
97) cis-1,4-dichloro-2-butene	16.013	75	110938	305.58	ug/L		97
100) bromobenzene	16.421	156	452616	220.32	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.290	83	559173	207.22	ug/L		99
102) trans-1,4-dichloro-2-b...	16.326	53	62387	249.99	ug/L		90
103) 1,2,3-trichloropropane	16.389	110	158963	208.36	ug/L		97
104) n-propylbenzene	16.447	91	2056679	206.95	ug/L		96
105) 2-chlorotoluene	16.604	126	494853	221.30	ug/L		95
106) 4-chlorotoluene	16.724	91	1089773	214.40	ug/L		100
107) 1,3,5-trimethylbenzene	16.619	105	1708628	209.26	ug/L		97
108) tert-butylbenzene	17.001	134	403354	220.49	ug/L		96
109) 1,2,4-trimethylbenzene	17.059	105	1632372	211.65	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration

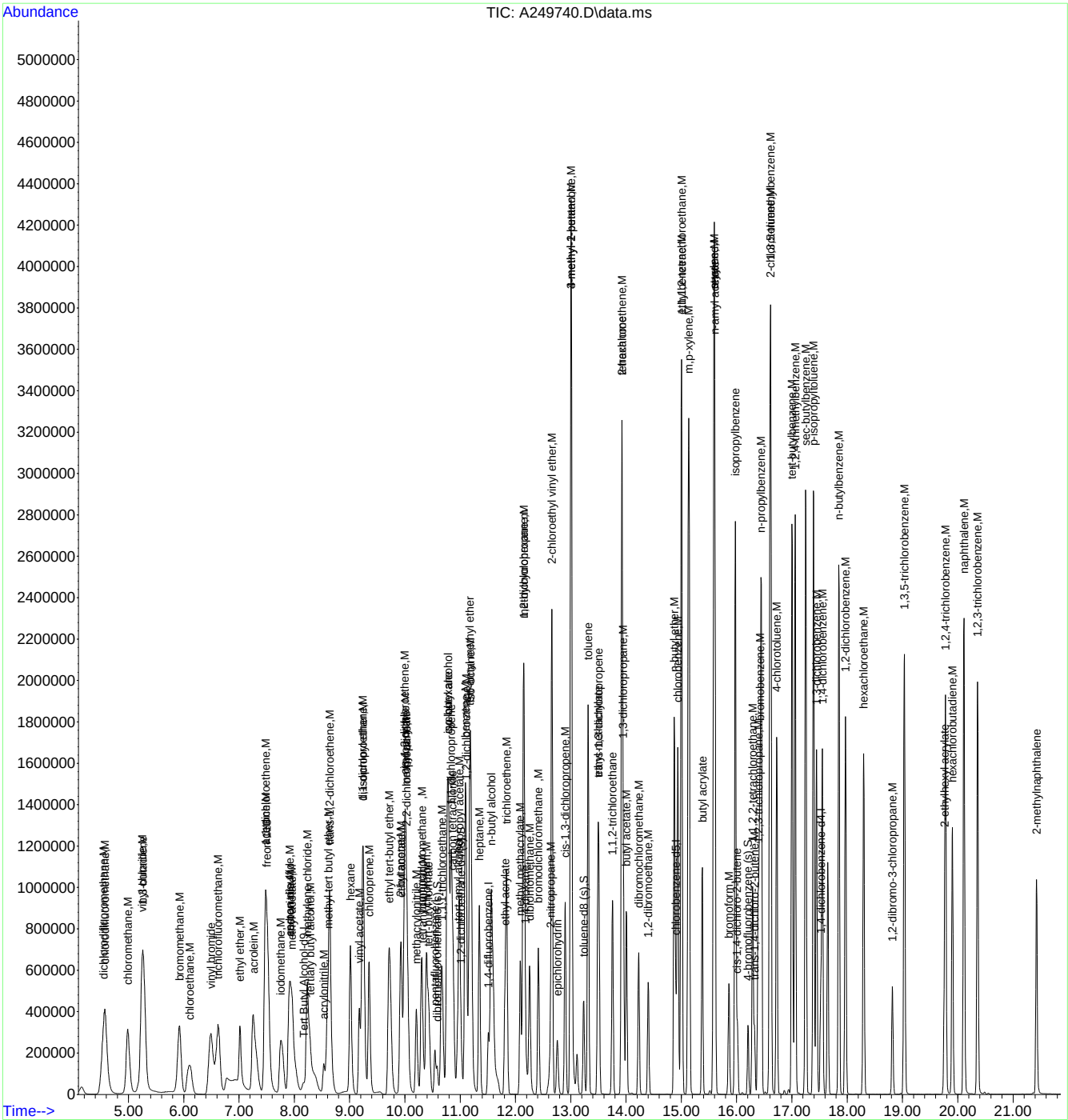
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.247	105	2248694	204.78	ug/L	98
111) 1,3-dichlorobenzene	17.446	146	788132	203.34	ug/L	98
112) p-isopropyltoluene	17.393	119	1917115	210.74	ug/L	97
113) 1,4-dichlorobenzene	17.550	146	779510	201.85	ug/L	99
114) 1,2-dichlorobenzene	17.969	146	865684	206.87	ug/L	99
115) n-butylbenzene	17.848	92	873916	208.59	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.821	157	185176	195.55	ug/L	95
117) 1,3,5-trichlorobenzene	19.036	180	800123	205.17	ug/L	98
118) 2-ethylhexyl acrylate	19.757	70	97946	48.38	ug/L	95
119) 1,2,4-trichlorobenzene	19.778	180	735266	200.12	ug/L	98
120) hexachlorobutadiene	19.904	225	318355	221.56	ug/L	99
121) naphthalene	20.113	128	2109560	194.43	ug/L	98
122) 1,2,3-trichlorobenzene	20.359	180	760347	203.48	ug/L	98
123) hexachloroethane	18.298	201	334325	233.65	ug/L	98
124) 2-methylnaphthalene	21.426	142	635435	108.35	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249740.D
Acq On : 11 May 2019 7:50 pm
Operator : PrashanS
Sample : IC9645-200
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 16:11:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:07:31 2019
QLast Update : Mon May 13 16:07:31 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.171	65	278791	500.00	ug/L	0.00
5) pentafluorobenzene	10.545	168	190481	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.508	114	276478	50.00	ug/L	0.00
74) chlorobenzene-d5	14.902	117	241043	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.517	152	126057	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.587	113	92745	49.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%			
53) 1,2-dichloroethane-d4 (s)	11.021	65	96906	48.79	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.58%			
75) toluene-d8 (s)	13.234	98	317279	49.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.98%			
99) 4-bromofluorobenzene (s)	16.204	95	99698	50.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.54%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.286	59	145195	252.17	ug/L	98
4) 1,4-dioxane	12.182	88	51091	1369.99	ug/L	98
6) chlorodifluoromethane	4.578	51	209275	56.57	ug/L	96
7) dichlorodifluoromethane	4.552	85	229431	50.99	ug/L	97
8) chloromethane	4.986	50	278388	56.96	ug/L	96
9) vinyl chloride	5.252	62	201394	48.64	ug/L	98
10) 1,3-butadiene	5.268	54	221038	56.01	ug/L	97
11) bromomethane	5.922	94	136591	46.96	ug/L	96
12) chloroethane	6.110	64	103425	49.14	ug/L	96
13) vinyl bromide	6.492	106	140950	50.80	ug/L	100
14) trichlorofluoromethane	6.628	101	206096	48.10	ug/L	100
15) ethyl ether	7.015	74	49963	52.13	ug/L	96
16) acrolein	7.266	56	22951	52.65	ug/L	98
17) freon 113	7.507	151	119419	57.36	ug/L	98
18) 1,1-dichloroethene	7.475	96	99339	48.24	ug/L	99
19) acetone	7.475	58	57108	206.21	ug/L	87
20) acetonitrile	7.925	41	156922	357.91	ug/L	97
21) iodomethane	7.747	142	216694	59.23	ug/L	98
22) carbon disulfide	7.904	76	362128	52.85	ug/L	99
23) methylene chloride	8.228	84	109225	50.92	ug/L	97
24) methyl acetate	7.967	43	98042	50.54	ug/L	99
25) methyl tert butyl ether	8.605	73	627854	103.43	ug/L	88
26) trans-1,2-dichloroethene	8.642	96	91110	50.93	ug/L	94
27) hexane	9.013	57	135078	52.21	ug/L	99
28) di-isopropyl ether	9.227	45	301081	48.43	ug/L	96
29) ethyl tert-butyl ether	9.714	59	299303	50.32	ug/L	99
30) 2-butanone	9.918	72	69110	216.27	ug/L	97
31) 1,1-dichloroethane	9.248	63	161624	50.26	ug/L	98
32) chloroprene	9.353	53	138984	53.32	ug/L	97
33) acrylonitrile	8.532	53	54501	55.14	ug/L	96
34) vinyl acetate	9.180	86	19196	46.73	ug/L	94
35) ethyl acetate	9.928	45	17665	49.46	ug/L	96
36) 2,2-dichloropropane	10.033	77	151859	48.45	ug/L	99
37) cis-1,2-dichloroethene	9.991	96	101579	49.27	ug/L	97
38) methyl acrylate	10.022	85	18989	53.30	ug/L #	87
39) propionitrile	10.001	54	231885	549.24	ug/L	87
40) bromochloromethane	10.300	128	56364	53.58	ug/L	96
41) tetrahydrofuran	10.315	42	46505	50.73	ug/L	99
42) chloroform	10.388	83	159958	47.86	ug/L	97
43) tert-butyl formate	10.430	59	80795	47.58	ug/L	99
45) methacrylonitrile	10.200	67	48162	52.71	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) cyclohexane	10.781	84	182903	52.64	ug/L		99
47) 1,1,1-trichloroethane	10.660	97	167826	51.24	ug/L		98
48) iso-butyl alcohol	10.781	43	166270	527.01	ug/L		91
49) 1,1-dichloropropene	10.833	75	123493	50.46	ug/L		96
50) carbon tetrachloride	10.864	117	151125	51.62	ug/L		99
51) tert-amyl alcohol	10.959	73	78985	269.30	ug/L		95
54) benzene	11.089	78	356262	50.48	ug/L		99
55) iso-octane	11.189	57	361996	54.65	ug/L		97
56) tert-amyl methyl ether	11.168	73	301671	50.19	ug/L		100
57) heptane	11.346	71	78545	59.85	ug/L		97
58) isopropyl acetate	10.979	87	25540	49.32	ug/L		96
59) 1,2-dichloroethane	11.110	62	117856	46.53	ug/L		100
60) n-butyl alcohol	11.555	56	336110	2770.04	ug/L		99
61) ethyl acrylate	11.806	55	125478	54.51	ug/L		99
62) trichloroethene	11.837	95	90919	50.58	ug/L		98
63) 2-nitropropane	12.627	41	43598	57.17	ug/L		85
64) methylcyclohexane	12.151	83	191579	51.65	ug/L		98
65) 2-chloroethyl vinyl ether	12.653	63	275734	288.77	ug/L		98
66) methyl methacrylate	12.088	100	28657	56.33	ug/L	#	79
67) 1,2-dichloropropane	12.135	63	89190	52.37	ug/L		96
68) dibromomethane	12.256	93	59227	51.66	ug/L		96
69) bromodichloromethane	12.413	83	117147	49.78	ug/L		98
70) epichlorohydrin	12.752	57	72425	283.14	ug/L		99
71) cis-1,3-dichloropropene	12.899	75	136850	54.42	ug/L		99
72) 4-methyl-2-pentanone	13.004	58	223650	212.50	ug/L		100
73) 3-methyl-1-butanol	13.004	55	223762	1132.82	ug/L		98
76) toluene	13.312	92	213443	50.10	ug/L		99
77) trans-1,3-dichloropropene	13.511	75	122253	55.79	ug/L		99
78) ethyl methacrylate	13.490	69	119191	53.76	ug/L		97
79) 1,1,2-trichloroethane	13.751	83	64357	52.88	ug/L		98
80) 2-hexanone	13.924	58	182459	202.81	ug/L		99
81) tetrachloroethene	13.924	166	110934	53.19	ug/L		98
82) 1,3-dichloropropane	13.950	76	125801	53.70	ug/L		95
83) butyl acetate	14.002	56	66879	49.97	ug/L		96
84) dibromochloromethane	14.227	129	97488	53.47	ug/L		94
85) 1,2-dibromoethane	14.400	107	88205	52.92	ug/L		99
86) n-butyl ether	14.871	57	360955	51.61	ug/L		100
87) chlorobenzene	14.933	112	231421	52.25	ug/L		97
88) 1,1,1,2-tetrachloroethane	15.007	131	110887	49.96	ug/L		97
89) ethylbenzene	15.001	91	391290	49.45	ug/L		100
90) m,p-xylene	15.132	106	309651	100.64	ug/L		97
91) o-xylene	15.587	106	173058	50.84	ug/L		98
92) styrene	15.598	104	239009	48.84	ug/L		98
93) butyl acrylate	15.378	55	166333	47.68	ug/L		96
94) n-amyl acetate	15.608	70	68678	43.79	ug/L		94
95) bromoform	15.859	173	69347	54.63	ug/L		98
96) isopropylbenzene	15.974	105	473054	51.38	ug/L		98
97) cis-1,4-dichloro-2-butene	16.016	75	14580	53.23	ug/L		94
100) bromobenzene	16.419	156	98274	53.01	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.288	83	127755	53.06	ug/L		99
102) trans-1,4-dichloro-2-b...	16.319	53	12481	66.85	ug/L		92
103) 1,2,3-trichloropropane	16.387	110	35816	51.95	ug/L		96
104) n-propylbenzene	16.445	91	473850	52.39	ug/L		99
105) 2-chlorotoluene	16.597	126	105193	52.22	ug/L		99
106) 4-chlorotoluene	16.722	91	244789	51.99	ug/L		99
107) 1,3,5-trimethylbenzene	16.618	105	389512	55.85	ug/L		100
108) tert-butylbenzene	17.005	134	89380	55.32	ug/L		98
109) 1,2,4-trimethylbenzene	17.057	105	376465	54.55	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

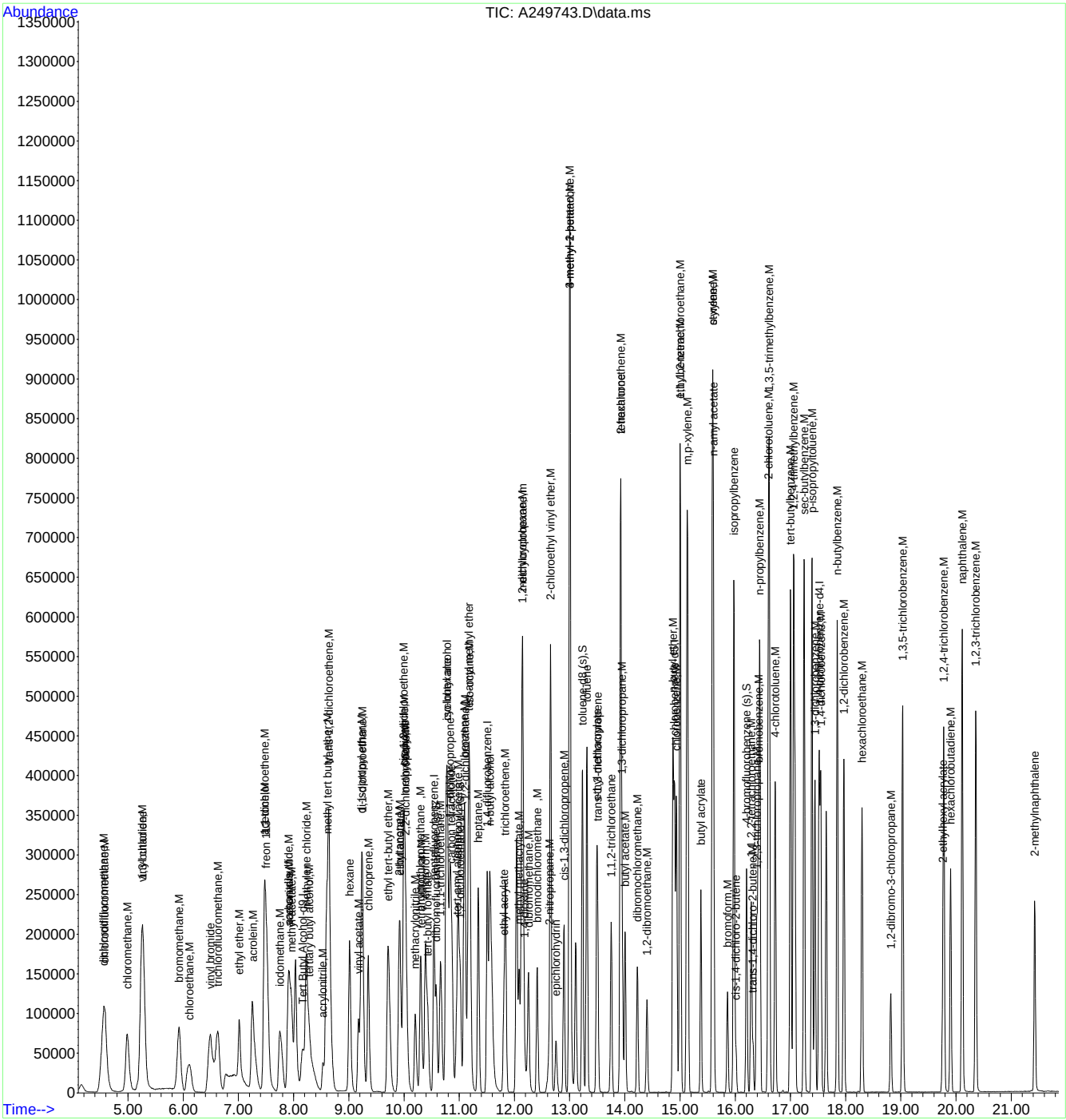
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.245	105	528954	55.55	ug/L	99
111) 1,3-dichlorobenzene	17.444	146	186510	50.75	ug/L	99
112) p-isopropyltoluene	17.392	119	447060	56.34	ug/L	100
113) 1,4-dichlorobenzene	17.549	146	185211	49.79	ug/L	98
114) 1,2-dichlorobenzene	17.967	146	200439	50.33	ug/L	98
115) n-butylbenzene	17.847	92	196700	50.70	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.819	157	43427	51.64	ug/L	96
117) 1,3,5-trichlorobenzene	19.034	180	184013	49.01	ug/L	99
118) 2-ethylhexyl acrylate	19.756	70	21343	10.25	ug/L	98
119) 1,2,4-trichlorobenzene	19.777	180	171800	50.87	ug/L	96
120) hexachlorobutadiene	19.902	225	67354	50.13	ug/L	96
121) naphthalene	20.111	128	529233	53.60	ug/L	100
122) 1,2,3-trichlorobenzene	20.357	180	179369	52.91	ug/L	99
123) hexachloroethane	18.302	201	73164	58.60	ug/L	99
124) 2-methylnaphthalene	21.424	142	143472	27.25	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249743.D
Acq On : 11 May 2019 9:17 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 14 13:59:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249744.D
Acq On : 11 May 2019 9:46 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 14 14:00:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

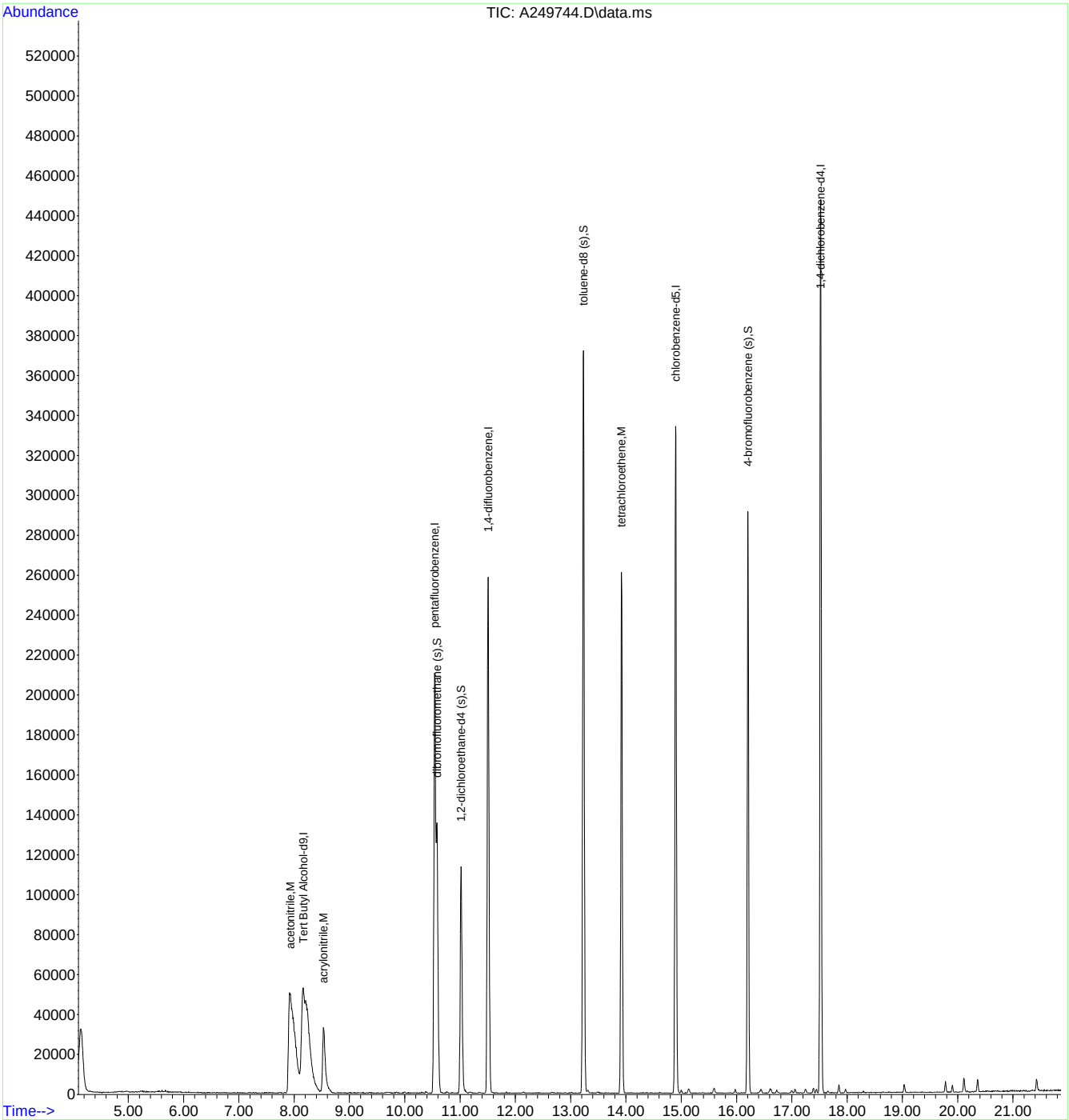
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	274172	500.00	ug/L	0.00
5) pentafluorobenzene	10.540	168	192266	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.508	114	267622	50.00	ug/L	0.00
74) chlorobenzene-d5	14.897	117	214926	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.522	152	136580	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.582	113	92465	48.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.58%			
53) 1,2-dichloroethane-d4 (s)	11.016	65	96913	50.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.82%			
75) toluene-d8 (s)	13.234	98	293064	51.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.54%			
99) 4-bromofluorobenzene (s)	16.204	95	103621	48.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.42%			
Target Compounds						Qvalue
20) acetonitrile	7.930	41	219958	497.02	ug/L	99
33) acrylonitrile	8.532	53	45221	45.33	ug/L	96
81) tetrachloroethene	13.919	166	90735	48.80	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9645\
Data File : A249744.D
Acq On : 11 May 2019 9:46 pm
Operator : PrashanS
Sample : ICV9645-50
Misc : MS34541,VA9645,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 14 14:00:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251641.d
Acq On : 15 Jul 2019 6:50 am
Operator : JAYC
Sample : cc9645-20 Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 02:57:46 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.152	65	347742	500.00	ug/L	-0.02
5) pentafluorobenzene	10.537	168	226849	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.500	114	347047	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	282500	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	152183	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.574	113	113969	50.97	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.94%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	121747	48.83	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.66%			
75) toluene-d8 (s)	13.226	98	373701	49.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.48%			
99) 4-bromofluorobenzene (s)	16.196	95	125318	52.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.72%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.273	59	68064	94.77	ug/L	93
4) 1,4-dioxane	12.174	88	22306	479.53	ug/L	98
6) chlorodifluoromethane	4.575	51	98611	22.38	ug/L	98
7) dichlorodifluoromethane	4.549	85	114816	21.43	ug/L	97
8) chloromethane	4.988	50	129809	22.30	ug/L	97
9) vinyl chloride	5.250	62	122245	24.79	ug/L	96
10) 1,3-butadiene	5.255	54	76612	16.30	ug/L	91
11) bromomethane	5.919	94	69047	19.93	ug/L	95
12) chloroethane	6.107	64	50813	20.27	ug/L	96
13) vinyl bromide	6.479	106	66803	20.22	ug/L	99
14) trichlorofluoromethane	6.625	101	102113	20.01	ug/L	95
15) ethyl ether	7.012	74	22641	19.83	ug/L	89
16) acrolein	7.258	56	12045	23.20	ug/L	96
17) freon 113	7.499	151	49548	19.98	ug/L	97
18) 1,1-dichloroethene	7.472	96	47594	19.41	ug/L	90
19) acetone	7.467	58	25713	77.96	ug/L #	81
20) acetonitrile	7.917	41	105410	201.87	ug/L	94
21) iodomethane	7.739	142	87687	20.12	ug/L	96
22) carbon disulfide	7.896	76	154227	18.90	ug/L	98
23) methylene chloride	8.220	84	51752	20.26	ug/L	95
24) methyl acetate	7.964	43	46053	19.93	ug/L	99
25) methyl tert butyl ether	8.597	73	151199	20.91	ug/L	100
26) trans-1,2-dichloroethene	8.633	96	44272	20.78	ug/L	93
27) hexane	9.010	57	58508	18.99	ug/L	100
28) di-isopropyl ether	9.224	45	151911	20.52	ug/L	97
29) ethyl tert-butyl ether	9.706	59	145922	20.60	ug/L	93
30) 2-butanone	9.910	72	32910	86.48	ug/L #	74
31) 1,1-dichloroethane	9.240	63	76407	19.95	ug/L	94
32) chloroprene	9.345	53	59046	19.02	ug/L	98
33) acrylonitrile	8.529	53	22558	19.16	ug/L	90
34) vinyl acetate	9.167	86	10041	20.53	ug/L #	71
35) ethyl acetate	9.925	45	9572	22.51	ug/L #	52
36) 2,2-dichloropropane	10.025	77	81766	21.90	ug/L	98
37) cis-1,2-dichloroethene	9.983	96	50967	20.76	ug/L	92
38) methyl acrylate	10.019	85	8509	20.06	ug/L #	89
39) propionitrile	9.993	54	102249	203.36	ug/L	96
40) bromochloromethane	10.291	128	25431	20.30	ug/L	92
41) tetrahydrofuran	10.307	42	20202	18.51	ug/L	97
42) chloroform	10.375	83	76166	19.13	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251641.d
Acq On : 15 Jul 2019 6:50 am
Operator : JAYC
Sample : cc9645-20 Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 02:57:46 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.417	59	47076	23.28	ug/L	96
45) methacrylonitrile	10.192	67	22593	20.76	ug/L	93
46) cyclohexane	10.773	84	77816	18.81	ug/L	97
47) 1,1,1-trichloroethane	10.658	97	81447	20.88	ug/L	97
48) iso-butyl alcohol	10.773	43	74825	199.14	ug/L	87
49) 1,1-dichloropropene	10.830	75	56070	19.24	ug/L	96
50) carbon tetrachloride	10.861	117	72646	20.84	ug/L	99
51) tert-amyl alcohol	10.956	73	35300	101.06	ug/L	91
54) benzene	11.086	78	169831	19.17	ug/L	98
55) iso-octane	11.181	57	139488	16.78	ug/L	96
56) tert-amyl methyl ether	11.160	73	146678	19.44	ug/L	100
57) heptane	11.343	71	31055	18.85	ug/L	92
58) isopropyl acetate	10.982	87	12756	19.62	ug/L	96
59) 1,2-dichloroethane	11.102	62	57114	17.96	ug/L	96
60) n-butyl alcohol	11.547	56	155975	1024.08	ug/L	98
61) ethyl acrylate	11.798	55	56105	19.42	ug/L	99
62) trichloroethene	11.834	95	41009	18.18	ug/L	98
63) 2-nitropropane	12.619	41	18826	19.67	ug/L	89
64) methylcyclohexane	12.148	83	82186	17.65	ug/L	99
65) 2-chloroethyl vinyl ether	12.645	63	118003	98.45	ug/L	98
66) methyl methacrylate	12.080	100	12640	19.79	ug/L	97
67) 1,2-dichloropropane	12.127	63	41393	19.36	ug/L	91
68) dibromomethane	12.242	93	28679	19.93	ug/L	94
69) bromodichloromethane	12.404	83	59865	20.27	ug/L	94
70) epichlorohydrin	12.744	57	32482	101.16	ug/L	99
71) cis-1,3-dichloropropene	12.891	75	64578	20.46	ug/L	95
72) 4-methyl-2-pentanone	12.995	58	103817	78.58	ug/L	96
73) 3-methyl-1-butanol	12.990	55	98949	399.08	ug/L	97
76) toluene	13.304	92	97945	19.62	ug/L	97
77) trans-1,3-dichloropropene	13.497	75	56556	22.02	ug/L	95
78) ethyl methacrylate	13.482	69	51005	19.63	ug/L	95
79) 1,1,2-trichloroethane	13.743	83	28890	20.25	ug/L	97
80) 2-hexanone	13.916	58	85450	81.04	ug/L	97
81) tetrachloroethene	13.916	166	44878	18.36	ug/L	97
82) 1,3-dichloropropane	13.942	76	55977	20.39	ug/L	93
83) butyl acetate	14.000	56	32448	20.68	ug/L	98
84) dibromochloromethane	14.219	129	43270	20.25	ug/L	96
85) 1,2-dibromoethane	14.392	107	42349	21.68	ug/L	98
86) n-butyl ether	14.863	57	161129	19.66	ug/L	99
87) chlorobenzene	14.931	112	101506	19.55	ug/L	97
88) 1,1,1,2-tetrachloroethane	14.999	131	52731	20.27	ug/L	96
89) ethylbenzene	14.993	91	176845	19.07	ug/L	99
90) m,p-xylene	15.124	106	139631	38.72	ug/L	99
91) o-xylene	15.579	106	80102	20.08	ug/L	85
92) styrene	15.590	104	105677	18.42	ug/L	98
93) butyl acrylate	15.370	55	82446	20.17	ug/L	99
94) n-amyl acetate	15.600	70	36246	19.72	ug/L	95
95) bromoform	15.851	173	32514	21.86	ug/L	95
96) isopropylbenzene	15.966	105	212094	19.66	ug/L	96
97) cis-1,4-dichloro-2-butene	16.003	75	20957	65.29	ug/L	93
100) bromobenzene	16.411	156	46471	20.77	ug/L	91
101) 1,1,2,2-tetrachloroethane	16.280	83	62394	21.47	ug/L	98
102) trans-1,4-dichloro-2-b...	16.317	53	12370	54.88	ug/L	96
103) 1,2,3-trichloropropane	16.374	110	17628	21.18	ug/L	94
104) n-propylbenzene	16.437	91	216693	19.84	ug/L	100
105) 2-chlorotoluene	16.589	126	47911	19.70	ug/L	96
106) 4-chlorotoluene	16.714	91	116517	20.50	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251641.d
Acq On : 15 Jul 2019 6:50 am
Operator : JAYC
Sample : cc9645-20 Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 02:57:46 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

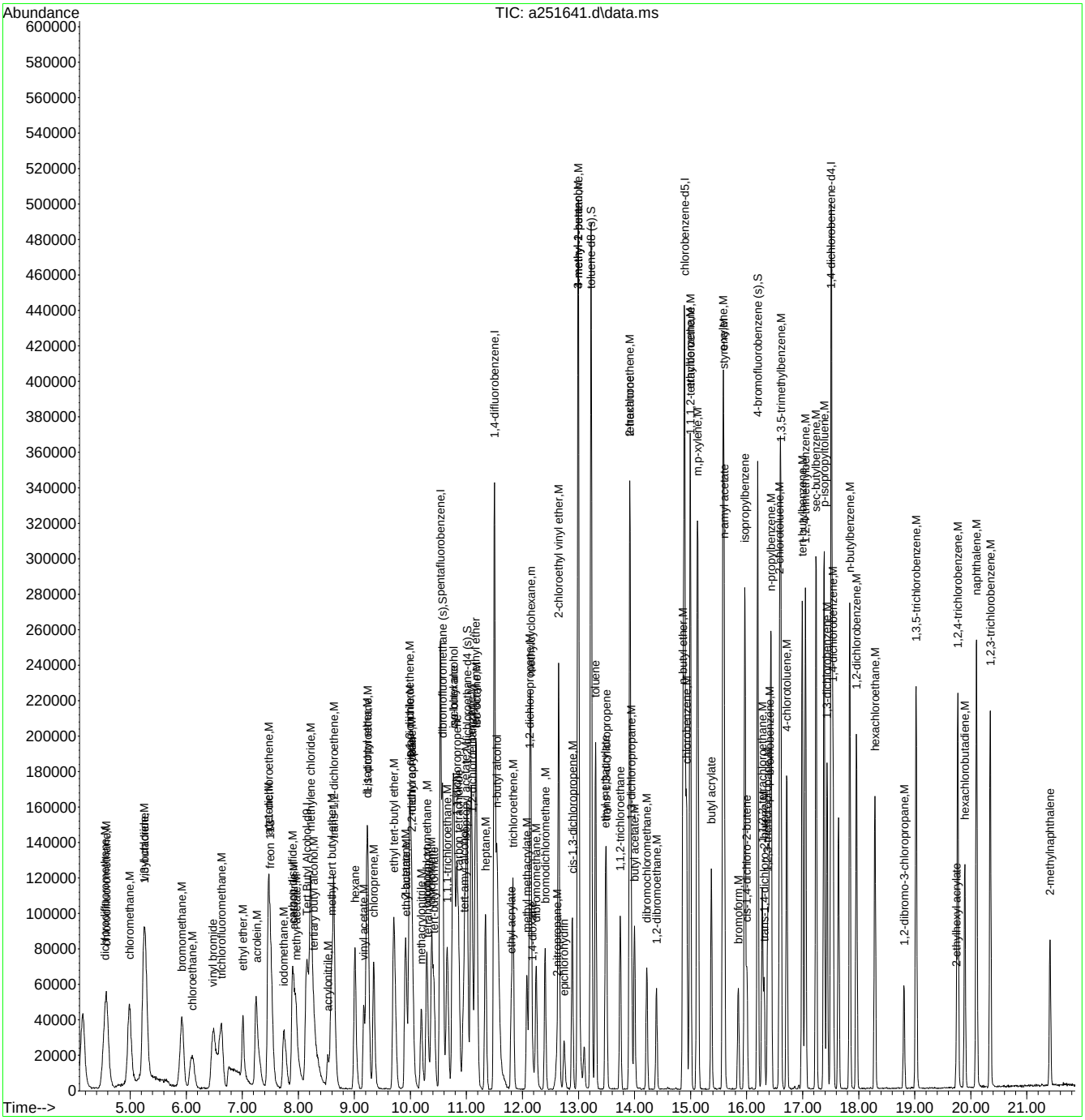
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) 1,3,5-trimethylbenzene	16.609	105	173648	20.62	ug/L		98
108) tert-butylbenzene	16.991	134	40141	20.58	ug/L		97
109) 1,2,4-trimethylbenzene	17.049	105	169630	20.36	ug/L		99
110) sec-butylbenzene	17.237	105	236287	20.56	ug/L		99
111) 1,3-dichlorobenzene	17.436	146	87377	19.70	ug/L		99
112) p-isopropyltoluene	17.383	119	196887	20.55	ug/L		99
113) 1,4-dichlorobenzene	17.540	146	87016	19.38	ug/L		98
114) 1,2-dichlorobenzene	17.959	146	95165	19.80	ug/L		95
115) n-butylbenzene	17.844	92	92255	19.70	ug/L		97
116) 1,2-dibromo-3-chloropr...	18.811	157	21013	20.70	ug/L		96
117) 1,3,5-trichlorobenzene	19.026	180	91026	20.08	ug/L		97
118) 2-ethylhexyl acrylate	19.742	70	6930	3.44	ug/L	#	83
119) 1,2,4-trichlorobenzene	19.768	180	84565	20.74	ug/L		97
120) hexachlorobutadiene	19.894	225	32354	19.95	ug/L		94
121) naphthalene	20.103	128	237694	19.94	ug/L		98
122) 1,2,3-trichlorobenzene	20.349	180	83659	20.44	ug/L		96
123) hexachloroethane	18.288	201	35327	23.44	ug/L		96
124) 2-methylnaphthalene	21.411	142	51873	8.16	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\JULY\071619\va9738\
Data File : a251641.d
Acq On : 15 Jul 2019 6:50 am
Operator : JAYC
Sample : cc9645-20 Inst : MSA
Misc : MS4986,VA9738,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 02:57:46 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-16-2019\kristelv\va9738\
Data File : a251664.d
Acq On : 15 Jul 2019 6:04 pm
Operator : edwardd
Sample : ecc9645-50 Inst : MSA
Misc : MS36114,VA9738,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 13:05:28 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.153	65	285714	500.00	ug/L	-0.02
5) pentafluorobenzene	10.538	168	192394	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.500	114	302637	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	260451	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	134801	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.574	113	101214	53.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.74%			
53) 1,2-dichloroethane-d4 (s)	11.014	65	108609	49.95	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.90%			
75) toluene-d8 (s)	13.226	98	338963	48.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.88%			
99) 4-bromofluorobenzene (s)	16.197	95	113261	53.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.88%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.278	59	144030	244.08	ug/L	95
4) 1,4-dioxane	12.180	88	47376	1239.60	ug/L	99
6) chlorodifluoromethane	4.586	51	169176	45.28	ug/L	95
7) dichlorodifluoromethane	4.549	85	234451	51.59	ug/L	96
8) chloromethane	4.989	50	277080	56.13	ug/L	96
9) vinyl chloride	5.255	62	260735	62.34	ug/L	97
10) 1,3-butadiene	5.271	54	133675	33.54	ug/L	98
11) bromomethane	5.930	94	149414	50.86	ug/L	99
12) chloroethane	6.108	64	112328	52.84	ug/L	95
13) vinyl bromide	6.490	106	132601	47.32	ug/L	98
14) trichlorofluoromethane	6.626	101	230317	53.22	ug/L	100
15) ethyl ether	7.013	74	47877	49.45	ug/L	97
16) acrolein	7.258	56	25237	57.32	ug/L	90
17) freon 113	7.504	151	99624	47.37	ug/L	98
18) 1,1-dichloroethene	7.478	96	100464	48.30	ug/L	96
19) acetone	7.462	58	56767	202.94	ug/L	99
20) acetonitrile	7.912	41	219627	495.94	ug/L	98
21) iodomethane	7.745	142	189732	51.34	ug/L	96
22) carbon disulfide	7.902	76	303194	43.81	ug/L	99
23) methylene chloride	8.226	84	111151	51.30	ug/L	99
24) methyl acetate	7.959	43	92926	47.43	ug/L	98
25) methyl tert butyl ether	8.597	73	319664	52.14	ug/L	100
26) trans-1,2-dichloroethene	8.629	96	91136	50.44	ug/L	98
27) hexane	9.011	57	109320	41.84	ug/L	99
28) di-isopropyl ether	9.225	45	319665	50.90	ug/L	99
29) ethyl tert-butyl ether	9.706	59	315581	52.53	ug/L	97
30) 2-butanone	9.910	72	68307	211.63	ug/L	93
31) 1,1-dichloroethane	9.241	63	163085	50.21	ug/L	100
32) chloroprene	9.345	53	130435	49.55	ug/L	98
33) acrylonitrile	8.524	53	51216	51.30	ug/L	90
34) vinyl acetate	9.173	86	20409	49.19	ug/L #	90
35) ethyl acetate	9.921	45	20110	55.75	ug/L	97
36) 2,2-dichloropropane	10.020	77	149023	47.07	ug/L	99
37) cis-1,2-dichloroethene	9.983	96	106677	51.23	ug/L	99
38) methyl acrylate	10.015	85	19386	53.88	ug/L #	89
39) propionitrile	9.989	54	221418	519.23	ug/L	90
40) bromochloromethane	10.292	128	55681	52.40	ug/L	94
41) tetrahydrofuran	10.313	42	44029	47.56	ug/L	97
42) chloroform	10.381	83	168645	49.95	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-16-2019\kristelv\va9738\
Data File : a251664.d
Acq On : 15 Jul 2019 6:04 pm
Operator : edwardd
Sample : ecc9645-50 Inst : MSA
Misc : MS36114,VA9738,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 13:05:28 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.417	59	98446	57.40	ug/L		98
45) methacrylonitrile	10.198	67	47829	51.82	ug/L		91
46) cyclohexane	10.778	84	173420	49.42	ug/L		98
47) 1,1,1-trichloroethane	10.653	97	180368	54.52	ug/L		97
48) iso-butyl alcohol	10.778	43	163021	511.57	ug/L		91
49) 1,1-dichloropropene	10.831	75	120829	48.88	ug/L		97
50) carbon tetrachloride	10.862	117	158923	53.74	ug/L		99
51) tert-amyl alcohol	10.956	73	76129	256.99	ug/L		96
54) benzene	11.087	78	364988	47.25	ug/L		97
55) iso-octane	11.181	57	301511	41.59	ug/L		98
56) tert-amyl methyl ether	11.160	73	321859	48.92	ug/L		97
57) heptane	11.343	71	62868	43.76	ug/L		96
58) isopropyl acetate	10.977	87	29502	52.04	ug/L	#	89
59) 1,2-dichloroethane	11.103	62	122947	44.35	ug/L		99
60) n-butyl alcohol	11.547	56	331697	2497.38	ug/L		98
61) ethyl acrylate	11.803	55	131415	52.16	ug/L		97
62) trichloroethene	11.830	95	93809	47.68	ug/L		98
63) 2-nitropropane	12.619	41	40641	48.69	ug/L		91
64) methylcyclohexane	12.149	83	176550	43.48	ug/L		98
65) 2-chloroethyl vinyl ether	12.645	63	268353	256.75	ug/L		97
66) methyl methacrylate	12.081	100	29389	52.77	ug/L		92
67) 1,2-dichloropropane	12.128	63	94911	50.91	ug/L		94
68) dibromomethane	12.243	93	64432	51.34	ug/L		96
69) bromodichloromethane	12.405	83	134537	52.23	ug/L		98
70) epichlorohydrin	12.745	57	69051	246.61	ug/L		99
71) cis-1,3-dichloropropene	12.891	75	146625	53.27	ug/L		97
72) 4-methyl-2-pentanone	12.996	58	229378	199.11	ug/L		96
73) 3-methyl-1-butanol	12.996	55	213241	986.24	ug/L		97
76) toluene	13.304	92	226671	49.24	ug/L		95
77) trans-1,3-dichloropropene	13.498	75	127271	53.75	ug/L		97
78) ethyl methacrylate	13.482	69	120727	50.39	ug/L		96
79) 1,1,2-trichloroethane	13.744	83	69245	52.65	ug/L		96
80) 2-hexanone	13.916	58	189561	195.00	ug/L		98
81) tetrachloroethene	13.916	166	105073	46.63	ug/L		93
82) 1,3-dichloropropane	13.943	76	132546	52.37	ug/L		96
83) butyl acetate	14.000	56	72198	49.92	ug/L		98
84) dibromochloromethane	14.220	129	105967	53.79	ug/L		94
85) 1,2-dibromoethane	14.392	107	101016	56.09	ug/L		100
86) n-butyl ether	14.863	57	364432	48.22	ug/L		99
87) chlorobenzene	14.926	112	239291	50.00	ug/L		97
88) 1,1,1,2-tetrachloroethane	14.999	131	120146	50.10	ug/L		98
89) ethylbenzene	14.994	91	411763	48.16	ug/L		99
90) m,p-xylene	15.125	106	327881	98.63	ug/L		100
91) o-xylene	15.580	106	182047	49.49	ug/L		99
92) styrene	15.590	104	251678	47.59	ug/L		98
93) butyl acrylate	15.370	55	186314	49.43	ug/L		99
94) n-amyl acetate	15.601	70	79811	47.09	ug/L		99
95) bromoform	15.852	173	75006	54.69	ug/L		96
96) isopropylbenzene	15.967	105	494888	49.75	ug/L		99
97) cis-1,4-dichloro-2-butene	16.003	75	43288	146.28	ug/L		96
100) bromobenzene	16.406	156	108833	54.90	ug/L		95
101) 1,1,2,2-tetrachloroethane	16.280	83	145239	56.41	ug/L		99
102) trans-1,4-dichloro-2-b...	16.312	53	25049	125.47	ug/L		87
103) 1,2,3-trichloropropane	16.375	110	40632	55.11	ug/L		98
104) n-propylbenzene	16.437	91	497129	51.40	ug/L		100
105) 2-chlorotoluene	16.589	126	115739	53.72	ug/L		97
106) 4-chlorotoluene	16.715	91	263057	52.25	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-16-2019\kristelv\va9738\
Data File : a251664.d
Acq On : 15 Jul 2019 6:04 pm
Operator : edwardd
Sample : ecc9645-50 Inst : MSA
Misc : MS36114,VA9738,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 13:05:28 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

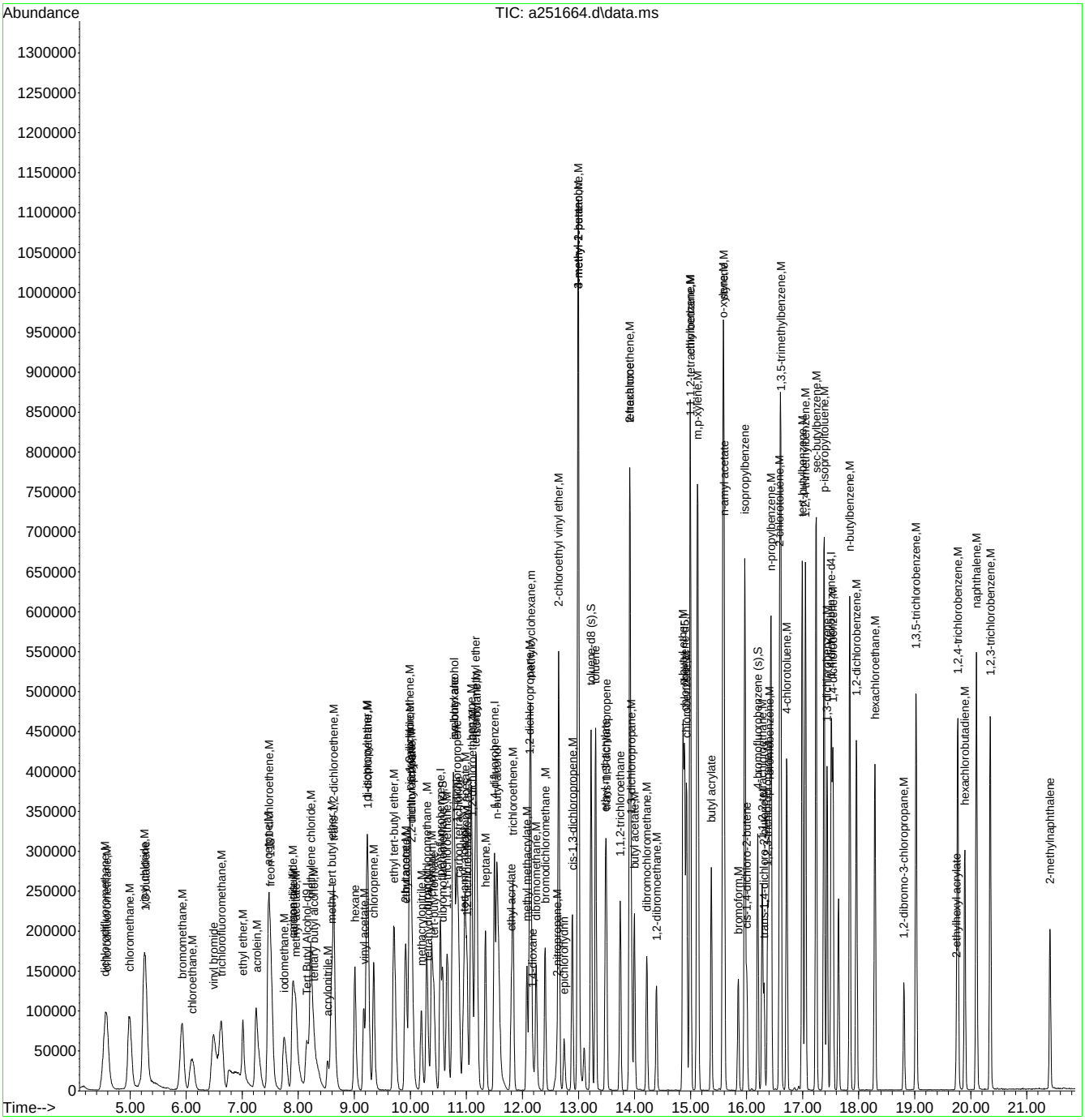
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.610	105	410011	54.97	ug/L	98
108) tert-butylbenzene	16.992	134	95142	55.07	ug/L	99
109) 1,2,4-trimethylbenzene	17.049	105	388385	52.63	ug/L	98
110) sec-butylbenzene	17.243	105	555473	54.55	ug/L	99
111) 1,3-dichlorobenzene	17.436	146	193036	49.12	ug/L	99
112) p-isopropyltoluene	17.384	119	456397	53.79	ug/L	99
113) 1,4-dichlorobenzene	17.541	146	193361	48.61	ug/L	98
114) 1,2-dichlorobenzene	17.959	146	212976	50.01	ug/L	99
115) n-butylbenzene	17.839	92	206834	49.86	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.807	157	46915	52.17	ug/L	93
117) 1,3,5-trichlorobenzene	19.021	180	192955	48.06	ug/L	98
118) 2-ethylhexyl acrylate	19.743	70	18420	8.45	ug/L	96
119) 1,2,4-trichlorobenzene	19.769	180	178512	49.43	ug/L	98
120) hexachlorobutadiene	19.894	225	77144	53.69	ug/L	97
121) naphthalene	20.104	128	513236	48.61	ug/L	99
122) 1,2,3-trichlorobenzene	20.349	180	182515	50.35	ug/L	100
123) hexachloroethane	18.289	201	87717	65.70	ug/L	98
124) 2-methylnaphthalene	21.411	142	123311	21.90	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-16-2019\kristelv\va9738\
Data File : a251664.d
Acq On : 15 Jul 2019 6:04 pm
Operator : edwardd
Sample : ecc9645-50 Inst : MSA
Misc : MS36114,VA9738,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 13:05:28 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251696.d
Acq On : 16 Jul 2019 11:07 am
Operator : EddieH
Sample : cc9645-20 Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:11:08 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.163	65	297202	500.00	ug/L	0.00
5) pentafluorobenzene	10.537	168	198664	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.499	114	300414	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	242759	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	130694	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.579	113	103695	52.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.92%			
53) 1,2-dichloroethane-d4 (s)	11.013	65	109639	50.80	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 101.60%			
75) toluene-d8 (s)	13.225	98	321336	49.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%			
99) 4-bromofluorobenzene (s)	16.196	95	106931	52.53	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.06%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.304	59	59753	97.35	ug/L	97
4) 1,4-dioxane	12.174	88	19635	493.89	ug/L	97
6) chlorodifluoromethane	4.575	51	73116	18.95	ug/L	93
7) dichlorodifluoromethane	4.559	85	93575	19.94	ug/L	98
8) chloromethane	4.998	50	98432	19.31	ug/L	95
9) vinyl chloride	5.265	62	93145	21.57	ug/L	99
10) 1,3-butadiene	5.276	54	58801	14.29	ug/L	95
11) bromomethane	5.929	94	62200	20.51	ug/L	95
12) chloroethane	6.102	64	47944	21.84	ug/L	97
13) vinyl bromide	6.489	106	54689	18.90	ug/L	98
14) trichlorofluoromethane	6.620	101	96800	21.66	ug/L	96
15) ethyl ether	7.017	74	19404	19.41	ug/L	95
16) acrolein	7.258	56	10737	23.62	ug/L	98
17) freon 113	7.504	151	40156	18.49	ug/L	97
18) 1,1-dichloroethene	7.472	96	42516	19.79	ug/L	86
19) acetone	7.467	58	27359	94.72	ug/L	94
20) acetonitrile	7.917	41	90171	197.19	ug/L	98
21) iodomethane	7.760	142	73771	19.33	ug/L	97
22) carbon disulfide	7.912	76	126178	17.66	ug/L	100
23) methylene chloride	8.225	84	44191	19.75	ug/L	93
24) methyl acetate	7.964	43	38674	19.11	ug/L	99
25) methyl tert butyl ether	8.602	73	125186	19.77	ug/L	100
26) trans-1,2-dichloroethene	8.633	96	34625	18.56	ug/L	96
27) hexane	9.010	57	47615	17.65	ug/L	100
28) di-isopropyl ether	9.224	45	120460	18.58	ug/L	96
29) ethyl tert-butyl ether	9.705	59	117826	18.99	ug/L	92
30) 2-butanone	9.909	72	28673	86.03	ug/L #	81
31) 1,1-dichloroethane	9.240	63	61570	18.36	ug/L	98
32) chloroprene	9.339	53	48954	18.01	ug/L	94
33) acrylonitrile	8.534	53	20003	19.41	ug/L	98
34) vinyl acetate	9.172	86	8260	19.28	ug/L #	91
35) ethyl acetate	9.925	45	7557	20.29	ug/L #	80
36) 2,2-dichloropropane	10.025	77	66373	20.30	ug/L	96
37) cis-1,2-dichloroethene	9.983	96	39919	18.56	ug/L	98
38) methyl acrylate	10.014	85	7393	19.90	ug/L #	82
39) propionitrile	9.983	54	91666	208.18	ug/L	87
40) bromochloromethane	10.291	128	21405	19.51	ug/L	98
41) tetrahydrofuran	10.312	42	16996	17.78	ug/L	96
42) chloroform	10.380	83	63578	18.24	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251696.d
Acq On : 16 Jul 2019 11:07 am
Operator : EddieH
Sample : cc9645-20 Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:11:08 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.412	59	37511	21.18	ug/L		98
45) methacrylonitrile	10.197	67	19132	20.08	ug/L		86
46) cyclohexane	10.772	84	65514	18.08	ug/L		99
47) 1,1,1-trichloroethane	10.663	97	64820	18.97	ug/L		94
48) iso-butyl alcohol	10.778	43	64111	194.84	ug/L	#	77
49) 1,1-dichloropropene	10.825	75	45493	17.82	ug/L		95
50) carbon tetrachloride	10.856	117	58824	19.26	ug/L		99
51) tert-amyl alcohol	10.961	73	31692	103.61	ug/L		90
54) benzene	11.086	78	134619	17.55	ug/L		99
55) iso-octane	11.180	57	119618	16.62	ug/L		100
56) tert-amyl methyl ether	11.159	73	120336	18.42	ug/L		99
57) heptane	11.337	71	26857	18.83	ug/L		90
58) isopropyl acetate	10.982	87	11467	20.38	ug/L	#	87
59) 1,2-dichloroethane	11.107	62	47156	17.13	ug/L		98
60) n-butyl alcohol	11.552	56	141165	1070.71	ug/L		99
61) ethyl acrylate	11.798	55	49538	19.81	ug/L		97
62) trichloroethene	11.829	95	34885	17.86	ug/L		96
63) 2-nitropropane	12.613	41	15069	18.19	ug/L	#	78
64) methylcyclohexane	12.143	83	70060	17.38	ug/L		99
65) 2-chloroethyl vinyl ether	12.645	63	99738	96.13	ug/L		97
66) methyl methacrylate	12.075	100	10346	18.72	ug/L		93
67) 1,2-dichloropropane	12.127	63	34454	18.62	ug/L		90
68) dibromomethane	12.242	93	24275	19.49	ug/L		95
69) bromodichloromethane	12.404	83	48661	19.03	ug/L		99
70) epichlorohydrin	12.739	57	27615	99.36	ug/L		99
71) cis-1,3-dichloropropene	12.891	75	54344	19.89	ug/L		95
72) 4-methyl-2-pentanone	12.995	58	88000	76.95	ug/L		99
73) 3-methyl-1-butanol	12.990	55	87838	409.26	ug/L		97
76) toluene	13.304	92	77722	18.12	ug/L		99
77) trans-1,3-dichloropropene	13.497	75	46965	21.28	ug/L		94
78) ethyl methacrylate	13.482	69	45363	20.32	ug/L		91
79) 1,1,2-trichloroethane	13.743	83	24665	20.12	ug/L		97
80) 2-hexanone	13.916	58	73462	81.08	ug/L		97
81) tetrachloroethene	13.916	166	37096	17.66	ug/L		99
82) 1,3-dichloropropane	13.942	76	46086	19.53	ug/L		96
83) butyl acetate	13.999	56	27161	20.15	ug/L		96
84) dibromochloromethane	14.219	129	37178	20.25	ug/L		99
85) 1,2-dibromoethane	14.392	107	35345	21.06	ug/L		96
86) n-butyl ether	14.862	57	124962	17.74	ug/L		99
87) chlorobenzene	14.925	112	82537	18.50	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.998	131	44154	19.75	ug/L		97
89) ethylbenzene	14.988	91	140000	17.57	ug/L		98
90) m,p-xylene	15.124	106	109368	35.30	ug/L		94
91) o-xylene	15.579	106	62971	18.37	ug/L		97
92) styrene	15.589	104	89068	18.07	ug/L		95
93) butyl acrylate	15.370	55	69899	19.90	ug/L		96
94) n-amyl acetate	15.605	70	31270	19.80	ug/L		95
95) bromoform	15.851	173	27791	21.74	ug/L		97
96) isopropylbenzene	15.971	105	170033	18.34	ug/L		98
97) cis-1,4-dichloro-2-butene	16.008	75	17031	61.74	ug/L		97
100) bromobenzene	16.405	156	38067	19.81	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.280	83	54287	21.75	ug/L		96
102) trans-1,4-dichloro-2-b...	16.311	53	10836	55.98	ug/L		95
103) 1,2,3-trichloropropane	16.379	110	15138	21.18	ug/L		94
104) n-propylbenzene	16.437	91	174200	18.58	ug/L		98
105) 2-chlorotoluene	16.588	126	39888	19.10	ug/L		92
106) 4-chlorotoluene	16.714	91	93719	19.20	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251696.d
Acq On : 16 Jul 2019 11:07 am
Operator : EddieH
Sample : cc9645-20 Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:11:08 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

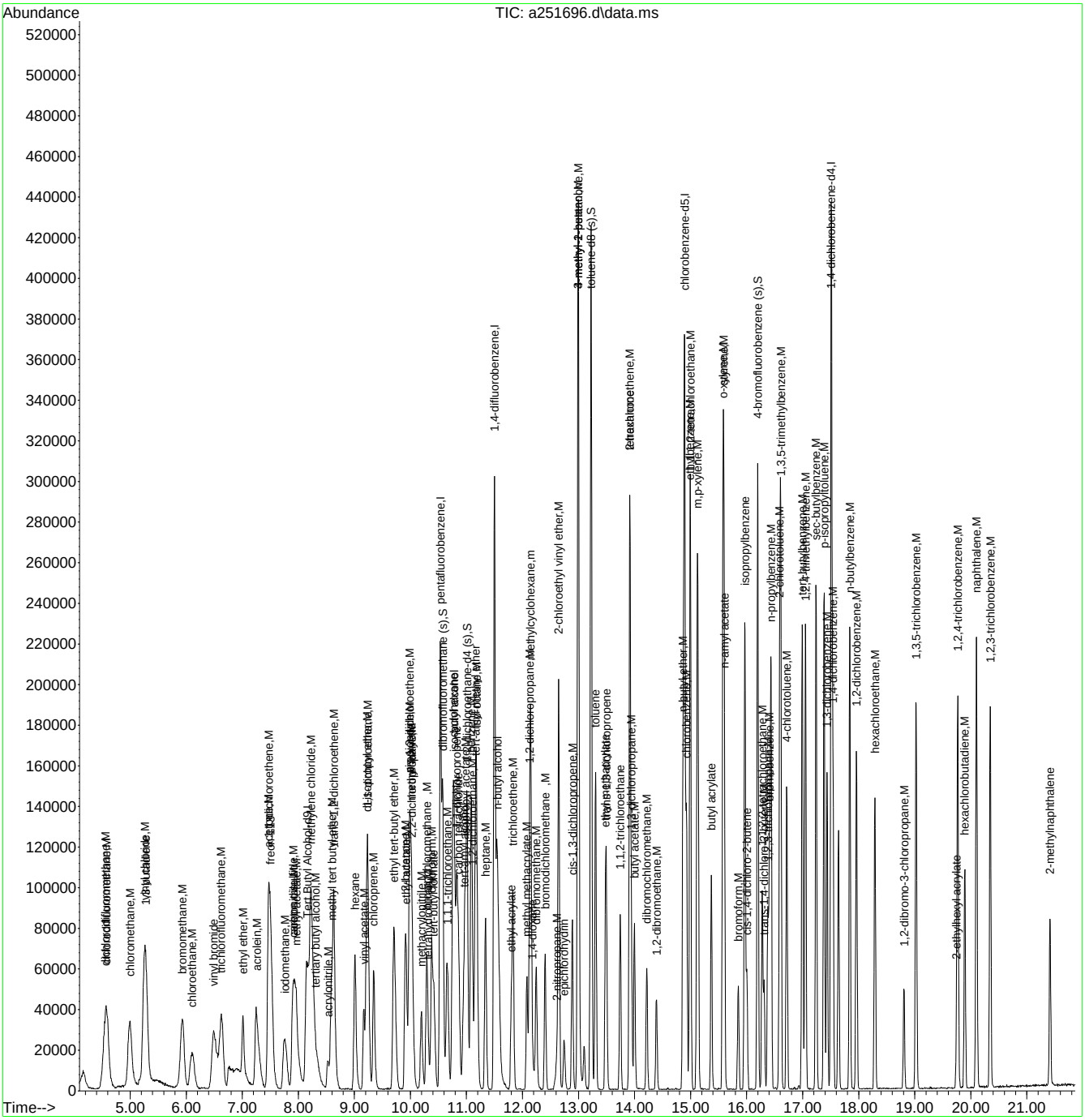
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) 1,3,5-trimethylbenzene	16.609	105	139009	19.22	ug/L		95
108) tert-butylbenzene	16.996	134	32564	19.44	ug/L		92
109) 1,2,4-trimethylbenzene	17.054	105	134749	18.83	ug/L		98
110) sec-butylbenzene	17.237	105	189752	19.22	ug/L		99
111) 1,3-dichlorobenzene	17.436	146	71172	18.68	ug/L		98
112) p-isopropyltoluene	17.383	119	158259	19.24	ug/L		100
113) 1,4-dichlorobenzene	17.540	146	72922	18.91	ug/L		97
114) 1,2-dichlorobenzene	17.959	146	77627	18.80	ug/L		100
115) n-butylbenzene	17.844	92	73471	18.27	ug/L		100
116) 1,2-dibromo-3-chloropr...	18.811	157	18803	21.57	ug/L		83
117) 1,3,5-trichlorobenzene	19.026	180	73385	18.85	ug/L		96
118) 2-ethylhexyl acrylate	19.742	70	7102	3.92	ug/L	#	84
119) 1,2,4-trichlorobenzene	19.768	180	71906	20.54	ug/L		98
120) hexachlorobutadiene	19.889	225	27599	19.81	ug/L		94
121) naphthalene	20.103	128	207754	20.29	ug/L		99
122) 1,2,3-trichlorobenzene	20.349	180	73148	20.81	ug/L		99
123) hexachloroethane	18.288	201	30197	23.33	ug/L		98
124) 2-methylnaphthalene	21.410	142	49984	9.16	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201907\7-17-2019\janellec\va9741\
Data File : a251696.d
Acq On : 16 Jul 2019 11:07 am
Operator : EddieH
Sample : cc9645-20 Inst : MSA
Misc : MS36109,VA9741,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 18 09:11:08 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251708.d
Acq On : 16 Jul 2019 5:35 pm
Operator : EddieH
Sample : ecc9645-50 Inst : MSA
Misc : MS36221,VA9741,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:59:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	8.171	65	280122	500.00	ug/L		0.00
5) pentafluorobenzene	10.535	168	213570	50.00	ug/L		0.00
52) 1,4-difluorobenzene	11.502	114	328989	50.00	ug/L		0.00
74) chlorobenzene-d5	14.891	117	279857	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.512	152	137491	50.00	ug/L		0.00
System Monitoring Compounds							
44) dibromofluoromethane (s)	10.577	113	110185	52.34	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.68%				
53) 1,2-dichloroethane-d4 (s)	11.016	65	116052	49.10	ug/L		0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.20%				
75) toluene-d8 (s)	13.223	98	363201	48.80	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.60%				
99) 4-bromofluorobenzene (s)	16.199	95	116787	54.53	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.06%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	8.301	59	137984	238.51	ug/L		94
4) 1,4-dioxane	12.172	88	43130	1151.03	ug/L		92
6) chlorodifluoromethane	4.593	51	199128	48.01	ug/L		95
7) dichlorodifluoromethane	4.572	85	224459	44.49	ug/L		95
8) chloromethane	5.012	50	250762	45.76	ug/L		93
9) vinyl chloride	5.263	62	228355	49.18	ug/L		99
10) 1,3-butadiene	5.294	54	158619	35.85	ug/L		95
11) bromomethane	5.948	94	138806	42.57	ug/L		98
12) chloroethane	6.120	64	107025	45.35	ug/L		95
13) vinyl bromide	6.502	106	124167	39.91	ug/L		99
14) trichlorofluoromethane	6.638	101	222339	46.28	ug/L		99
15) ethyl ether	7.010	74	54060	50.30	ug/L	#	84
16) acrolein	7.266	56	31750	64.96	ug/L		91
17) freon 113	7.522	151	108137	46.32	ug/L		99
18) 1,1-dichloroethene	7.506	96	120062	52.00	ug/L		96
19) acetone	7.470	58	66536	214.28	ug/L		96
20) acetonitrile	7.920	41	214675	436.69	ug/L		100
21) iodomethane	7.784	142	215188	52.46	ug/L		97
22) carbon disulfide	7.941	76	357487	46.53	ug/L		99
23) methylene chloride	8.239	84	127940	53.20	ug/L		96
24) methyl acetate	7.961	43	101379	46.61	ug/L		98
25) methyl tert butyl ether	8.600	73	336891	49.50	ug/L		99
26) trans-1,2-dichloroethene	8.636	96	98509	49.12	ug/L		93
27) hexane	9.013	57	129090	44.50	ug/L		99
28) di-isopropyl ether	9.232	45	332178	47.65	ug/L		99
29) ethyl tert-butyl ether	9.714	59	323700	48.54	ug/L		98
30) 2-butanone	9.912	72	75881	211.79	ug/L		93
31) 1,1-dichloroethane	9.243	63	170767	47.36	ug/L		99
32) chloroprene	9.353	53	133876	45.81	ug/L		100
33) acrylonitrile	8.526	53	55031	49.66	ug/L		92
34) vinyl acetate	9.170	86	23615	51.28	ug/L		98
35) ethyl acetate	9.928	45	20048	50.07	ug/L	#	69
36) 2,2-dichloropropane	10.033	77	174986	49.79	ug/L		97
37) cis-1,2-dichloroethene	9.991	96	112707	48.75	ug/L		96
38) methyl acrylate	10.017	85	20200	50.57	ug/L	#	82
39) propionitrile	9.991	54	230401	486.73	ug/L		93
40) bromochloromethane	10.294	128	59421	50.38	ug/L		97
41) tetrahydrofuran	10.320	42	47159	45.89	ug/L		98
42) chloroform	10.383	83	173491	46.29	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251708.d
Acq On : 16 Jul 2019 5:35 pm
Operator : EddieH
Sample : ecc9645-50 Inst : MSA
Misc : MS36221,VA9741,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:59:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	10.420	59	103625	54.43	ug/L		98
45) methacrylonitrile	10.200	67	52282	51.03	ug/L		87
46) cyclohexane	10.786	84	169738	43.57	ug/L		97
47) 1,1,1-trichloroethane	10.655	97	179390	48.85	ug/L		97
48) iso-butyl alcohol	10.775	43	162206	458.54	ug/L	#	83
49) 1,1-dichloropropene	10.828	75	126434	46.08	ug/L		95
50) carbon tetrachloride	10.859	117	161098	49.08	ug/L		100
51) tert-amyl alcohol	10.953	73	73842	224.55	ug/L		93
54) benzene	11.084	78	376022	44.78	ug/L		97
55) iso-octane	11.188	57	346213	43.93	ug/L		98
56) tert-amyl methyl ether	11.162	73	331165	46.30	ug/L		99
57) heptane	11.340	71	72582	46.48	ug/L		99
58) isopropyl acetate	10.984	87	29615	48.06	ug/L	#	92
59) 1,2-dichloroethane	11.105	62	133340	44.24	ug/L		97
60) n-butyl alcohol	11.549	56	324562	2247.93	ug/L		99
61) ethyl acrylate	11.806	55	138271	50.48	ug/L		99
62) trichloroethene	11.832	95	96677	45.20	ug/L		97
63) 2-nitropropane	12.616	41	42913	47.29	ug/L		97
64) methylcyclohexane	12.146	83	189457	42.92	ug/L		99
65) 2-chloroethyl vinyl ether	12.648	63	286899	252.50	ug/L		95
66) methyl methacrylate	12.083	100	30792	50.86	ug/L		88
67) 1,2-dichloropropane	12.130	63	95687	47.21	ug/L		98
68) dibromomethane	12.245	93	69433	50.90	ug/L		98
69) bromodichloromethane	12.402	83	141503	50.53	ug/L		98
70) epichlorohydrin	12.747	57	75910	249.39	ug/L		97
71) cis-1,3-dichloropropene	12.888	75	157160	52.52	ug/L		96
72) 4-methyl-2-pentanone	12.993	58	231630	184.96	ug/L		95
73) 3-methyl-1-butanol	12.993	55	208122	885.46	ug/L		98
76) toluene	13.307	92	228024	46.10	ug/L		96
77) trans-1,3-dichloropropene	13.500	75	134476	52.85	ug/L		97
78) ethyl methacrylate	13.484	69	123476	47.97	ug/L		94
79) 1,1,2-trichloroethane	13.741	83	73440	51.97	ug/L		97
80) 2-hexanone	13.919	58	192836	184.62	ug/L		96
81) tetrachloroethene	13.913	166	106952	44.17	ug/L		98
82) 1,3-dichloropropane	13.945	76	136570	50.21	ug/L		96
83) butyl acetate	13.997	56	70837	45.58	ug/L		96
84) dibromochloromethane	14.217	129	106914	50.51	ug/L		98
85) 1,2-dibromoethane	14.395	107	104429	53.96	ug/L		94
86) n-butyl ether	14.865	57	350195	43.12	ug/L		99
87) chlorobenzene	14.928	112	239466	46.57	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.996	131	120327	46.70	ug/L		96
89) ethylbenzene	14.991	91	401714	43.72	ug/L		100
90) m,p-xylene	15.127	106	316127	88.50	ug/L		99
91) o-xylene	15.577	106	173612	43.93	ug/L		97
92) styrene	15.587	104	247858	43.62	ug/L		99
93) butyl acrylate	15.367	55	182863	45.15	ug/L		97
94) n-amyl acetate	15.603	70	77016	42.29	ug/L		94
95) bromoform	15.848	173	73797	50.07	ug/L		97
96) isopropylbenzene	15.969	105	473379	44.29	ug/L		100
97) cis-1,4-dichloro-2-butene	16.005	75	44590	140.23	ug/L		96
100) bromobenzene	16.408	156	105313	52.09	ug/L		96
101) 1,1,2,2-tetrachloroethane	16.277	83	142712	54.34	ug/L		99
102) trans-1,4-dichloro-2-b...	16.314	53	25912	127.25	ug/L		83
103) 1,2,3-trichloropropane	16.377	110	38559	51.27	ug/L		96
104) n-propylbenzene	16.434	91	477809	48.43	ug/L		100
105) 2-chlorotoluene	16.591	126	110292	50.19	ug/L		95
106) 4-chlorotoluene	16.717	91	251910	49.06	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251708.d
Acq On : 16 Jul 2019 5:35 pm
Operator : EddieH
Sample : ecc9645-50 Inst : MSA
Misc : MS36221,VA9741,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:59:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration

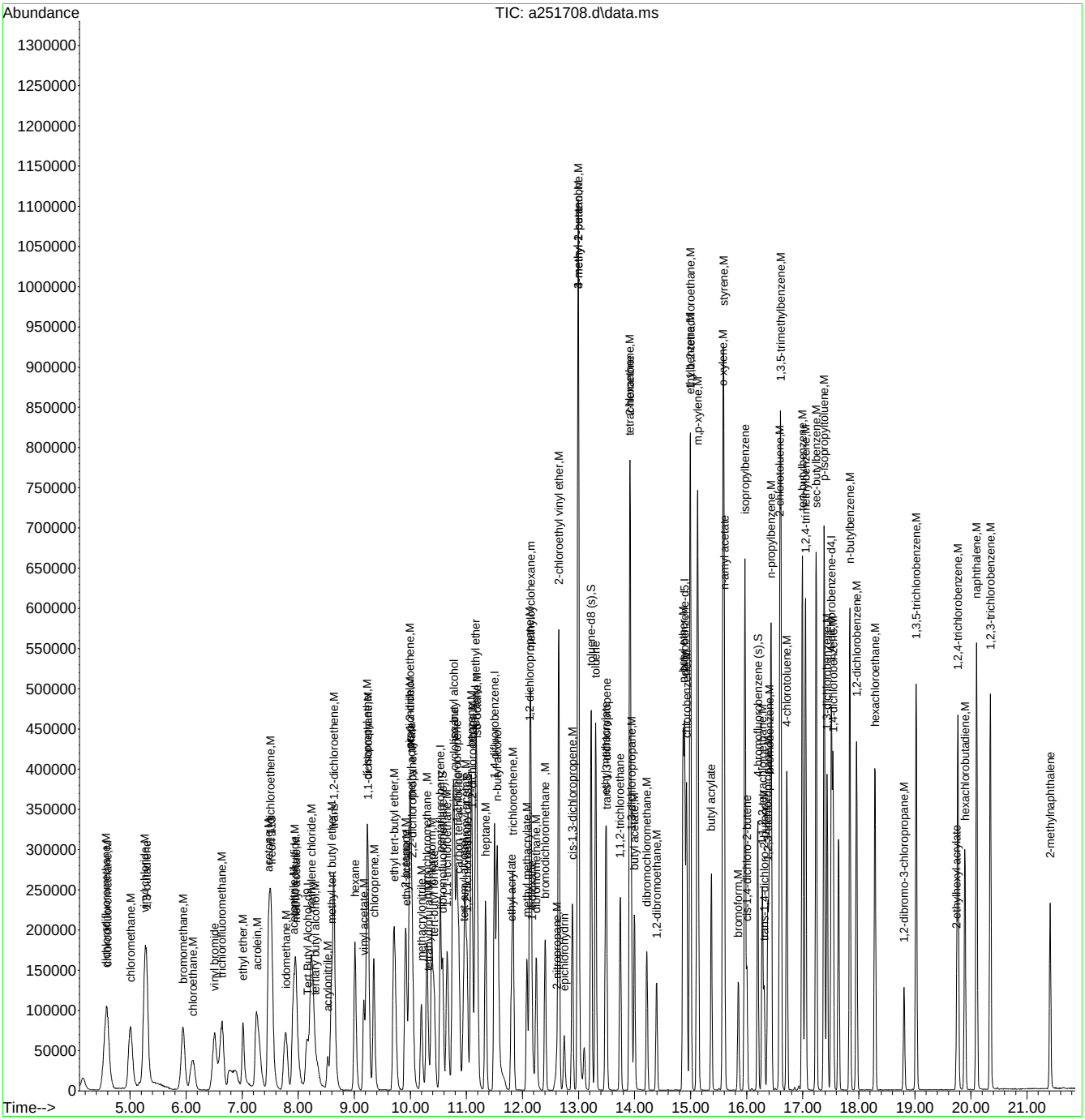
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.607	105	392570	51.61	ug/L	99
108) tert-butylbenzene	16.994	134	92125	52.28	ug/L	99
109) 1,2,4-trimethylbenzene	17.051	105	373356	49.60	ug/L	100
110) sec-butylbenzene	17.240	105	529894	51.02	ug/L	99
111) 1,3-dichlorobenzene	17.433	146	190795	47.60	ug/L	98
112) p-isopropyltoluene	17.381	119	441188	50.98	ug/L	100
113) 1,4-dichlorobenzene	17.543	146	188109	46.37	ug/L	98
114) 1,2-dichlorobenzene	17.961	146	207959	47.88	ug/L	99
115) n-butylbenzene	17.841	92	201079	47.52	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.809	157	45915	50.06	ug/L	96
117) 1,3,5-trichlorobenzene	19.023	180	190740	46.58	ug/L	98
118) 2-ethylhexyl acrylate	19.745	70	18663	8.40	ug/L	91
119) 1,2,4-trichlorobenzene	19.766	180	180797	49.08	ug/L	99
120) hexachlorobutadiene	19.897	225	77295	52.74	ug/L	98
121) naphthalene	20.101	128	513289	47.66	ug/L	99
122) 1,2,3-trichlorobenzene	20.346	180	186956	50.56	ug/L	95
123) hexachloroethane	18.291	201	87233	64.06	ug/L	98
124) 2-methylnaphthalene	21.413	142	137752	23.99	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\07-17-19\va9741\
Data File : a251708.d
Acq On : 16 Jul 2019 5:35 pm
Operator : EddieH
Sample : ecc9645-50 Inst : MSA
Misc : MS36221,VA9741,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9645.M
Quant Results File: MA9645.RES
Quant Time: Jul 16 19:59:35 2019
Quant Title : SW 846 8260C / EPA 624 DB624 60m x 0.25mm x 1.4uMon May 13 16:30:35 2019
QLast Update : Mon May 13 16:30:35 2019
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-103.11	EC V019-2648-104.2	Acrolein V019-2648-88.5 1		Method	V8260C/V624.1
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	5/11/2018
Internal Surrogate	V019-2648-97					
Internal Surrogate Concentration	50/500ppm					
					Analysis Date	5/11/2019
Ext.Standards	Ext.ABK V019-2648-94.5	Ext.EC V019-2648-99.3	Ext.Acrolein V019-2648-9 0.2	Ext.PA V019-2648-79	Sequence loaded by	Prashant B. Shukla
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm	100ppm-1,000ppm	Data processed by	Bridget Kelly
					Batch ID	VA9645
					Matrix	AQ
					Approved By:	KANYAV
pH Paper Lot#	217518		Initial Calibration Method	MA9645	Approved Date:	5/14/2019 7:30:52 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	249730	BFB		NA			5			1	ok	2:52 PM
A	249731	IC9645-0.2		NA		initial cal.	5			2	ok	1uL Std.ABK,EC,Acrolein in 500mL DI H2O
A	249732	IC9645-0.5		NA		initial cal.	5			3	ok	1uL Std.ABK,EC,Acrolein in 200mL DI H2O
A	249733	IC9645-1		NA		initial cal.	5			4	ok	1uL Std.ABK,EC,Acrolein in 100mL DI H2O
A	249734	IC9645-2		NA		initial cal.	5			5	ok	1uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249735	IC9645-4		NA		initial cal.	5			6	ok	2uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249736	IC9645-8		NA		initial cal.	5			7	ok	4uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249737	IC9645-20		NA		initial cal.	5			8	ok	10uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249738	ICC9645-50		NA		initial cal.	5			9	ok	25uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249739	IC9645-100		NA		initial cal.	5			10	ok	50uL Std.ABK,EC,Acrolein in 50mL DI H2O
A	249740	IC9645-200		NA		initial cal.	5			11	ok	100uL Std.ABK,EC,Acrolein in 50mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	249741	IB		NA			5			12	OK	
A	249742	IB		NA			5			13	OK	
A	249743	ICV9645-50		NA		initial cal.	5			14	ok	25uL Ext.ABK,EC,Acrolein in 50mL DI H2O
A	249744	ICV9645-50		NA		initial cal.	5			15	ok	25uL Ext.PA in 50mL DI H2O
A	249745	IB		NA			5			16	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB-624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-45.37	EC V019-2659-68.6	Acrolein V019-2659-67.2		Method	v8260c
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Init Calib Date	5/11/2018
Internal Surrogate	V019-2659-61					
Internal Surrogate Concentration	50/500ppm					
					Analysis Date	7/15/2019
					Sequence loaded by	Edward Durner
					Data processed by	kristelv
					Batch ID	VA9738
rough reviewed by	Devin Gomez 7/15				Matrix	AQ
Initial Calibration Method	MA9645				Approved By:	MEI
pH Paper Lot#	217518				Approved Date:	7/16/2019 2:21:49 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	251640	IB		NA			5			1	ok	
A	251641	BFB/CC9645-20		NA			5			2	ok/ok	20ul abk,ec,acrolein/100ml, 6:50am
A	251642	BS		NA			5			3	ok	50ul abk,ec,acrolein/100ml
A	251643	IB		NA			5			4	ok	
A	251644	MB		NA			5			5	ok	
A	251645	JC91301-1	6	NA	MS36109	V8260TCL20+	5		1	6	ok	
A	251646	JC91301-2	6	NA	MS36109	V8260TCL20+	5		1	7	ok	
A	251647	JC91301-3	6	NA	MS36109	V8260TCL20+	5		1	8	ok	
A	251648	JC91301-4	6	NA	MS36109	V8260TCL20+	5		1	9	ok	
A	251649	JC91309-1MS	1	10	MS36113	V8260SL	5/50		1	10	ok	50ul abk,ec,acrolein,10ml sample/100ml
A	251650	JC91309-1MSD	1	10	MS36113	V8260SL	5/50		1	11	ok	50ul abk,ec,acrolein,10ml sample/100ml

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	251651	IB		NA			5			12	ok	
A	251652	JC91039-2	5	NA	MS36026	V8260TCL20+	5		1	13	ok	
A	251653	JC91039-3	1	NA	MS36026	V8260TCL20+	5		1	14	ok	
A	251654	JC91309-4	3	NA	MS36113	V8260SL	5		1	15	ok	
A	251655	JC91126-1	2	NA	MS36026	V8260MDVO, VLS	5		1	16	ok	
A	251656	JC91126-2	2	NA	MS36026	V8260MDVO, VLS	5		1	17	ok	
A	251657	JC91309-1	1	10	MS36113	V8260SL	5/50		1	18	ok/rr	o/d 2.5x cchit VC
A	251658	JC91309-2	1	NA	MS36113	V8260SL	5		1	19	ok/rr	1x cchit VC
A	251659	JC91309-3	2	NA	MS36113	V8260SL	5		1	20	ok/rr	1x cchit VC
A	251660	JC91111-1	27	NA	MS36014	V8260SL	5		1	21	ok	
A	251661	JC91111-2	27	NA	MS36014	V8260SL	5		1	22	ok	
A	251662	JC91111-3	27	NA	MS36014	V8260SL	5		1	23	ok	
A	251663	JC91111-4	27	NA	MS36014	V8260SL	5		1	24	ok	
A	251664	ECC9645-50		NA			5			25	ok	50ul abk,ec,acrolein/100ml (5:35pm)

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	DB-624(60mx0.25mmx1.4um)
Standards	ABK V019-2648-45.32	EC V019-2659-74.11	Acrolein V019-2659-67.2		Method	V8260C
Standard Concentration	100ppm-10,000ppm	100ppm	100ppm		Initial Calibration Date	5/11/2018
Internal Surrogate	V019-2659-61					
Internal Surrogate Concentration	50/500ppm				Rough reviewed by	Eddie Huang (7/17/19)
					Analysis Date	7/16/2019
					Sequence loaded by	Eddie Huang
					Data processed by	janellec
					Batch ID	VA9741
					Matrix	AQ
Initial Calibration Method	MA9645				Approved By:	MOHUI
pH Paper Lot#	217518				Approved Date:	7/18/2019 8:43:05 AM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	251693	BFB/CC9645-20		NA			5			1	NG	20uLABK,EC,Acrolein/100mL DI H2O. Target compound low.
A	251694	CC9645-2		NA			5			2	not used	2uLABK,EC,Acrolein/100mL DI H2O.
A	251695	BFB/CC9645-20		NA			5			1	ok/ok	20uLABK,EC,Acrolein/100mL DI H2O. 10:37am, 7/16/19. #19,30 high. OK per Jessica.
A	251696	CC9645-20		NA			5			2	ok	20uLABK,EC,Acrolein/100mL DI H2O.
A	251697	BS		NA			5			3	ok	50uLABK,EC,Acrolein/100mL DI H2O.
A	251698	IB		NA			5			4	ok	
A	251699	MB		NA			5			5	ok	
A	251700	JC91309-2	2	NA	MS36113	V8260SL	5		1	6	ok	DOD-QSM5.
A	251701	JC91309-3	1	NA	MS36113	V8260SL	5		1	7	ok	DOD-QSM5.
A	251702	JC91309-1	2	2.5X	MS36113	V8260SL	20/50		1	8	ok/DL	DOD-QSM5. +A251657. Report 2-butanone from A251657.
A	251703	JC91586-6MS	1	5X	MS36221	V8260TCL20+	10/50		1	9	ok	50uLABK,EC,Acrolein/100mL.

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	251704	JC91586-6MSD	1	5X	MS36221	V8260TCL20+	10/50		1	10	ok	50uLABK,EC,Acrolein/100mL.
A	251705	IB		NA			5			11	ok	
A	251706	JC91586-6	1	5X	MS36221	V8260TCL20+	10/50		1	12	ok/DL	+A251707.
A	251707	JC91586-6	1	50X	MS36221	V8260TCL20+	1/50		1	13	ok	
A	251708	ECC9645-50		NA			5			14	ok	50uLABK,EC,Acrolein/100mL DI H2O. 5:35pm, 7/16/19.
A	251709	IB		NA			5			15	ok	

APPENDIX D
WELL INSPECTION CHECKLIST

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Well Number	Water Level (feet TOIC)	Current Depth (feet TOIC)	Well Paint (G/F/P)	Well Label (G/F/P)	Casing Lock (G/F/P)	Protective Cover (G/F/P)	Inner Well Cap (G/F/P)	Equipment in Well	Obstructions in Well (Y/N)	Water in Annulus (Y/N)	Concrete Pad (G/F/P)	Inspection Date	Comments/Needs
Site 1													
MW1-1DA	9.46	24.04	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW1-7A	5.62	12.96	G	G	G	G	G	N	N	N	G	5/28/2019	
Site 2													
MW2-1DA	3.05	14.49	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
Site 3													
MW3-1A	4.8	13.4	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW3-1DA	2.89	16.05	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW3-1E	1.16	44.20	G	G	G	G	P	Y	N	N	G	5/28/2019	
MW3-2	5.33	10	G	G	G	G	G	N	N	N	G	5/28/2019	
MW3-2DA	3.01	22.02	G	G	G	G	G	Y	N	N	G	5/28/2019	Missing J plug *replaced 05/29/19
MW3-3DA	0.10	16.99	P	G	G	G	G	Y	N	N	G	5/28/2019	
MW3-4DA	1.14	15.64	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW3-5D	4.98	25.70	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW3-6A	4.91	10.98	G	G	G	G	G	N	N	N	G	5/28/2019	No label
MW3-6D	4.47	19.04	G	G	G	G	G	N	N	N	G	5/28/2019	
MW3-7	3.83	7.28	G	G	G	G	G	N	N	N	G	5/28/2019	
MW3-8	4.71	12.75	G	G	G	F	G	N	N	N	G	5/28/2019	
MW3-8D	12.80	24.73	G	G	G	G	G	N	N	N	G	5/28/2019	
MW3-8E	13.40	46.40	G	G	G	G	G	N	N	N	G	5/28/2019	
PW3-3A	0.50	13.24	N/A	G	G	G	N/A	Y	N	N	G	5/28/2019	
PZ3-1	0.00	5.64	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
PZ3-1D	2.15	12.24	N/A	G	G	G	G	Y	N	N	G	5/28/2019	No bolts
PZ3-2	0.00	4.10	N/A	G	G	G	G	N	N	N	G	5/28/2019	
PZ3-2D	0.00	12.64	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
PZ3-3	0.20	2.30	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
PZ3-3D	0.10	9.35	N/A	G	F	F	G	N	N	N	G	5/28/2019	
PZ3-4	2.11	3.31	N/A	G	F	F	G	Y	N	N	G	5/28/2019	
PZ3-4D	1.00	11.51	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
PZ3-5	0.00	2.85	N/A	G	G	F	G	Y	N	Y	G	5/28/2019	No bolts
PZ3-5D	0	10.00	N/A	G	G	F	G	Y	N	N	G	5/28/2019	
PZ3-6	0.5	3.28	N/A	G	G	G	G	N	N	Y	G	5/28/2019	
PZ3-6D	0.1	12.80	N/A	G	G	G	G	Y	N	Y	G	5/28/2019	
PZ3-7D	3.12	21.6	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW3-3A	0.00	5.1	N/A	G	G	G	G	N	N	N	G	5/28/2019	
PZ3-8D	3.31	18.18	N/A	G	G	G	G	Y	N	N	G	5/28/2019	No label
PZ3-9	0.00	4.12	N/A	G	G	G	G	N	N	Y	G	5/28/2019	
PZ3-9D	1.03	24.26	N/A	G	G	G	G	N	N	N	F	5/28/2019	

NOTE: TOIC = Top of Inner Casing
G = Good
F = Fair
P = Poor
Y = Yes
N = No
PDB = Passive Diffusion Bag
N/A = Not applicable
TOC = Top of Casing

Well Number	Water Level (feet TOIC)	Current Depth (feet TOIC)	Well Paint (G/F/P)	Well Label (G/F/P)	Casing Lock (G/F/P)	Protective Cover (G/F/P)	Inner Well Cap (G/F/P)	Equipment in Well	Obstructions in Well (Y/N)	Water in Annulus (Y/N)	Concrete Pad (G/F/P)	Inspection Date	Comments/Needs
Site 5													
CH5-01	8.40	30.00	N/A	G	G	G	G	N	N	N	G	5/29/2019	
CH5-02	8.42	32.01	N/A	G	G	G	G	N	N	N	G	5/29/2019	No label
CH5-03	8.52	32.55	N/A	G	G	G	G	N	N	N	G	5/29/2019	
CH5-04	7.94	33.78	N/A	G	G	G	G	N	N	N	G	5/29/2019	
MW5-1A	8.44	15.98	G	G	G	G	G	N	N	N	G	5/29/2019	No lock
MW5-1DA	11.10	28.72	G	G	G	G	G	Y	N	N	G	5/29/2019	Damaged lock
MW5-1E	11.70	57.20	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-2D	10.48	26.35	G	G	G	G	G	N	N	N	G	5/29/2019	
MW5-3D	10.48	25.00	G	G	G	G	G	N	N	N	G	5/29/2019	
MW5-4	9.09	15.48	G	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-4D	8.75	25.98	N/A	G	G	G	G	N	N	N	G	5/29/2019	1 bolt
MW5-5A	11.59	19.98	G	G	G	G	G	N	N	N	G	5/29/2019	
MW5-5D	8.15	20.50	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-6	6.05	13.55	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-6D	4.35	22.95	N/A	G	G	G	G	N	N	N	G	5/29/2019	
MW5-7	6.00	12.92	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-7D	4.57	17.53	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-8	3.02	10.52	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
MW5-8D	--	--	--	--	--	--	--	--	--	--	--	5/29/2019	Could not locate well
RW5-1	5.01	14.58	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
RW5-2	4.52	11.00	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
RW5-3	6.93	14.15	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
RW5-4	6.69	14.57	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
Site 8													
CH8-01	6.03	30.94	N/A	G	G	P	G	N	N	N	G	5/28/2019	New PDB wire needed
MW8-1	5.01	13.61	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-10D	8.57	24.73	G	G	G	G	G	Y	N	N	G	5/28/2019	No label
MW8-11	11.25	16.55	G	G	G	G	G	N	N	N	G	5/28/2019	
MW8-11D	10.31	27.52	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-11E	12.02	49.61	G	G	G	G	G	Y	N	N	G	5/28/2019	No label
MW8-1E	15.31	50.31	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-2D	8.91	30.00	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-3	7.71	14.58	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-3DA	9.58	26.62	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-4A	8.23	14.93	G	G	G	G	G	Y	N	N	G	5/28/2019	
MW8-4D	8.49	22.41	G	G	G	G	G	N	N	N	G	5/28/2019	
MW8-5A	8.18	14.99	G	G	G	G	G	N	N	N	G	5/28/2019	
MW8-8	9.00	14.91	G	F	G	G	G	Y	N	N	G	5/28/2019	Label taped on

Well Number	Water Level (feet TOIC)	Current Depth (feet TOIC)	Well Paint (G/F/P)	Well Label (G/F/P)	Casing Lock (G/F/P)	Protective Cover (G/F/P)	Inner Well Cap (G/F/P)	Equipment in Well	Obstructions in Well (Y/N)	Water in Annulus (Y/N)	Concrete Pad (G/F/P)	Inspection Date	Comments/Needs
Site 10													
MW10-10D	1.32	10.81	N/A	G	P	G	G	N	N	N	G	5/28/2019	Damaged lock, needs new PDB wire
MW10-1DA	2.34	22.90	N/A	G	G	G	G	Y	N	N	G	5/28/2019	No lock
MW10-1EA	5.22	39.81	N/A	G	G	G	G	Y	N	N	G	5/28/2019	No lock
MW10-1F	5.42	59.20	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-2	1.95	8.78	N/A	G	G	G	G	Y	N	N	G	5/28/2019	Needs new PDB wire
MW10-2E	4.51	47.12	N/A	G	G	G	G	N	N	N	G	5/28/2019	No label
MW10-3	0.60	9.48	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-3D	0.00	25.88	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-3E	5.58	43.27	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-4	1.72	8.07	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-4D	0.95	19.95	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-4E	4.15	40.69	N/A	P	P	P	P	Y	N	N	P	5/28/2019	Concrete broken around casing again
MW10-5D	1.99	19.70	N/A	G	G	G	G	N	N	N	F	5/28/2019	
MW10-6	0.30	9.63	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-7	0.98	9.05	N/A	G	G	G	G	Y	N	N	G	5/28/2019	Damaged label
MW10-8	3.61	9.41	N/A	G	G	G	G	N	N	N	G	5/28/2019	
MW10-8D	3.46	23.72	N/A	G	G	G	G	N	N	N	G	5/28/2019	
MW10-9D	3.40	19.72	N/A	G	G	G	G	Y	N	N	F	5/28/2019	No label or PDB wire
MW10-11	3.12	7.40	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-11D	1.89	17.38	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-12	4.09	8.35	N/A	G	G	G	G	Y	N	N	G	5/28/2019	
MW10-12D	5.15	18.84	N/A	G	G	G	G	Y	N	N	G	5/28/2019	No label
MW10-13	0.00	6.99	N/A	G	G	G	G	Y	N	N	G	5/28/2019	No label
MW10-13D	3.02	18.84	N/A	G	G	G	G	Y	N	N	G	5/28/2019	Missing bolt
PW10-1	1.25	14.10	G	G	G	G	N/A	Y	N	N	N/A	5/28/2019	Need new PDB weight
PW10-2	1.51	24.30	N/A	N/A	N/A	G	N/A	Y	N	Y	N/A	5/28/2019	New PDB wire needed
PZ10-7	3.48	10.05	N/A	G	G	G	G	Y	N	N	G	5/28/2019	

Well Number	Water Level (feet TOIC)	Current Depth (feet TOIC)	Well Paint (G/F/P)	Well Label (G/F/P)	Casing Lock (G/F/P)	Protective Cover (G/F/P)	Inner Well Cap (G/F/P)	Equipment in Well	Obstructions in Well (Y/N)	Water in Annulus (Y/N)	Concrete Pad (G/F/P)	Inspection Date	Comments/Needs
Site 13													
MW13-1	6.77	10.05	G	G	G	G	G	Y	N	N	G	5/29/2019	
MW13-1D	6.05	20.68	G	G	G	G	G	Y	N	N	G	5/29/2019	
MW13-1E	14.15	43.88	G	G	G	G	G	Y	N	N	G	5/29/2019	EVO present in well
MW13-2D	9.18	23.64	G	G	G	G	G	N	N	N	G	5/29/2019	
MW13-3	6.07	15.97	G	G	G	G	G	Y	N	N	G	5/29/2019	
MW13-3D	2.67	15.97	N/A	G	G	G	G	N	N	N	G	5/29/2019	
MW13-4	7.95	10.95	G	G	G	F	G	Y	N	N	G	5/29/2019	
MW13-4D	8.20	18.75	G	G	G	G	G	Y	N	N	G	5/29/2019	
MW13-5A	4.72	7.66	N/A	None	G	F	G	Y	N	N	G	5/29/2019	
MW13-5D	6.18	20.70	G	G	G	G	G	Y	N	N	G	5/29/2019	Damaged lock
MW13-6	3.92	6.87	N/A	G	G	G	G	Y	N	N	G	5/29/2019	No bolts
MW13-6D	3.33	8.89	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
PW13-1	6.09	27.38	G	G	G	G	N/A	Y	N	N	G	5/29/2019	Damaged lock
PW13-4D	7.55	22.78	G	G	G	G	N/A	Y	N	N	G	5/29/2019	
PZ13-1	1.53	4.29	N/A	G	G	G	G	Y	N	N	G	5/29/2019	l bolt missing
PZ13-1D	3.85	16.81	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
PZ13-2	2.37	5.87	N/A	G	G	G	G	N	N	N	G	5/29/2019	No bolts
PZ13-2D	5.89	17.06	N/A	G	G	G	G	N	N	N	G	5/29/2019	No bolts
PZ13-3D	4.24	17.55	N/A	G	G	G	G	N	N	N	G	5/29/2019	
PZ13-4	1.35	9.62	N/A	G	G	G	G	Y	N	N	G	5/29/2019	1 bolt missing
PZ13-4D	4.41	22.18	N/A	G	G	G	G	Y	N	N	G	5/29/2019	
Site Former 02													
MPL2-1A	4.41	14.50	G	None	G	G	G	Y	N	N	G	5/28/2019	
Site Former 06													
MPL6-2A	7.38	14.25	P	G	G	G	G	Y	N	N	G	5/28/2019	Paint peeling on casing.
MPL6-3	7.46	15.6	P	F	G	G	G	Y	N	N	G	5/28/2019	

APPENDIX E

REMEDIAL ACTION PERFORMANCE MONITORING DATA TREND GRAPHS

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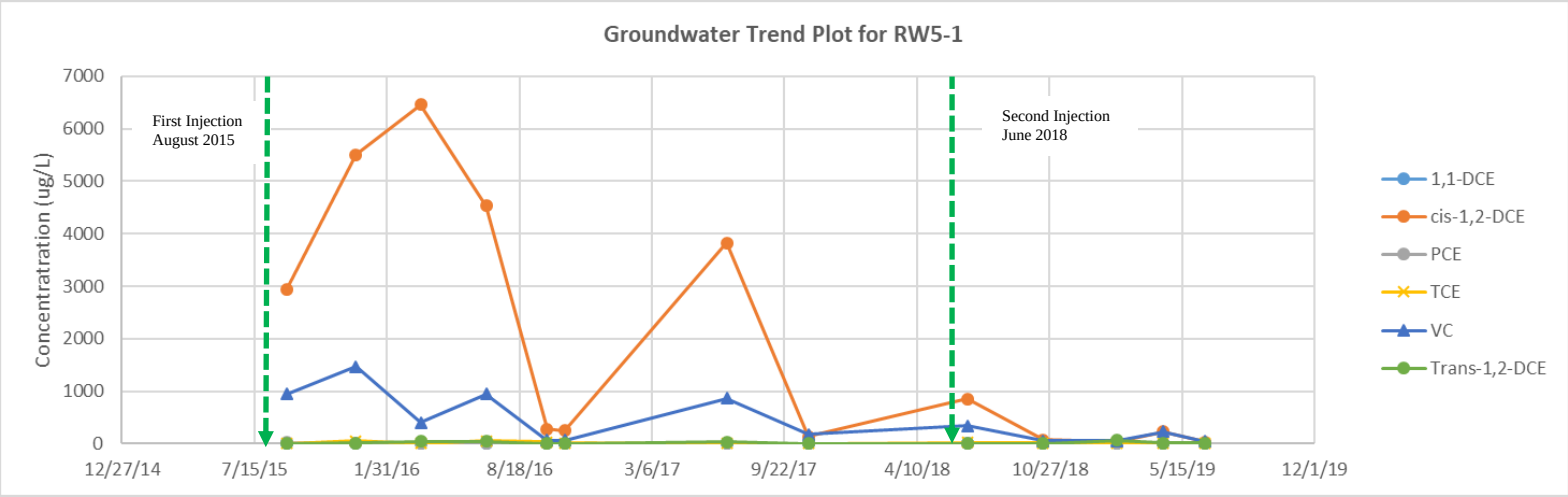
Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

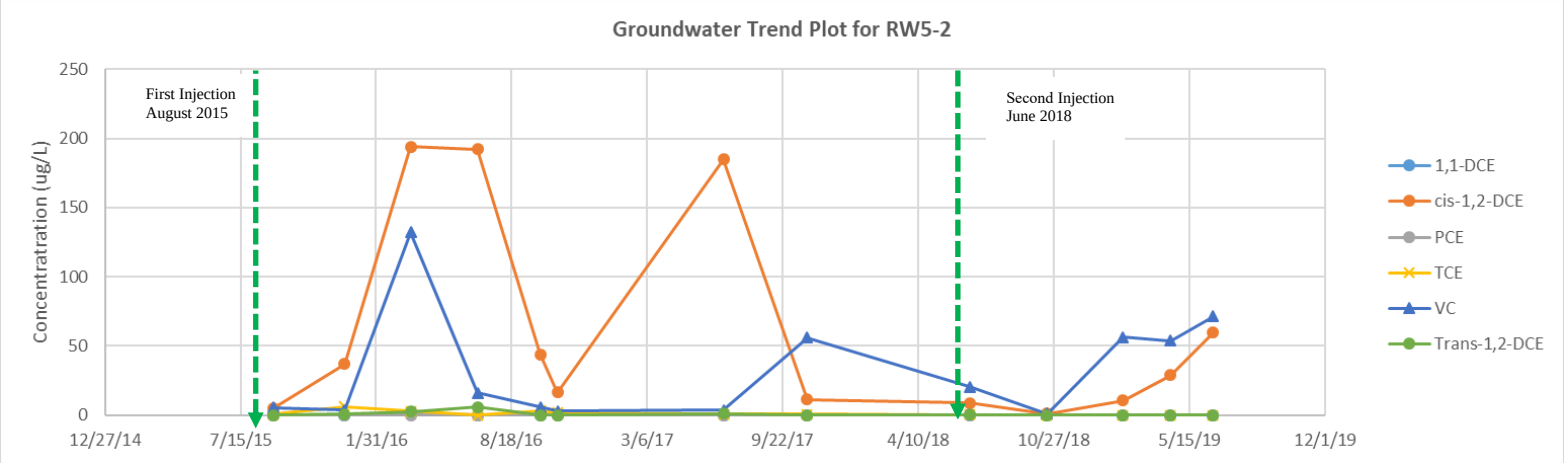


Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	10/25/2016	6/27/2017	10/28/2017	6/25/2018
1,1-Dichloroethene	ND (7.1)	6.3	ND (22)	ND (0.60)	ND (0.60)	ND (1.4)	ND (5.2)	ND (5.2)	2
cis-1,2-Dichloroethene	2930	5510	6460	4530	275	251	3830	138	854
Tetrachloroethene	21.0 J	ND (0.33)	ND (30)	ND (0.45)	ND (0.45)	ND (0.89)	ND (13)	ND (13)	ND (0.50)
Trichloroethene	ND (6.2)	49.7	ND (27)	54.8	33.2	12.8	ND (6.7)	1.1	21.7
Vinyl Chloride	943	1470	369	939	62.8	65.8	858	180	338
trans-1,2-Dichloroethylene	ND (12)	12.9	42.8 J	43.3 J	ND	1.5 J	31.4	2.7	3.9

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	75.8	43.4	228	32.3
Tetrachloroethene	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	8.2	3.7	2.1	2.5
Vinyl Chloride	48.1	50.3	224	42.4
trans-1,2-Dichloroethylene	1.6	63.4	11.6	9.5

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

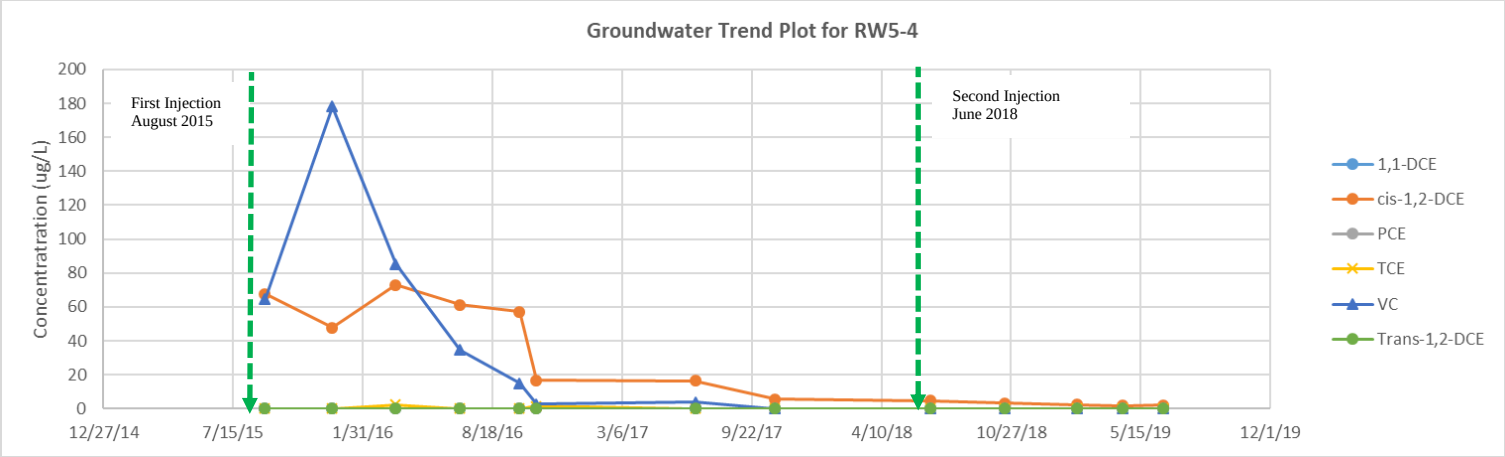


Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	10/25/2016	6/27/2017	10/28/2017
1,1-Dichloroethene	ND (0.28)	ND (0.27)	1.5	ND (0.60)	ND (0.60)	ND (0.68)	ND (0.21)	ND (0.21)
cis-1,2-Dichloroethene	5	37	194	192	43.8	16.6	185	11.2
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.50)	ND (0.50)
Trichloroethene	0.82 J	6.3	2.8	1.3	3.4	1.6	0.63 J	0.8 J
Vinyl Chloride	5.3	3.5	132	16.1	5.7	2.8	3.7	4.1
trans-1,2-Dichloroethylene	ND (0.48)	0.59 J	2.5	5.7	ND (0.48)	ND (0.50)	1	ND (0.50)

Analyte	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	8.7	1.2	10.7	28.9	59.7
Tetrachloroethene	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	0.32 J	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)
Vinyl Chloride	20.6	1.2	56.4	53.7	71.5
trans-1,2-Dichloroethylene	0.47 J	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

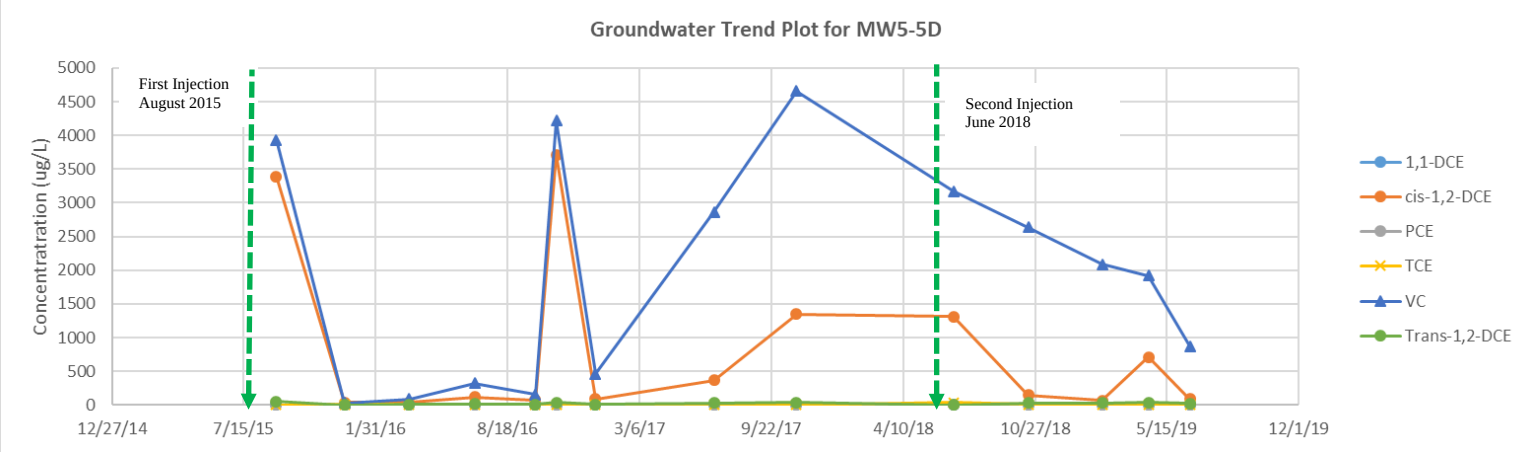


Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	10/25/2016	6/27/2017	10/28/2017
1,1-Dichloroethene	ND (0.28)	ND (27)	ND (0.22)	ND (0.60)	ND (0.60)	ND (0.68)	ND (0.21)	ND (0.21)
cis-1,2-Dichloroethene	67.6	47.7 J	72.9	61.1	57.1	16.6	16.3	5.5
Tetrachloroethene	ND (0.21)	ND (33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.50)	ND (0.50)
Trichloroethene	ND (0.25)	ND (22)	2.4	ND (0.48)	ND (0.48)	1.6	ND (0.27)	ND (0.27)
Vinyl Chloride	64.5	178	85.2	34.7	15.1	2.8	3.7	ND (0.50)
trans-1,2-Dichloroethylene	ND (0.48)	ND (21)	ND (0.33) [b]	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.41)	ND (0.41)

Analyte	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	4.6	3.2	2.4	1.7	2.1
Tetrachloroethene	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)
Vinyl Chloride	ND (0.62)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
trans-1,2-Dichloroethylene	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

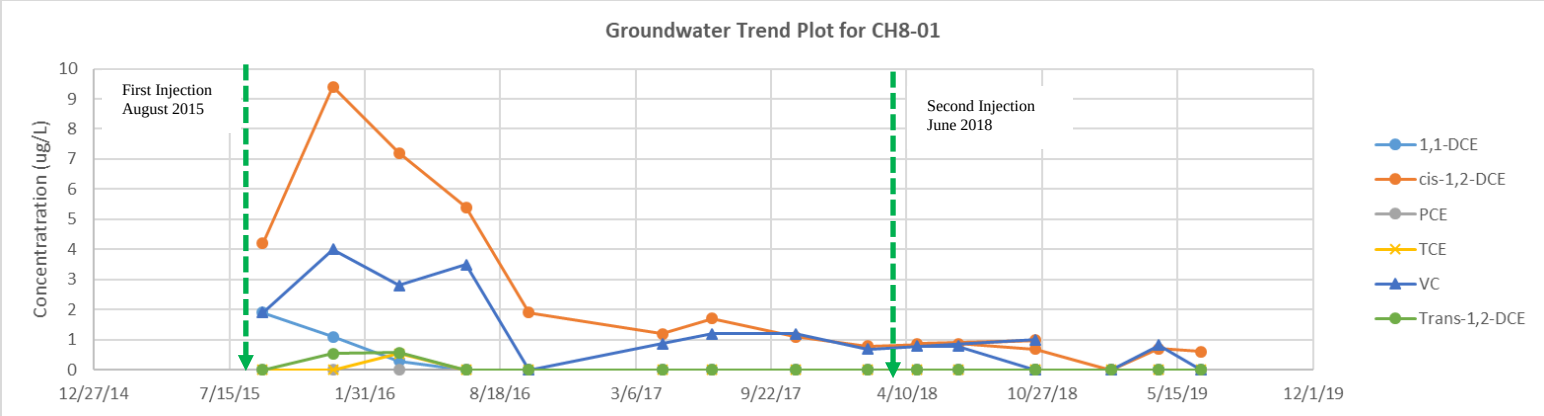


Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	10/31/2016	12/29/2016	6/27/2017	10/30/2017
1,1-Dichloroethene	ND (1.4)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.60)	8.4	ND (0.64)	ND (0.21)	8.4
cis-1,2-Dichloroethene	3390	37	34.1	114	70.3	3710	90	368	1350
Tetrachloroethene	ND (1.0)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)
Trichloroethene	3.5 J	3.9	4.7	2.5	2.8	3.9	0.92 J	1.3	ND (0.45)
Vinyl chloride	3930	27.8	87.5	321	155	4220	458	2860	4660
trans-1,2-Dichloroethylene	50.3	1.1	4.6	15.8	8.2	39.5	7.8	29.5	35.3

Analyte	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	3.2	ND (7.5)	ND (0.75)	3.8	ND (0.75)
cis-1,2-Dichloroethene	1310	147	63	712	90.3
Tetrachloroethene	ND (0.50)	ND (9.0)	ND (0.90)	ND (0.45)	ND (0.90)
Trichloroethene	38.7	ND (7.5)	ND (0.75)	ND (0.75)	0.62
Vinyl chloride	3170	2640	2090	1920	869
trans-1,2-Dichloroethylene	32.8	32	33.1	33.4	19.6

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York



Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	10/28/2017
1,1-Dichloroethene	1.9	1.1	0.30 J	ND (0.68)	ND (0.68)	ND (0.68)	ND (0.21)	ND (0.21)
cis-1,2-Dichloroethene	4.2	9.4	7.2	5.4	1.9	1.2	1.7	1.1
Tetrachloroethylene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.5)	ND (0.5)
Trichloroethene	ND (0.25)	ND (0.22)	0.54 J	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.6)	ND (0.6)
Vinyl Chloride	1.9	4	2.8	3.5	ND (0.69)	0.87	1.2	1.2
trans-1,2-Dichloroethylene	ND (0.48)	0.54 J	0.57 J	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.4)	ND (0.4)

Analyte	2/12/2018	4/26/2018	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	0.78 J	0.98 J	0.87 J	0.68 J	ND (0.75)	0.71	0.6
Tetrachloroethylene	ND (0.50)	ND (0.90)	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
Vinyl Chloride	068 J	1	0.79 J	ND (0.79)	ND (0.80)	0.82	ND (0.80)
trans-1,2-Dichloroethylene	ND (0.50)	ND (0.54)	ND (0.50)	ND (0.54)	ND (0.75)	ND (0.75)	ND (0.75)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
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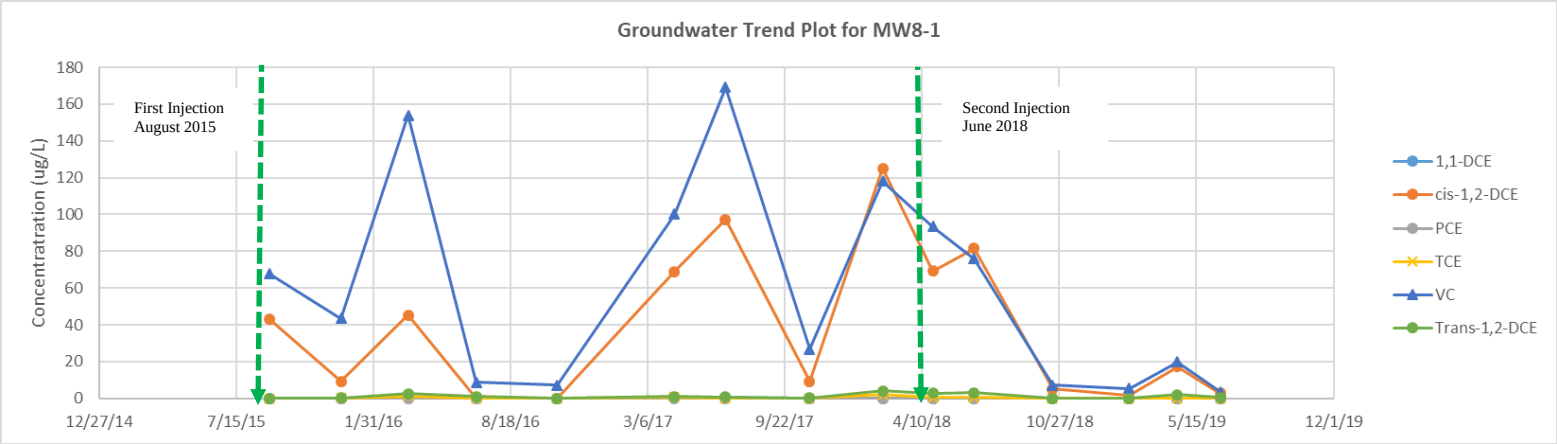
Niagara Falls Air Reserve Station, New York



Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	10/25/2016	4/14/2017	6/27/2017
1,1-Dichloroethene	ND (0.28)	ND (0.27)	0.31 J	ND (0.60)	ND (0.60)	ND (0.68)	0.24	0.42 J
cis-1,2-Dichloroethene	42.9	9.4	45.2	0.37 J	ND (0.29)	ND (0..29)	69.1	97.2
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.5)
Trichloroethene	ND (0.25)	0.28 J	1.2	ND (0.48)	ND (0.48)	ND (0.48)	0.7	ND (0.27)
Vinyl Chloride	67.7	43.5	154	8.7	ND (0.69)	7.1	100	169
trans-1,2-Dichloroethylene	ND (0.48)	0.34 J	2.7	1.1	(ND 0.50)	ND (0.26)	1	0.82 J

Analyte	10/28/2017	2/12/2018	4/26/2018	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.68)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	9.2	125	69.2	81.6	5.1	1.6	17.2	2.9
Tetrachloroethene	ND (0.5)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.27)	2	0.53 J	0.55 J	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
Vinyl Chloride	26.7	118	93.3	75.9	7.1	5.5	19.9	3.6
trans-1,2-Dichloroethylene	0.31 J	4.1	2.8	3	ND (0.50)	ND (0.75)	2.1	0.58

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
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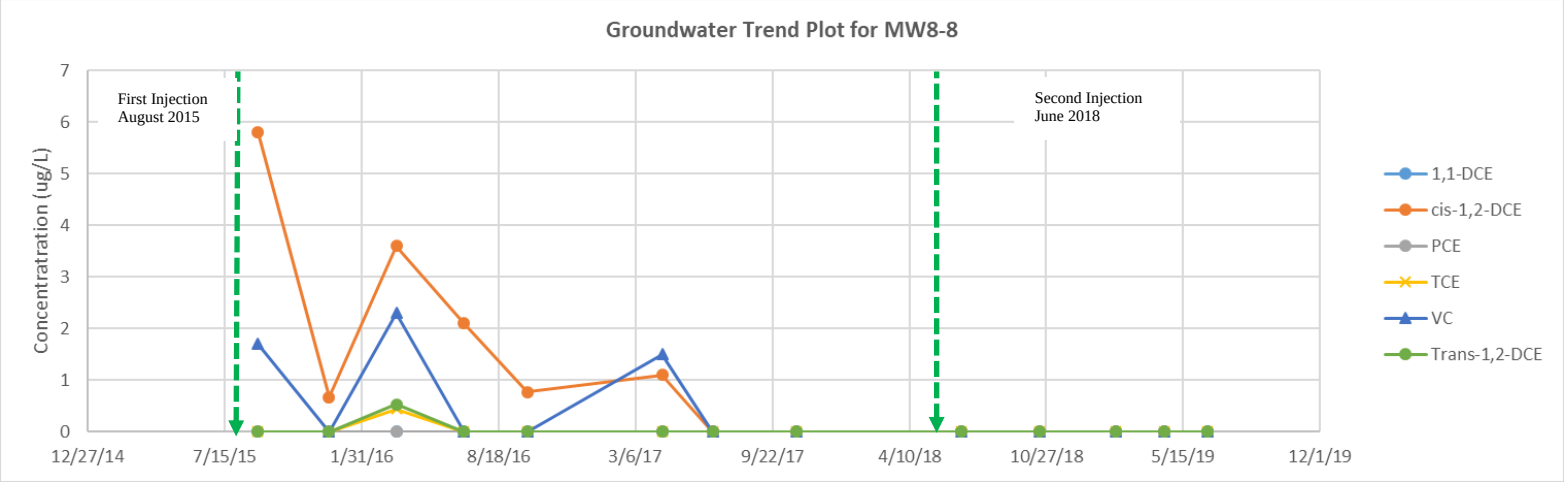

Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	10/28/2017
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.26)	ND (0.68)	ND (0.60)	ND (0.60)	ND (0.21)	ND (0.21)
cis-1,2-Dichloroethene	5.8	0.67 J	3.6	5.4	0.77 J	1.1	ND (0.20)	ND (0.20)
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.50)	ND (0.50)
Trichloroethene	ND (0.25)	ND (0.22)	0.44 J	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.60)	ND (0.60)
Vinyl Chloride	1.7	ND (0.25)	2.3	3.5	ND (0.69)	1.5	ND (0.62)	ND (0.62)
trans-1,2-Dichloroethylene	ND (0.48)	0	0.53 J	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.40)	ND (0.40)

Analyte	2/12/2018	4/26/2018	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	0.4 J	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)
Vinyl Chloride	0.52 J	0.64 J	ND (0.62)	ND (0.62)	ND (0.80)	ND (0.80)	ND (0.80)
trans-1,2-Dichloroethylene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)	ND (0.75)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
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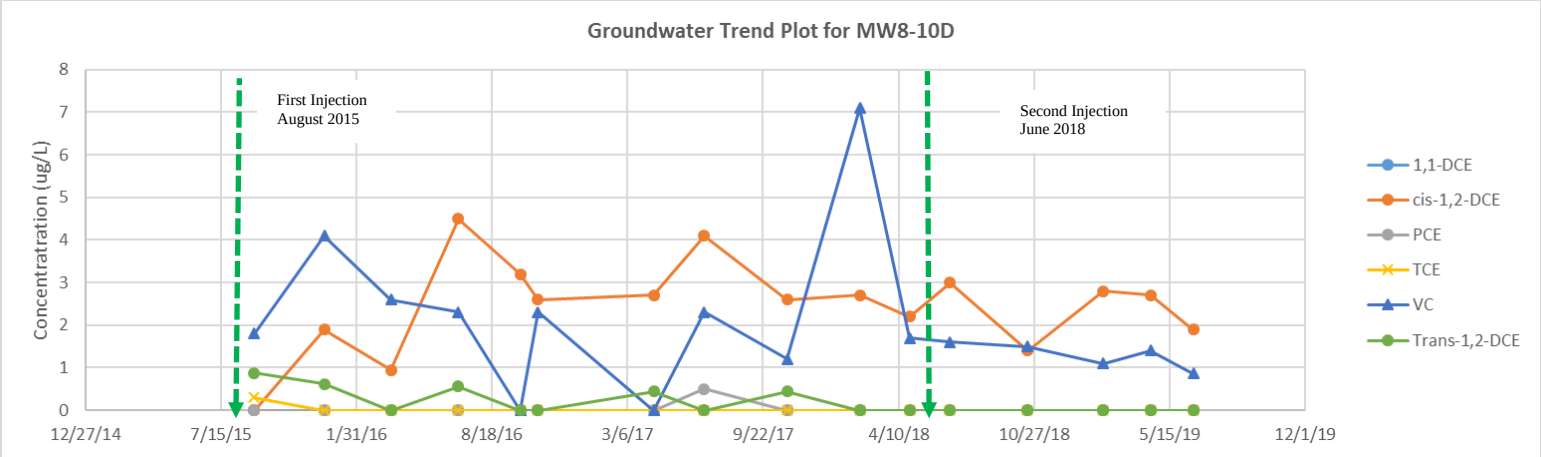
Niagara Falls Air Reserve Station, New York



Analyte	9/2/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	10/25/2016	4/14/2017	6/27/2017
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.27)	ND (0.60)	ND (0.60)	ND (0.60)	ND (1.0)	ND (0.21)
cis-1,2-Dichloroethene	5.2	1.9	0.95 J	4.5	3.2	2.6	2.7	4.1
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.33)	ND (0.45)	ND (0.45)	ND (0.45)	ND (1.0)	0.50 J
trans-1,2-Dichloroethene	0.88 J	0.62 J	ND (0.33)	0.56 J	ND (0.33)	ND (0.23)	0.44	ND (0.54)
Trichloroethene	0.30 J	ND (0.22)	ND (0.22)	ND (0.48)	ND (0.48)	ND (0.48)	ND (1.0)	ND (0.60)
Vinyl Chloride	1.8	4.1	2.6	2.3	ND (0.69)	2.3	1.1	2.3

Analyte	10/28/2017	2/12/2018	4/26/2018	6/25/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.21)	ND (0.50)	ND (0.59)	ND (0.50)	ND (0.59)	ND (0.75)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	2.6	2.7	2.2	3	1.4	2.8	2.7	1.9
Tetrachloroethene	ND (1.0)	ND (0.50)	ND (0.90)	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
trans-1,2-Dichloroethene	0.44	ND (0.50)	ND (0.79)	ND (0.50)	ND (0.79)	ND (0.75)	ND (0.75)	ND (0.75)
Trichloroethene	ND (0.60)	ND (0.60)	ND (0.53)	1.6	ND (0.53)	1.1	1.4	0.86
Vinyl Chloride	1.2	7.1	1.7	ND (0.62)	1.5	ND (0.75)	ND (0.75)	ND (0.75)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
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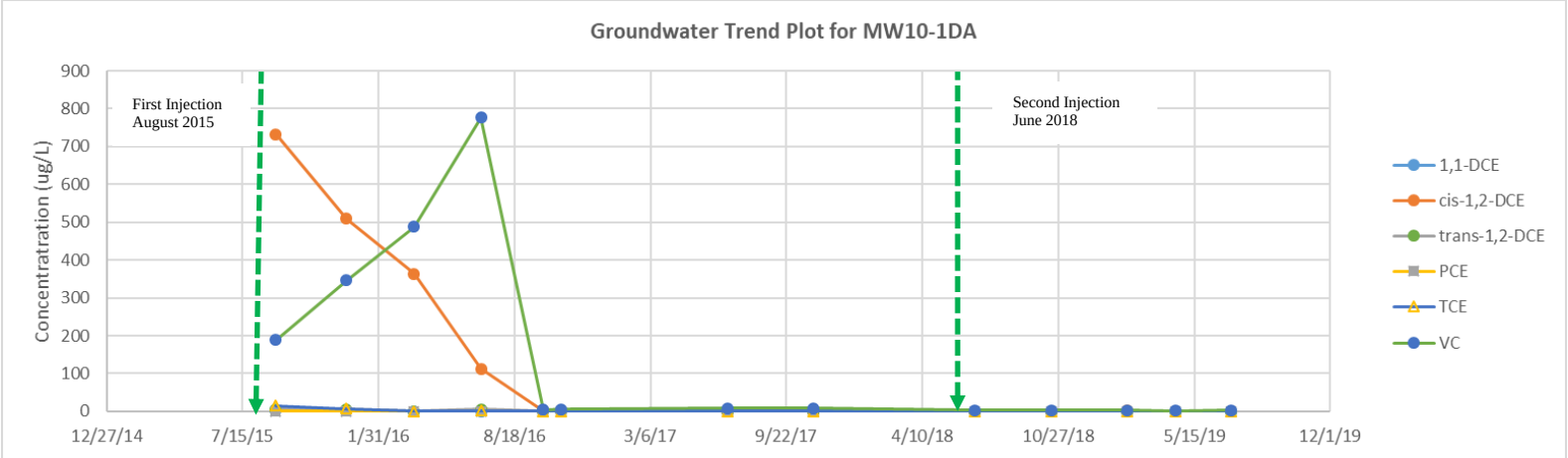

Analyte	9/2/2015	12/15/2015	3/23/2016	6/30/2016	9/29/2016	10/25/2016	6/27/2017	10/31/2017
1,1-Dichloroethene	1.5	2.6	ND (1.1)	ND (0.60)	ND (0.60)	ND (0.68)	ND (0.21)	ND (0.21)
cis-1,2-Dichloroethene	733	509	364	113	1.2	1.4	0.64 J	ND
trans-1,2-Dichloroethene	5.2	4.8	4.0 J	6.1	1.9	2.0	0.75 J	0.75 J
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (1.5)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.50)	ND (0.50)
Trichloroethene	15.3	6.4	3.2 J	2	ND (0.48)	ND (0.48)	ND (0.27)	ND (0.27)
Vinyl Chloride	188 [a]	346	488	776	4.2	6.0	7.9	8.5

Analyte	6/26/2018	10/17/2018	2/6/2019	4/17/2019	7/8/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.57)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	ND (0.50)	0.56 J	1.5	ND (0.75)	ND (0.75)
trans-1,2-Dichloroethene	0.46 J	0.66 J	ND (0.54)	ND (0.75)	ND (0.75)
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.53)	ND (0.75)	ND (0.75)
Vinyl Chloride	2.2	3.4	2.6	2.1	3.1

Trend Plots of Selected VOC Data

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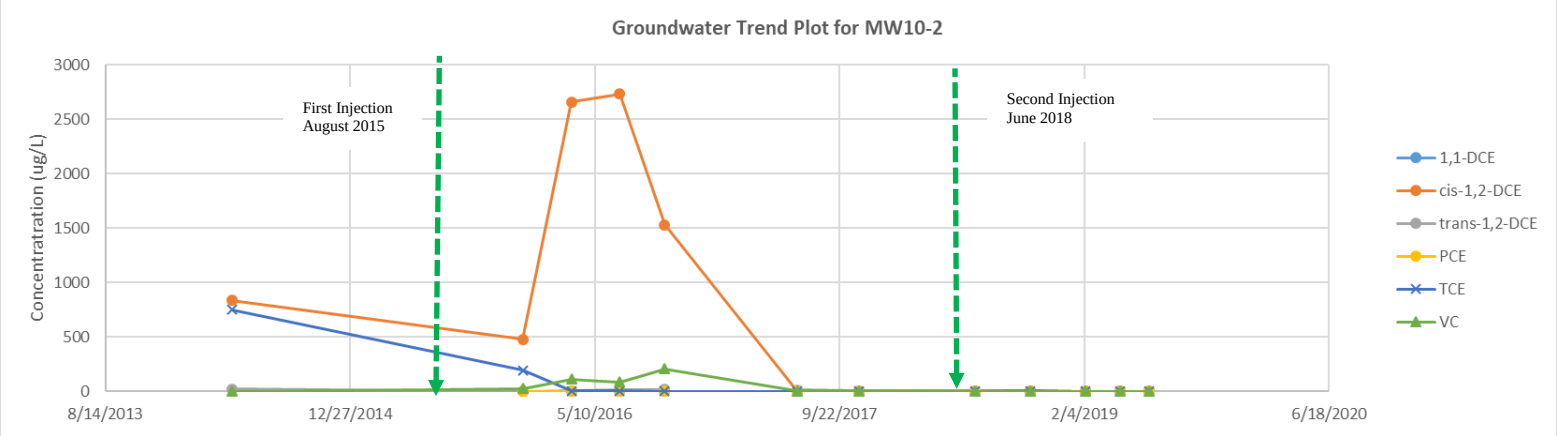

Analyte	4/30/14	12/15/2015	3/23/2016	6/30/2016	9/29/2016	10/25/2016	6/27/2017	10/31/2017
1,1-Dichloroethene	1	0.71 J	2.7 J	2.3 [b]	ND (6.0)	NA	ND (0.21)	ND (0.21)
cis-1,2-Dichloroethene	837	478	2660	2730	1530	NA	6.3	6.0
trans-1,2-Dichloroethene	24.4		7.5	14.7	17.1	NA	13.3	5.5
Tetrachloroethene	ND	ND (0.33)	ND (1.5)	ND (0.45)	ND (0.45)	NA	ND (0.60)	ND (0.60)
Trichloroethene	750	197	3.6 J	6	ND (0.48)	NA	1.9	0.77 J
Vinyl Chloride	1.8	26.8	111	87.3	209	NA	7.4	6.3

Analyte	6/26/2018	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.57)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	7.2	5.2	1.5	1.2	3.0
trans-1,2-Dichloroethene	1.4	0.71 J	ND (0.54)	ND (0.75)	ND (0.75)
Tetrachloroethene	ND (0.50)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	0.64 J	3.5	0.94	ND (0.75)	1.6
Vinyl Chloride	2.5	ND (0.53)	2.8	2.5	2.9

Trend Plots of Selected VOC Data

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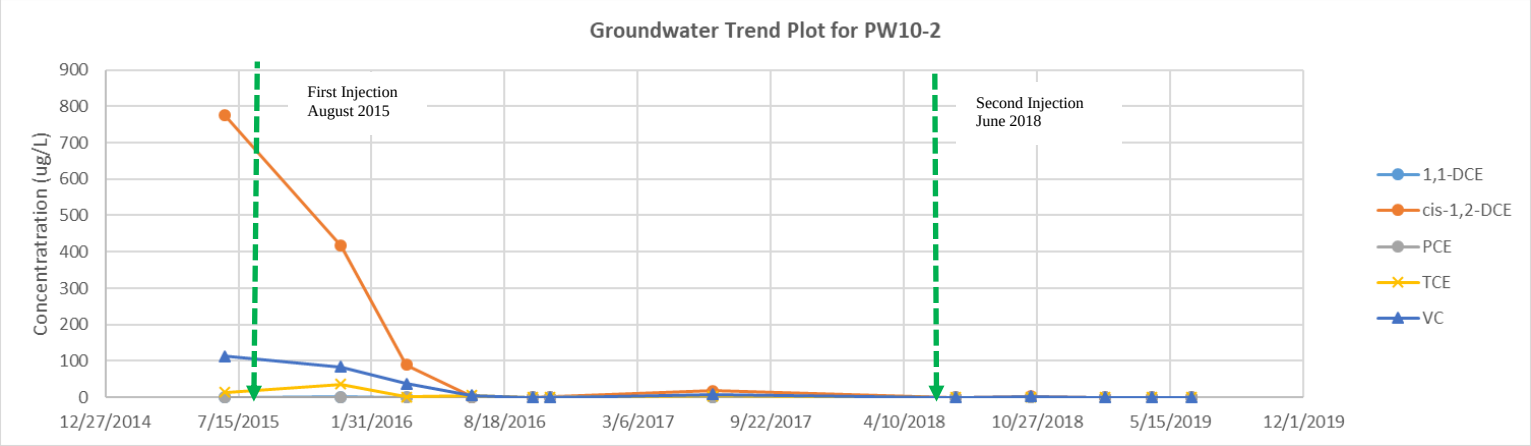

Analyte	6/24/2015	12/16/2015	3/23/2016	6/30/2016	9/29/2016	10/25/2016	6/27/2017	6/26/2018
1,1-Dichloroethene	ND (0.28)	1.3	ND (0.22)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	777	417	89.8	1.6	ND (0.29)	0.88 J	18.4	ND (0.50)
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	0.69 J	ND (0.50)	ND (0.50)
Trichloroethene	13.4	35.9	1.2	4.7	ND (0.48)	ND (0.48)	3.3	ND (0.50)
Vinyl Chloride	113	84.3	37	4.7	ND (0.69)	ND (0.69)	8.6	ND (0.62)

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.57)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	1.8	ND (0.51)	ND (0.75)	ND (0.75)
Tetrachloroethene	ND (0.50)	ND (0.90)	ND (0.9)	ND (0.75)
Trichloroethene	ND (0.50)	ND (0.53)	ND (0.75)	ND (0.90)
Vinyl Chloride	2	ND (0.79)	ND (0.75)	ND (0.75)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
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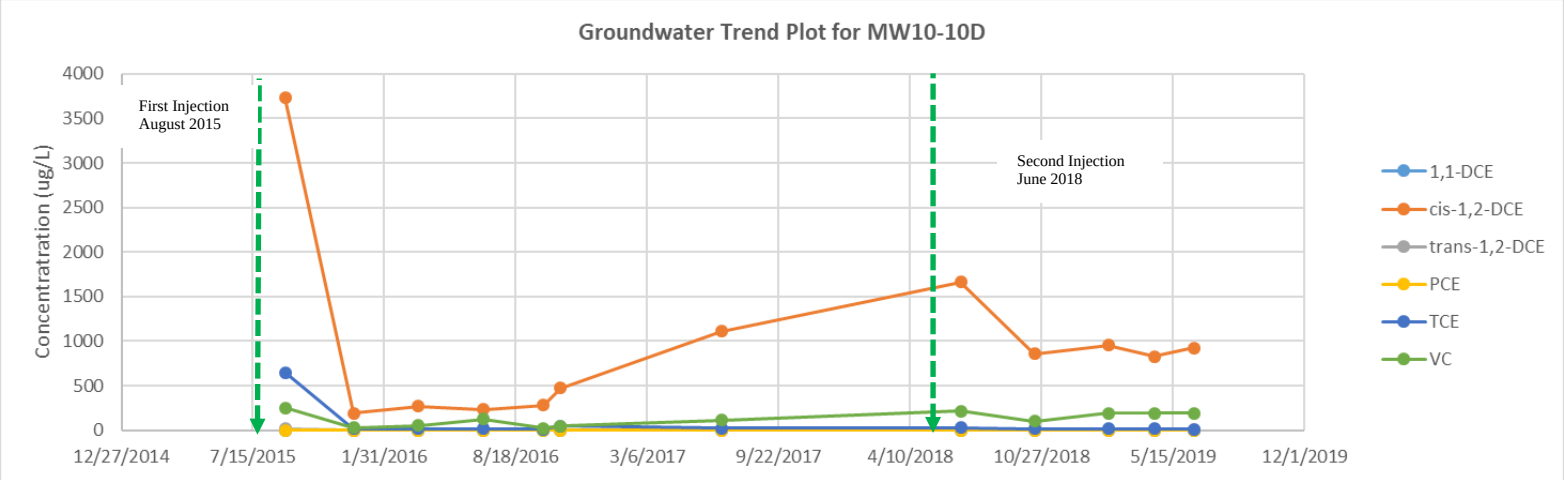

Analyte	9/2/2015	12/15/2015	3/23/2016	6/30/2016	9/29/2016	10/25/2016	6/27/2017	6/26/2018
1,1-Dichloroethene	ND (5.7)	ND (0.27)	ND (0.43)	ND (0.60)	ND (1.4)	0.75 J	ND (2.1)	ND (0.50)
cis-1,2-Dichloroethene	3730	191	266	230	281	476	1110	1660
trans-1,2-Dichloroethene	17.8	0.95 J	1.2 J	1.4	2.2	3.2	6.5 J	9
Tetrachloroethene	ND (4.1)	ND (0.33)	ND (0.61)	ND (0.45)	ND (0.89)	ND (0.45)	ND (5.0)	ND (0.50)
Trichloroethene	650	15.6	13.8	14.5	10	43.8	20	28.1
Vinyl Chloride	253 [a]	28.6	51.5	124	25.3	45.6	110	212

Analyte	10/17/2018	2/6/2019	4/17/2019	7/8/2019
1,1-Dichloroethene	ND (0.50)	ND (2.8)	ND (2.8)	ND (1.9)
cis-1,2-Dichloroethene	856	954	826	921.0
trans-1,2-Dichloroethene	4.6	5.8	6.2	5.8
Tetrachloroethene	ND (0.50)	ND (3.3)	ND (0.90)	ND (2.3)
Trichloroethene	16.9	18.1	15.5	12.6
Vinyl Chloride	101	188	189	191.0

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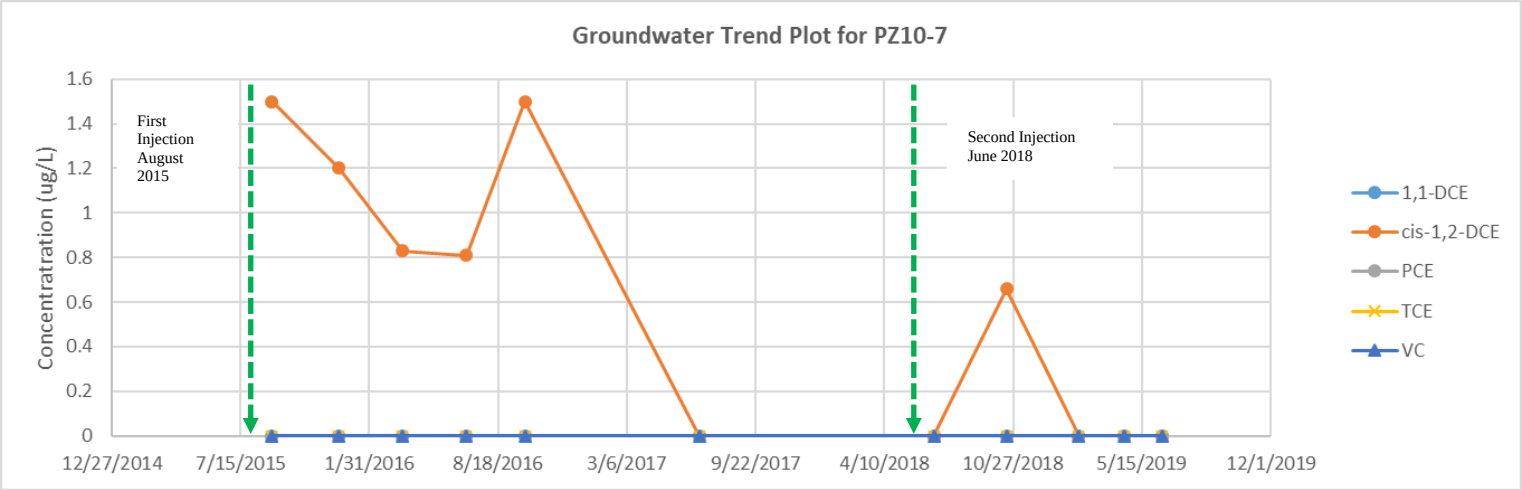

Analyte	9/2/2015	12/15/2015	3/23/2016	6/30/2016	9/29/2016	6/27/2017	6/26/2018	10/17/2018
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.60)	ND (0.21)	ND (0.50)	ND (0.50)
cis-1,2-Dichloroethene	1.5	1.2	0.83 J	0.81 J	1.5	ND (0.50)	ND (0.50)	0.66 J
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (0.50)	ND (0.50)	ND (0.50)
Trichloroethene	ND (0.25)	ND (0.22)	ND (0.27)	ND (0.48)	ND (0.48)	ND (0.62)	ND (0.50)	ND (0.50)
Vinyl Chloride	ND (0.45)	ND (0.25)	ND (0.31)	ND (0.69)	ND (0.69)	ND (0.62)	ND (0.62)	ND (0.62)

Analyte	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.57)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	ND (0.51)	ND (0.75)	ND (0.75)
Tetrachloroethene	ND (0.9)	ND (0.9)	ND (0.75)
Trichloroethene	ND (0.53)	ND (0.75)	ND (0.90)
Vinyl Chloride	ND (0.79)	ND (0.75)	ND (0.75)

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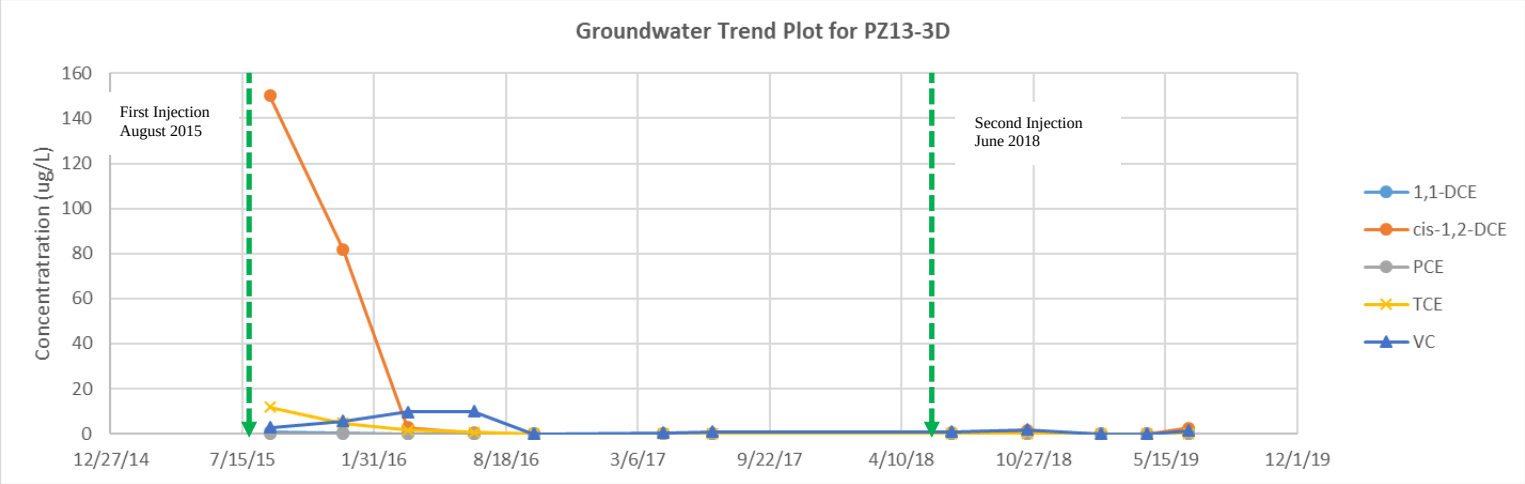
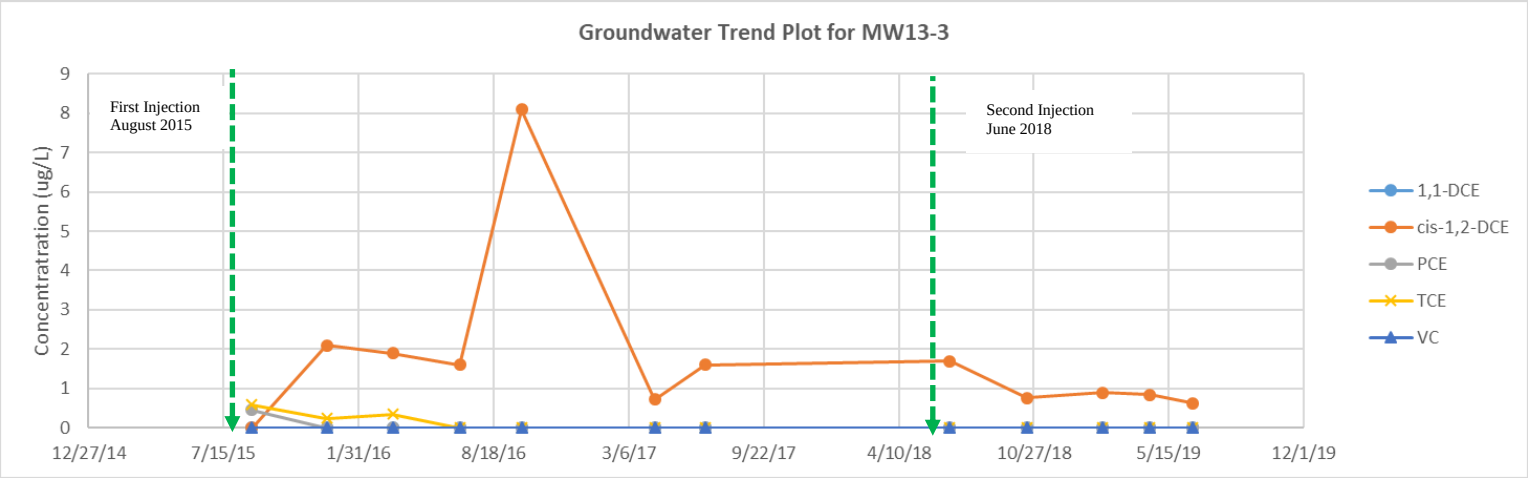


Analyte	8/26/2015	12/15/2015	3/22/2016	6/30/2016	9/29/2016	4/14/2017	6/27/2017	6/25/2018
1,1-Dichloroethene	0.94 J	0.49 J	ND (0.22)	ND (0.60)	ND (0.68)	ND (1.0)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	150	81.6	2.7	0.45 J	ND (0.29)	ND (1.0)	ND (0.50)	0.73 J
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (1.0)	ND (0.50)	ND (0.50)
Trichloroethene	11.7	4.6	1.5	0.58 J	ND (0.48)	ND (1.0)	ND (0.27)	ND (0.50)
Vinyl Chloride	2.9	5.7	9.7	10	ND (0.69)	0.47	0.84 J	0.77 J

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	1.3	ND (0.50)	ND (0.75)	2.5
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
Vinyl Chloride	1.8 U	ND (0.50)	ND (0.75)	1.3

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

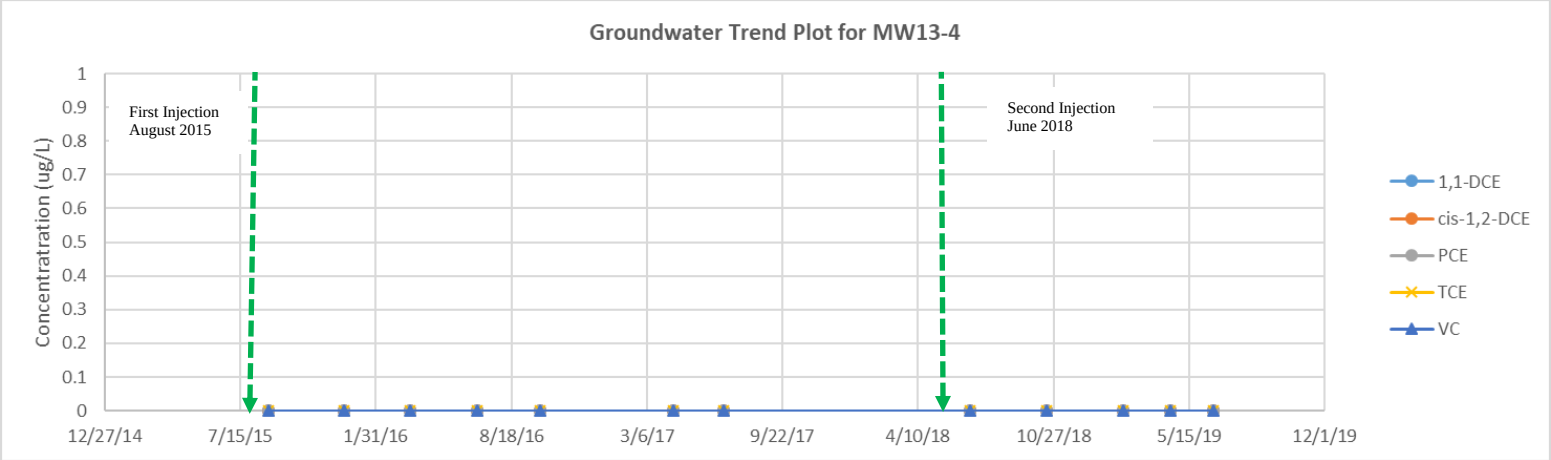


Analyte	8/26/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	6/25/2018
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.60)	ND (1.0)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	ND (0.31)	2.1	1.9	1.6	8.1	0.72 J	1.6	1.7
Tetrachloroethene	0.45 J	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (1.0)	ND (0.50)	ND (0.50)
Trichloroethene	0.58 J	0.24 J	0.34 J	ND (0.48)	ND (0.48)	ND (1.0)	ND (0.27)	ND (0.50)
Vinyl Chloride	ND (0.45)	ND (0.25)	ND (0.31)	ND (0.69)	ND (0.69)	ND (1.0)	ND (0.62)	ND (0.62)

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)
cis-1,2-Dichloroethene	0.76	0.89 J	0.84 J	0.62
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.75)
Vinyl Chloride	ND (0.62)	ND (0.62)	ND (0.62)	ND (0.80)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

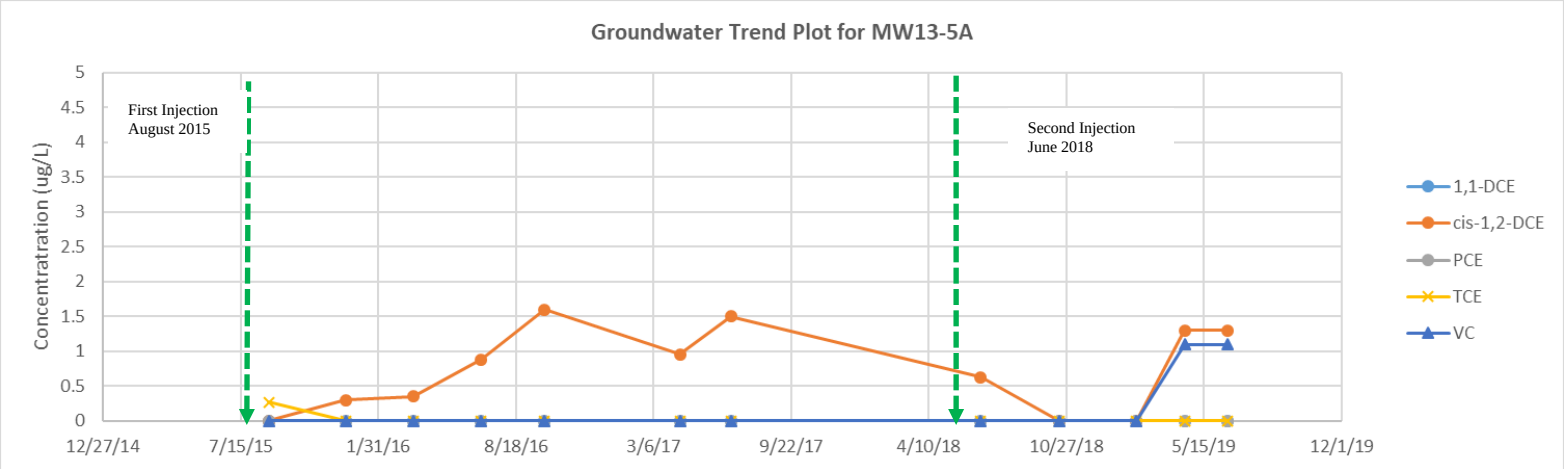


Analyte	8/26/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	6/25/2018
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.68)	ND (1.0)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	ND (0.31)	ND (0.22)	ND (0.31)	ND (0.29)	ND (0.29)	ND (1.0)	ND (0.50)	ND (0.50)
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (1.0)	ND (0.50)	ND (0.50)
Trichloroethene	ND (0.25)	ND (0.22)	ND (0.27)	ND (0.48)	ND (0.48)	ND (1.0)	ND (0.27)	ND (0.50)
Vinyl Chloride	ND (0.45)	ND (0.25)	ND (0.31)	ND (0.69)	ND (0.69)	ND (1.0)	ND (0.62)	ND (0.62)

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
Vinyl Chloride	ND (0.62)	ND (0.62)	ND (0.80)	ND (0.80)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

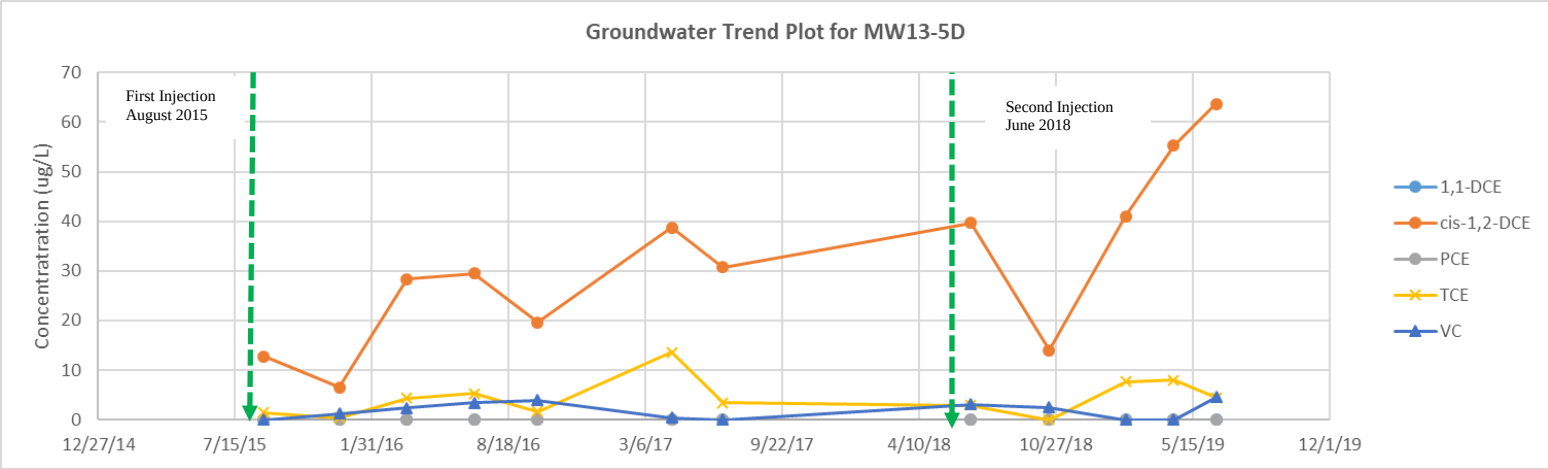


Analyte	8/25/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	6/25/2018
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.68)	ND (1.0)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	ND (0.31)	0.30 J	0.35 J	0.88 J	1.6	0.96	1.5	0.63 J
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (1.0)	ND (0.50)	ND (0.50)
Trichloroethene	0.27 J	ND (0.22)	ND (0.27)	ND (0.48)	ND (0.48)	ND (1.0)	ND (0.27)	ND (0.50)
Vinyl Chloride	ND (0.45)	ND (0.25)	ND (0.31)	ND (0.69)	ND (0.69)	ND (1.0)	ND (0.62)	ND (0.62)

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	ND (0.51)	ND (0.51)	1.3	ND (0.75)
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
Vinyl Chloride	ND (0.62)	ND (0.62)	1.1	ND (0.80)

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York

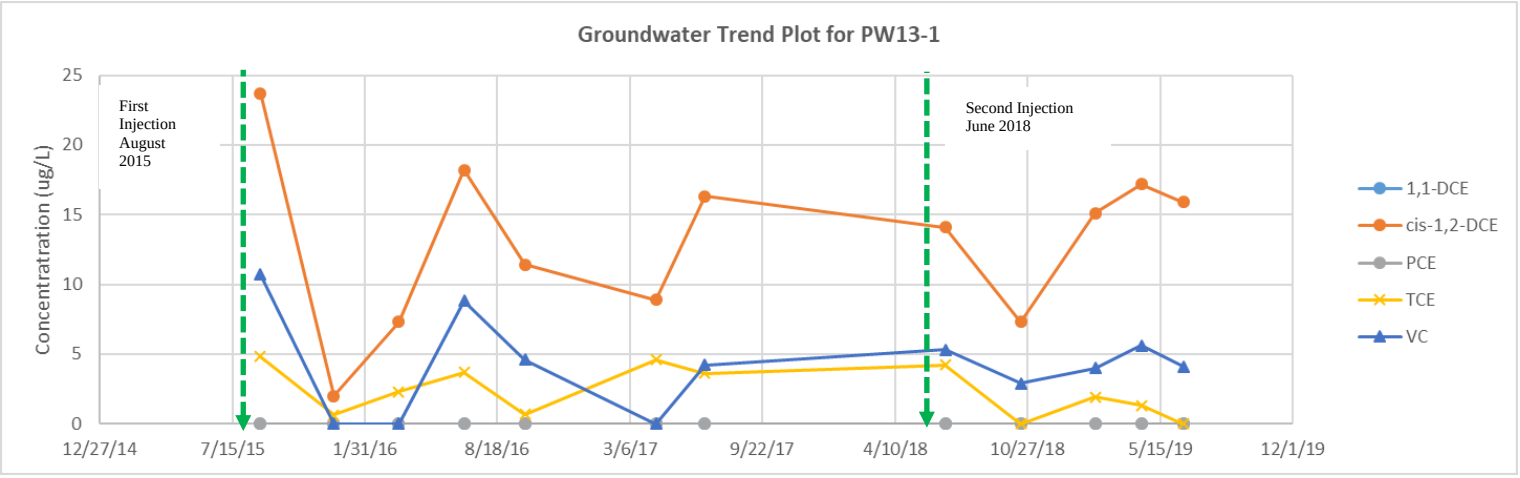


Analyte	8/26/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	6/25/2018
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.68)	ND (1.0)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	12.8	6.5	28.3	29.5	19.6	38.7	30.7	39.7
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (1.0)	ND (0.50)	ND (0.50)
Trichloroethene	1.4	0.37 J	4.3	5.3	1.6	13.6	3.4	2.9
Vinyl Chloride	ND (0.45)	1.2	2.4	3.4	3.9	0.36	ND (0.62)	3.1

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.59)	ND (0.59)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	14	41	55.3	63.7
Tetrachloroethene	ND (0.50)	ND (0.50)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.90)	7.7	8	4.4
Vinyl Chloride	2.5	ND (0.80)	ND (0.80)	4.5

Trend Plots of Selected VOC Data

Remedial Action Injection Sites
Performance Monitoring Point Groundwater Data
Niagara Falls Air Reserve Station, New York



Analyte	8/26/2015	12/15/2015	3/22/2016	6/29/2016	9/29/2016	4/14/2017	6/27/2017	6/25/2018
1,1-Dichloroethene	ND (0.28)	ND (0.27)	ND (0.22)	ND (0.60)	ND (0.68)	ND (1.0)	ND (0.21)	ND (0.50)
cis-1,2-Dichloroethene	23.7	2	7.3	18.2	11.4	8.9	16.3	14.1
Tetrachloroethene	ND (0.21)	ND (0.33)	ND (0.30)	ND (0.45)	ND (0.45)	ND (1.0)	ND (0.50)	ND (0.50)
Trichloroethene	4.8	0.64 J	2.3	3.7	0.66 J	4.6	3.6	4.2
Vinyl Chloride	10.7	ND (0.25)	ND (0.31)	8.8	4.6	ND (1.0)	4.2	5.3

Analyte	10/17/2018	2/6/2019	4/17/2019	6/19/2019
1,1-Dichloroethene	ND (0.50)	ND (0.50)	ND (0.75)	ND (0.75)
cis-1,2-Dichloroethene	7.3	15.1	17.2	15.9
Tetrachloroethene	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
Trichloroethene	ND (0.53)	1.9	1.3	ND (0.75)
Vinyl Chloride	2.9	4	5.6	4.1

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